

**COOPER** Crouse-Hinds





The Cooper Crouse-Hinds GmbH
factory in Eberbach, Germany



The Cooper Crouse-Hinds SA Barcelona,
Spain



The Cooper Crouse-Hinds (UK) Ltd.,
factory in Sheerness, UK



Crouse-Hinds

COOPER CROUSE-HINDS GMBH

Essentials, Innovations and a few words about your money

You have the responsibility for the lighting technology, the electrical system components, the complete controlling for hazardous areas or even for the emergency lighting? Then you have the responsibility for peoples lives: the regulations, definitions and information on page 0.3 onwards will help you to make the right decisions.

After having won the award for the „safest mining lamp in the world“ in 1912, the ambitiousness of our construction engineers has since then, not decreased.

Whether its about Ex-Fluorescent lamps, complex distribution systems, or the central controlling of emergency lighting, you will find that with our innovations you have found a partner that will help you stay on the “safe side“.

Its not just the design goals or the superior safety reserves that we are interested in, its also the keeping of the „total costs of ownership“ as low as possible. Just by using our concept “plugably easy“, you will find that you can save a great deal, just on the installation costs.

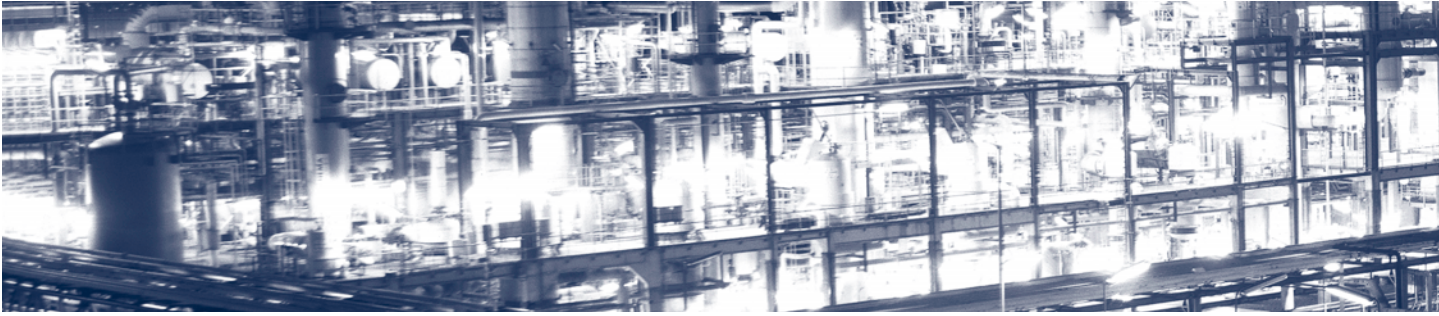
If you have international customers, then there is good news for you.

A new norm that will drastically reduce expenditure:

SpecOne.

Another example: our Worldwide Service.

But you will find that on the following pages anyway.



How do you profit from the fact that we are the world leaders in explosion-protection?

When our customers put their trust in us, this should give reason for an expectancy of capability, reliability and an outlook and safety for the future. But, and let's be honest, it could also lead to the effect of "resting on one's laurels" or of being arrogant. With us, you can be absolutely sure that that won't happen. We invest an immense amount of energy to become (or stay) your number one partner in explosion-protection.

With our worldwide presence we are able to react quickly and can therefore be able to help you further, no matter in what country you are in (or ocean you are on). With quick deliveries, service, consultation and even

with our knowledge of the local circumstances/facts. We also do customer training in explosion-protection, be it in Germany or for example in Brazil.

Even though we produce a great deal in Germany, if it is convenient and it will give you a certain advantage, we will also assemble worldwide.

Our comprehensive program:

- Ex-protected light fittings and materials
- Ex-protected components for process automation
- Emergency light fittings and emergency supply systems acc. to DIN VDE 0108
- All products are of course manufactured to the DIN EN ISO 9001:2000

Better products are not everything. But without better products everything is nothing.

It is our goal to be able to offer you in all of our product categories a superior usage of products. Our safety switches for example, we prefer an AC-3 motor switching ability instead of the AC-23 ability.

The AC-3 ability has a 10-times higher demand on the overload reliability as does the AC-23.

Prolonged life span means less replacements, which means lower costs.

A technological quality advantage should ideally convince any financial manager of its use.





The more complicated approval certification becomes, the easier you should make it for yourself.

Work together with us: We have long years of experience with approval certification procedures in the whole world and we keep a close eye on the newest trends and developments. For you that means

not just a better consultation but also future based safety products. We offered for example, a year before the ATEX-Directive 94/9/EC came

into power, products and components that were already well within its accordance. With our Cooper Crouse-Hinds GmbH SpecOne-Products you will find solutions that are approved both in the IEC as well as in the NEC norm : So save yourself the double design and construction effort that customers and companies in the whole world have had in the past.

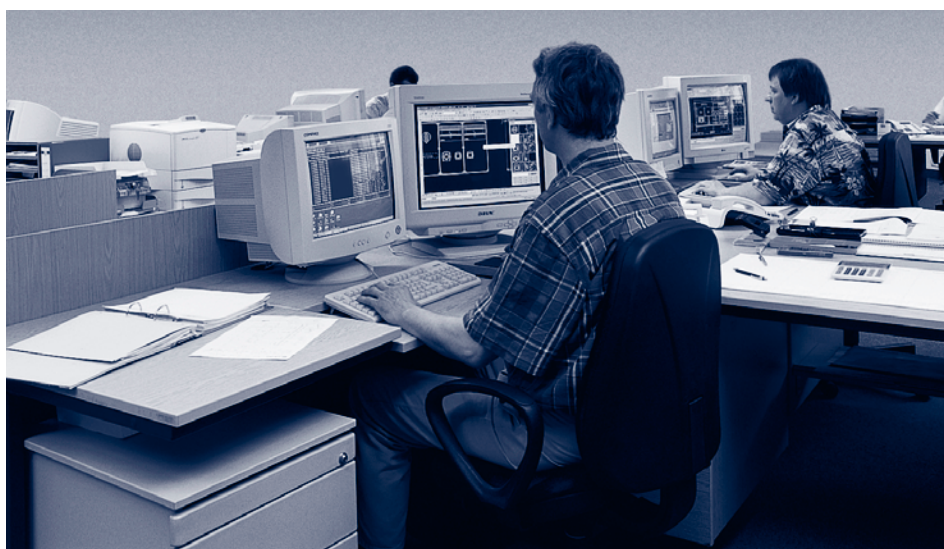


What ever you say to us, we nearly always take it personally.

Customer service, customer focussing, concentrating on you: this is not a management method, nor is it the idea of a management consultant. It is our work maxim, something we are proud of. In our Customer Center we do not have Call-Center personnel, we have our own highly qualified foremen and technicians who are able to consult you and know what their talking about.

Every customer has a contact employee assigned to him. An employee who feels responsible for him and who is there to help when there is a special individual solution to be found.

In such cases we of course setup a special team of experts, but there is still only the one contact employee who is responsible for letting the teams know about your special requirements and thoughts.



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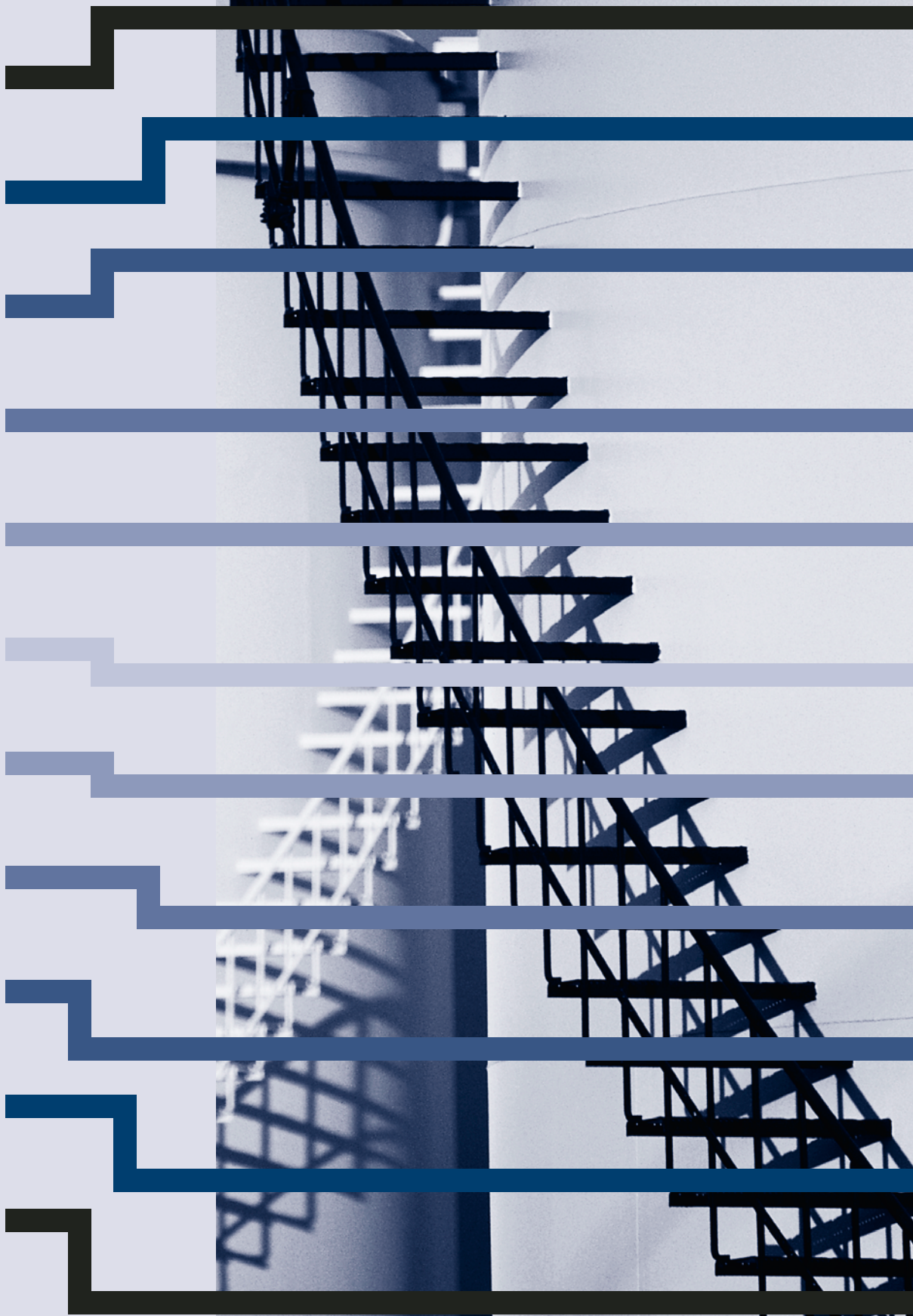
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C O N T E N T S

EXPLOSION-PROTECTED PRODUCTS

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3 EX-SIGNAL- AND ESCAPE SIGN LUMINAIRES

4 EX-PENDANT LIGHT FITTINGS AND FLOODLIGHTS

5 EX-INSTALLATION UNITS AND MATERIAL

6 EX-INSTALLATION AND CONTROL UNITS

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8 EX-SWITCH GEAR AND DISTRIBUTIONS

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EX-REGULATIONS FROM A TO Z

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J

COOPER CROUSE-HINDS AND
CEAG APPARATEBAU HUNDSBACH:
WWW.CEAG.DE – YOUR PARTNER WITH
COMPETENCE IN EXPLOSION-PROTECTION

K





Explosion-protected
apparatus according to
the directive 76/117/EEC
bear the Ex-symbol.



B The directive 94/9/EC (former ATEX 100a)

After a transition period, as of **July 1, 2003** the directives **94/9/EC of the European Parliament and Council** for the harmonization of the statutory provisions of member states on apparatus and protective systems intended for use in potentially explosive atmospheres dated **23.3.1994 (Directive 94/9/EC)** will replace any existing directives on Explosion-Protection on a European level.

A Regulations on Explosion-Protection

Electrical apparatus for use in hazardous areas must be explosion-protected in design and must comply with the regulations on Explosion-Protection. In order to establish a requirement and safety level that is the same throughout Europe, the EC Commission has compiled product-related "European Directives" for all types of products. In 1975 the Council of the European Community issued basic directives on Explosion-Protection.

These were converted into national law in Germany in the "Regulations concerning electrical installations in explosive atmospheres (Ex V)" issued in February 1980. CENELEC, the European committee for electrotechnical standardization, worked out European standards for apparatus for use in hazardous areas.

These standards DIN EN 50014 to 50020/VDE 0170/0171, Parts 1 to 7, designated as VDE regulations, came into force on 1.5.1978. They contain constructional and test requirements for explosion-protected electrical apparatus for Zone 1.

The certificates of conformity or inspection certificates issued by notified bodies of member states of the EC, which are issued on the basis of the tests carried out, are recognized by all member states of the EU as type examination certificates.

This new Ex directive was converted into national German law by the new **“Explosion-Protection decree (ExVO)”** issued in December 1996.

Parallel to this, a revised version of the **“Regulations concerning electrical installations in explosive atmospheres (ExlexV)”** as well as the **“Regulation concerning flammable liquids” (VbF)** was also issued in December 1996.

These directives regulate the explosion-protection and the standards for the required monitoring of apparatus in Germany. These national regulations were replaced by the **“Industrial Safety Regulations”** in **October 2002**.

Amongst other things, the new ATEX directive now newly regulates the classification and marking of apparatus for use in hazardous areas.



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New is the classification of apparatus in the following:

Apparatus for mining operations:

Apparatus Group I

Apparatus for use in all other hazardous areas: Apparatus Group II

This is divided further into apparatus categories that regulate the safety level of the apparatus for the respective zone:

Categories 1, 2 and 3

In addition to this, distinction is also made between apparatus for use in Gas-Ex hazardous areas, code letter "G", and appara-



Apparatus for Gas-Ex hazardous areas		
Apparatus category	Zone	Marking
1	0	II 1 G
2	1	II 2 G
3	2	II 3 G

Apparatus for Dust-Ex hazardous areas		
Apparatus category	Zone	Marking
1	20	II 1 D
2	21	II 2 D
3	22	II 3 D

tus for use in Dust-Ex hazardous areas, code letter "D".

After successful completion of the type test within the scope of the conformity evaluation procedure, the authorized testing stations, now called **notified bodies**, issue an **"EC Type Examination Certificate"**.

All explosion-protected CEAG apparatus in this catalogue complies with the European standards EN 50014 to EN 500128 and can, therefore, be used in almost every country in the world.

All explosion-protected products in this catalogue have already been certified in accordance with the new ATEX-Directive 94/9/EC.

Additionally, most of the products in this catalogue have supplementary approvals for the use in areas where hazardous flammable dusts are present.

To fulfil all requirements of the Explosion-Protection directive 94/9/EC (as well as those of any further EC-directives which are applicable), the manufacturer issues an "EC-Declaration of Conformity".

To allow free movement of goods throughout Europe, **the CE marking** shall be affixed to all apparatus to which this EC declaration of conformity applies.





C Hazardous areas due to explosive gases, vapours and mists

Hazardous areas due to the presence of explosive gases, vapours and mists are classified into three zones. This classification depends on the probability of the occurrence of an explosive gas atmosphere.

Which explosion-protected electrical apparatus may be used in the individual zones?

Zone 0 covers areas in which an explosive atmosphere caused by a mixture of air and gases, vapours or mists is present, continuously, for long periods or frequently.

Zone 0 mainly encompasses the areas inside closed containers, pipelines and apparatus which contain inflammable liquids. The respective operating temperature lies above the flash point. The hazardous area is above the liquid level and not within the liquid.

With **apparatus in the category 1 G** (for Zone 0), in order to avoid ignition hazards resulting from electrical circuits of the apparatus, it is necessary to guarantee the specified degree of safety.

- ☐ in the event of two independent faults when only one protection measure is applied, or
- ☐ in the event of the failure of one protection measure, by means of a second, independent protective measure.

These conditions are deemed fulfilled if, for example, the apparatus

- ☐ is designed in the type of protection "ia" to EN 50020, or if "specially casted encapsulations" are used, or
- ☐ a combination of two independent ignition protections according to EN 50015 through to 50028 are used.

So can for example, hand lamps with intrinsic supply circuits or intrinsic apparatus "ib", an additional and in accordance to EN 50028 flameproof encapsulation.

The requirements on apparatus with regard to electrostatic charges are considerably higher than those for Zone 1 or Zone 2.

The constructional and testing requirements for electrical apparatus in Group II 1 G have been newly regulated in Europe.

EN 50284 / VDE 0170/0171, Part 12 replaces special national arrangements as defined by the ATEX directive.

Zone 1 covers areas in which the occasional occurrence of an explosive atmosphere due to the presence of gases, vapours or mists is likely.

Inflammable or explosive substances are made, processed or stored in Zone 1. This includes the area surrounding charging doors, the immediate vicinity of filling and emptying devices, the immediate vicinity of fragile equipment and lines, as well as around cable glands on pumps and slides that do not seal adequately. The occurrence of an explosive atmosphere is likely during normal operation.

With **apparatus of the category 2 G** (for Zone 1), it is either necessary to ensure that the occurrence of an ignition source is excluded, or the ignition source must be encapsulated by a recognized type of protection in such a way that the ignition of an explosive atmosphere surrounding the apparatus is prevented. This applies in Zone 1 for both normal, trouble-free operation and for the operating faults that commonly occur. The constructional and test regulations for



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the permissible types of protection are laid down in EN 50014 through to 50028.

Zone 2 covers areas in which the occurrence of an explosive atmosphere due to the presence of gases, vapours and mists is not likely, but if one should occur, then **only rarely** and **only for a short period**.

Zone 2 encompasses areas where explosive or flammable materials are manufactured or stored. Zone 2 also encompasses areas around Zones 0 and 1, for example areas around flanged joints of pipelines in closed rooms. Furthermore, it includes areas in which, due to natural or forced ventilation, the lower explosion limit is reached in exceptional cases only, e.g. the surroundings of outdoor installations.

Apparatus in the category 3 G (Zone 2) must be designed in such a way that it is safe during normal, trouble-free operation. All apparatus that fulfils the requirements for Zone 0, Zone 1 may be used. The requirements for electrical apparatus specially designed for use in Zone 2 have been newly regulated in EN 50021.

In future the previous practice of also using apparatus of “good industrial quality” in Zone 2, a common practice in some countries, will no longer be possible. The requirements for Zone 2 apparatus according to previous national standards will be considerably higher with the new European norm. Zone 2 apparatus to EN 50021 provide a considerably higher safety standard.

The **type of protection “n”** applies for Zone 2 apparatus: apparatus that cannot ignite a surrounding explosive atmosphere under normal and certain abnormal operating conditions.

In addition to this, distinction is made between apparatus that does normally not produce arcs/sparks and/or hot surfaces “non-sparking apparatus” and apparatus that produce sparks/arcs and/or hot surfaces “sparking apparatus”. The Explosion-Protection methods resulting from this were derived, in part, from the types of protection for Zone 1/category 2 apparatus, whereby they were adapted for Zone 2/category 3 apparatus on a lower level.



Non-sparking apparatus "nA":

The risk of the occurrence of sparks, arcs and/or hot surfaces during normal operation is minimized by constructional measures.

Sparking apparatus:

Here sparks, arcs and/or hot surfaces occur during normal operation: The following protection methods are permissible:

Apparatus with protected contacts: "nC"

This includes enclosed switchgear, non-ignitable components, hermetically sealed, sealed and encapsulated devices.

Restricted breathing apparatus: "nR"

Apparatus with simplified pressurization: "nP"

Limited power apparatus: "nL"

The chart on page 0/9 shows the pictograms/illustrations of the different types of protection for Zone 1 and 2 apparatus.

D Hazardous areas due to explosive dust/air mixtures:

Hazardous areas due to the presence of inflammable dust/air mixtures are also subdivided into 3 zones that are comparable to the zones for explosive gas atmospheres.

Zone 20 covers areas in which an explosive atmosphere due to dust/air mixtures is present **continuously**, for **long periods** or **frequently**.

If these conditions occur, they are usually found in closed containers, pipelines, apparatus, etc. where a continuous or for longer periods a dust/air mixture is probably to be found.

Zone 21 covers areas in which the occurrence of an explosive atmosphere due to dust/air mixtures is to be expected **occasionally**.

This can, for example, include areas in the immediate vicinity of dust extraction or filling stations and areas where dust deposits can occur and can form a potentially explo-

sive concentration of inflammable dust mixed with air under normal operating conditions.

Zone 22 covers areas in which the occurrence of an explosive atmosphere due to whirled-up dust is not likely, but, if it occurs, then in all probability only **rarely** and only for a **short period**.

This can, for example, include areas in the vicinity of apparatus containing dust if the dust can escape from leaks and in time build up a dangerous dust layer (e.g. milling rooms, where dust leaks from the mill and builds a dust layer).

In future only apparatus that fulfils the conditions of the directive 94/9/EC shall be used in these areas. Electrical apparatus in the type of protection "dust Explosion-Protection due to enclosure" must be built and tested in accordance with EN 50028-1-1, whereby, for the most part, this was based on the general requirements in accordance with EN 50014 for explosion-protected apparatus for gases, vapours and mists. With such dust explosion-protected apparatus, there are, among other things, given surface temperatures and minimum IP degrees of protection required.

The approval amendments for dust Explosion-Protection in accordance with directive 94/9/EC are already available for many of the explosion-protected light fittings and apparatus in this catalogue, or they have been applied for.

E Classification of apparatus

In accordance with the various properties of gases with regard to ignition temperature, ignition capability and flame transmission capacity, explosion-protected electrical apparatus is divided into explosion groups and temperature classes.

Division of explosion-protected apparatus into explosion groups

To specify the scope of application of explosion-protected electrical apparatus, it is sub-divided into two groups:

Group I: Electrical apparatus for use in mines susceptible to the hazard of firedamp

Group II: Electrical apparatus for use in all other hazardous areas

A further sub-division of the Explosion Group II into "A", "B" and "C" is prescribed for the types of protection "flameproof enclosure" and "intrinsic safety". This is also for the protection types nC and nL. With the type of protection "flameproof enclosure" this sub-division is made according to the maximum experimental safe gap for the non-transmission of an internal ignition (MESG), whereas with the type of protection "intrinsic safety" this sub-division is made according to the ratio of the minimum ignition current of the mixture being tested to the minimum ignition current of a mixture of laboratory methane and air (MIC). Group II C apparatus is suitable for use in all types of gas atmospheres.

Classification of gases and vapours into explosion groups and temperature classes					
	T1	T2	T3	T4	T5 T6
I	Methan				
IIA	Acetone, Ethane Ethylacetate Ammonia, Benzol Acetic acid Carbonmonoxide Methanol, Propane Toluene	Ethylalcohol i-amylacetate n-butane n-butylalcohol	Petrol Diesel-fuel Aviation-fuel Heating-oils, n-hexane	Acetaldehyde Ethyl-ether	
IIB	Town gas (lamp gas)	Ethylene			
IIC	Hydrogen	Acetylene			Carbon-disulphide

Division of explosion-protected apparatus into temperature classes

The ignition temperature is the lowest temperature of a surface at which an explosive atmosphere will ignite.

Gases and vapours can be divided into temperature classes according to their ignition temperatures. This results in a sub-division of explosion-protected electrical apparatus into the temperature classes T1 to T6. This classification allows explosion-protected apparatus to be used economically.

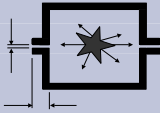
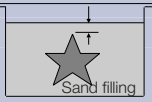
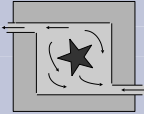
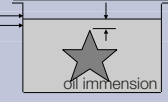
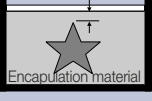

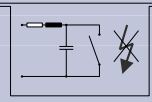
The maximum surface temperature of an apparatus must always be lower than the ignition temperature of the gas/air or vapour/air mixture.

Generally speaking, explosion-protected apparatus must be suitable for an ambient temperature from -20 °C to +40 °C.

The following tables show both the division of explosion-protected apparatus according to the temperature classes and examples of the classification of gases and vapours in accordance with the explosion groups and temperature classes.

Division of explosion-protected apparatus into temperature classes	
Temperature class	Max. surface temperature
T1	450 °C
T2	300 °C
T3	200 °C
T4	135 °C
T5	100 °C
T6	85 °C

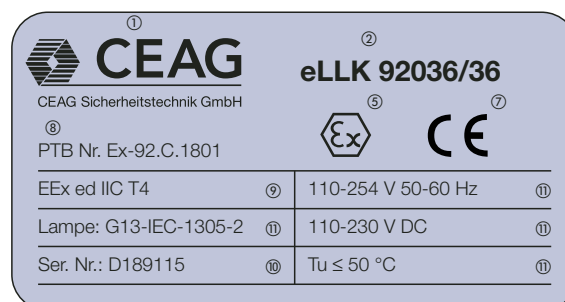


Types of protection according to European Standard				
Type of protection	Symbol	IEC EN	Princip	Application
Flameproof enclosure	d	IEC 60079-1 EN 50018		Power-operated apparatus, switchgear, motors (all types of apparatus producing ignitable arcs in normal operation)
Sand filling	q	IEC 60079-5 EN 50017		Capacitors, electronic components, fuses
Pressurization	p	IEC 60079-2 EN 50016		Power-operated apparatus (active safety measures required)
Oil immersion	o	IEC 60079-6 EN 50015		Transformers (rarely used)
Encapsulation	m	IEC 60079-18 EN 50028		Measurement and control devices, relays, electronic circuits
Increased safety	e	IEC 60079-7 EN 50019		Connection and distribution boxes light fittings, measuring instruments, squirrel cage motors (no ignitable sparks in normal operation)
Intrinsic safety	i	IEC 60079-11 EN 50020		Measurement and control devices, data processing (low electric values)
Protection type for Zone 2	n	IEC 60079-15 EN 50021	<ul style="list-style-type: none"> • non-sparking apparatus: nA • apparatus with protected contacts: nC • restricted breathing apparatus: nR • apparatus with simplified pressurization: nP • limited power apparatus: nL 	Lamps, motors, plugs and sockets, measurement and control devices

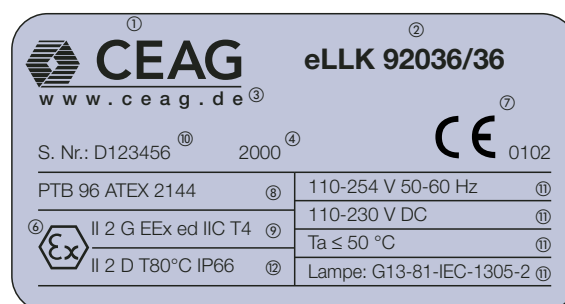
G Marking of explosion-protected apparatus

As, until the transition period expires, both the previous basic Explosion-Protection directive 76/117/EEC, supplemented by the individual Explosion-Protection directive 79/196/EEC, and the new Explosion-Protection directive 94/9/EC are valid, there are two valid parallel certification procedures and marking methods for explosion-protected apparatus.

By way of example, the two type labels for an explosion-protected light fitting for fluorescent lamps show both the marking according to the previous directive and the marking according to the new directive.



Type label according to previous directive



Type label according to new directive 94/9/EC

ATEX) stands for the notified body involved in the production quality system (in this case PTB)

① Name / Code of manufacturer

② Type code

③ Address of manufacturer

④ Year of manufacture

⑤ Community marking for explosion-protected apparatus in accordance with directive 76/117/EEC

⑥ Marking of apparatus in accordance with directive 94/9/EC:

for use in hazardous areas: II

apparatus Group II for use in zone 1

areas category: 2

for use in gas hazardous areas: G

für den Einsatz in

Dust-Ex-areas: D

⑦ CE marking confirming conformity with all requirements of the applicable directives for the product. The number next to the CE marking (only typical for

⑧ Testing station (notified body) and the respective number

⑨ Marking of apparatus in accordance with the European Standards for the construction and testing of explosion-protected apparatus:

EEx: built and tested according to the European Standards

e d: type of protection here

„increased safety“ und

„flameproof encapsulation“

II C: explosion group

T 4: temperature class

⑩ Serial number

⑪ Technical data

⑫ additional marking of the apparatus for Dust-Ex:

T 80 °C: Max. surface temperature + 80 °C

IP 66: type of protection



H Degrees of protection in accordance with EN 60529

Because they are often used in outdoor installations and often come into contact with dust and water, as well as with other environmental influences caused by chemical media, explosion-protected electrical apparatus are subjected to particularly extreme operating conditions. In accordance with the constructional and test requirements explosion-protected apparatus must, therefore, satisfy the requirements for a minimum degree of protection, normally **IP 54**. The IP degrees of protection according to EN 60529 are defined according to the protection against inadvertent contact, foreign matter and water.

The degrees of protection against solid foreign matter are designated by the first code number.

Degrees of protection against water are designated by the second code number.

Example: **IP 65**: dust-tight, protected against jet water.

Degrees of protection according to IEC 60529

First Number	Degree of protection	Second Number	Degree of protection
0	No special protection	0	No special protection
1	Protected against solid foreign bodies Ø 50 mm and larger	1	Protected against vertically dripping water
2	Protected against solid foreign bodies Ø 12,5 mm and larger	2	Protected against dripping water when enclosure is inclined up to 15°
3	Protected against solid foreign bodies Ø 2,5 mm and larger	3	Protected against spray water being sprayed at an angle up to 60°
4	Protected against solid foreign bodies Ø 1 mm and larger	4	Protected against splash water from any direction
5	Dust protected	5	Protected against jet water from any direction
6	Dust-tight	6	Protected against powerful water jets from any direction
		7	Protected against water intrusion when submerged for a limited time
		8	Protected against water intrusion when submerged, time irrelevant



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I Regulations and Approvals outside of the EC Jurisdiction

Outside the jurisdiction of the ATEX directive 94/9/EC (EC area and associated countries) there are other standards and approvals that apply for the operation of electrical apparatus for use in hazardous areas.

National approvals on the basis of the EN directives

The majority of the eastern European countries such as Russia, Poland, Hungary, etc. have their own certification bodies that

issue their own approvals on the basis of the current EC type examination certificates. These are requisite for the installation and operation of electrical apparatus in hazardous areas

in these countries. Cooper Crouse-Hinds GmbH is in possession of approvals for the products listed in this catalogue in many of these countries.

Explosion-Protection in North America

The IEC/EN approach to Explosion-Protection differs to the engineering practices in North America. Here, to name one example,

they use closed conduit systems with potted ignition barriers.

Other criteria also apply for the classification. In addition to the "hazardous (classified) locations" Class I (gases, vapours

and mists), there are Class II (dusts) and Class III (fibres). These design regulations and classifications are laid down in the NEC regulation, Sections 500 to 505, valid for the USA, and in the CEC standard, Section 18, valid for Canada. In addition to this the areas are divided into Division 1 and Division 2.

In section 9 you will find an overview of the Cooper Crouse-Hinds GmbH explosion-protected products that are additionally certified in accordance to the american norms.

You will find a detailed description in the printed media „specOne“ which you can acquire at COOPER Crouse-Hinds agencies (only in the english language).



Due to the introduction of the IEC zone classification concept in Canada in 1988 and in the USA in 1996 (amendment of NEC, Article 505 and of CEC), the use of a comparable technology became possible.

Comparison of types of protection

Type	EN standard	IEC standard
General requirements	EN 50014	IEC 60 079-0
Increased safety "e"	EN 50019	IEC 60 079-7
Flameproof enclosure "d"	EN 50018	IEC 60 079-1
Intrinsic safety "i"	EN 50020	IEC 60 079-11
Oil immersion "o"	EN 50015	IEC 60 079-6
Pressurization "p"	EN 50016	IEC 60 079-3
Sand encapsulated "q"	EN 50017	IEC 60 079-5
Encapsulation		
"m"	EN 50028	IEC 60 079-18
Type of protection "n"	EN 50021	IEC 60 079-15



Non-European approvals

In addition to the EN standard, the IEC, as a worldwide standard, is an important basis for the approval of explosion-protected apparatus.

A comparison shows the similarity of content to the European standards. Thus, almost all of the IEC standards can be compared to EN standards that say the same or are similar in content. Approvals according to „Ex-NEPSI“ are for example in part conform with the IEC standards.

0.13

Comparison of the IEC - NEC - CEC Classifications				
	Gases, vapours or mists		Dusts	Fibres
	Class I	(IEC)	Class II	Class III
Regulation USA	NEC 500-5	NEC 505-7	NEC 500-6	NEC 500-7
Regulation Canada	CEC J18-004	CEC 18-006	CEC 18-008	CEC 18-010
Classification	Division 1	Zone 0 Zone 1	Division 1	Division 1
	Division 2	Zone 2	Division 2	Division 2
Groups (Groups to NEC 500... or CEC J18-050)	- 3	- 7	- 3	
	Div. 1 und 2	Zone 0, 1, 2		Div. 1 und 2
	A (acetylene)	II C (acetylene, hydrogen)	E (metals)	---
	B (hydrogen)	II B (ethylene)	F (coals)	
	C (ethylene)	II A propane)	G (grain)	
	D (propane)			
Temperature classes				
Class I	Div. 1 und 2	Zone 0, 1 und 2	Div. 1 und 2	none
	T1 ≤ 450 °C	T1 ≤ 450 °C	T1 ≤ 450 °C	
	T2 ≤ 300 °C	T2 ≤ 300 °C	T2 ≤ 300 °C	
	T2A ≤ 280 °C; T2B ≤ 260 °C		T2A ≤ 280 °C; T2B ≤ 260 °C	
	T2C ≤ 230 °C; T2D ≤ 215 °C		T2C ≤ 230 °C; T2D ≤ 215 °C	
	T3 ≤ 200 °C; T3A ≤ 180 °C	T3 ≤ 200 °C	T3 ≤ 200 °C; T3A ≤ 180 °C	
	T3B ≤ 165 °C; T3C ≤ 160 °C		T3B ≤ 165 °C; T3C ≤ 160 °C	
	T4 ≤ 135 °C; T4A ≤ 120 °C	T4 ≤ 135 °C	T4 ≤ 135 °C; T4A ≤ 120 °C	
	T5 ≤ 100 °C	T5 ≤ 100 °C	T5 ≤ 100 °C	
	T6 ≤ 85 °C	T6 ≤ 85 °C	T6 ≤ 85 °C	



J Chemical stability of plastics for explosion-protected apparatus

Nowadays explosion-protected electrical apparatus is often made in the economical type of protection "increased safety". This calls for the use of high-grade, specially selected and tested plastics that meet the high requirements and provide a high mechanical, thermal and chemical stability.

The plastics listed in the table beside have been used in practice for years and have proved to be reliable.

The table beside gives details issued by the manufacturers of the plastics relating to the chemical stability of the plastics listed compared to a series of media.

These details can, however, only be applied up to a degree for the evaluation of the usability of explosion-protected electrical apparatus in chemical and petrochemical installations, as the aggressive atmosphere often only occurs for a short time and in a relatively low concentration.

Chemical stability of plastics			
Material	Polyamide	Polyester	Polycarbonate
Acetone	+	+	–
Ethyl alcohol (up to 30 %)	O	+	0,96 %
Ethyl glycol	O	+	+
Ammonia (at 23 °C)	+	+ 10 %	–
Benzene 60/140 °C	+	+	+
Benzol (at 23 °C)	+	+	–
Boric acid 3 %	+	+	+
Butane	+	+	+
Chlorine bleaching solution	O	+	
Chloric gas (damp)	O	+	–
Chloride of lime	O	+	+
Chromic acid 10 %	–	+	+
Cyclohexane	+	+	+
Diesel oil	+	+	+
Jet fuel	+	+	+
Acetic acid (up to 25 %)	O	+	+ 10 °C
Formaldehyde	+	+	+
Glycol	+	+	+
Glycerine	+	+	+
Uric acid (up to 20 %)	+	+	+
Fuel oil	+	+	+
Machinery oil	O	+	+
Sea water	+	+	+
Methyl alcohol	O	+	O
Lactic acid conc. 20 %	+	+	+
Mineral oil	+	+	
Sodium chloride	O	+	+
Soda lye (20 - 25 °C)	+	+ 5 %	–
Petroleum	+	+	–
Phosphoric acid conc.	–	+	+
Soap suds (at 23 °C)	+	+	+
Sulphuric acid 5 - 30 % and 70 %	O	+	+
Sulphuric dioxide, dry (at 23 °C)	+	+	O
Super fuel (at 60 °C)	+	+	–
Turpentine (at 23 °C)	+	+	–
Tartaric acid	O	+	+ up to 10 %
Citric acid up to 32 %	+	+	+

Explanation of symbols: + = stable O = limited stability – = non-stable

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CEAG Sicherheitstechnik GmbH
CEAG Operations North America, LLC 8125 9th St.

0.15


Explosion Protection

Focus on Explosion Protection

There's a lot happening in the field of explosion-protected products. To ensure that you are always well-informed on all the latest developments, in addition to technical and general information on our products, we also provide you with topical seminar contributions and application reports, as well as up-to-date information from the world of explosion protection.

You can, of course, also ask us questions on your special subject!

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Standardization
Literary references
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CEAG Specialist Forums

Here you can find the quick link to the other forums:

- Intrinsic Safety
- Safety Lighting

Explosion Protection

Ex-Junction- and Terminal Boxes

Ex-Junction- and Terminal Boxes

1 2 3 4 5 6 forward

- Complete Socket Distributions (Format PDF, Size 469 kB)
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- Ex-Multi Purpose Terminal Boxes - GHS 721 (Format PDF, Size 297 kB)
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It is our goal to make the theme of explosion-protection as clear and as understandable as possible. So that you can access "online" and be able to have access to all the important and interesting information that you might need, we have re-designed our website for you. Apart from the essential product information, we also offer an "Expert Forum" where important articles appertaining to explosion-protection and intrinsics can be viewed. Also you will find articles from congresses and meetings as well as information as to whats new on the norm and directive front. Clearly structured, we offer you a large variety on information to nearly all areas of explosion-protection.

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0.15

INFORMATION ON EX-PROTECTED PORTABLE LAMPS	1.2
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EX-HAND LAMPS	1.10
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WHAT HAPPENS HERE, WHEN THE FILAMENT OF THE LAMP BREAKS?

(SOLUTION: PAGE 1.2ff)



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Safety Requirements

Explosion-protected portable lamps are predominantly used for industrial applications such as security patrols, inspections and repair work. The police and fire brigade use explosion-protected lamps to ensure safety at the scene of an accident, in case explosive substances are present. Besides reliability and safety, explosion-protected portable lamps must meet the standard requirements of handling, weight, lighting properties and operating time.

Explosion-protected portable lamps must not be opened in explosive atmospheres. Similarly, batteries may only be charged outside the hazardous area.

Minimum Safety Standard: minimum requirement is Zone 1

Since there are no physical barriers between the hazardous areas which are subdivided into zones, special attention has to be paid to portable electrical apparatus. For this reason all portable lamps of our brand "CEAG" are approved for Zone 1 hazardous areas. Zone 2 is automatically included. The Cooper Crouse-Hinds GmbH also offers solutions for Zone 0 (which exists for example, in closed containers), Zone 21 and Zone 22.

Hazard Warning Lamps according to the ADR-Directive

A special version of the SEB 8 Ex-Search-light has been developed for use in the field of transportation of hazardous goods. This version conforms to 94/55/EG and can therefore be used throughout Europe as a Hazard Warning Lamp.



Material choice

The lights described in this catalogue are mainly made of high-quality impact resistant plastic (eg. polyamide or polycarbonate). By adding conductive substances, a surface resistance for the housing is achieved which prevents an electrostatic charge. All plastics used can be recycled.

Housings of explosion-protected electrical apparatus must conform to IP 54 protection as a minimum. Especially for usage in rough environments the brand "CEAG" offers hand lamps that conform to the high standard IP 65.

Scratch resistant mineral glass is used for the light aperture.

This ensures that, inspite of rough use, the light aperture remains clear for the duration of its use.

Ergonomics: Single-Handed Operation

All portable lamps are designed for "single-handed operation". This means they can be switched on and off with one hand (even when wearing safety gloves), while the other hand is free for other tasks.



Focussing of HE 8

Lighting technology

Depending on their use, explosion-protected portable lamps are required to have different luminous intensity distributions, such as a broad beam (working light) or a spotlight. This is achieved by the use



Focussing Stabex HF

of powerful lamps and different systems of focussing the light. In the new types of CEAG lights the need to be able to focus the light has been realized by the use of an adjustable reflector. This kind of reflector enables focussing a broad beam into a spotlight. Different slip-on filters enable a change of light colour.

A novel dispersive filter composed of many small prisms enables the beam of light to be broadened without a major loss of working light.

Halogen lamps with a double bulb: bright and cool

Halogen lamps have a very bright, white light, but due to their high surface temperature their light output must be limited. By means of a special method, whereby the halogen lamp is provided with a "double bulb", Cooper Crouse-Hinds GmbH has considerably increased the useful light output. Thus, explosion-protected lights can make optimum use of the advantages of the halogen lamp (high light output, pleasant light colour and long service life).

Guidance of light

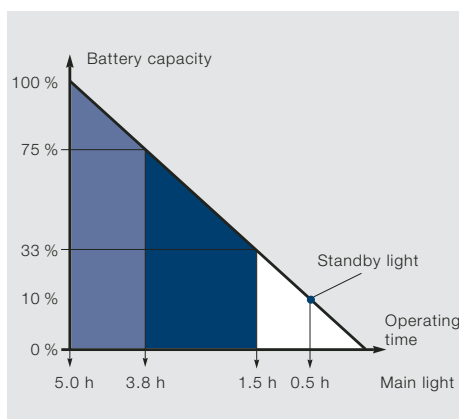
In order to achieve optimum lighting properties, all components are analyzed, calculated and measured. The development and manufacture of the series are based on the results of our in-house light laboratory. The range diagrams essential for a portable lamp, have been derived from the polar curves established by the light laboratory. These diagrams tell the user at what distance a round surface is irradiated with an illumination of min. 1 lux.

Battery Technology

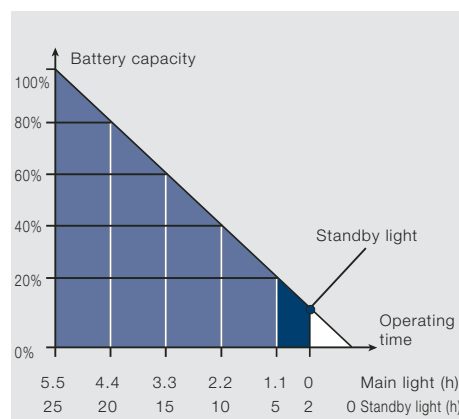
The CEAG explosion-protected lamps can be fitted with rechargeable (secondary cells) or non-rechargeable batteries (primary cells). Which battery is best from an economical point of view depends on the respective application. If lamps are used on an irregular basis, high-quality primary cells (alkaline manganese batteries) to IEC 60086 should be used. If the lamps are used frequently, it is preferable to use gas-tight, rechargeable nickel cadmium batteries (NiCd). In addition to the fact that they are extremely economical, the outstanding characteristics of these batteries are the constant voltage, the high energy density and the suitability for use in hazardous areas. Discharged NiCd batteries can easily be stored for several years. NiCd batteries have to be recycled and are almost 100 % reusable.



Rechargeable battery for SEB 8

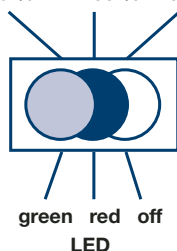


Function „indication of residual operating time“ HE 8 N

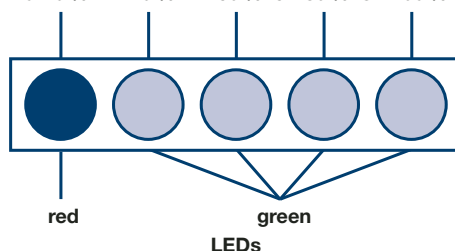


Function „indication of residual operating time“ SEB 8

100-75 % 74-33 % 32-0 %



0-20 % 21-40 % 41-60 % 61-80 % 81-100 %



Charge state indication

Unlike with lead batteries, the charge state of NC batteries cannot be determined by means of the residual charge voltage, but must be calculated using an involved micro-processor technology. Cooper Crouse-Hinds GmbH offers various systems for this in their portable lamps.

HE 8

With lamps of the series HE 8 N/EURO PLUS the remaining duration and the charge state is indicated in three stages via a two-coloured LED display. This means that the operator is always informed about the state of the battery and can, therefore, reach a safe place before the batteries are completely run down. If the main filament breaks or when the operating life expires, the HE 8 N EN automatically switches over to the less powerful standby filament. Thus, a sudden loss of light is avoided. If the standby filament continues to be discharged, a protective circuit arrangement switches off the lamp after approx. 0.5 hours.

SEB 8

The complicated lighting electronics in the explosion-protected searchlight SEB 8 features 5 LEDs that indicate the residual capacity in 20 % stages. If the residual capacity falls below the 20 % limit, a red LED warns the operator. Before the overdi-

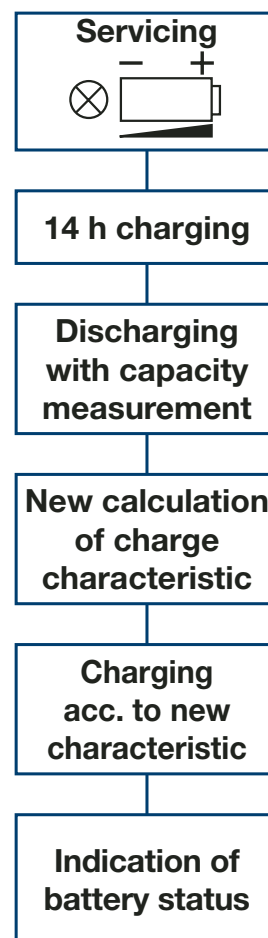
charge protection stage is reached, the powerful main light switches over to the weaker standby light to give the operator an optical signal and to conserve energy. If, to ward off any hazards, it is necessary to continue to operate the standby lamp, the standby lamp can be switched over to manual operation, whereby the monitoring electronics is bridged.

Safety functions

Each time the light is switched on, the lighting electronics check the function of the standby lamp. If the main lamp fails, the light is switched over automatically to the standby lamp. The fault is signaled by the flashing red LED.

Service circuit

Lights of the series SEB 8 feature a unique service circuit that calculates the remaining capacity according to the ageing of the battery and adapts the charge data accordingly. This ensures a gentle, service-life prolonging battery charge at all times. In addition, the operator is also given information on the state of the battery with regard to ageing and can, therefore, replace the batteries at an appropriate point in time. This means that hazards resulting from changing the batteries too early or too late are avoided. The service test is fully automatic.





The right light for every type of operation

Each type of operation calls for a specially selected light. The requirements for lights for inspection work, where a searchlight is rarely needed or is only needed for a short time, are different to those for lights for repair work, where a powerful, robust light with a long operating life is needed all the time. The CEAG-brand range provides a suitable light for almost every application possible.

Due to their size and the use of primary cells, the mini and the HF Stabex torches and the HE5 pocket torches are suited for inspections on a regular basis and as a constant companion for security personnel. The Stabex HF-L version with rechargeable NC cells is suitable for frequent operations. Here, the extra costs for the rechargeable cells and the charger unit often pay for themselves within a relatively short time

considering the maintenance costs for replacing empty batteries. The powerful HE 8 hand lamps are either fitted with rechargeable cells or with primary batteries and can be used as work lights or searchlights.

The robust SEB 8 light series is used by the mobile task forces of fire brigades and rescue services, as well as for maintenance and repair work in all hazardous areas. It meets the requirements of the fire brigade standard DIN 14642. A luminous intensity of 15,000 cd allows light to be projected up to 150 m. A consistent working light can be achieved with a diffusing lens, that is supplied with the lamp. Due to the battery capacity, long operation times of up to ca. 5.5 h, do not pose a problem.

The special SEB 8-ADR can be used for hazard warning in the transportation of hazardous goods.

International Conformity

Nearly all of the CEAG Ex-Hand lamps have in addition to the ATEX Certification further conformity certifications for

- Sea-Profession Trade Association
- UL/CSA for the USA and Canada
- Hungary
- Czech Republic
- Slovakia
- Russia

Table: Features of the explosion-protected hand lamps

Type of light fitting	Primary cells	Secondary cells	Built-in mains charger	External mains charger	12/24 V charger	Special features
Stabex mini	2 x R6/LR6	–	–	–	–	Single-handed operation
Stabex HF	2 x R20/LR20	–	–	–	–	Can be focussed
Stabex HF-L	–	2 x 4 Ah	–	LG 493	–	Can be focussed
Stabex MO	2 x R20/LR20	–	–	–	–	Use in Zone 0
HE 5 EN	1 x 3R12	–	–	–	–	Extremely flat design
HE 8 N EN	–	3 x 4 Ah	–	LG 483	–	Indication of residual operating time, operating time, red signal light
HE 8 EURO	3 x R20/LR20	–	–	–	–	can be focussed
HE 8 EURO PLUS	–	3 x 4 Ah	Plug-in charger	–	–	Indication of residual operating time, can be focussed
SEB 8	–	4 x 7 Ah	–	LG 443	Car holder 90	Capacity indication, can be focussed, standby light, servicing circuit
SEB 8 gem. StVZO and ADR	–	4 x 7 Ah	yes	LG 443	Car holder 90	Capacity indication, can be focussed, standby light, servicing circuit, mains charger cable with plug
HLE 7 LEN	–	3 x 7 Ah	yes	–	–	Flexible cable from battery to headpiece

EX - TORCHLIGHTS

Stabex mini Stabex HF

The Stabex mini, Stabex HF and the Stabex HF-L range of explosion-protected torchlights meets the requirements of the ATEX-Directive 94/9/EG. The torchlights have been conceived for use in Zone 1 and Zone 2. Complementary the Stabex HF and HF-L are also for use in the Zones 21 and 22. Due to the temperature classification T5 (Stabex mini) and T4 (Stabex HF and HF-L) these torchlights can be used in nearly any hazardous area.

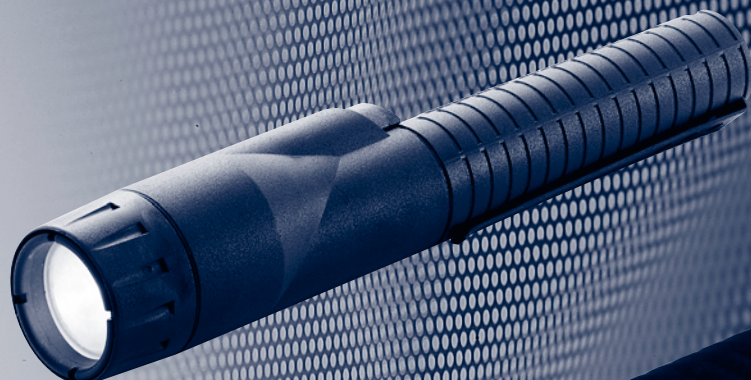
Because of their compact design, the torches are used for security patrols and inspection duties. The Stabex HF and HF-L models equipped with a halogen lamp can be uniformly focussed for short and long ranges.

The ergonomically designed light switch is easily operated by means of a sliding switch - even with safety gloves.

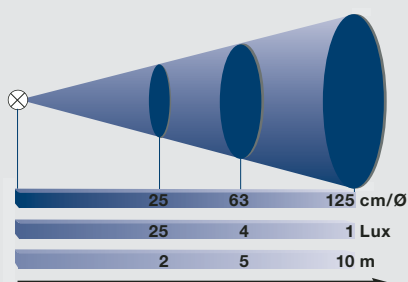
The Stabex mini is fitted with 2 dry cells size AA and the Stabex HF with 2 dry cells size D.

The Stabex HF-L model is equipped with an EEx e certified handle containing 2 NiCd accumulators, that can be recharged in the LG 493 charger. By replacing the complete handle with NiCd batteries, any new Stabex HF can be converted into a rechargeable version.

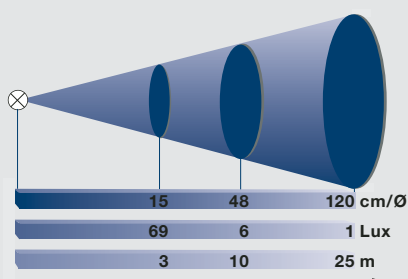
Due to the special design of the battery housing, a special locking device is not required. Thus, the batteries can easily be replaced outside of the hazardous area, no special tool being required.



Range-diagram Stabex mini



Range-diagram Stabex HF



Single-handed operation
even with work gloves

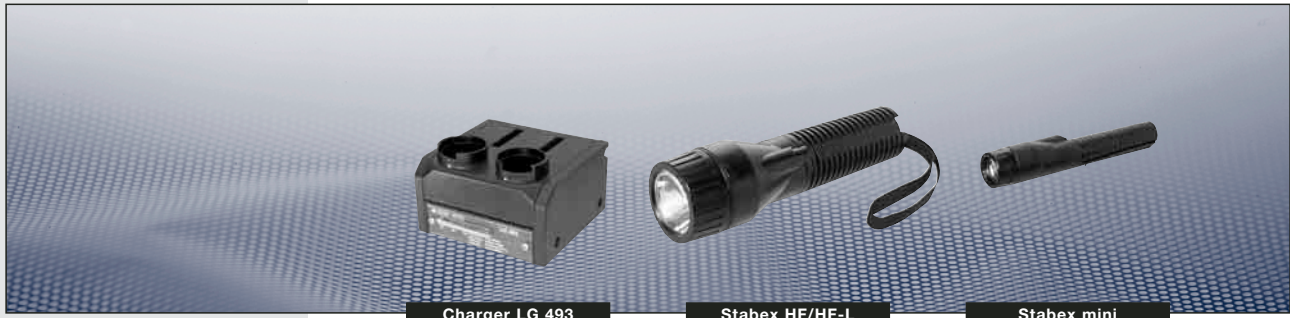
Degree of protection IP 65

Light cone can be focussed –
Stabex HF/HF-L

Halogen bulb – HF Stabex HF/HF-L

Scratch resistant mineral glass

Internationale Approvals



Charger LG 493

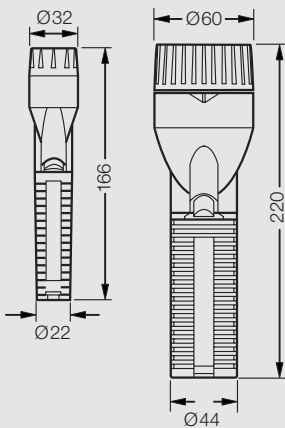
Stabex HF/HF-L

Stabex mini

E X - T O R C H L I G H T S

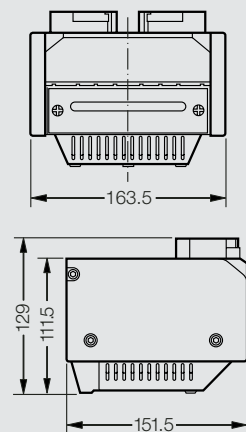
| Stabex mini | Stabex HF | Stabex HF-L |

1.7



Stabex mini

Stabex HF/HF-L



Charger LG 493

Technical data

Stabex mini

Marking to 94/9/EC	⊕ II 2 G
Type of protection	EEx ib e IIC T5 for Zone 1 and 2
EC-Type Examination Certificate	PTB 98 ATEX 2061
Enclosure material	Polycarbonat/black
Light aperture	Ø 23 mm, mineral glass
Incandescent lamp	2.2 V/0.4 A
Degree of protection to EN 60529	IP 65
Permissible ambient temperatures	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)
Battery	2 dry cell aa-size IEC 60086 R 6/LR 6
Operating time	approx. 8 h
Weight	approx. 0.07 kg (without battery)

Stabex HF/HF-L

Marking to 94/9/EC	⊕ II 2 G ⊕ II 2 D T57 °C
Type of protection	EEx ib e IIC T4 for Zone 1, 2, 21 and 22
EC-Type Examination Certificate	PTB 98 ATEX 2062
Enclosure material	Polyamid/black
Light aperture	Ø 48 mm, mineral glass
Halogen lamp	2.8 V/0.5 A
Degree of protection to EN 60529	IP 65
Permissible ambient temperatures	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)
Battery	Stabex HF 2 dry cells IEC 60086 R 20/LR 20 Stabex HF-L 2 chargeable NiCd battery 1.2 V/4 Ah
Operating time	Dry cells approx. 12 h, NC-battery approx. 7 h
Weight	approx. 0.25 kg (without battery)

Charger LG 493

Rated voltage	220 - 250 V AC ±10 %, 50/60 Hz
Charging period	max. 14 h (dep. on the state of charge)
Weight	approx. 1.3 kg

Ordering details

Type	Scope of delivery	Order No.
Stabex mini	with incandescent lamp, without battery (set order qty's 10 units)	1 1358 000 001
Stabex HF	with incandescent lamp, without battery	1 1359 000 001
Stabex HF-L (rechargeable)	Lamp with incandescent lamp and battery	1 1359 000 010
Charger LG 493	for Stabex HF-L	1 1540 000 493

Accessories for portable Ex-lamps see page 1.27

EX - TORCHLIGHT

Stabex mini II

The new Stabex mini II torchlight fulfils the requirements of ATEX Directive 94/9/EC and is certified for use in potentially explosive gas atmospheres in Zones 1 and 2 and in potentially explosive dust atmospheres in Zones 21 and 22.

Due to the temperature class T4 and the low surface temperature, this torchlight can be used in almost any hazardous area for control, search and inspection tasks.

The possible fields of application range from the chemical and petrochemical fields of industry through the food industry and mills to rescue services, fire services, technical relief organizations and other public organizations.

The torchlight is switched on and off and focussed by turning the headpiece.

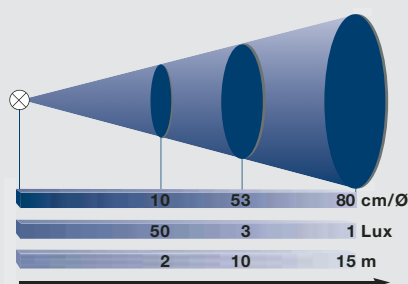
Thanks to the special design of this torchlight, a special locking mechanism for the housing is not required. This means that batteries can be replaced easily outside the hazardous area without special tools.

The high degree of protection IP 66 guarantees trouble-free operation, even in extreme ambient conditions such as moisture and large variations in temperature.

The light source is an optimized micro Xenon incandescent lamp, whereby the cone of light can be focussed evenly for both short and long ranges. The Stabex mini II is equipped with 2 commercially available dry cells.



Range-diagram Stabex mini II



Single-handed operation, even when wearing work gloves

High degree of protection IP 66

Scratch and solvent-resistant mineral glass

Micro Xenon incandescent bulb

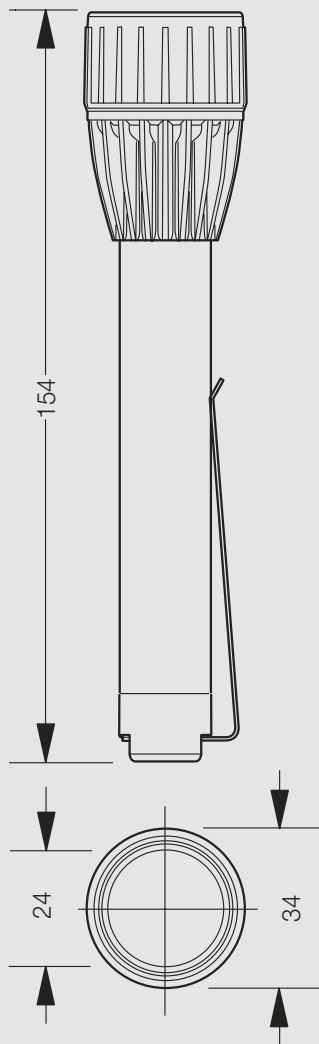
Lightcone can be focussed



Stabex mini II

E X - T O R C H L I G H T

| Stabex mini II |



Stabex mini II

Technical data

Stabex mini

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T56 °C
Explosion protection	EEx e ib IIC T4
EC-Type Examination Certificate	PTB 04 ATEX 2119
Housing material	Headpiece: Polyamide Handle: Aluminium, black Clip: Stainless steel
Light aperture	Ø 24 mm, mineral glass
Incandescent lamp	2.3 V/0.36 A
Max. axial luminous intensity	> 4000 cd
Luminous flux of lamp	approx. 10 lm
Degree of protection to EN 60529	IP 66
Permissible ambient temperature	-20 °C to +40 °C acc. to data: 0 °C to +30 °C (battery)
Battery	2 dry cells IEC 60086 R 6/LR 6
Operating cycle	approx. 8 hours
Weight	approx. 0.09 kg (without battery)

Ordering details

Type	Scope of delivery	Order qty.	Order No.
Stabex mini II	with incand. lamp, without battery (min. order qty. 10 units)	10	1 1360 000 001

Accessories

Incand. lamp 2.3 V/0.36 A	10	1 1360 002 001
Hand strap	1	3 1360 030 005
Belt holder	1	3 1360 030 006

EX - TORCHLIGHT

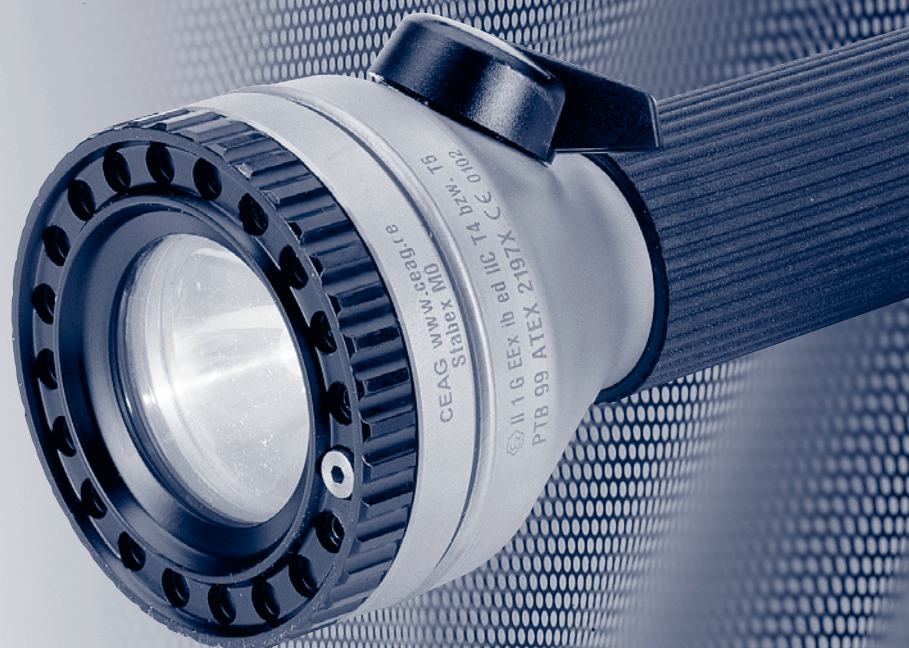
Stabex M0

The Stabex M0 was specially developed as an inspection lamp for gas or empty mineral oil tanks where the permanent hazard of an explosive gas atmosphere exists. Furthermore it is also suitable for areas where long-term combustible dust/air mixtures are present.

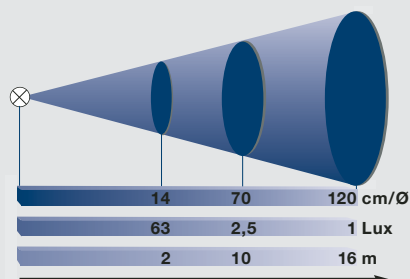
The Stabex M0 explosion-protected torch has specifically been approved for use in Zone 0 hazardous areas up to the temperature class T6, and also fulfills the ATEX-Directive 94/9/EG.

The Zone 0 safety requirements are met, since a permanent overlapping of 2 to 3 explosion categories is provided for. The torchlight may be operated in the Zone 0 without additional safety measures up to a height of 5 metres above ground level. After use, the lamp must not be left in the Zone 0 hazardous areas.

The rotary switch is designed for single-handed operation. Even when safety gloves are worn, it can be operated without difficulty. The housing of the extremely robust torch is made of stainless steel and bronze which prevents the generation of ignitable sparks due to impact. The multipart front pane is made of mineral safety glass. The torch is equipped with 2 dry cells size D according to IEC 86 LR20 which are impact-protected by a metal sheath.



Range-diagram Stabex M0

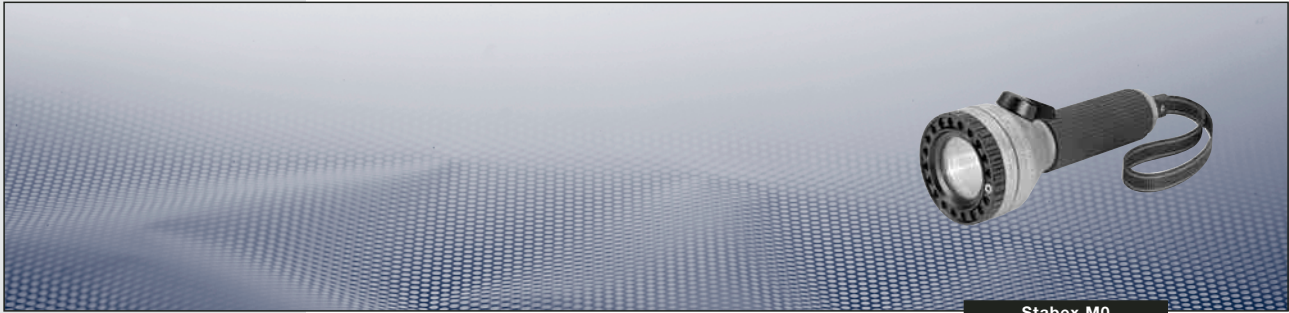


Zone 0

Extremely robust housing made of stainless steel and bronze

Ergonomic switch design makes it suitable for operation with safety gloves

International Approvals

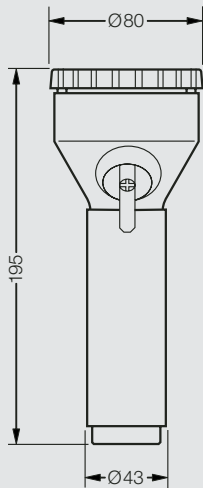


Stabex M0

E X - T O R C H L I G H T

Stabex M0 (Zone 0)

1.9



Stabex M0

Technical data

Stabex M0

Marking to 94/9/EC	Ex II 1 G
Type of protection	EEx ib ed IIC T6/T4
EC-Type Examination Certificate	PTB 99 ATEX 2197 X
Enclosure material	Stainless steel/bronze
Light aperture	Ø 44 mm, mineral glass
Incandescent lamp	2.5 V/0.3 A
Degree of protection to EN 60529	IP 65
Max. permitted height of fall	5 m
Permissible ambient temperatures	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)
Battery	2 dry cells IEC 60086 R 20/LR 20 (T6/T4)
Operating time	approx. 12 h (LR 20)
Luminous flux	approx. 12 lm
Weight	approx. 2.2 kg (without battery)

* II 1 D applied for

Ordering details

Type	Scope of delivery	Order No.
Stabex M0	with incandescent lamp and battery	1 1350 000 001

Accessories for portable Ex-lamps see page 1.27

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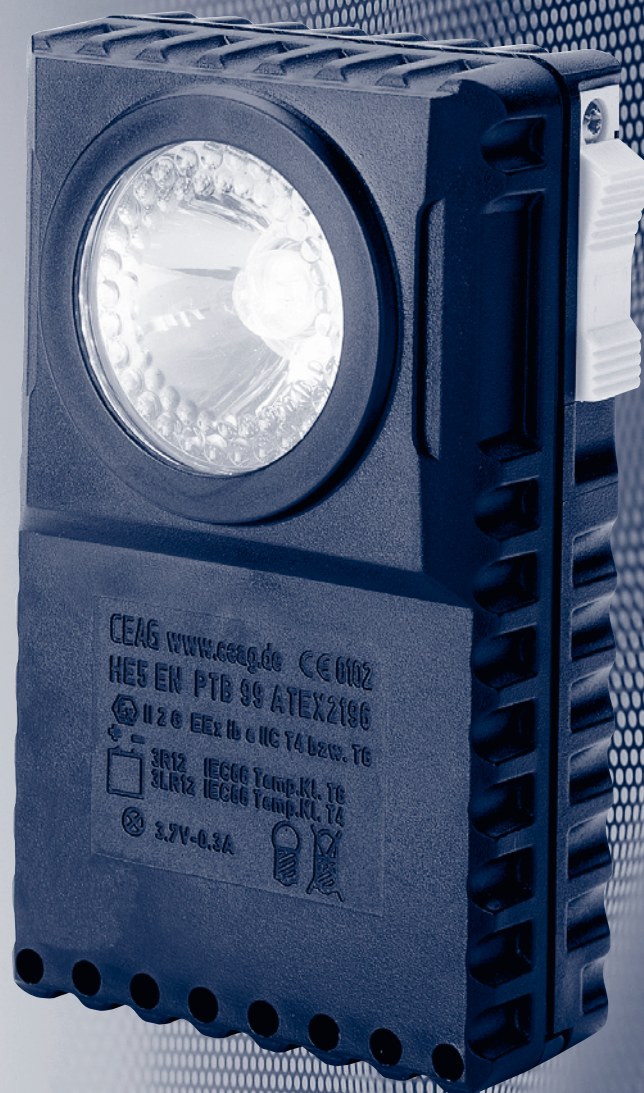
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EX - H A N D L A M P

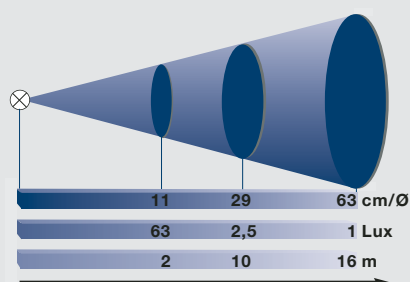
HE 5 EN



The HE 5 EN pocket torch meets the requirements of ATEX-Directive 94/9/EG and has been approved for use in Zones 1 and 2 hazardous areas up to temperature class T6. Since this temperature class covers all gases and vapours known at present, there is no restriction to the use of the HE 5 EN pocket lamp in Zones 1 and 2.

The lamp is particularly suitable for control and inspection duties. Due to its flat, handy shape it can be put in any pocket. There is also a strap for fastening the lamp to clothing or to a belt. By the use of both a parabolic reflector and a fresnel lens, a light distribution is obtained which equally serves short and long distances. The battery is a (flat) 4.5 V dry battery to IEC 60086 3 R 12.

Range-diagram HE 5 EN



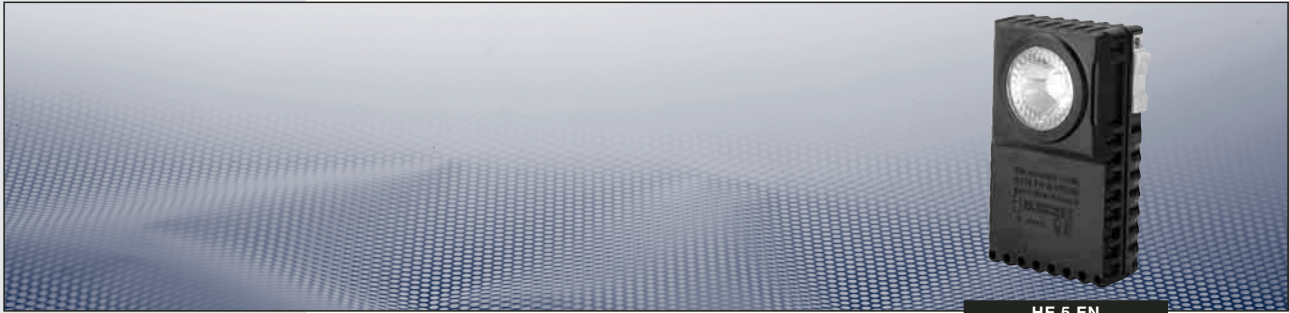
Temperature class T6

Combined light distribution by means of parabolic reflector and fresnel lens

Handy shape

Scratch resistant mineral glass

International Approvals

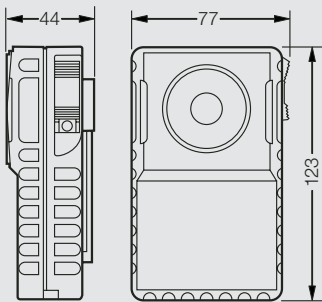


HE 5 EN

E X - P O C K E T T O R C H

HE 5 EN

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HE 5 EN

Technical data

HE 5 EN

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx e ib T6/T4
EC-Type Examination Certificate	PTB 99 ATEX 2196
Enclosure material	Polyamide/black
Light aperture	Ø 40 mm, mineral glass
Incandescent lamp	3.7 V/0.3 A
Switch	Slide switch „ON - OFF“
Degree of protection to EN 60529	IP 54
Permissible ambient temperatures	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)
Battery	Flat battery 4.5 V IEC 60086 3 R 12 (T6) or IEC 60086 3 LR12 (T4)
Operating time	approx. 6 h
Weight	approx. 0.14 kg (without battery)

Ordering details

Type	Scope of delivery	Order No.
HE 5 EN	with incandescent lamp without battery	1 1125 000 111

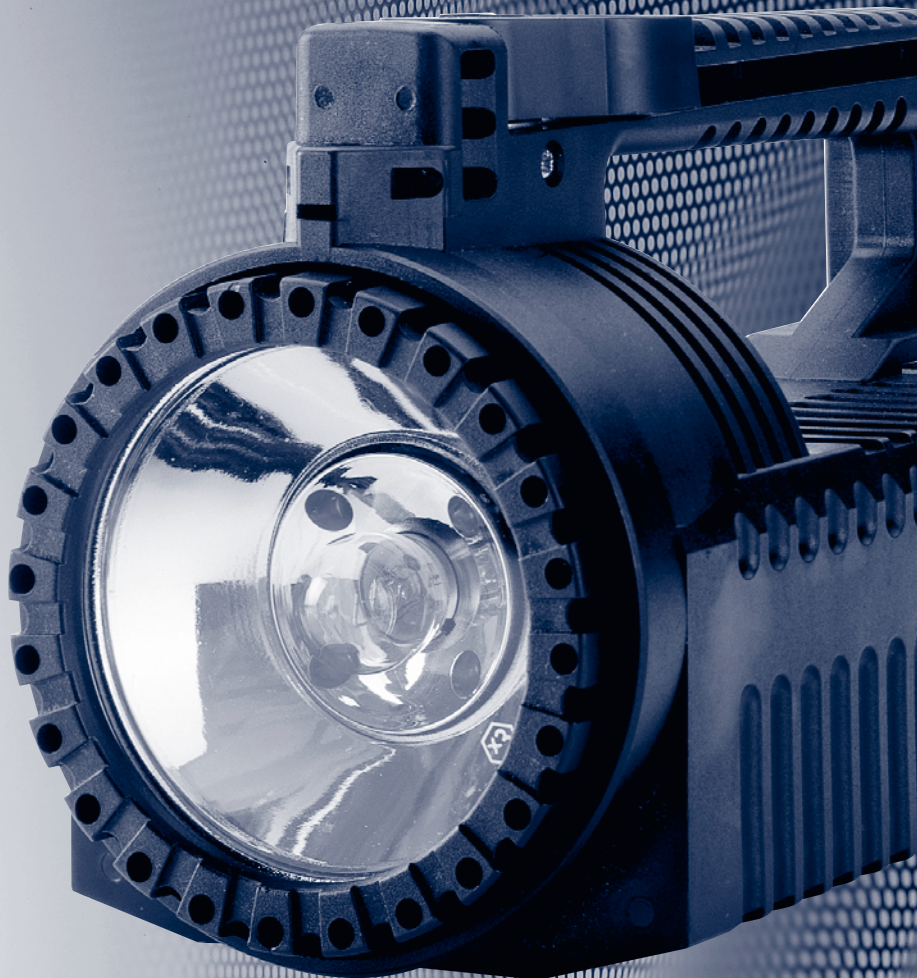
Accessories for portable Ex-lamps see page 1.27

EX - H A N D L A M P

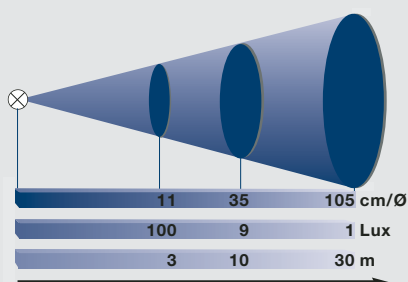
HE 8 N EN

This powerful hand lamp has been developed for use in Zone 1 and Zone 2 hazardous areas.

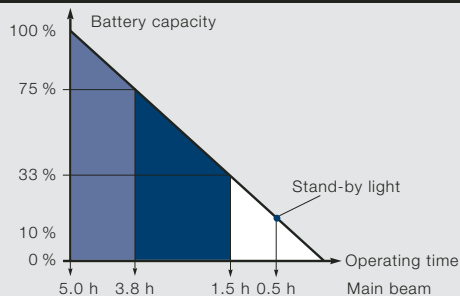
It is used for inspection and repair work, security patrols, and in railway workshops and shunting yards. The lamp has been designed for single-handed operation. By means of the light switch it can be switched over to a red signal light, which is produced by 4 powerful light emitting diodes visible at a long range. The working light can be uniformly focussed for a short and long range. In conjunction with the LG 483 charger, the light is automatically switched on in the event of a mains failure (non-maintained system mode). While the working light is switched on, an electronic indication of the residual operating time is provided. During the charging process the charging state is also indicated. In case of a broken filament or at the end of the duty cycle, the hand lamp automatically switches over to the stand by light. The built-in safety circuit prevents the deep discharge of the battery. The battery insert is fitted with a rechargeable NiCd battery (3.6 V/4 Ah). The lamp is charged in the LG 483 charger. When the battery is charged, only the amount of energy that has been used will be replaced.



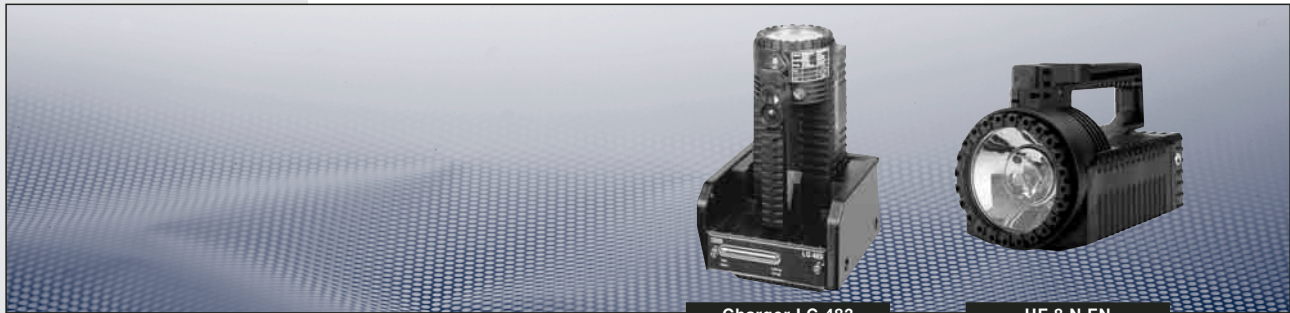
Range-diagram HE 8 N EN



Indication of residual operating time HE 8 N EN



- Safety circuit in case of a broken filament or an exhausted battery**
- Gentle charge dependent on the drawn capacity**
- Reversible to red signal light by light switch**
- Indication of residual operating time and charging state**
- Degree of protection IP 65**
- International Approvals**



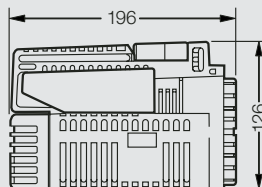
Charger LG 483

HE 8 N EN

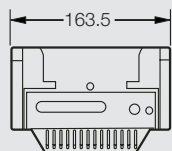
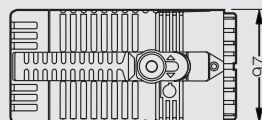
E X - H A N D L A M P

| HE 8 N EN |

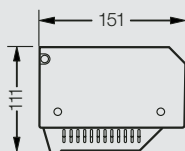
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HE 8 N EN



Charger LG 483



Technical data

HE 8 N EN

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx e ib IIC T4
EC-Type Examination Certificate	PTB 98 ATEX 2063
Enclosure material	Polyamid/black
Light aperture	Ø 71 mm, mineral glass
Incandescent lamp	3.75 V / 0.8 / 0.4 A
Rotary switch	3 positions „Main beam - OFF - signal light (red)“
Degree of protection to EN 60529	IP 65
Permissible ambient temperatures	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)
Battery	chargeable NiCd battery (3.6 V/4 Ah)
Operating time	approx. 5 h
Function	<ul style="list-style-type: none"> - Indication of residual operating time - Emergency light in event of mains failure - Charge depending on the drawn capacity - Red signal light, switchable - Switching for standby light or in case of broken filament
Weight	approx. 1.0 kg (with battery)

Charger LG 483

Degree of protection	IP 31
Rated voltage	220 - 250 V AC 50/60 Hz
Input power	12 VA
Charging period	max. 8 h (dep. on charging state)
Weight	approx. 1.3 kg

Ordering details

Type	Scope of delivery	Order No.
HE 8 N EN	with incandescent lamp and battery	1 1118 000 050
Charger LG 483		1 1540 000 483

Accessories for portable Ex-lamps see page 1.27

EX - H A N D L A M P S

HE 8 EURO HE 8 EURO PLUS

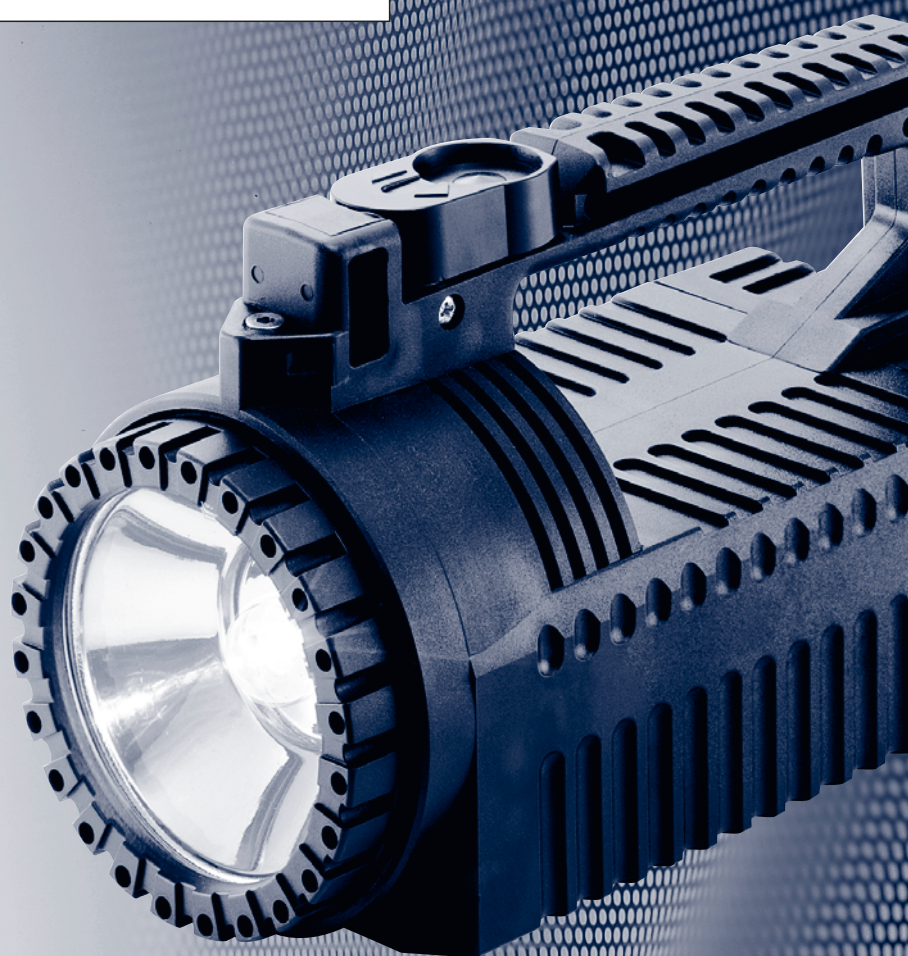
The HE 8 Euro and HE 8 EURO PLUS hand lamps which are suitable for use in Zone 1 and Zone 2 hazardous areas, have been developed for inspection and maintenance duties as well as for security patrols. They are in accordance with the ATEX-Directive 94/9/EG.

Their high IP 65 protection renders them particularly suitable for work in sewage systems and similarly wet environments. By turning the reflector ring, the light can be converted into a spotlight.

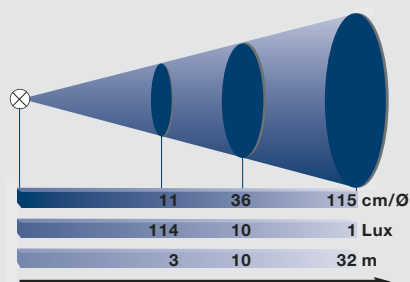
The HE 8 EURO PLUS hand lamp is fitted with an electronic indication of the available operating time. Light emitting diodes indicate the available capacity of the battery. There is also an Indicator for the recharge status.

The HE 8 EURO is fitted with 3 dry batteries (IEC 60086 LR 20) while the HE 8 EURO PLUS is fitted with a rechargeable, gas-tight 4 AH NiCd battery. The battery insert can be recharged separate from the lamp with a plug in charger. This means that with a second easily replaceable battery insert, there will always be a recharged battery available.

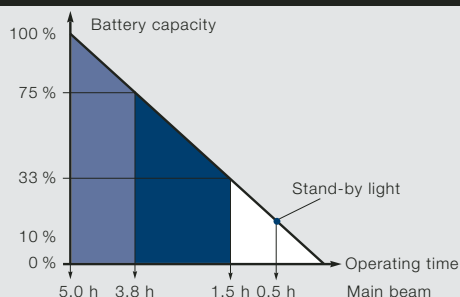
By using the rechargeable battery insert, the HE 8 EURO can be converted into a type HE 8 EURO PLUS. Indication of the available operating time is then be provided.



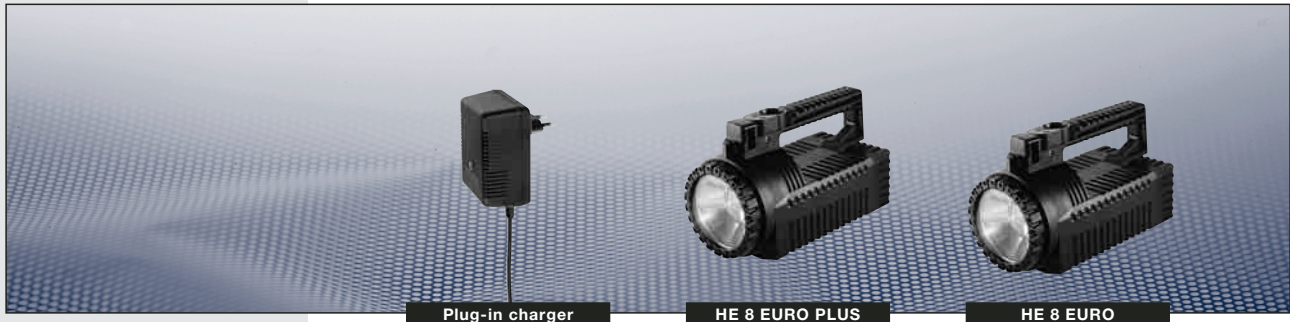
**Range-diagram
HE 8 EURO/EURO Plus**



**Indication of residual operating time
HE 8 EURO Plus**



- Powerful hand lamp due to halogen lamp with double bulb**
- Gentle battery charging with overcharge protection (EURO PLUS)**
- Operating time indicator (EURO PLUS)**
- Focussing by means of adjustable reflector**
- Degree of protection IP 65**
- International Approvals**



Plug-in charger

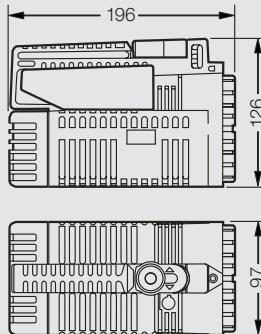
HE 8 EURO PLUS

HE 8 EURO

E X - H A N D L A M P

| HE 8 EURO | HE 8 EURO PLUS |

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HE 8 EURO
HE 8 EURO Plus

Technical data

HE 8 EURO / HE 8 EURO PLUS

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx e ib IIC T4
EC-Type Examination Certificate	PTB 98 ATEX 2063
Enclosure	Polyamide/black
Light aperture	Ø 71 mm, mineral glass
Halogen lamp with double bulb	4 V / 0,82 A
Degree of protection to EN 60529	IP 65
Permissible ambient temperatures	-20 °C to +40 °C specified data: 0 °C to +30 °C (battery)
Battery	EURO: battery insert to be equipped with of 3 x 1.5 V/IEC 60086, R 20/LR 20 EURO PLUS: battery insert with rechargeable battery 3.6 V/4 Ah
Operating time	approx. 10 h (HE 8 EURO) approx. 5 h (HE 8 EURO PLUS)
Function	– easily replaceable battery insert – Halogen lamp with double bulb – Indication of available duration (HE 8 EURO PLUS) – protection against overcharge (HE 8 EURO PLUS)
Weight	approx. 0.64 kg (HE 8 EURO, without battery) approx. 1.0 kg (HE 8 EURO PLUS, with battery, rechargeable)

Plug-in charger for HE 8 EURO PLUS

Degree of protection	IP 20
Rated voltage	230 V ± 10 %, 50/60 Hz
Input power	6.5 VA
Charging period	max. 14 h (EURO PLUS)
Degree of protection	II
Weight	approx. 0.42 kg

Ordering details

Type	Scope of delivery	Order No.
HE 8 EURO	with lamp, without battery	1 1118 000 001
HE 8 EURO PLUS	with lamp and battery pack, rechargeable	1 1118 000 010
Plug-in charger		1 1518 000 111

Accessories for portable Ex-lamps see page 1.27

EX - SEARCHLIGHT

SEB 8 SEB 8 L | SEB 8 ADR

The powerful explosion-protected portable searchlights SEB 8 and SEB 8 L are in accordance to the ATEX-Directive 94/9/EG and have therefore been certified for usage in the Zones 1, 2, 21 and 22 in the T4 temperature class.

Their use is permitted in nearly any area where the hazard of an explosive atmosphere exists. They have been developed for inspection, maintenance and repair operations in hazardous explosive atmospheres. Due to their robust construction and the high IP 65 safety standard they can be used in nearly any work area subject to high mechanical stress and high humidity.

The searchlights have a light intense Halogen double bulb, a gas-tight NiCd battery 4,8 V/7 Ah and a 5 LED Display.

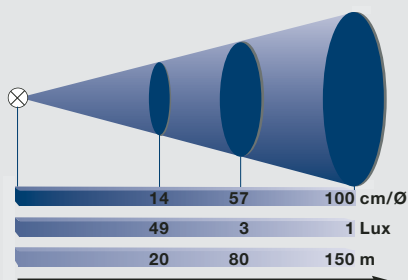
Five light emitting diodes provide continuous information on the current operating and charging state, plus it will also "warn" you in due time when the battery capacity is low or it needs to be replaced.

The electronics additionally protect against excessive discharging as well as overcharging – only the amount of energy that has been used will be replaced. This increases the service life of the battery.

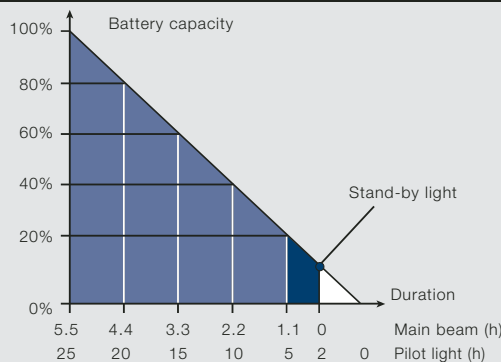
In the event of a broken filament, the lamp will automatically switch over from the main beam to the standby light, in order to prevent the user from being left suddenly in the dark.



Range-diagram



Indication of residual operating time



- Halogen lamp with double bulb:
- Luminous intensity after 4 h ≥ 15000 cd
- Indication of available duration provides safety of operation
- Broken filament and Automatic switchover to pilot light occurs
- No overcharging of the battery due to a recharge dependent on the capacity
- Focussing beam
- Degree of protection IP 65
- International Approvals



SEB 8/SEB 8 L as search and work light

SEB 8/SEB 8 L

A search and working light

This explosion-protected portable searchlight has been developed in accordance with the new fire brigade standard DIN 14 642 in order to comply with the requirements for control and rescue operations of the police and the fire brigade. The electronics of the lamp are reliably protected against electromagnetic fields (EMC). They are in accordance with the ATEX-Directive 94/9/EG. Special for operations where a constant luminosity is required the prism filter will give you a quadratic working light with a uniform, widespread luminous intensity distribution and that with no major loss. Slip-on coloured filters extend the range of

functions for the SEB 8 such as safeguarding and giving signals.

SEB 8 ADR as a warning light according to StVZO and ADR-Directives

For special operations such as a warning and inspection light for the transport of hazardous goods by road the Cooper Crouse-Hinds GmbH has developed the SEB 8 ADR. This version has been certified by the Federal Motor Vehicle Department as a warning and inspection light according to the Road Traffic Regulations and has been issued with an EC-Type Examination Certificate. According to the ATEX-Directive 94/55/EG, this lamp can be used across Europe as a hazard warning and inspection light for the transportation of hazardous good on the road. This is possible due to optimized orange filter and the special switching technology.

Charging possibilities

SEB 8/SEB 8 L/SEB 8 ADR

The SEB 8 model can be charged from a motor vehicle battery using the vibration-proof motor vehicle holder (10-33 V) or from the mains supply of the LG 443 charger. The SEB 8 L model features an integrated mains connecting lead by means of which it can be recharged from the 230 V mains supply.



SEB 8 ADR as a warning light in the transportation of hazardous goods on the road





SEB 8 L

SEB 8 ADR

SEB 8 with vehicle charger

Charger LG 443

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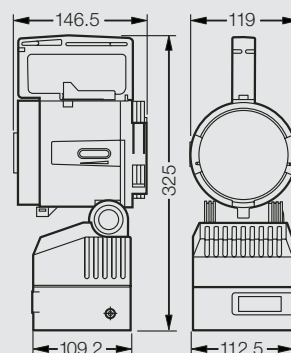
| SEB 8 ADR | SEB 8 L | SEB 8 |

Technical data

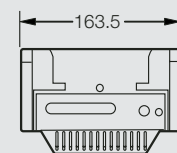
SEB 8 L/SEB 8/SEB 8 ADR

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*
Type of protection	EEx e ib IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 2195
EG-Type approval	
acc. guideline 95/54/EC	[e1]
(EMV in vehicles)	023025
Approved design of Federal Office for motor vehicles	~ K 265
Enclosure material	Polyamide/black
Light aperture	Ø 98 mm mineral glass
Halogen lamp with double bulb	5.5 V/5.5 W
Pilot light-Incandescent lamp	4.8 V/0.3 A
Degree of protection to EN 60529	IP 65
Permissible ambient temperatures	-20 °C to +40 °C, specified data 0 °C to +30 °C (battery)
Battery	NC-battery, rechargeable 4.8 V/7 Ah
Operating time	approx. 5.5 h
Function	<ul style="list-style-type: none"> - Indication of available duration processor controlled - Charge depending on the drawn capacity - Flashlight - Emergency light - Switching for standby light or in case of broken filament - Integrated charger (SEB 8 L)
Weight	SEB 8 L: 2.5 kg SEB 8/SEB 8 ADR: 2.2 kg
Charger LG 443 for	
SEB 8/SEB 8 L/SEB 8 ADR	
Rated voltage	220-250 V ± 10 %, 50/60 Hz
Motor vehicle charger 90 for	
SEB 8/SEB 8 L/SEB 8 ADR	
Rated voltage	10-33 V DC
Integrated charger SEB 8 L	
Rated voltage	230 V ± 10 %; 50/60 Hz

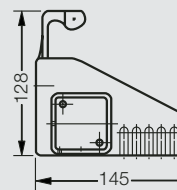
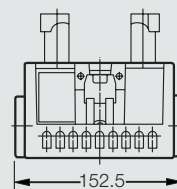
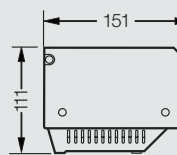
* II 2 D applied for



SEB 8/SEB 8 L/SEB 8 ADR



LG 443



Motor vehicle charger 90



Charger LG 443

SEB 8 with vehicle charger

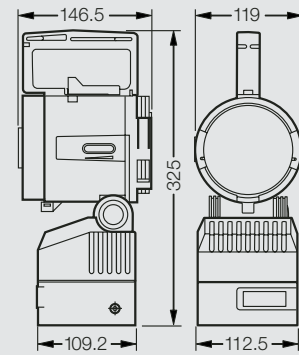
SEB 8 ADR

SEB 8 L

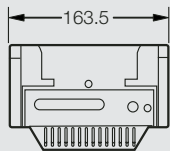
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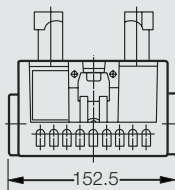
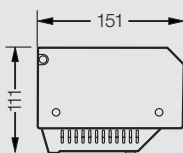
| SEB 8 L | SEB 8 | SEB 8 ADR |



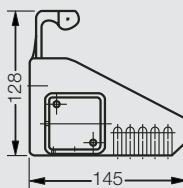
SEB 8/SEB 8L/SEB 8 ADR



LG 443



Motor vehicle charger 90



Ordering details

Type	Scope of delivery	Order No.
SEB 8 L	Including halogen lamp with double bulb, pilot lamp, diffusing lens and battery (rechargeable by means of mains, LG 443 or motor vehicle charger 90)	1 1147 000 001
SEB 8	Including halogen lamp with double bulb, pilot lamp, diffusing lens and battery (rechargeable in LG 443 or motor vehicle charger 90)	1 1147 000 002
SEB 8 ADR	Including halogen lamp with double bulb, pilot lamp, diffusing lens and battery (rechargeable in LG 443 or motor vehicle charger 90)	1 1147 000 200
Charger LG 443		1 1540 000 443
Motor vehicle charger 90		1 1145 000 792
Wall bracket SW	Bracket, without charger	1 1145 000 795

Accessories for portable Ex-lamps see page 1.27

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EX - CAP LIGHT

HLE 7 L EN

The explosion-protected HLE 7 L EN has been developed as a working and inspection lamp for tunnelling and for duties in sewage systems.

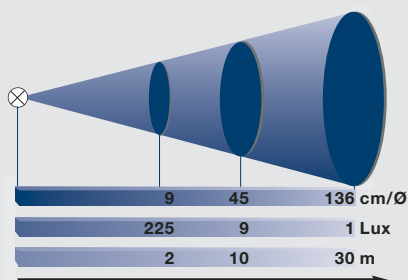
It is in accordance with the ATEX-Directive 94/9/EG and has been approved for use in the Zones 1 and 2 hazardous areas up to the temperature class of T4.

The lamp can easily be fixed onto the headpiece holder of the protective helmet. The main or secondary filament of the two-filament lamp is operated by the switch on the headpiece. The lamp has a highly flexible neoprene-sheathed connecting cable. The battery container is additionally protected by a leather case.

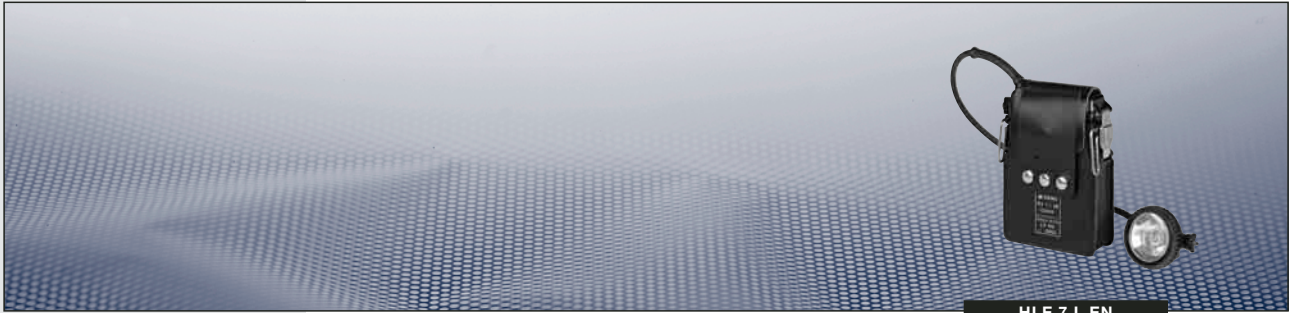
The powerful energy source consists of a three-cell maintenance free and gas-tight 7 Ah NiCd battery which can be charged from the 230 V mains supply by means of the provided connecting lead. The battery has an integrated charging circuit. The battery container does not have to be opened for charging. A red and green LED indicate the charging state.



Range-diagram



- Abrasion resistant flexible connection between battery and headpiece
- Powerful maintenance free, gastight 7 Ah battery
- Battery container with integrated charging circuit
- Red and green LED's indicating the charging state
- Two-filament lamp provides safety in case of a broken filament
- International Approvals



HLE 7 L EN

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HLE 7 L EN

Technical data

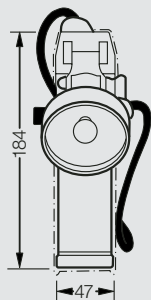
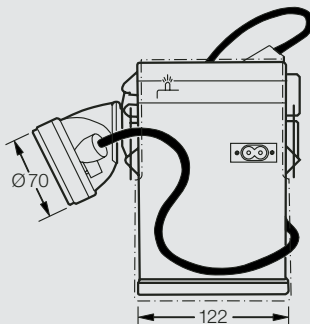
HLE 7 L EN

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx e ib IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 2194
Enclosure material	Polyamide/black
Light aperture	Ø 65 mm, mineral glass
Rotary switch	4 positions: „OFF - pilot light - ON - main light“
Incandescent lamp	3.75 V / 0.8 / 0.4 A
Degree of protection to EN 60529	IP 54
Permissible ambient temperatures	-20 °C to +40 °C, specified data: 0 °C to +30 °C (battery)
Battery	chargeable NiCd battery 3.6 V/7 Ah
Operating time	approx. 8 h
Rated voltage	230 V ± 10 %, 50/60 Hz
Degree of protection	II
Input power	4 VA
Permissible ambient temperatures during charging	0 °C to +35 °C
Charging period	max. 18 h
Function	– Integrated charger – Charge state indication – Two-flament lamp
Weight	approx. 2.0 kg (with battery)

Ordering details

Type	Scope of delivery	Order No.
HLE 7 L EN	including lamp, battery and mains connection lead	1 1229 000 416

Accessories for portable Ex-lamps see page 1.27



HLE 7 L EN

EX - TANK INSPECTION LAMP

FOC Fibre-Optic Light Guide Cable with 25 m long portable system for operating in Zone 0

In order to create adequate working lighting in the Zone 0 areas during maintenance work, only hand-held lamps, such as the Stabex MO with relatively low levels of light, have been available to date. But if large areas of illumination are needed, a system to light up the inside of the tank in Zone 0 is now available for the first time in the form of the new Tank Inspection Lamp FOC 25,

Mechanical Version

The system comprises 2 units:

1. A transport trolley with a fixed cable reel, an EEx-de lamp housing and a supply cable with a plug allow the transport and operation of the light cable system in Zone 1. The size of the cable reel is also designed to prevent intentional access through the tank opening.
2. The 25 m long fibre-optic cable may be introduced into Zone 0 after the equipotential bonding has been connected.



High light capacity in Zone 0
(approx. 300 lm)

metal halide lamp 150 W with electronic ballast and specially sized reflector for use with light guide systems

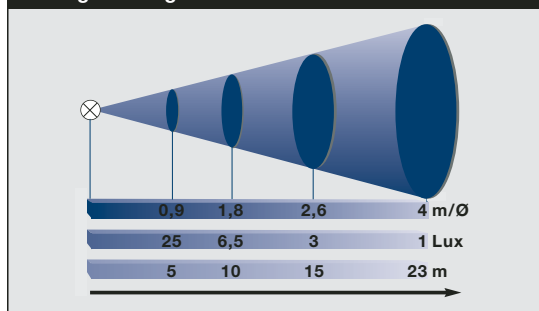
Permanently installed transport carriage with large wheels (200 mm diameter) for easier and safer handling even on uneven ground

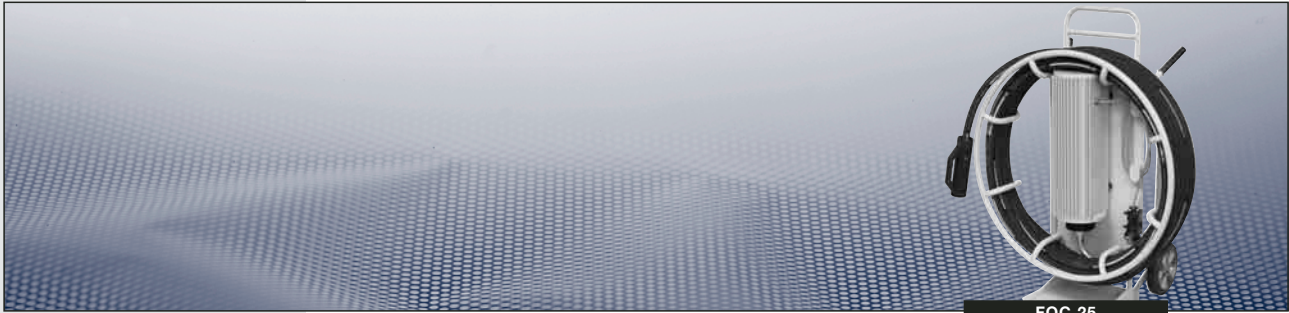
Light guide cable with highest degree of protection IP 67

Only a screw terminal is needed for central equipotential bonding, since the protective hose that conducts electricity and the conductive wheel construction include the whole system

High-quality protective hose for the light guide cable pursuant to EN 12115 in a chemical and oil-resistant design

Range-diagram



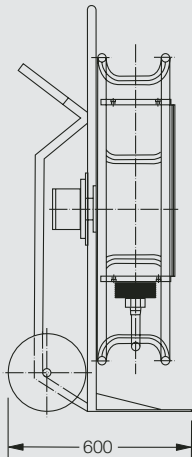
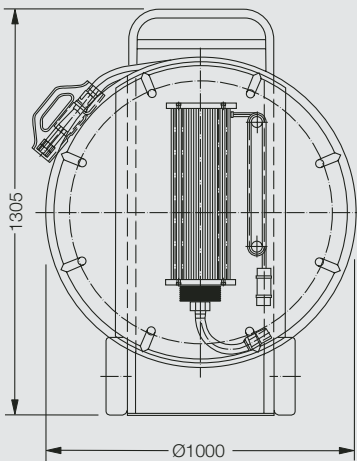


FOC 25

EX - T A N K I N S P E C T I O N L A M P

FOC for Zone 0

1.25



FOC 25

Technical data

Fibre-optic light

Transport carriage with light source (device 1)	
Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T4
EC-Type Examination Certificate	PTB 02 ATEX 2179
Degree of protection to EN 60529	IP 66
Rated voltage	220 - 230 V AC
Rated current	1.8 A

Fibre-optic light guide cable (device 2)¹⁾

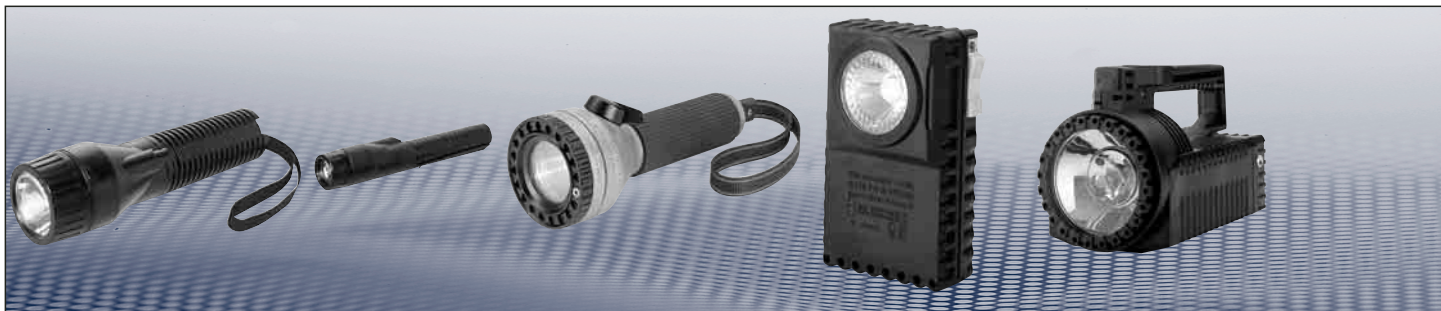
Marking to 94/9/EC	Ex II 1 G
Type of protection	Ex IIC T6
Degree of protection to EN 60529	IP 67

Laden weight of the system	112 kg
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¹⁾ Fulfills IEC 31WG8/TD3 protection against ignition by optic radiation

Ordering details

Type	Scope of delivery	Order No.
FOC 25	incl. 25 m light guide cable	1 3032 000 001



Accessories

On the following page you will find Accessories and Spare Parts for the portable Ex-Lamps covered in chapter 1.

Spare Parts

As well as the above, there is also a large amount of spare parts available for maintenance and repair work.

If required, please contact us, you will find that we will be more than pleased to help you.

We must point your attention to the fact that repair work done on explosive-protected products must be carried out with original spare parts only! If this is not the case and third-party parts are used, the Certification and Approval for the product will be forfeited and a possible reduction of the explosion-protection may be achieved.

Repair Service

Of course the Cooper Crouse-Hinds GmbH upholds its own repair department where customer repairs are carried out. Our qualified and schooled personnel carry out repairs and overhauling using original spare parts, quickly and efficiently. This service also includes the end quality testing needed for explosion-protected products. With this service you have an "assured safety" as do all overhauled Ex-Lamps and products by Cooper Crouse-Hinds GmbH.

Repair Schooling/Training

Repairs on explosion-protected electrical products must be carried out by qualified Electricians only! For our customers to be able to repair explosion-protected goods themselves we offer Qualification Training Courses in our house several times a year. Each trainee will become extensive training documentation and will, after having completed the course, a course completion certification. Please get in contact with us if you require further information.




Accessories for Ex-torchlight Stabex mini and Stabex HF/HF-L

Type	OU	Order No.
1 Incandescent lamp 2.2 V/0.4 A for Stabex mini	10	1 1358 000 070
1 Halogen lamps 2.8 V/0.5 A for Stabex HF	10	1 1359 000 070
Handle with 2 NC batteries for Stabex HF-L bzw. HF	1	2 1359 200 000

Accessories for Ex-torch light Stabex M0

Type	OU	Order No.
1 Incandescent lamp 2.5 V / 0.3 A	5	1 2041 820 000
Protective sheath for battery	1	3 1350 001 024

Accessories for Ex-pocket torch HE 5 EN

Type	OU	Order No.
1 Incandescent lamp 3.7 V / 0.3 A	10	1 2041 810 000

Accessories for Ex-hand lamp HE 8 N EN

Type	OU	Order No.
Battery pack with NC-battery 3.6 V/4 Ah	1	2 1118 020 000
1 Incandescent lamp 3.75 V/0.8/0.4 A	5	1 2035 300 000

Accessories for Ex-hand lamp HE 8 EURO/EURO PLUS

Type	OU	Order No.
Battery pack with NC-battery 3.6 V/4 Ah, rechargeable	1	2 1118 024 000
Halogen lamp with double bulb 4 V/0.82 A	1	2 2061 080 000

Accessories for Ex-searchlight SEB 7 L/SEB 7

Type	OU	Order No.
Battery set 7 Ah, 4.8 V NC	1	2 1145 585 000
Main lamp 5.0 V/5 W	1	1 2073 000 160
1 Pilot light incandescent lamp 4.8 V/0.3 A	10	1 2041 450 000
Radial diffuser cap, orange	1	2 1145 017 000
Slip-on filters red, orange, green	1	2 1147 300 000
Mains connecting lead for SEB 7 L	1	4 0018 031 358

Accessories for Ex-searchlight SEB 8 L/SEB 8/SEB 8 ADR

Type	OU	Order No.
Battery set 7 Ah, 4.8 V NC	1	2 1147 701 000
Conversion kit for motor vehicle charger 90	1	2 1147 400 000
Halogen lamp with double bulb 5.5 V/5.5 W	1	1 2061 000 040
1 Incandescent lamp 4.8 V/0.3 A (pilot light)	10	1 2041 450 000
Radial diffuser cap, orange	1	2 1145 017 000
Slip-on filters red, orange, green	1	2 1147 300 000
Slip-on filter orange with adapter and magnet for SEB 8 ADR	1	1 1147 080 000

Accessories for Ex-cap light HLE 7 L EN

Type	OU	Order No.
Power supply complete	1	2 1229 456 000
1 Incandescent lamp 3.75 V/0.8 A/0.4 A	5	1 2035 520 000
Belt	1	3 0231 001 011
Head ribbon for helmets	1	2 1261 191 000

Please note that we can only deliver in the ordering units (OU) stated in the tables above.

EX - FLUORESCENT LIGHT FITTINGS

EX-LIGHT FITTINGS - MAIN FEATURES	2.2
EX-LIGHT FITTING eLLK 92...	2.10
EX-POLE MOUNTED LIGHT FITTING eLLM 92...	2.14
EX-EMERGENCY LIGHT FITTING eLLK 92... NIB	2.16
EX-RECESSED CEILING LIGHT FITTING eLLB 20...	2.22
EX-RECESSED CEILING EMERGENCY LIGHT FITTING eLLB 20... NIB	2.26
EX-d LIGHT FITTING AB 12 AND EVF...	2.30
EX-LIGHT FITTING nLLK 98... FOR ZONE 2	2.36
EX-CEILING LIGHT FITTING FVS... FOR ZONE 2	2.40
ACCESSORIES	2.42



WHAT MAKES YOU SO SURE THAT YOU CAN RELY ON THE LIGHTING?

(15 YEARS Ex-EVG EXPERIENCE: PAGE 2.7 AND 2.8)

1

2

3

4

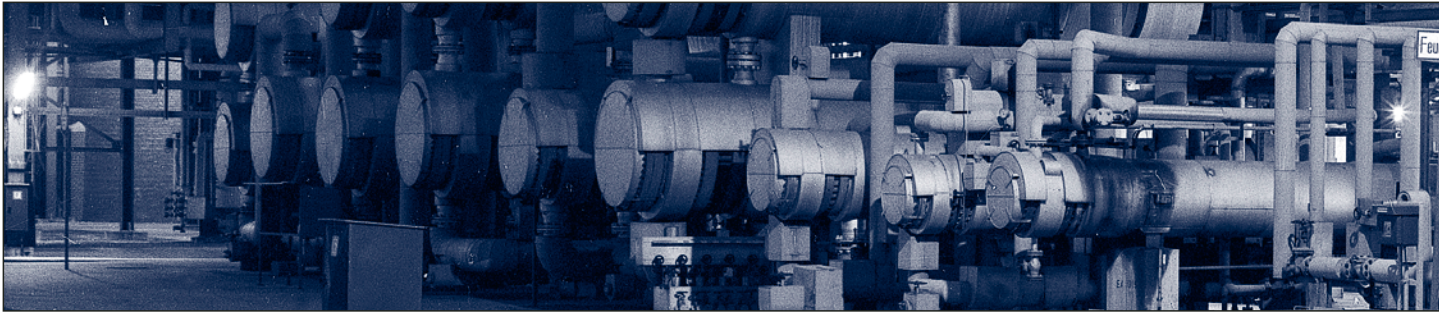
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2.2

E X - L I G H T F I T T I N G S

| Field of applications and main features |

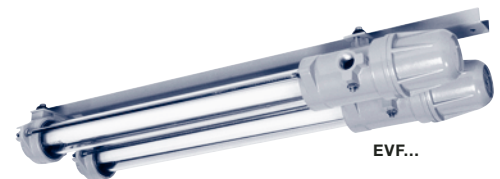
The best choice for an economical solution for the illumination of probable explosive environments is the fluorescent lamp.

The advantages of fluorescent lamps in light fittings:

- worldwide availability
- low cost
- very good colour reproduction
- immediate starting
- easy handling
- long service life with EVG-Technology
- immediate restart
- standardised disposal of the fluorescent lamps



eLLK 92...



EVF...



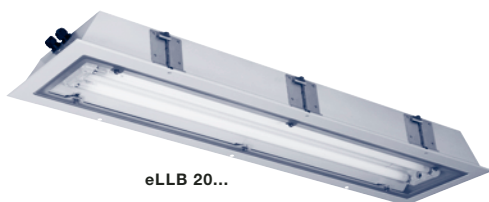
nLLK 98...

Depending on the proposed usage there is a variety of groups to choose from:

- eLLK/M 92...: Surface and pole mounted for use in the Zones 1, 2, 21 and 22
- nLLK 98...: Surface mounted for use in the Zones 2, 21 and 22
- eLLB 20...: Recessed ceiling mounting for use in the Zones 1, 2, 21 and 22
- AB 12.../EVF...: Flameproof surface mounted for use in the zones 1 und 2
- FVS 225: Ceiling surface mounted for use in zone 2



AB 12...



eLLB 20...



FVS 225



E X - L I G H T F I T T I N G S

| Field of applications and main features |

2.3

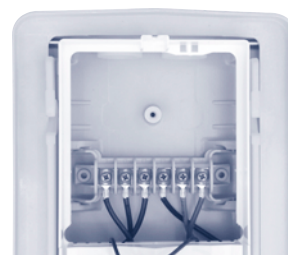
one sided
through-wiring
Type 1/6


Fluorescent light fittings of the series **eLLK 92...** / **nLLK 98...** are equipped with a single-end through-wiring **1/6** as standard. Here there are 2 cable entries M25 for cable sizes \varnothing 8-17 mm, where as one of these is fitted with a certified blanking plug (red) as a stopper.

The **2/6** version is fitted with a cable entry M25 for cable sizes \varnothing 8-17 mm and a certified blanking plug (red) as stopper on both ends. The mains terminal block has 6 clamps enabling wire of up to $2 \times 6 \text{ mm}^2$ (solid) or $2 \times 4 \text{ mm}^2$ (multi wire) to be connected. This allows for a comfortable and problem free wiring (L, L1, L2, L3, N and PE) and installation.

The **2/6** version is fitted with a second mains terminal block of 6 clamps on the opposite side. The required internal wiring of the light fitting has been rated for 16 A.

The standard screwable terminal block allows single sided connecting without having to bend the wire. Simply push the hinged cover shut and you already have protection against contact according to BGV A2.

double sided
through-wiring
Type 2/6


1

2

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EX - LIGHT FITTINGS

Technical Special Features on hand of the eLLK 92

The fluorescent lamp series eLLK 92..., eLLM 92..., nLLK 98... and in some parts the eLLB 20... have in their architecture, the same characteristics, which we show here on hand of the eLLK 92-Series.

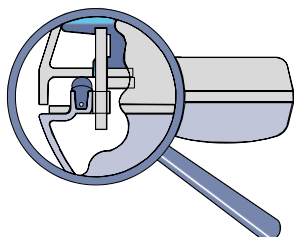
Materials

The eLLK 92 light fitting is made of high-grade plastics that, in addition to the excellent mechanical properties, also feature a high stability against many chemicals found in industrial plants. All the materials



Combination of high resistant materials

used for the light fitting provide are effectively protected against corrosion and have already been successfully tried and tested in chemical and off-shore installations.



Optimized
Sealing system

Sealing system

The bowl and the enclosure form a labyrinth, that protects the seal against jet water. The continuous seal is extremely elastic and, in conjunction with the locking mechanism, ensures that the light fitting is sealed tightly for a long time. As was also confirmed by an ERA test, this is the only way to reliably maintain the degree of protection IP 66 for a longer period.

Aptitude tests

The eLLK 92 light fitting has already passed both tests with lateral thrusts due to wind up to 12 Bft and the ERA test specified for British off-shore installations. Here, for example, the sealing qualities and the resistance to vibration are tested.

Standard – two moulded plastic or brass (optional) cable entries for one-ended through-wiring

Double thread (MS)
for reliable PE contacting of metal gland (optional)

Standard terminal block with
6 terminals for conductors up to 2 x 6 mm²

Optional double-ended
through-wiring for cable connection

Enclosure made of polyester
reinforced with glass fibre

Special Ex-EVG in the type of protection EEx d
to meet high requirements

Locking bolt for operating the
light fitting locking mechanism on both sides

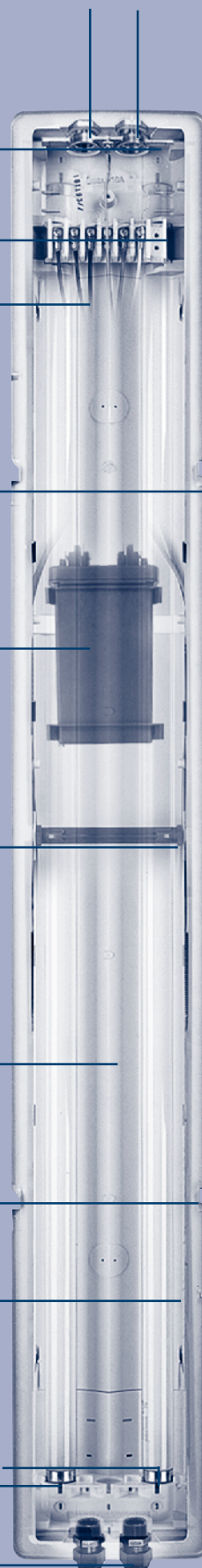
Bowl made of transparent,
impact-resistant polycarbonate

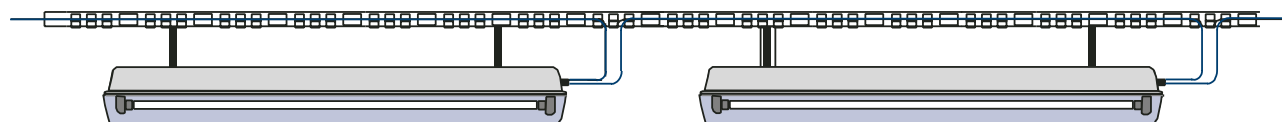
Sockets for the hinges
of protective bowl – on both sides

Internal sealing system for IP 66

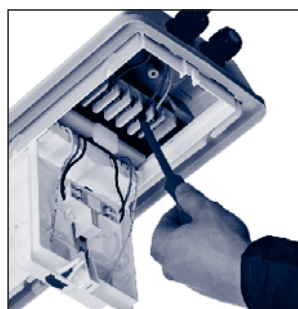
Special lamp socket in the type of protection
EEx e for bi-pin lamps to IEC 81

Moulded plastic or brass cable entries for
double-ended cable connection (optional)





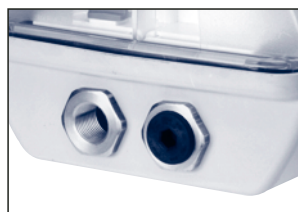
Cost reduction with single-end through-wiring



generously dimensioned terminal compartments



Plastic cable entries



Metal thread



Myer Hubs (for Conduit-System)

Standard version for two cables

The standard version of the eLLK 92 is designed for a single-ended through-wiring. According to the verdict in an independent expertise, together with the easily accessible terminal compartment, this connection method results in a time saving of up to 30% compared to conventional light fittings using the classical through-wiring method.

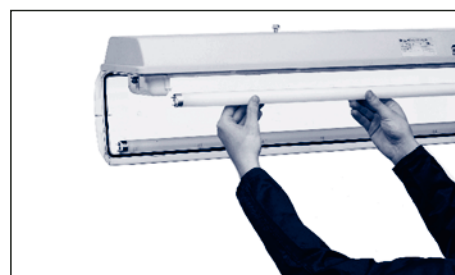
Installation of the eLLK 92

Whether it is mounted on rails or suspended from the ceiling, the lion's share of the overall costs is taken up by the installation and electrical connection of the light fitting. Here, due to the standardized fixing clearances and the generously dimensioned terminal compartments, the eLLK 92 provides a high saving potential. The terminal compartment can be opened without removing covers or reflectors, thus permitting the easy connection of cables.

Three ways – one solution

Depending on the type of installation, different cable entries could be required for the connection of the light fitting. Available for all types are the following:

- M25 x 1,5 Plastic cable entries
- M20 x 1,5 Earthed metal thread for metal cable entries
- non-metric threads, for example Myer Hubs 3/4" NPT-Thread



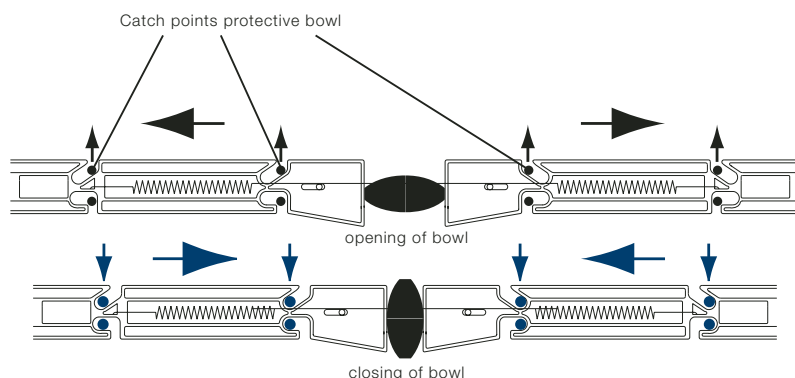
Easy lamp replacement

Lamp replacement made easy

Irrespective of how the light fitting is installed, the locking mechanism can be operated on either side – this means that there are no future surprises with light fittings that were installed at a later point in time. The fact that the locking mechanism can be operated on both sides and that the protective bowl is hinged on both sides, means that there is plenty of scope for the arrangement of light fittings. The bowl can simply be swung open in the respective direction without tools – this is made possible by the hinge fasteners fitted on both sides of the light fitting housing. A quarter turn of the locking bolt and the bowl opens up downwards. The hinges on the cover are fixed in such a way that the replacement lamps can be safely deposited in the bowl, thus saving time when replacing lamps. The bowl cannot fall down, even in wind and rain.



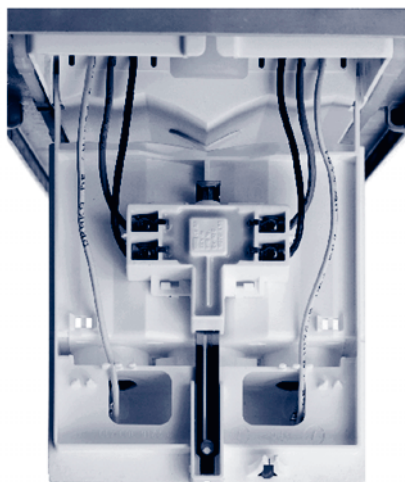
"strongbox principle" opening from both sides



Closing system using the "strongbox principle" guarantees a correct sealing

Locking mechanism

The housing and the protective bowl are securely locked by means of a locking mechanism according to the „strongbox principle“ on both sides that features as many as 24 latch points. This new type of locking system features stainless steel springs that regulate the pressure applied to the seal, thus guaranteeing the tightness of the light fittings, even in the event of changes due to the ageing of the sealing material and variable climatic influences.



compulsory N/C contact safeguarded against contact

Double the safety is better

The regulations require the automatic disconnection of the supply voltage when the light fitting is opened. The built-in compulsory N/C contact is safeguarded against inadvertent operation and, as soon as the locking mechanism of the light fitting is operated, it de-energizes all parts that can be touched. A second interlock switch increases the safety level for the operator. Therefore, even if the lock of the light fitting

is actuated while the protective bowl is still open, the switch cannot be operated, as, in this case, the circuit for the light fitting remains disconnected.

Lamps

All the light fittings in the eLLK 92 series have been developed and certified for Ø 26 mm bi-pin fluorescent lamps with a G 13 lamp cap in accordance with:

81 IEC 1105 (18 W)

81 IEC 1305 (36 W)

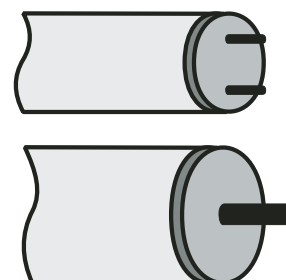
81 IEC 1545 (58 W)

This means that the lamps, that are available all over the world, can be used for both hazardous and non-hazardous areas. Not only does this simplify stock-keeping, but the operator also benefits from all the technical advantages in conjunction with EVG operation. Compared to the old Ø 38 mm single-pin fluorescent lamps, the luminous power of the system is increased by a factor of 2.2.

Lighting engineering

Due to the various fields of application light fittings are equipped with a large variety of lamps and reflectors. The criteria for the selection of the types of lamps and reflectors are basically determined by the type of lighting required (illumination of surfaces or objects, etc.) and the economic efficiency.

When planning a lighting installation, the polar curves of the luminous intensity of the light fittings being used are required in order to calculate the illumination distribution.



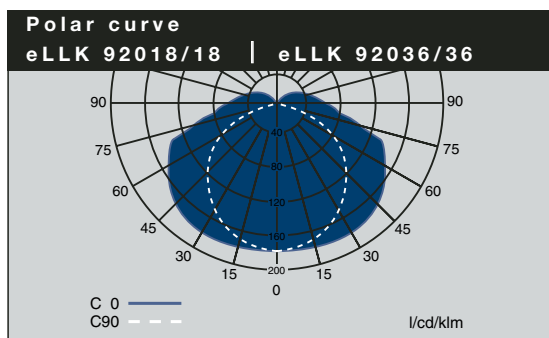
International Ø 26 mm bi-pin fluorescent lamp and the old Ø 38 mm single-pin fluorescent lamp



CEAG products are constantly being advanced and tested in the company's own lighting laboratory

Polar curves, LVK

During the development phase the lighting properties of all explosion-protected light fittings are tested in the Cooper Crouse-Hinds GmbH lighting laboratory. In this way it is



ensured that the reflectors, as well as the protective bowls for fluorescent light fittings are optimized down to the last detail. In the case of the eLLK 92 series of light fittings, Cooper Crouse-Hinds GmbH has succeeded in

optimizing both the illumination of surfaces with the largest possible light distribution and the illumination of objects with the highest possible axial light intensity. The polar curve of each light fitting can be found in the technical data and can be used together with the other lighting values to calculate the illuminance.

INL-WIN CEAG, the design software

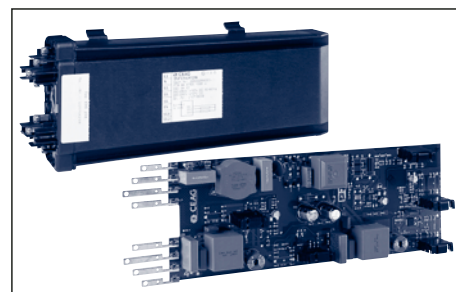
INL-WIN CEAG is a lighting calculation program for the design of lighting requirements. This program is an excellent menu-driven aid for the everyday work involved in the design and engineering of explosion-protected lighting equipment.

The lighting data of the Cooper Crouse-Hinds light fittings is stored in a data base and is used for the light calculation. By entering a few details, such as the height, width and length of the room, the reflectance of the walls and the desired illuminance, it is possible to make an exact calculation of the

number and distribution of the explosion-protected light fittings. This simple, yet optimal calculation makes it possible to minimize the number of light fittings required. If emergency lighting is required, the program shows the exact number and positions of the light fittings. Individual, customized lighting arrangements can also be realized with this program.

Electronic ballasts (EVG)

Nowadays it is not possible to imagine modern light fittings for fluorescent lamps without the EVG technology. Features such as immediate starting, the absence of flickering during operation or the minimal heat rise are only possible with this technology.

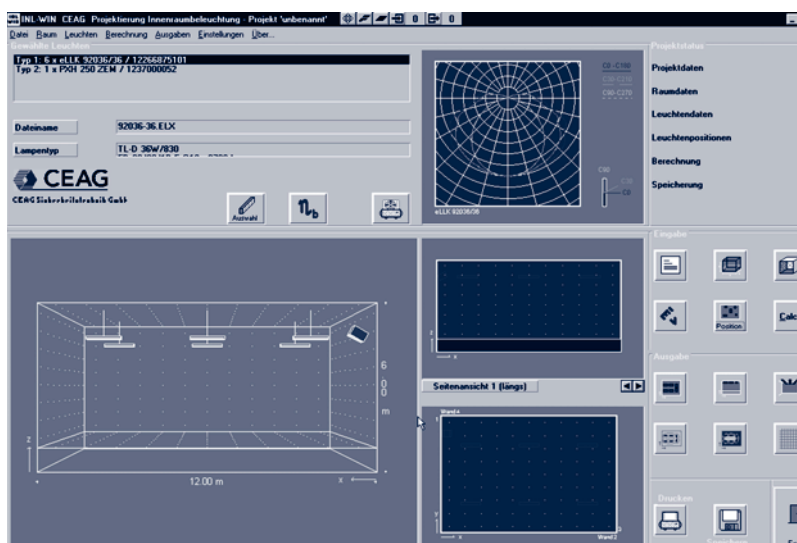


With the CEAG EVG technology, fluorescent light fittings for use in hazardous areas also provide decisive advantages:

- possibility of a lamp-sparing cold start
- use of bi-pin lamps, Ø 26 mm
- use with various mains voltages
- regulation of lamp current with fluctuating mains voltages
- safe lamp ignition at low and high ambient temperatures
- service life of lamp is approx. 12.000 hours
- AC/DC operation possible

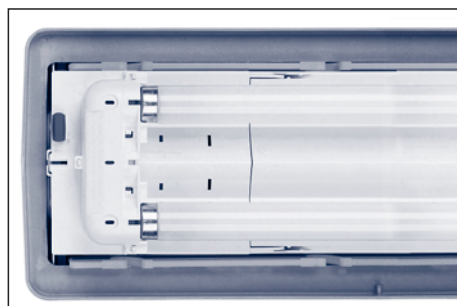
With the latest generation EVG 97, CEAG provides a safe and reliable operation of the explosion-protected eLLK 92 and the eLLB 20 light fittings.

A possible hazard due to the so-called "End of Life"-effect is according to experts not very probable, so that no special maintenance procedures are necessary.



Robust technology for extreme applications

The operation of explosion-protected light fittings places high requirements on the reliability and durability of the circuits being used. In addition to temperature, moisture and mechanical stress, mains contamination or voltage peaks can affect the light fittings. Here the EVGs specially developed by Cooper Crouse-Hinds GmbH provide safe protection against harmful influences. Whereas conventional industrial EVGs are designed for an ambient temperature of the light fittings of up to + 30°C, the CEAG EVGs are designed for an ambient temperature of + 50°C. The large-scale printed wiring board layouts ensure an even heat distribution, through-connections and encapsulation of sensitive components provide mechanical protection. A hermetically sealed enclosure provides protection against undesirable substances that could cause damage to the PCB.



All CEAG Light Fittings with EVG 97 have the "green button"

Direct or alternating voltage?

Conventional ballasts only work with an alternating voltage and can only be used with group or central battery installations under certain conditions. Cooper Crouse-Hinds GmbH, as the leading manufacturer of emergency lighting installations, offers an explosion-protected ballast that can be operated with alternating and direct voltages.

Quality cannot be left to chance

Extensive testing and a highly automated production process are necessary to ensure a constant good quality. Cooper Crouse-Hinds GmbH has been manufactu-



EVG-Capsulation

ring EVGs for more than 25 years and has the necessary know-how. In addition to the routine verifications and tests carried out on all apparatus, stress tests are carried out on individual batches to ensure safe findings with regard to component specifications.

Computer-aided final inspections

The uncompromising safety of the explosion-protected eLLK 92 light fittings is maintained throughout the various production stages and includes the final inspection. Each light fitting is tested in detail by a computer test program. All data relating to the manufacture and safety is stored and can still be called up years later. This is where the Cooper Crouse-Hinds GmbH quality assurance system, that is certified to ISO 9001:2000, clearly makes its mark.

Emergency Lighting – central or decentral

Appertaining to Emergency Lighting in hazardous explosive areas, their are two general philosophies. That of the supply assurance, the test and maintenance effort and that of the economic efficiency.

Emergency light fittings with a self-contained battery system

Emergency light fittings with self-contained battery systems provide the required Emergency lighting decentral, independant from central systems. That means the battery, the charger and the electronics are integrated in the light fitting. Taking the availability and the redundancy into consideration, this system has with respect to the supply assurance in safety-engineering sensible areas a very high standard. Taking the economic efficiency into consideration,

the required effort of testing, maintenance and the environmental effect on the battery life span of each self-contained battery system has to be taken into account. Taking the above into consideration it is without reason the best solution when emergency light fittings with a self-contained battery system are used in large and spacious explosion hazardous areas where the number of fittings to be used is limited.

The new **CEAG series of emergency light fittings with self-contained battery systems eLLK 92 NIB** have all the necessary self-control features needed and does the required functionality and operating time tests automatically. Hereby the battery life-span is optimized.

The new **CEAG series of emergency light fittings with self-contained battery systems eLLK 92 NIB** have all the necessary self-control features needed and does the required functionality and operating time tests automatically. Hereby the battery life-span is optimized.

Centrally Controlled Emergency Lighting Systems with CG-Modules

A centrally controlled emergency light system using the CEAG group supply and a

central battery system is installed when a large number of emergency lights are conglomerated and can be used as a system emergency lighting.

These battery systems are generally, not installed in the hazardous areas and therefore do not have to cope with the same environmental conditions as the light fittings themselves. This usually results in an extended life span of the batteries with a minimized maintenance effort. One must of course take into consideration that the cable laying from the central battery to each light fitting in the hazardous areas affords an increased effort.

To be able to run on the CEAG emergency light fittings system we can provide the following light fitting series eLLK 92, nLLK 98 and eLLB 20 versions with **"CG-Modules"**. This controlling module controls amongst other things the data exchange between the main emergency light apparatus and the individual light fittings per power supply cable and reports all functional errors.

In conjunction with the CG-Modules, it is now possible have individually monitored emergency light fittings connected to a CEAG emergency lighting installation with monitoring system. Here it is now possible to integrate explosion-protected light fittings as system light fittings into the practical monitoring system of CEAG group or central battery installations.

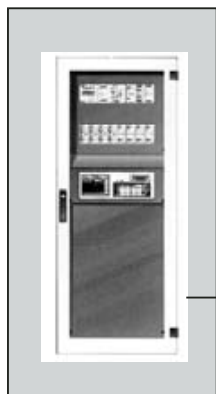
This combination offers the following advantages:

- Automatic performance of the necessary function test with central record-keeping
- Enormous cost savings as manual testing is no longer necessary
- Two-lamp operation with mains supply, single lamp operation with emergency power supply, therefore cost saving for batteries and apparatus
- High degree of safety of emergency lighting due to constant display of availability
- Simplified installation:
 - mains and emergency power supply have a common connection
 - a separate data line is not required
 - a maximum of 12 light fittings can be connected to one circuit
 - automatic performance of the necessary function tests with central record-keeping

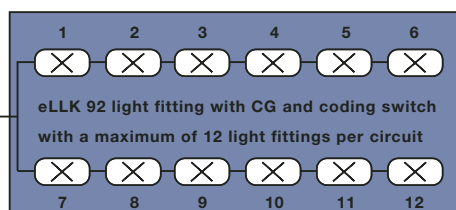


Ex-Emergency light fitting with self-contained battery system eLLK 92036/36 NIB

CEAG emergency lighting supply unit for non-hazardous areas

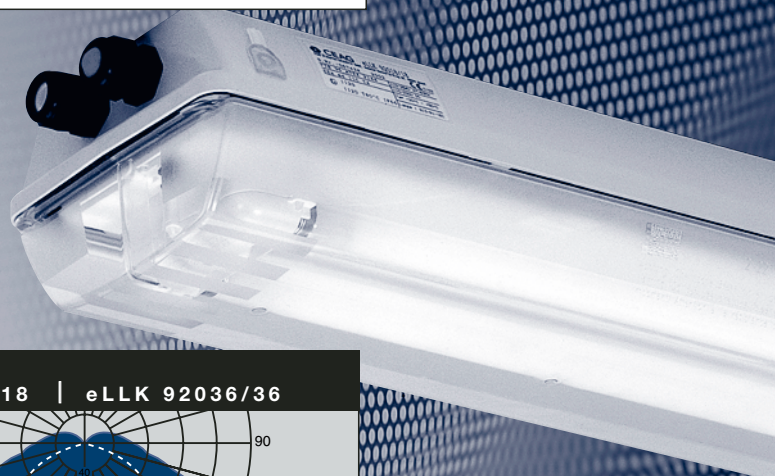


One line, e.g. 3 x 1.5 mm², for both the mains and the emergency power supply



EX - LIGHT FITTINGS

eLLK 92... 18 W - 58 W
All plastics design for Zone 1



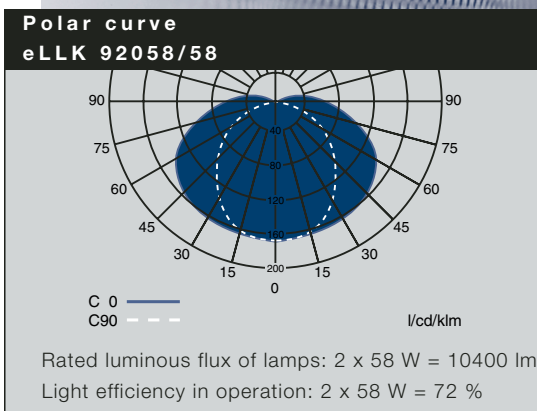
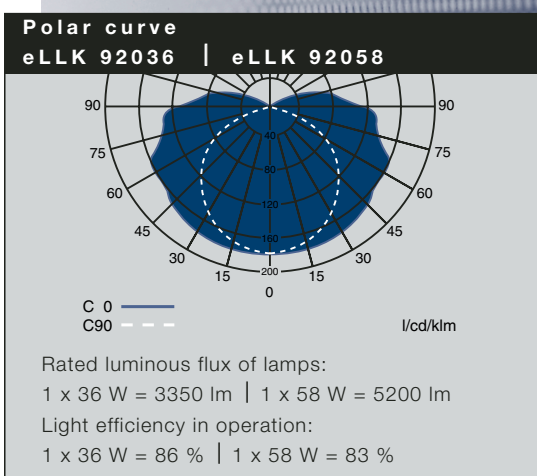
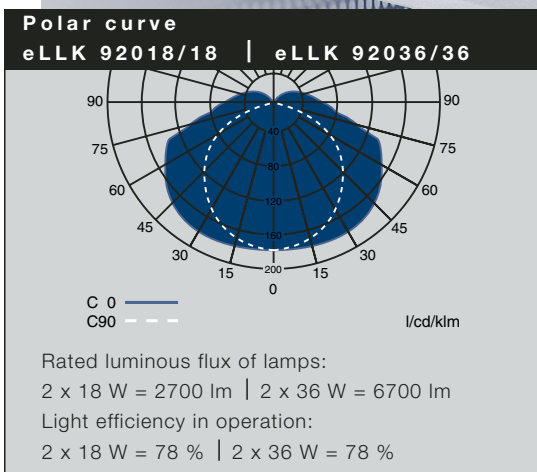
The eLLK 92 Ex-protected light fittings for bi-pin fluorescent lamps are fitted with an electronic ballast and conform to the ATEX-Directive 94/9/EG.

Modern economical ballasts in combination with bi-pin fluorescent lamps contribute to give a 30% higher light output compared to a conventional Fa6 fluorescent lamp. The high input voltage range allows international use. Due to the standard dual channel architecture (with double lamp fittings) if one fluorescent lamp fails, the other fluorescent lamp will independently stay in operation. The standard single-sided through-wiring in connection with the variety of possibilities offers a cost efficient installation.

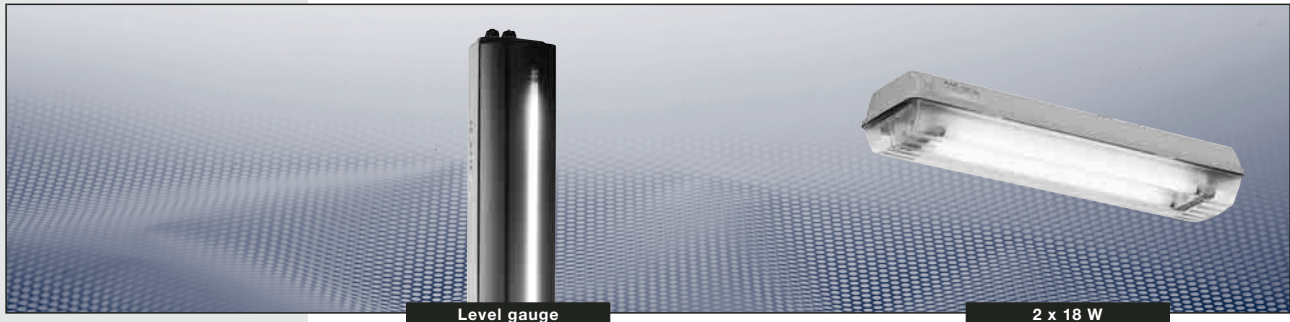
Double-sided lock with 10, 20 or 24 latch points allows the protective bowl to be hingeable on both sides meaning the fitting can be mounted without having to pay attention to which side is the right side.

Automatic switch built as a safety disconnecter according to EN 60947 (IEC 664) with an automatic switch ensuring the disconnection of all exposed components when the fitting is opened.

The optional CG-S module represents an optimum solution for the individual monitoring of light fittings connected to CEAG emergency battery systems.



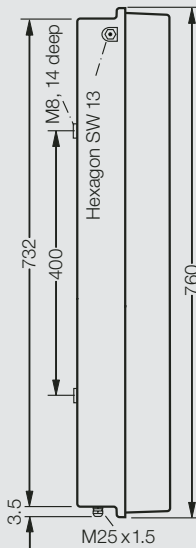
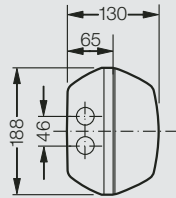
- Standard dual channel ballast**
- Double-sided safety lock**
- Safety locking system due to an integrated forced isolating switch**
- Safety standard IP 66**
- Connection to CEAG emergency light monitoring systems possible**
- International Approvals**



EX - LIGHT FITTINGS

| eLLK 92018/18 |

2.11



eLLK 92018/18

Technical data

eLLK 92018/18

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx ed IIC T4 EEx edm ib IIC T4 (CG-S-variant)
EC-Type Examination Certificate	PTB 96 ATEX 2144
Enclosure material	Glass-fibre reinforced polyester
Protective bowl	Polycarbonate
Rated voltage	AC: 110-254 V ± 10 %, 47-63 Hz DC: 195-250 V ± 10 % AC: 110-254 V ± 10 %, 47-63 Hz DC: 110-127 V ± 10 %*
Rated voltage CG-S-variant	AC: 220-254 V ± 10 %, 47-63 Hz DC: 195-250 V ± 10 %
Circuit	EVG resp. EVG/CG-S
Rated current	0.18 A resp. 0.19 A (CG-S-variant)
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature	- 20 °C to + 50 °C
Cable entries	EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal
Lamps	Bi-pin lamp: 18 W, socket G13, see accessories
Weight	approx. 4.6 kg approx. 5.0 kg (CG-S-variant)

Ordering details

Type	Terminals	Through wiring	Cable	Plugs	Order No.
(220 V DC)		single-ended double-ended	entries ³⁾		
eLLK 92018/18 (2 x 18 W)					
1/6-1	1 x 6	x	—	2 x M25 x 1.5 1 x blanking	1 2265 875 101
2/6-2	2 x 6	—	x	2 x M25 x 1.5 2 x threaded	1 2265 875 103
1/6-1 M ¹⁾	1 x 6	x	—	2 x M20 x 1.5 1 x threaded	1 2265 875 109
2/6-2 M ¹⁾	2 x 6	—	x	4 x M20 x 1.5 2 x threaded	1 2265 875 111
eLLK 92018/18 (2 x 18 W)					
level gauge P2 1 x 6	x	—	—	2 x M25 x 1.5 1 x blanking	1 2265 875 126
eLLK 92018/18 CG-S ²⁾ (2 x 18 W)					
2/6-2	2 x 6	—	x	2 x M25 x 1.5 2 x threaded	1 2265 881 103
2/6-2M ¹⁾	2 x 6	—	x	4 x M20 x 1.5 2 x threaded	1 2265 881 211

¹⁾ M: with metal thread, without cable entry

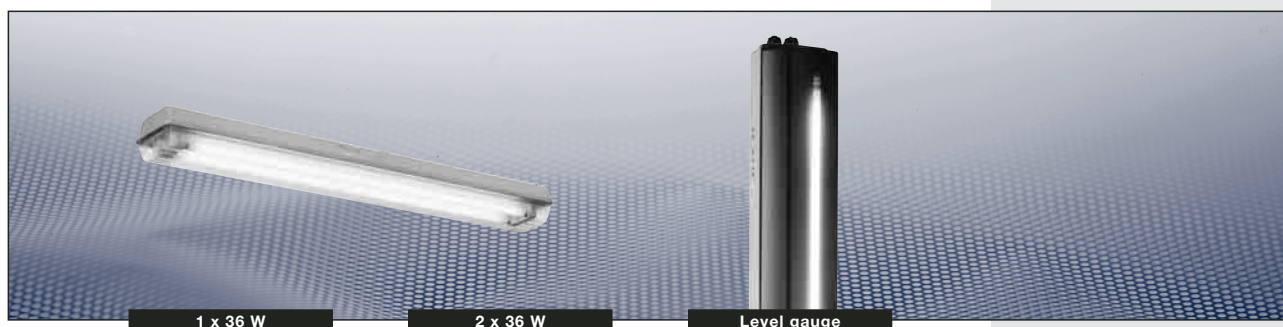
²⁾ Design single monitored emergency light fitting for use in CEAG Emergency light supply unit

³⁾ With dustcap for unclosed entries/metal thread

*On request

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42



2.12

EX - LIGHT FITTINGS

| eLLK 92036/36 | eLLK 92036 |

Technical data

eLLK 92036 | eLLK 92036/36

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx ed IIC T4 EEx edm ib IIC T4 (CG-S-variant)
EC-Type Examination Certificate	PTB 96 ATEX 2144
Enclosure material	Glass-fibre reinforced polyester
Protective bowl	Polycarbonate
Rated voltage	AC: 110-254 V ± 10 %, 47-63 Hz DC: 110-250 V ± 10 %
Rated voltage CG-S-variant	AC: 220-254 V ± 10 %, 47-63 Hz DC: 195-250 V ± 10 %
Circuit	EVG resp. EVG + CG
Rated current	0.18 A (1 x 36 W) 0.34 A (2 x 36 W) 0.35 A (2 x 36 W) CG-S-variant
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature	- 20 °C to + 50 °C
Cable entries	EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal
Lamps	Bi-pin lamp: 36 W, socket G13, see accessories
Weight	approx. 6.7 kg approx. 8.0 kg (CG-S-variant)

Ordering details

Type	Terminals	Through wiring	Cable	Plugs	Order No.
		single-ended double-ended	entries ³⁾		
eLLK 92036 (1 x 36 W)					
1/6-1	1 x 6	x	—	2 x M25 x 1.5 1 x blanking	1 2263 875 101
2/6-2	2 x 6	—	x	2 x M25 x 1.5 2 x threaded	1 2263 875 103
eLLK 92036 (1 x 36 W)					
level gauge P3 1 x 6	x	—	2 x M25 x 1.5	1 x blanking	1 2263 875 125
eLLK 92036/36 (2 x 36 W)					
1/6-1	1 x 6	x	—	2 x M25 x 1.5 1 x blanking	1 2266 875 101
2/6-2	2 x 6	—	x	2 x M25 x 1.5 2 x threaded	1 2266 875 103
1/6-1 M ¹⁾	1 x 6	x	—	2 x M20 x 1.5 1 x threaded	1 2266 875 109
2/6-2 M ¹⁾	2 x 6	—	x	4 x M20 x 1.5 2 x threaded	1 2266 875 111
eLLK 92036/36 CG-S ²⁾ (2 x 36 W)					
2/6-2	2 x 6	—	x	2 x M25 x 1.5 2 x threaded	1 2266 881 103
2/6-2M ¹⁾	2 x 6	—	x	4 x M20 x 1.5 2 x threaded	1 2266 881 211

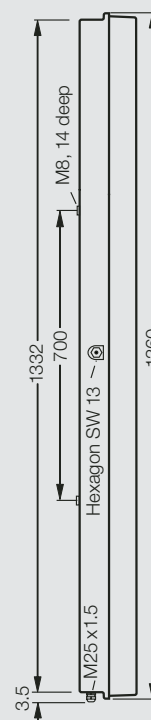
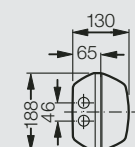
¹⁾ M: with metal thread, without cable entry

²⁾ Design single monitored emergency light fitting for use in CEAG Emergency light supply unit

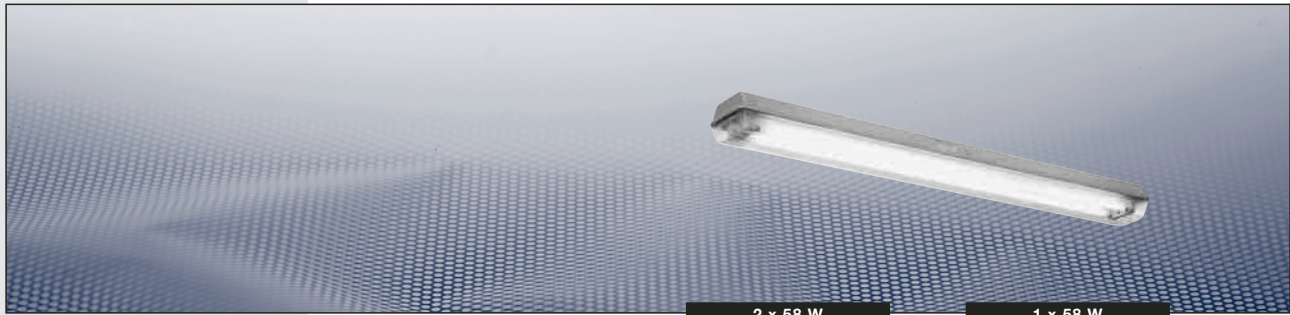
³⁾ With dustcap for unclosed entries/metal thread

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42



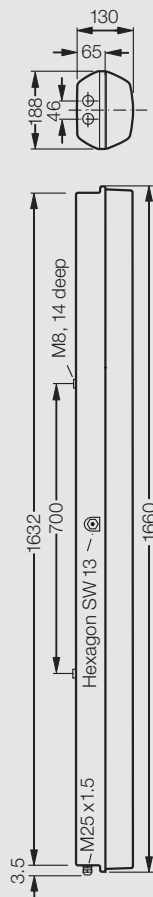
eLLK 92036
eLLK 92036/36



EX - LIGHT FITTINGS

| eLLK 92058 | eLLK 92058/58 |

2.13



eLLK 92058
eLLK 92058/58

Technical data

eLLK 92058 | eLLK 92058/58

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx ed IIC T4 EEx edm ib IIC T4 (CG-S-variant)
EC-Type Examination Certificate	PTB 96 ATEX 2144
Enclosure material	Glass-fibre reinforced polyester
Protective bowl	Polycarbonate
Rated voltage (1 x 58 W)	AC: 110-254 V ± 10 %, 47-63 Hz DC: 110-250 V ± 10 %
Rated voltage (2 x 58 W)	AC: 220-254 V ± 10 %, 47-63 Hz DC: 195-250 V ± 10 %
Rated voltage CG-S-variant	AC: 220-254 V ± 10 %, 47-63 Hz DC: 195-250 V ± 10 %
Circuit	EVG resp. EVG + CG-S
Rated current	0.27 A (1 x 58 W) 0.53 A (2 x 58 W) 0.54 A (2 x 58 W) CG-S-variant
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature	- 20 °C to + 50 °C for 1 x 58 Watt - 20 °C to + 40 °C for 2 x 58 Watt
Cable entries	EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal
Lamps	Bi-pin lamp: 58 W, socket G13, see accessories
Weight	approx. 8.0 kg approx. 9.3 kg (CG-S-variant)

Ordering details

Type	Terminals	Through wiring	Cable	Plugs	Order No.
single-ended double-ended entries ³⁾					
eLLK 92058 (1 x 58 W)					
1/6-1	1 x 6	x	—	2 x M25 x 1.5 1 x blanking	1 2264 875 101
2/6-2	2 x 6	—	x	2 x M25 x 1.5 2 x threaded	1 2264 875 103
2/6-2 M ¹⁾	2 x 6	—	x	4 x M20 x 1.5 2 x threaded	1 2264 875 111
eLLK 92058/58 (2 x 58 W)					
1/6-1	1 x 6	x	—	2 x M25 x 1.5 1 x blanking	1 2267 875 101
2/6-2	2 x 6	—	x	2 x M25 x 1.5 2 x threaded	1 2267 875 103
2/6-2 M ¹⁾	2 x 6	—	x	4 x M20 x 1.5 2 x threaded	1 2267 875 111
eLLK 92058/58 CG-S ²⁾ (2 x 58 W)					
2/6-2	2 x 6	—	x	2 x M25 x 1.5 2 x threaded	1 2267 881 103
2/6-2 M ¹⁾	2 x 6	—	x	4 x M20 x 1.5 2 x threaded	1 2267 881 211

¹⁾ M: with metal thread, without cable entry

²⁾ Design single monitored emergency light fitting for use in CEAG Emergency light supply unit

³⁾ With dustcap for unclosed entries/metal thread

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42

EX - POLE MOUNTED FITTINGS

eLLM 92... 18 W - 36 W
All-plastic design for Zone 1

The eLLM 92 Ex-protected pole mounted light fittings for bi-pin fluorescent lamps are fitted with an electronic ballast and conform to the ATEX-Directive 94/9/EG.

The eLLM 92 pole mounted light fitting combines the assets of the eLLK 92 series with a new cost-saving connecting technique. The terminal compartment complete with 44 mm diameter pole socket forms an integral part of the polyester light fitting housing.

To install the light fitting, only the cover of the large terminal compartment needs to be opened, the light fitting housing remains closed. The accessory kit allows a single-sided through-wiring.

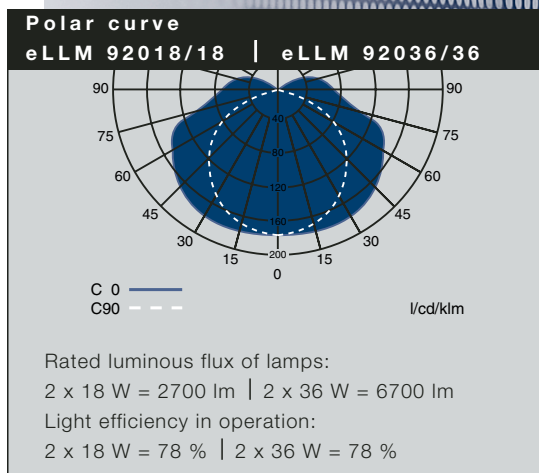
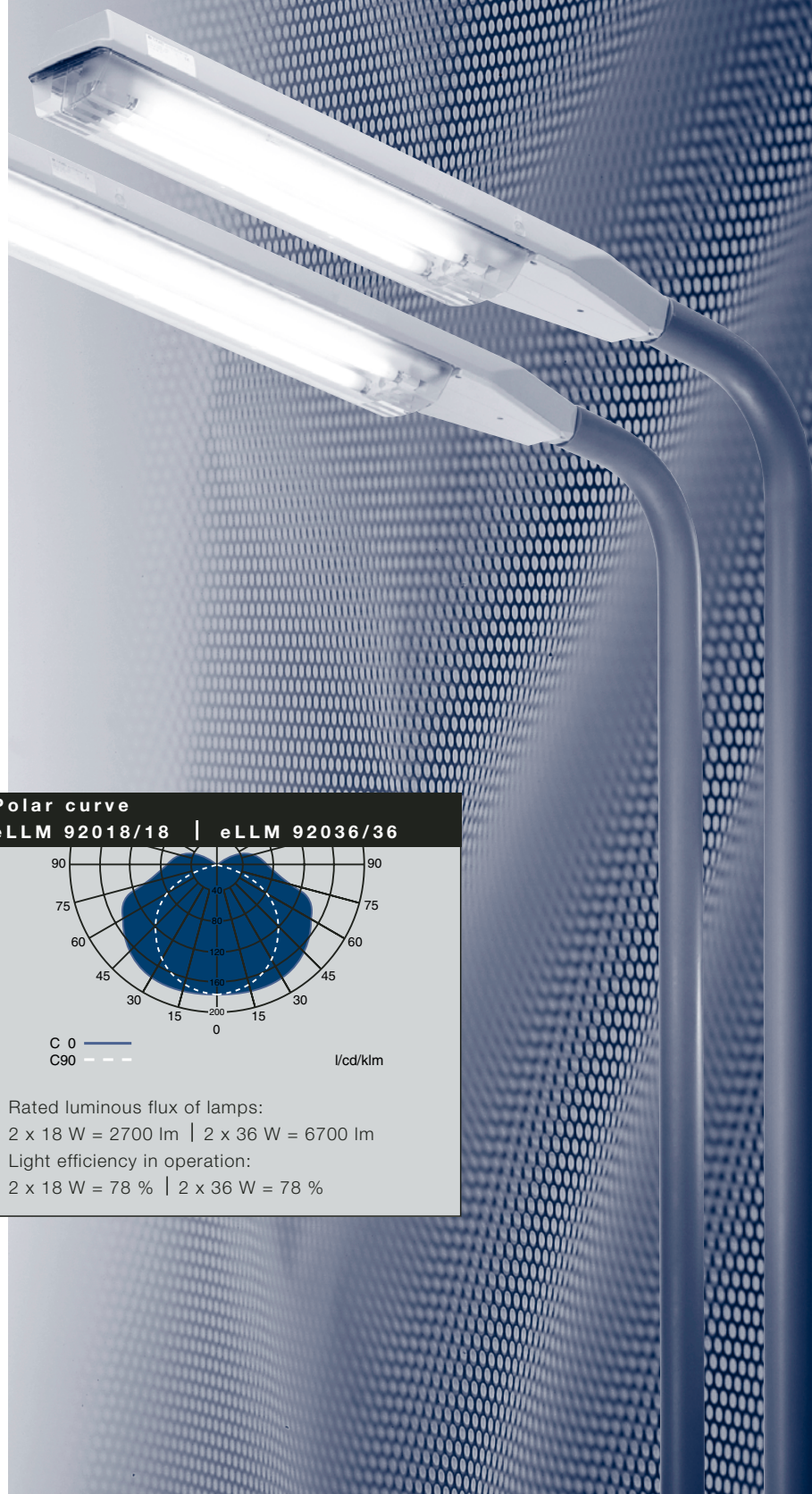
Modern economical ballasts in combination with bi-pin fluorescent lamps contribute to give a 30% higher light output compared to a conventional Fa6 fluorescent lamp. The high input voltage range allows international use. Due to the standard dual channel architecture (with double lamp fittings) if one fluorescent lamp fails, the other fluorescent lamp will independently stay in operation.

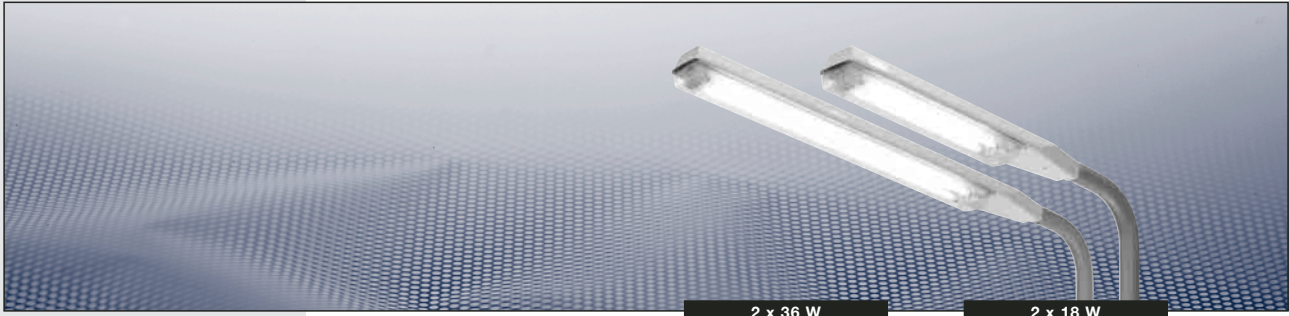
Double-sided lock with 10 or 20 latch points allows the protective bowl to be hingeable on both sides meaning the fitting can be mounted without having to pay attention to which side is the right side.

Automatic switch built as a safety disconnecter according to EN 60947-1 (IEC 664) with an automatic switch ensuring the disconnection of all exposed components when the fitting is opened.

A wind load test according to VDE (EN 60 598-2-3: 1989) was carried out and was passed at light spot levels of up to 8 m, 15 m and above 15 meters

- Standard dual channel ballast**
- Double-sided safety lock**
- Safety locking system due to an integrated forced isolating switch**
- Safety standard IP 66**
- Large terminal compartment in the pole socket, now also for through-wiring**
- International Approvals**

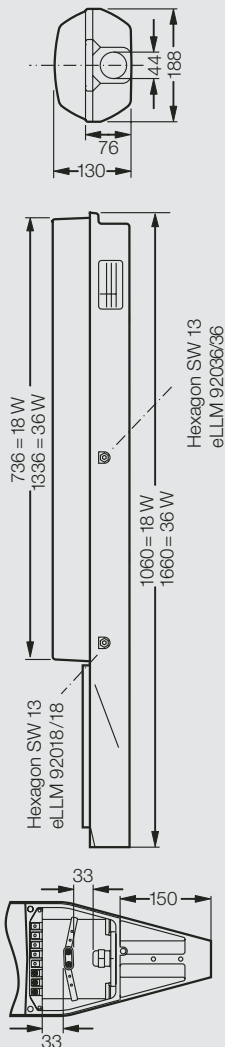




EX - POLE MOUNTED FITTINGS

| eLLM 92018/18 | eLLM 92036/36 |

2.15



Terminal compartment located in the pole socket

eLLM 92018/18
eLLM 92036/36

Technical data

eLLM 92018/18 | eLLM 92036/36

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx ed IIC T4
EC-Type Examination Certificate	PTB 96 ATEX 2144
Enclosure material	Glass-fibre reinforced polyester
Protective bowl	Polycarbonate
Pole socket	Ø 44 mm
Rated voltage eLLM 018/18	AC: 110-254 V ± 10 %, 47-63 Hz DC: 195-250 V ± 10 %
Rated voltage eLLM 036/36	AC: 110-254 V ± 10 %, 47-63 Hz DC: 110-127 V ± 10 %*
Circuit	EVG
Rated current	0.18 A (2 x 18 W) 0.34 A (2 x 36 W)
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature	- 20 °C to + 50 °C
Cable entries	1 x EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm
Connecting terminals	L1, L, N, PE; max. 2 x 6 mm² single wire per terminal
Lamps	Bi-pin lamp: 18 W/36 W, socket G13, see accessories
Weight	approx. 6.7 kg (2 x 18 W) approx. 9.1 kg (2 x 36 W)

Ordering details

Type	Order No.
eLLM 92018/18 (2 x 18 W)	1 2268 875 101
eLLM 92036/36 (2 x 36 W)	1 2269 875 101

* on request

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42

EX - EMERGENCY LIGHT FITTINGS

eLLK 92... NIB/eLLM 92... NIB 18 W - 36 W
All-plastic for Zone 1

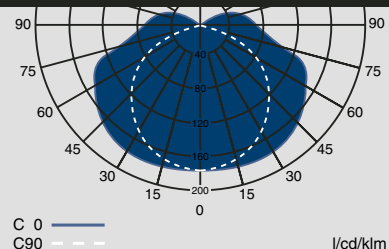
The new Ex-emergency light fittings with self-contained battery unit, types eLLK 92... NIB, for bi-pin fluorescent lamps are fitted with an electronic ballast (EVG). They meet the requirements of ATEX Directive 94/9/EC. Due to a new charging and monitoring technology with intelligent microelectronics, they provide reliable safety and reduced maintenance costs. A function test lasting 5 minutes, that is carried out automatically on a weekly basis, even during mains operation, and a quarterly partial duty-cycle test provide additional safety and drastically reduce the necessary amount of manual tests. The charging and discharging functions are monitored constantly by the micro-processor and are indicated via a diode display. Only the spent energy is recharged – therefore, overcharging is not possible. The so-called memory effect cannot occur – the service life of the battery is optimized. The need to replace a battery, a fault in the emergency lighting circuit or a faulty battery is indicated by the LED display.

Due to a new type of battery connection, the battery can be replaced in the hazardous area. The emergency lighting cycle can be set locally for 1.5 or 3 hours. A remote switch inquiry is standard.



- Automatic weekly 5 minute function test**
- Automatic quarterly partial duty cycle test**
- Fault indication by flashing red LED with reset after fault elimination**
- Monitoring of battery cells with fault indication**
- Capacity-dependant charging: indication of charged capacity and remaining operating time by 5 green LEDs**
- Easy replacement of battery, even in Ex-area**
- International approvals**

Polar curve
eLLK 92018/18 NIB | eLLK 92036/36 NIB



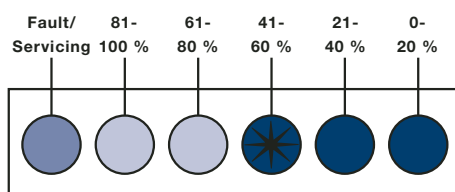
Rated luminous flux of lamps:
 2 x 18 W = 2700 lm | 2 x 36 W = 6700 lm

Light efficiency in operation:
 2 x 18 W = 78 % | 2 x 36 W = 78 %

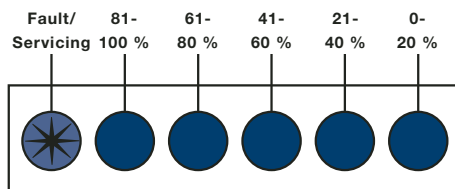
Luminous flux factor (emerg. light):
 for 1 lamp at rated operation
 18 W = ca. 90 % bei 1,5 h | ca. 45 % bei 3,0 h
 36 W = ca. 45 % bei 1,5 h | ca. 25 % bei 3,0 h



red LED green LEDs
Monitoring Display

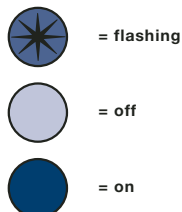


Capacity larger than 40 %, Charging (flashing),
no faults



Capacity 100 %, Charging, Fault after Function or
duty cycle

LED:



Intelligent Battery Technology – Safety in Case of Emergency

Emergency light fittings with self-contained battery systems

Emergency light fittings with self-contained battery systems provide the required emergency lighting from a decentralized source and function independent of the central system. These light fittings are particularly economical when used in extensive plants. Until now, compared to the centrally operated and monitored installations, the disadvantage of the emergency light fittings with self-contained battery systems was that they do not supply any information on the state of the light fittings. With the introduction of the eLLK 92 NIB, Cooper Crouse-Hinds GmbH has now incorporated monitoring. Five LEDs supply constant information on the charging state, and the available battery capacity.

Monitoring functions NIB

A novelty is the enlarged self-monitoring function with automatic function and duration tests. For further safety, all battery cells are permanently monitored. In the event of a fault, the red LED lights up. Then the battery must be changed. Resetting is not possible for safety reasons.

Guarded by a lens, the 5 green LEDs continuously indicate the charging state and the battery capacity. Charging is indicated by flashing green LEDs. The loaded capacity is shown in 20 % steps.

An automatic 5 minute function test is carried out on a weekly basis. Thereby, the electronics of the emergency lamp switches from mains to emergency operation, while the mains lamp stays in normal operation. The battery capacity and also the converter- and lamp-function is being tested and possible faults are shown by a flashing red LED. After removing the fault (p.e. by lamp change) and a new function test the fault indication resets automatically.

A partial duty cycle-test (35 min.) is initiated automatically after approx. 3 months. If the min. operation time of 30 minutes is not reached, this is indicated by a flashing red LED. When the cause of the fault has been eliminated, the fault indication is reset during the next emergency lighting operation (manual or automatic) when the minimum operating time of ca. 30 minutes has been reached.

2.18

Handling

The battery is installed in a separate, certified housing.

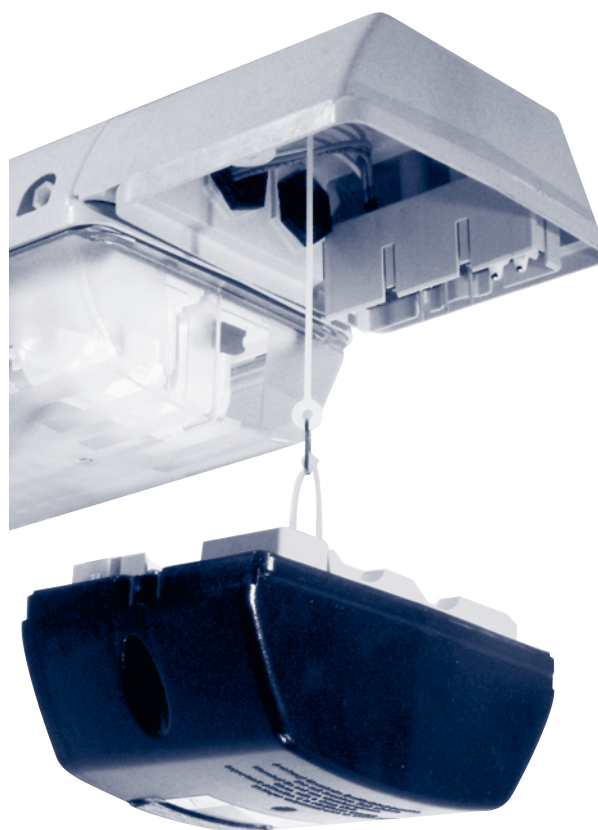
There are up to 7 Ex-d connectors for the data transfer between the battery unit and the luminaire. Therefore, a battery change is also possible in hazardous areas – at any time.

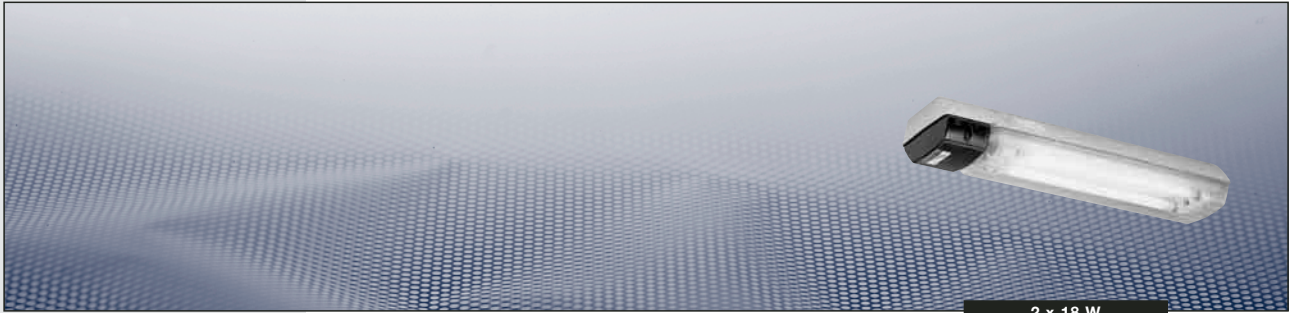
The run-down battery set can be replaced by loosening the screws and simply pulling off the battery set. A detachable strap protects the insert from being dropped inadvertently.



Ex-d contact sockets

Ex-d contact pins



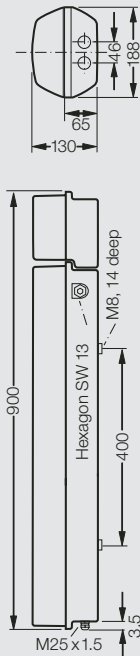


2 x 18 W

EX - EMERGENCY LIGHT FITTING

| eLLK 92018/18 NIB |

2.19



eLLK 92018/18 NIB

Technical data

eLLK 92018/18 NIB

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx edm ib IIC T4
EC-Type Examination Certificate	PTB 96 ATEX 2144
Enclosure material	Glass-fibre reinforced polyester
Protective bowl	Polycarbonate
Rated voltage	AC: 220-254 V ± 10 %, 47-63 Hz I AC: 110-127 V ± 10 %, 47-63 Hz (on request)
Circuit	EVG
Rated current	0.23 A
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature*	- 20 °C to + 50 °C (specified data: - 5 °C to + 35 °C)
Cable entries	EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal
Lamps	Bi-pin lamp: 18 W/36 W, socket G13, see accessories
Weight	approx. 10 kg
Rated emergency lighting operation	1-lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours
Battery	Battery set with 7 Ah-NC battery, with LED-display and monitoring via microprocessor

* Longer charging times are necessary for temperatures of less than - 5 °C

Ordering details

Type	Terminals	Through wiring	Cable	Plugs	Order No.
		single-ended	double-ended	entries ³⁾	
eLLK 92018/18 NIB ¹⁾ (2 x 18 W)					
1/6-1	1 x 6	x	-	2 x M25 x 1.5 1 x blanking	1 2260 879 101
2/6-2	2 x 6	-	x	2 x M25 x 1.5 2 x threaded	1 2260 879 103
2/6-2 M ²⁾	2 x 6	-	x	4 x M20 x 1.5 3 x threaded	1 2260 879 111

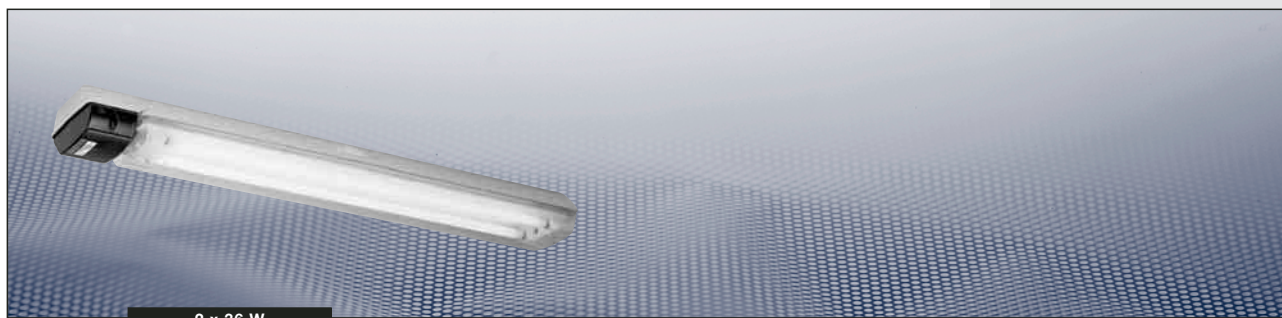
¹⁾ Version: 220-254 V, optional 110-127 V

²⁾ M: with metal thread, without cable entry

³⁾ With dustcap for unclosed entries/metal thread

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42



2 x 36 W

2.20

EX - EMERGENCY LIGHT FITTINGS

| eLLK 92036/36 NIB |

Technical data

eLLK 92036/36 NIB

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx edm ib IIC T4
EC-Type Examination Certificate	PTB 96 ATEX 2144
Enclosure material	Glass-fibre reinforced polyester
Protective bowl	Polycarbonate
Rated voltage	AC: 220-254 V ± 10 %, 47-63 Hz I AC: 110-127 V ± 10 %, 47-63 Hz (on request)
Circuit	EVG
Rated current	0.40 A
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature*	– 20 °C to + 50 °C (specified data: – 5 °C to + 35 °C)
Cable entries	EEx e-cable entries M25 x 1,5 (plastic) for cables from Ø 8 - 17 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² single wire per terminal
Lamps	Bi-pin lamp: 18 W/36 W, socket G13, see accessories
Weight	approx. 12.0 kg
Rated emergency lighting operation	1-lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours
Battery	Battery set with 7 Ah-NC battery, with LED-display and monitoring via microprocessor

* Longer charging times are necessary for temperatures of less than – 5 °C

Ordering details

Type	Terminals	Through wiring	Cable	Plugs	Order No.
		single-ended	double-ended	entries ³⁾	
eLLK 92036/36 NIB ¹⁾ (2 x 36 W)					
1/6-1	1 x 6	x	–	2 x M25 x 1.5 1 x blanking	1 2261 879 101
2/6-2	2 x 6	–	x	2 x M25 x 1.5 2 x threaded	1 2261 879 103
2/6-2 M ²⁾	2 x 6	–	x	4 x M20 x 1.5 3 x threaded	1 2261 879 111

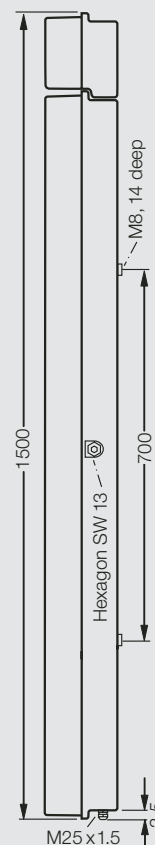
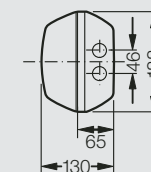
¹⁾ Version: 220-254 V, optional 110-127 V

²⁾ M: with metal thread, without cable entry

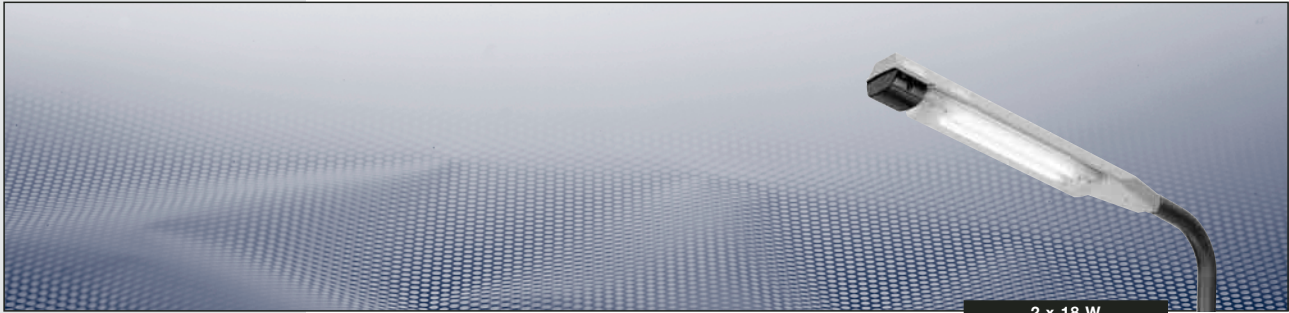
³⁾ With dustcap for unclosed entries/metal thread

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42



eLLK 92036/36 NIB

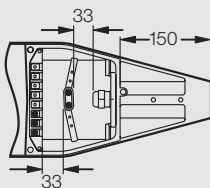
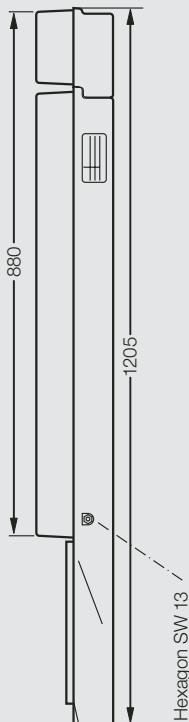
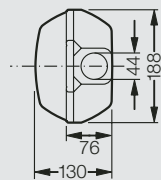


2 x 18 W

EX-POLE MOUNTED EMERGENCY LIGHT FITTING

| eLLM 92018/18 NIB |

2.21



eLLM 92018/18 NIB

Technical data

eLLM 92018/18 NIB

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx edm ib IIC T4
EC-Type Examination Certificate	PTB 96 ATEX 2144
Enclosure material	Glass-fibre reinforced polyester
Protective bowl	Polycarbonate
Pole socket	Ø 44 mm
Rated voltage	AC: 220-254 V ± 10 %, 47-63 Hz AC: 110-127 V ± 10 %, 47-63 Hz (on request)
Circuit	EVG
Rated current	0.23 A
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature*	- 20 °C to + 50 °C (specified data: - 5 °C to + 35 °C)
Cable entries	1 x EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm
Connecting terminals	L1, N, PE; remote switch connection S1-S2; max. 2 x 6 mm² single wire per terminal
Lamps	Bi-pin lamp: 18 W, socket G13, see accessories
Weight	approx. 12.4 kg
Rated emergency lighting operation	1-lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours.
Battery	Battery set with 7 Ah-NC battery, with LED-display and monitoring via microprocessor

* Longer charging times are necessary for temperatures of less than - 5 °C.

Ordering details

Type	Order No.
eLLM 92018/18 NIB ¹⁾ (2 x 18 W)	1 2273 879 101

¹⁾ Version: 220-254 V, optional 110-127 V

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42

EX-RECESSED CEILING LIGHT FITTINGS

eLLB 20... 18 - 58 W
metallic design for Zone 1

The eLLB 20 explosion-protected ceiling built-in lamps fitted with electronic ballast meet the requirements of ATEX-Directive 94/9/EC and are suitable for two-pin fluorescent lamps. These lamps are used for surface and flush mounting in ceilings, in particular in clean rooms where smooth, flush surfaces are very important. The area of application is in the pharmaceutical and chemical industry and in engineering as well as in paint shops and spraying cabinets. The housing comprises white-painted steel sheet with integrally moulded covering frame or, optionally, made of polished stainless steel. Safe installation in the ceiling is ensured with special fixing elements. In addition, it can also be fixed by means of two M8 drilled holes on the top of the housing. The hinged, frameless disc made of safety glass is fixed with captive screws and has inside hinges. The sealing material is guaranteed silicone-leak-proof. The electronic ballasts of the latest generation can be used internationally due to their large input voltage range. The standard two-channel structure means that if one lamp fails, the other one remains in operation. The standard two-sided through-wiring together with the generous terminal housing offers a cost-saving installation. The light switch is designed as an automatic disconnecter pursuant to EN 60947-1 (IEC 60664) and reliably prevents the lamp from being switched on when the cover disc is open. Light fitting variants with optional CG-S monitoring module can be used as single monitored emergency light fitting by connected to a CEAG emergency light supply unit without additional installation work. During the emergency lighting operation (DC operation) only one lamp is supplied. Up to 20 luminaires with different switching modes can be operated in one end circuit. All function and operating time tests are carried out automatically and recorded by the central control unit.

Flush Installation Specially for Clean Rooms

Optionally in painted sheet steel or stainless steel

Standard, two-channel electronic ballast safety locking due to integral automatic disconnecter

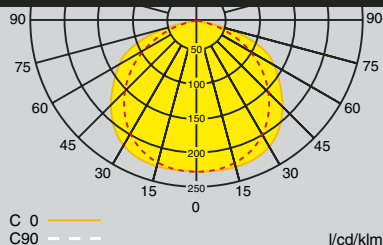
High degree of protection IP 66

Connection to CEAG Emergency Light Supply Systems possible



Polar curve

eLLB 20018/18 | eLLB 20036/36
eLLB 20058/58



Rated luminous flux of lamps:

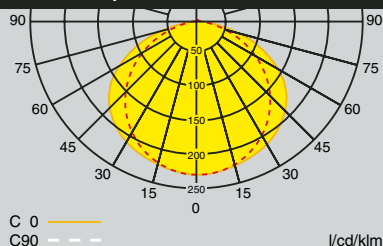
2 x 18 W = 2700 lm | 2 x 36 W = 6700 lm

2 x 58 W = 10400 lm

Light efficiency in operation: approx. 72 %

Polar curve

eLLB 20418 | eLLB 20436



Rated luminous flux of lamps:

18 W = 2700 lm | 36 W = 6700 lm

Light efficiency in operation: approx. 72 %

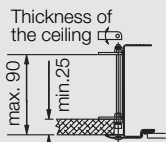
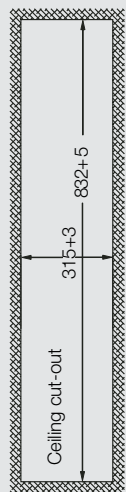
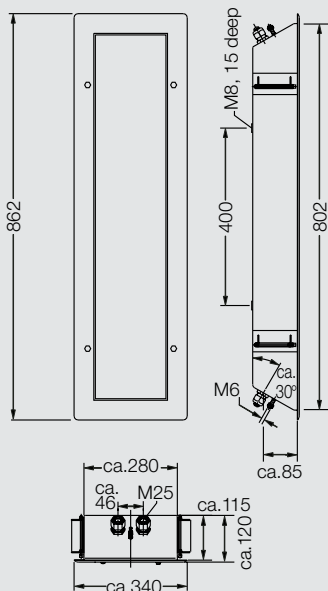


2 x 18 W

EX-RECESSED CEILING LIGHT FITTINGS

eLLB 20018/18

5



eLLB 20018/18

Dimensions in mm

Technical data

eLLB 20018/18

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx ed IIC T4 EEx edm ib IIC T4 (CG-S-variant)
EC-Type Examination Certificate	DMT 02 ATEX E 069
Enclosure material	painted steel sheet, white optional polished stainless steel
Cover disc	single-safety glass pane of 6 mm thick
Ceiling thickness	min. 25 mm to max. 90 mm
Rated voltage	AC: 110-254 V ± 10 %, 47-63 Hz DC: 195-250 V ± 10 % AC: 110-254 V ± 10 %, 47-63 Hz DC: 110-127 V ± 10 % ¹⁾
Rated voltage CG-S-variant	AC: 220-254 V ± 10 %, 47-63 Hz DC: 195-250 V ± 10 %
Circuit	EVG resp. EVG/CG-S
Rated current	0.18 A resp. 0.19 A (CG-S-variant)
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature	- 20 °C to + 50 °C
Cable entries	2 x EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm 1 x EEx e blanking plug 2 x threaded plugs M25 x 1.5
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal, through-wiring multi-wire
Lamps	Bi-pin lamp: 18 W, socket G13, see accessories
Weight	approx. 15 kg approx. 16.4 kg (CG-S-variant)

Ordering details

Type	Terminals	Enclosure	Order-No.
eLLB 20018/18	M20M	Stainless steel 316	1 2190 218 111
eLLB 20018/18	M20M	Painted steel sheet	1 2190 218 101
eLLB 20018/18	M25K	Stainless steel 316	1 2190 218 011
eLLB 20018/18	M25K	Painted steel sheet	1 2190 218 001
eLLB 20018/18 CG-S ²⁾	M20M	Stainless steel 316	1 2190 218 723
eLLB 20018/18 CG-S ²⁾	M20M	Painted steel sheet	1 2190 218 713
eLLB 20018/18 CG-S ²⁾	M25K	Stainless steel 316	1 2190 218 733
eLLB 20018/18 CG-S ²⁾	M25K	Painted steel sheet	1 2190 218 703

¹⁾ On request

²⁾ Design single monitored emergency light fitting for use in CEAG Emergency light supply unit

Scope of delivery without lamp and fixing accessories.



COOPER Crouse-Hinds

COOPER CROUSE-HINDS GMBH



6

EX-RECESSED CEILING LIGHT FITTINGS

| eLLB 20036/36 |

Technical data

eLLB 20036/36

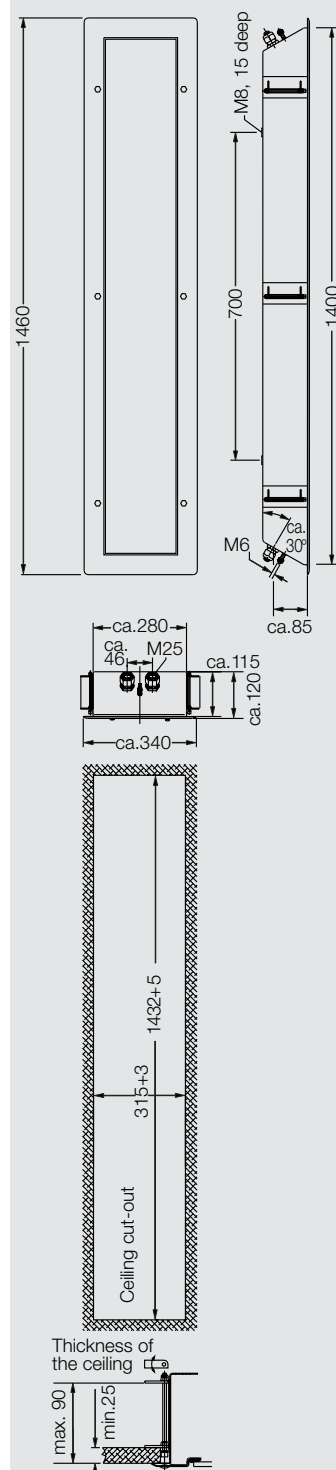
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx ed IIC T4 EEx edm ib IIC T4 (CG-S-variant)
EC-Type Examination Certificate	DMT 02 ATEX E 069
Enclosure material	painted steel sheet, white optional polished stainless steel
Cover disc	single-safety glass pane of 6 mm thick
Ceiling thickness	min. 25 mm bis max. 90 mm.
Rated voltage	AC: 110-254 V ± 10 %, 47-63 Hz DC: 110-250 V ± 10 %
Rated voltage CG-S-variant	AC: 220-254 V ± 10 %, 47-63 Hz DC: 195-250 V ± 10 %
Circuit	EVG resp. EVG + CG-S
Rated current	0.34 A resp. 0.35 A (CG-S-variant)
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature	- 20 °C to + 50 °C
Cable entries	2 x EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm 1 x EEx e-blanking plug 2 x threaded plugs M25 x 1.5
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal, through-wiring multi-wire
Lamps	Bi-pin lamp: 36 W, socket G13, see accessories
Weight	approx. 22 kg approx. 23.3 kg (CG-S-variant)

Ordering details

Type	Terminals	Enclosure	Order-No.
eLLB 20036/36	M20M	Stainless steel 316	1 2190 236 111
eLLB 20036/36	M20M	Painted steel sheet	1 2190 236 101
eLLB 20036/36	M25K	Stainless steel 316	1 2190 236 011
eLLB 20036/36	M25K	Painted steel sheet	1 2190 236 001
eLLB 20036/36 CG-S ¹⁾	M20M	Stainless steel 316	1 2190 236 723
eLLB 20036/36 CG-S ¹⁾	M20M	Painted steel sheet	1 2190 236 713
eLLB 20036/36 CG-S ¹⁾	M25K	Stainless steel 316	1 2190 236 733
eLLB 20036/36 CG-S ¹⁾	M25K	Painted steel sheet	1 2190 236 703

¹⁾ Design single monitored emergency light fitting for use in CEAG Emergency light supply unit

Scope of delivery without lamp and fixing accessories.

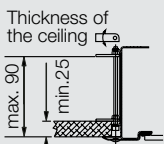
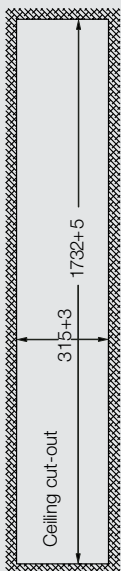
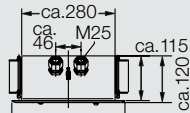
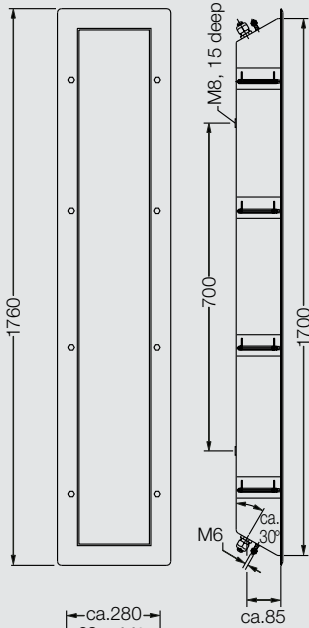


eLLB 20036/36

Dimensions in mm



2 x 58 W



eLLB 20058/58

Dimensions in mm

EX-RECESSED CEILING LIGHT FITTINGS

eLLB 20058/58

Technical data

eLLB 20058/58

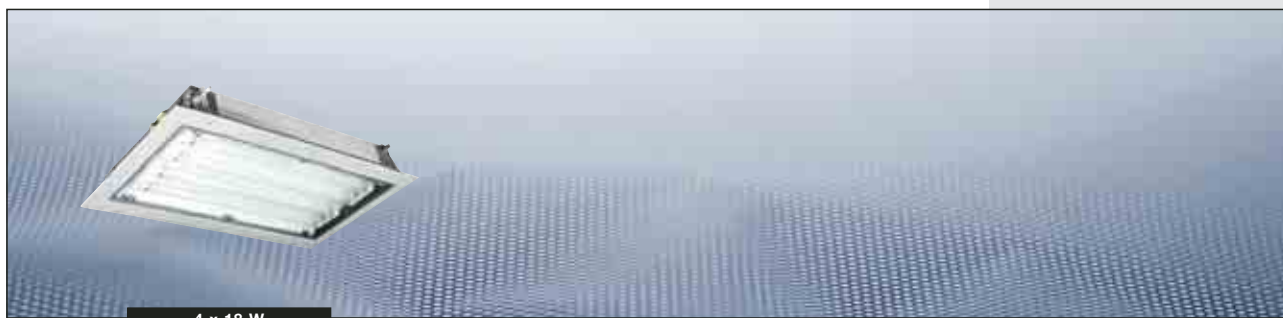
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx ed IIC T4 EEx edm ib IIC T4 (CG-S-variant)
EC-Type Examination Certificate	DMT 02 ATEX E 069
Enclosure material	painted steel sheet, white optional polished stainless steel
Cover disc	single-safety glass pane of 6 mm thick
Ceiling thickness	min. 25 mm bis max. 90 mm.
Rated voltage	AC: 220-254 V ± 10 %, 47-63 Hz DC: 195-250 V ± 10 %
Rated voltage CG-S-variant	AC: 220-254 V ± 10 %, 47-63 Hz DC: 195-250 V ± 10 %
Circuit	EVG resp. EVG + CG-S
Rated current	0.53 A resp. 0.54 A (CG-S-variant)
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature	- 20 °C to + 50 °C
Cable entries	2 x EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm 1 x EEx e-blanking plug 2 x threaded plugs M25 x 1.5
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal, through-wiring multi-wire
Lamps	Bi-pin lamp: 58 W, socket G13, see accessories
Weight	approx. 26 kg approx. 27.3 kg (CG-S-variant)

Ordering details

Type	Terminals	Enclosure	Order-No.
eLLB 20058/58	M20M	Stainless steel 316	1 2190 258 111
eLLB 20058/58	M20M	Painted steel sheet	1 2190 258 101
eLLB 20058/58	M25K	Stainless steel 316	1 2190 258 011
eLLB 20058/58	M25K	Painted steel sheet	1 2190 258 001
eLLB 20058/58 CG-S ¹⁾	M20M	Stainless steel 316	1 2190 258 723
eLLB 20058/58 CG-S ¹⁾	M20M	Painted steel sheet	1 2190 258 713
eLLB 20058/58 CG-S ¹⁾	M25K	Stainless steel 316	1 2190 258 733
eLLB 20058/58 CG-S ¹⁾	M25K	Painted steel sheet	1 2190 258 703

¹⁾ Design single monitored emergency light fitting for use in CEAG Emergency light supply unit

Scope of delivery without lamp and fixing accessories.



8

EX-RECESSED CEILING LIGHT FITTINGS

| eLLB 20418 |

Technical data

eLLB 20418

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 80 °C
Type of protection	EEx ed IIC T4 EEx edm ib IIC T4 (CG-S-variant)
EC-Type Examination Certificate	DMT 02 ATEX E 069
Enclosure material	painted steel sheet, white optional polished stainless steel
Cover disc	single-safety glass pane of 6 mm thick
Ceiling thickness	min. 25 mm to max. 90 mm
Rated voltage	AC: 110-254 V ± 10 %, 47-63 Hz DC: 196-230 V ± 10 % AC: 110-254 V ± 10 %, 47-63 Hz DC: 110-127 V ± 10 % ¹⁾
Rated voltage CG-S-variant	AC: 220-254 V ± 10 %, 47-63 Hz DC: 196-250 V ± 10 %
Circuit	EVG resp. EVG/CG-S
Rated current	0.36 A resp. 0.37 A (CG-S-variant)
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature	- 20 °C to + 50 °C
Cable entries	2 x EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm 1 x EEx e blanking plug 2 x threaded plugs M25 x 1.5
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal, through-wiring multi-wire
Lamps	Bi-pin lamp: 18 W, socket G13, see accessories
Weight	approx. 25 kg approx. 26.3 kg (CG-S-variant)

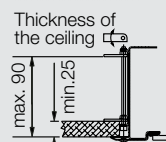
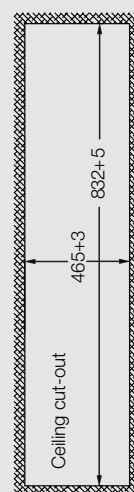
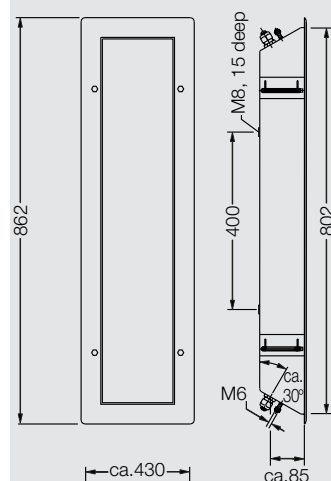
Ordering details

Type	Terminals	Enclosure	Order-No.
eLLB 20418	M20M	Stainless steel 316	1 2190 418 111
eLLB 20418	M20M	Painted steel sheet	1 2190 418 101
eLLB 20418	M25K	Stainless steel 316	1 2190 418 011
eLLB 20418	M25K	Painted steel sheet	1 2190 418 001
eLLB 20418 CG-S ²⁾	M20M	Stainless steel 316	1 2190 418 723
eLLB 20418 CG-S ²⁾	M20M	Painted steel sheet	1 2190 418 713
eLLB 20418 CG-S ²⁾	M25K	Stainless steel 316	1 2190 418 733
eLLB 20418 CG-S ²⁾	M25K	Painted steel sheet	1 2190 418 703

¹⁾ On request

²⁾ Design single monitored emergency light fitting for use in CEAG Emergency light supply unit

Scope of delivery without lamp and fixing accessories.

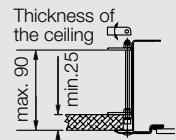
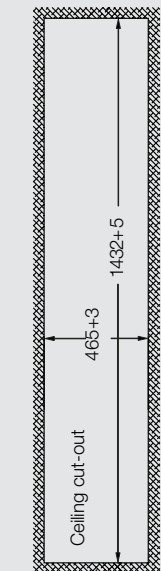
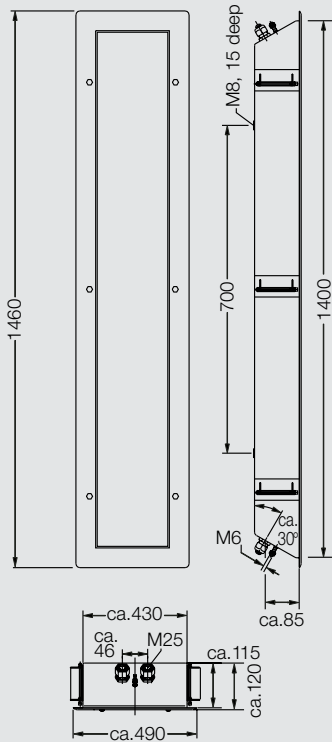


eLLB 20418

Dimensions in mm



4 x 36 W



eLLB 20036/36

Dimensions in mm

EX-RECESSED CEILING LIGHT FITTINGS

eLLB 20436

Technical data

eLLB 20436

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 80 °C
Type of protection	EEx ed IIC T4 EEx edm ib IIC T4 (CG-S-variant)
EC-Type Examination Certificate	DMT 02 ATEX E 069
Enclosure material	painted steel sheet, white optional polished stainless steel
Cover disc	single-safety glass pane of 6 mm thick
Ceiling thickness	min. 25 mm bis max. 90 mm.
Rated voltage	AC: 110-254 V ± 10 %, 47-63 Hz DC: 110-230 V ± 10 %
Rated voltage CG-S-variant	AC: 220-254 V ± 10 %, 47-63 Hz DC: 196-250 V ± 10 %
Circuit	EVG resp. EVG + CG-S
Rated current	0.68 A resp. 0.69 A (CG-S-variant)
Power factor cos φ	≥ 0.95
Degree of protection EN 60529	IP 66
Protection class	I
Permissible ambient temperature	- 20 °C to + 50 °C
Cable entries	2 x EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm 1 x EEx e-blanking plug 2 x threaded plugs M25 x 1.5
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal, through-wiring multi-wire
Lamps	Bi-pin lamp: 36 W, socket G13, see accessories
Weight	approx. 34 kg approx. 35.3 kg (CG-S-variant)

Ordering details

Type	Terminals	Enclosure	Order-No.
eLLB 20436	M20M	Stainless steel 316	1 2190 436 111
eLLB 20436	M20M	Painted steel sheet	1 2190 436 101
eLLB 20436	M25K	Stainless steel 316	1 2190 436 011
eLLB 20436	M25K	Painted steel sheet	1 2190 436 001
eLLB 20436 CG-S ¹⁾	M20M	Stainless steel 316	1 2190 436 723
eLLB 20436 CG-S ¹⁾	M20M	Painted steel sheet	1 2190 436 713
eLLB 20436 CG-S ¹⁾	M25K	Stainless steel 316	1 2190 436 733
eLLB 20436 CG-S ¹⁾	M25K	Painted steel sheet	1 2190 436 703

¹⁾ Design single monitored emergency light fitting for use in CEAG Emergency light supply unit

Scope of delivery without lamp and fixing accessories.

EX-EMERGENCY RECESSED CEILING LIGHT FITTINGS

eLLB 20... NIB 18 – 36 W
metallic design for Zone 1

The new Ex-emergency light fittings with self-contained battery unit, type eLLB 20 ... NIB for bi-pin fluorescent lamps are fitted with an electronic ballast (EVG). They meet the requirements of ATEX-Directive 94/9/EC. Due to a new charging and monitoring technology with intelligent microelectronics, they provide reliable safety and reduced maintenance costs. A function test lasting 5 minutes, that is carried out automatically on a weekly basis, even during mains operation, and a quarterly partial duty-cycle test provide additional safety and drastically reduce the necessary amount of manual tests. The charging and discharging functions are monitored constantly by the micro-processor and are indicated via a diode display. Only the spent energy is recharged – therefore, overcharging is not possible. The so-called memory effect cannot occur – therefore life of the battery is optimized. The need to replace a battery, a fault in the emergency lighting circuit or a faulty battery is indicated by the LED display.

Due to a new type of battery connection, the battery can be replaced in the hazardous area. The emergency lighting cycle can be set locally for 1.5 or 3 hours. A remote switch inquiry is standard. All the other mechanical details are corresponding to the eLLB 20... serie. The separate battery housing with a 1.5 m long connecting load can be mounted directly in line with the light fitting or, depending on the ceiling raster, alongside it.

Automatic weekly 5 min. function test

Automatic quarterly partial duty cycle test

Fault indication by flashing red LED with reset after fault elimination

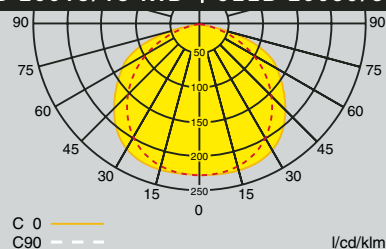
Capacity-dependent charging: indication of charged capacity and remaining operating time by 5 green LEDs

Easy replacement of battery, even in Ex-area

Separate mounted no battery housing

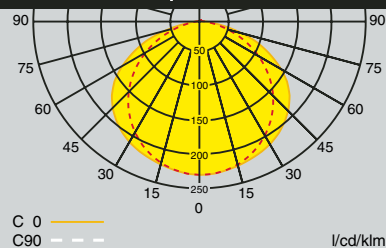


Polar curve
eLLB 20018/18 NIB | eLLB 20036/36 NIB



Rated luminous flux of lamps:
 2 x 18 W = 2700 lm | 2 x 36 W = 6700 lm
 Light efficiency in operation: approx. 72 %
 Luminous flux factor (emerg. light):
 for 1 lamp at rated operation
 18 W = approx. 1.5 h, 90 % | approx. 3.0 h, 45 %
 36 W = approx. 1.5 h, 45 % | approx. 3.0 h, 25 %

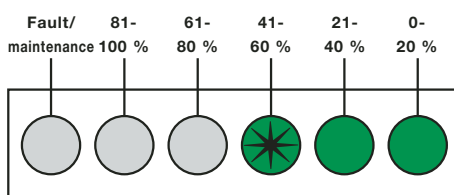
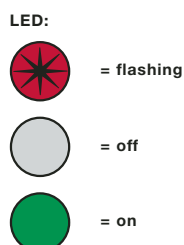
Polar curve
eLLB 20418 NIB | eLLB 20436 NIB



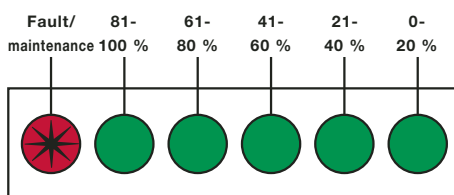
Rated luminous flux of lamps:
 18 W = 2700 lm | 36 W = 6700 lm
 Light efficiency in operation: approx. 72 %



red LED green LEDs
Monitoring display



Capacity higher 40 %, charging operation (flashing)
no Fault



Capacity 100 %, charging operation,
fault after function or duty cycle

Intelligent Battery Technology – Safety in Case of Emergency

Emergency light fittings with self-contained battery systems

Emergency light fittings with self-contained battery systems provide the required emergency lighting from a decentralized source and function independent of the central system. These light fittings are particularly economical when used in extensive plants. Until now, compared to the centrally operated and monitored installations, the disadvantage of the emergency light fittings with self-contained battery systems was that they do not supply any information on the state of the light fittings. With the introduction of the CEAG light fitting series eLLB 20 ... NIB, Cooper Crouse-Hinds has now incorporated monitoring. Five LEDs supply constant information on the charging state and the available battery capacity.



Battery bloc NIB

Monitoring functions NIB

Guarded by a lens, the 5 green LEDs continuously indicate the charging state and the battery capacity. Charging is indicated by flashing green LEDs. The loaded capacity is shown in 20 % steps.

A novelty is the enlarged self-monitoring function with automatic function and duration tests.

An automatic 5 minute function test is carried out on a weekly basis. Thereby, the electronics of the emergency lamp switches from mains to emergency operation, while the mains lamp stays in normal operation. The battery capacity and also the converter and lamp-function is being tested and possible faults are shown by a flashing red LED. After removing the fault (p.e. by lamp change) and a new function test the fault indication resets automatically.

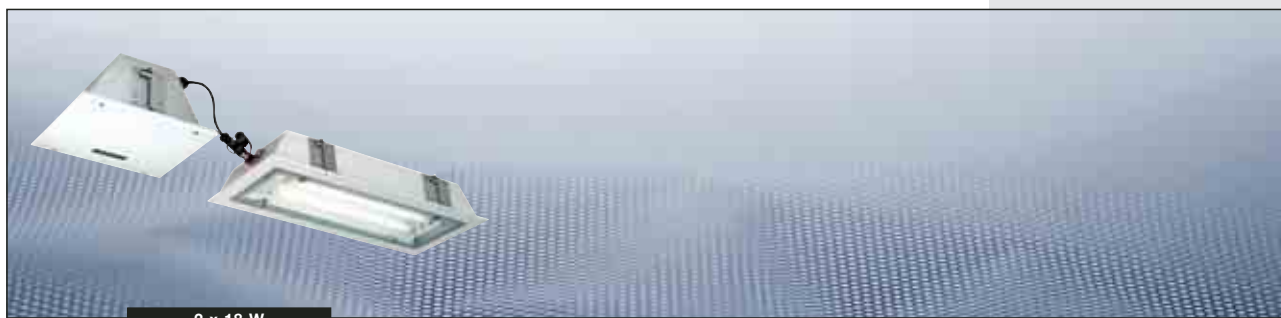
A partial duty cycle-test (35 min.) is initiated automatically after approx. 3 months. If the min. operation time of 30 minutes is not reached, this is indicated by a flashing red LED. When the cause of the fault has been eliminated, the fault indication is reset during the next emergency lighting operation (manual or automatic) when the minimum operating time of ca. 30 minutes has been reached.

Handling

The battery is installed in a separate, certified housing.

There are up to 7 Ex-d connectors for the data transfer between the battery unit and the luminaire. Therefore, a battery change is also possible in hazardous areas – at any time.

The run-down battery set can be replaced by loosening the screws and simply pulling off the battery set. A detachable strap protects the insert from being dropped inadvertently.



12

EX-RECESSED CEILING LIGHT FITTINGS

eLLB 20018/18 NIB

Technical data

eLLB 20018/18 NIB

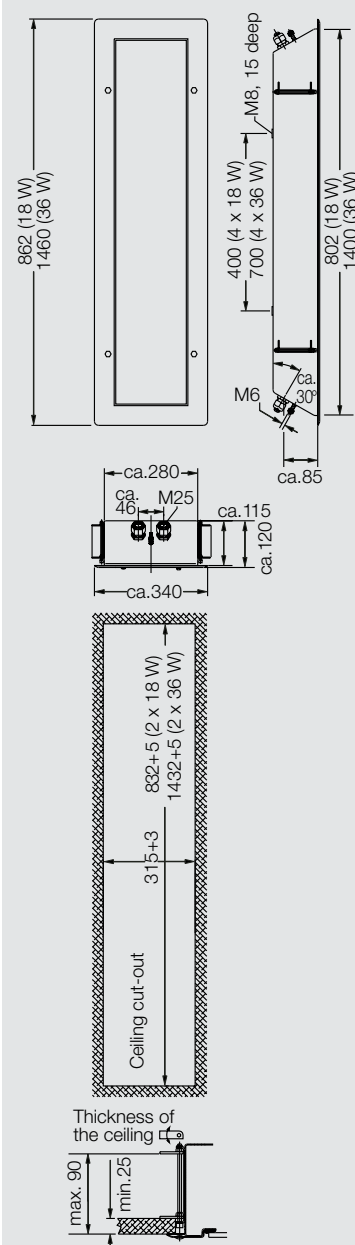
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx edm ib IIC T4
EC-Type Examination Certificate	DMT 02 ATEX E 069
Enclosure material	painted steel sheet, white optional polished stainless steel
Cover disc	single-safety glass pane of 6 mm thick
Rated voltage	AC: 220-254 V ± 10 %, 47-63 Hz AC: 110-127 V ± 10 %, 47-63 Hz (on request)
Circuit	EVG
Rated current	0.23 A
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature*	- 20 °C to + 50 °C (specified data: - 5 °C to + 35 °C)
Cable entries	2 x EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm 1 x EEx e blanking plug 2 x threaded plugs M25 x 1.5
Cable entries	1 x EEx e-cable entries M25 x 1.5 (plastic),
Battery housing	connection via 1.5 m long connection lead with plugs
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal, through-wiring multi-wire
Lamps	Bi-pin lamp: 18 W, socket G13, see accessories
Weight light	approx. 18 kg
Weight battery housing compl.	approx. 5.7 kg
Rated emergency lighting operation	1-lamps 1.5 h or 3 h, can be set on site
Battery	Battery set with 7 Ah-NC-battery with LED-display and monitoring via microprocessor

*Longer charging times are necessary for temperatures of less than - 5 °C

Ordering details

Type	Terminals	Enclosure	Order-No.
eLLB 20018/18 NIB	M25K	Painted steel sheet	1 2190 218 002
eLLB 20018/18 NIB	M25K	Stainless steel 316	1 2190 218 012
eLLB 20018/18 NIB	M20M	Painted steel sheet	1 2190 218 102
eLLB 20018/18 NIB	M20M	Stainless steel 316	1 2190 218 112

Scope of delivery without lamp and fixing accessories.



eLLB 20018/18 NIB

eLLB 20036/36 NIB

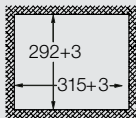
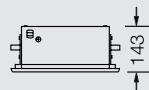
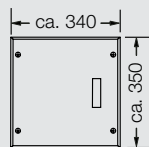
Dimensions in mm



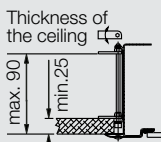
EX-RECESSED CEILING LIGHT FITTINGS

| eLLB 20036/36 NIB |

13



Ceiling cut-out



Battery housing

Technical data

eLLB 20018/18 NIB | eLLB 20036/36 NIB

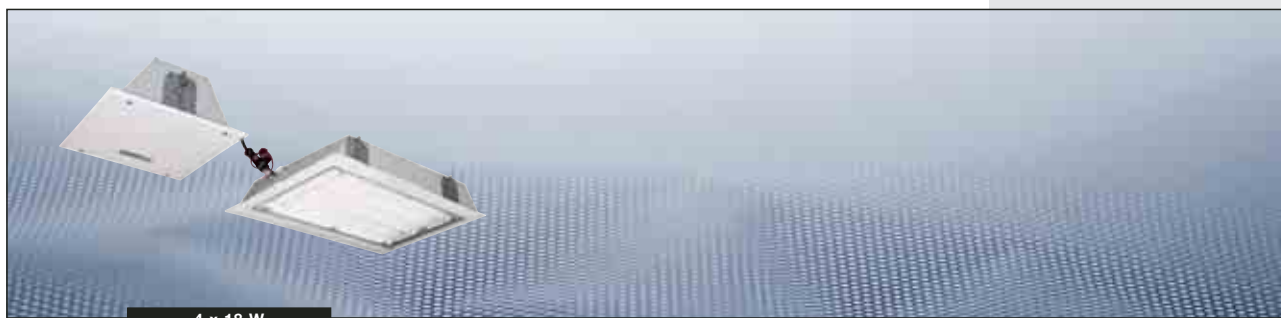
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx edm ib IIC T4
EC-Type Examination Certificate	DMT 02 ATEX E 069
Enclosure material	painted steel sheet, white optional polished stainless steel
Cover disc	single-safety glass pane of 6 mm thick
Rated voltage	AC: 220-254 V ± 10 %, 47-63 Hz AC: 110-127 V ± 10 %, 47-63 Hz (on request)
Circuit	EVG
Rated current	0.4 A
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature*	– 20 °C to + 50 °C (specified data: – 5 °C to + 35 °C)
Cable entries	2 x EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm 1 x EEx e blanking plug 2 x threaded plugs M25 x 1.5
Cable entries	1 x EEx e-cable entries M25 x 1.5 (plastic),
Battery housing	connection via 1.5 m long connection lead with plugs
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal, through-wiring multi-wire
Lamps	Bi-pin lamp: 36 W, socket G13, see accessories
Weight Leuchte	approx. 25 kg
Weight battery housing cpl.	approx. 5.7 kg
Rated emergency lighting operation	1-lamps 1.5 h or 3 h, can be set on site
Battery	Battery set with 7 Ah-NC-battery with LED-display and monitoring via microprocessor

*Longer charging times are necessary for temperatures of less than – 5 °C

Ordering details

Type	Terminals	Enclosure	Order-No.
eLLB 20036/36 NIB	M25K	Painted steel sheet	1 2190 236 002
eLLB 20036/36 NIB	M25K	Stainless steel 316	1 2190 236 012
eLLB 20036/36 NIB	M20M	Painted steel sheet	1 2190 236 102
eLLB 20036/36 NIB	M20M	Stainless steel 316	1 2190 236 112

Scope of delivery without lamp and fixing accessories.



4 x 18 W

14

EX-RECESSED CEILING LIGHT FITTINGS

| eLLB 20418 NIB |

Technical data

eLLB 20418 NIB

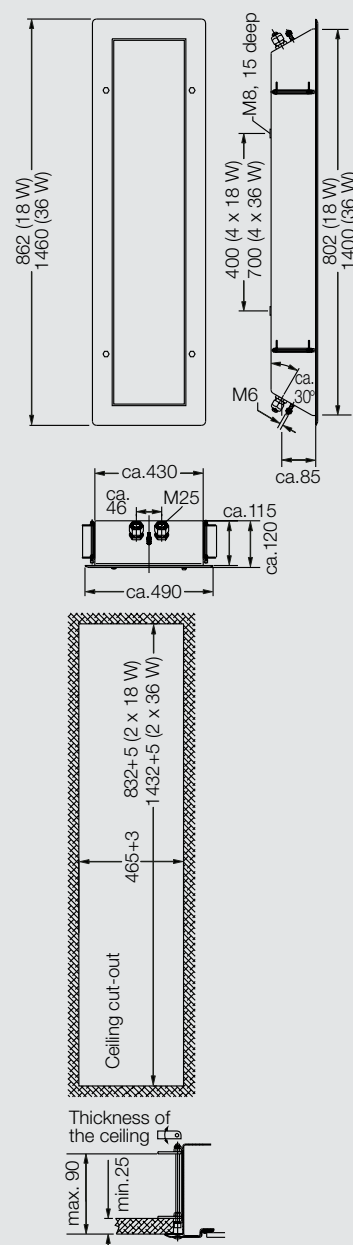
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx edm ib IIC T4
EC-Type Examination Certificate	DMT 02 ATEX E 069
Enclosure material	painted steel sheet, white optional polished stainless steel
Cover disc	single-safety glass pane of 6 mm thick
Rated voltage	AC: 220-254 V ± 10 %, 47-63 Hz AC: 110-127 V ± 10 %, 47-63 Hz (on request)
Circuit	EVG
Rated current	0.41 A
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature*	– 20 °C to + 50 °C (specified data: – 5 °C to + 35 °C)
Cable entries	2 x EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm 1 x EEx e blanking plug 2 x threaded plugs M25 x 1.5
Cable entries	1 x EEx e-cable entries M25 x 1.5 (plastic),
Battery housing	connection via 1.5 m long connection lead with plugs
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal, through-wiring multi-wire
Lamps	Bi-pin lamp: 18 W, socket G13, see accessories
Weight light	approx. 29 kg
Weight battery housing compl.	approx. 5.7 kg
Rated emergency lighting operation	1-lamps 1.5 h or 3 h, can be set on site
Battery	Battery set with 7 Ah-NC-battery with LED-display and monitoring via microprocessor

*Longer charging times are necessary for temperatures of less than – 5 °C

Ordering details

Type	Terminals	Enclosure	Order-No.
eLLB 20418 NIB	M25K	Painted steel sheet	1 2190 418 002
eLLB 20418 NIB	M25K	Stainless steel 316	1 2190 418 012
eLLB 20418 NIB	M20M	Painted steel sheet	1 2190 418 102
eLLB 20418 NIB	M20M	Stainless steel 316	1 2190 418 112

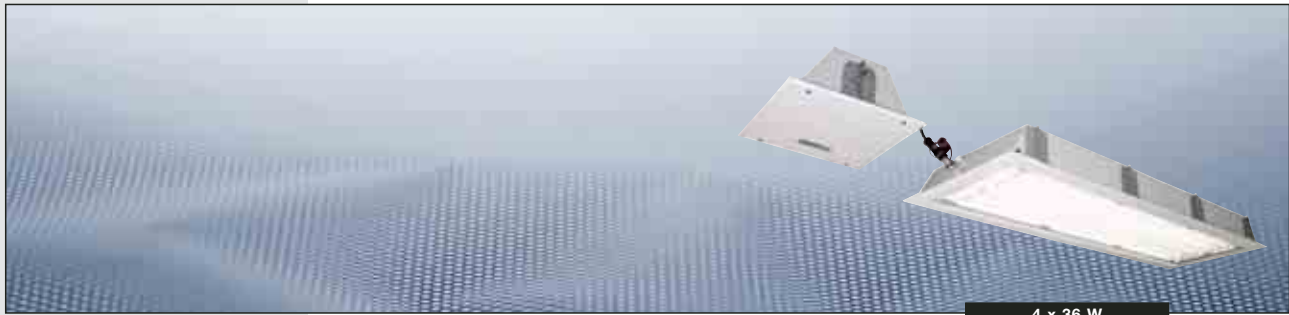
Scope of delivery without lamp and fixing accessories.



eLLB 20418 NIB

eLLB 20436 NIB

Dimensions in mm

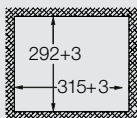
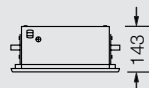
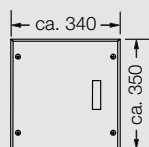


4 x 36 W

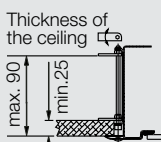
EX-RECESSED CEILING LIGHT FITTINGS

| eLLB 20436 NIB |

15



Ceiling cut-out



Battery housing

Technical data

eLLB 20018/18 NIB | eLLB 20036/36 NIB

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx edm ib IIC T4
EC-Type Examination Certificate	DMT 02 ATEX E 069
Enclosure material	painted steel sheet, white optional polished stainless steel
Cover disc	single-safety glass pane of 6 mm thick
Rated voltage	AC: 220-254 V ± 10 %, 47-63 Hz AC: 110-127 V ± 10 %, 47-63 Hz (on request)
Circuit	EVG
Rated current	0.74 A
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 66
Protection class	I
Permissible ambient temperature*	– 20 °C to + 50 °C (specified data: – 5 °C to + 35 °C)
Cable entries	2 x EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm 1 x EEx e blanking plug 2 x threaded plugs M25 x 1.5
Cable entries	1 x EEx e-cable entries M25 x 1.5 (plastic), Battery housing
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² single wire per terminal, through-wiring multi-wire
Lamps	Bi-pin lamp: 36 W, socket G13, see accessories
Weight Leuchte	approx. 41 kg
Weight battery housing cpl.	approx. 5.7 kg
Rated emergency lighting operation	1-lamps 1.5 h or 3 h, can be set on site
Battery	Battery set with 7 Ah-NC-battery with LED-display and monitoring via microprocessor

*Longer charging times are necessary for temperatures of less than – 5 °C

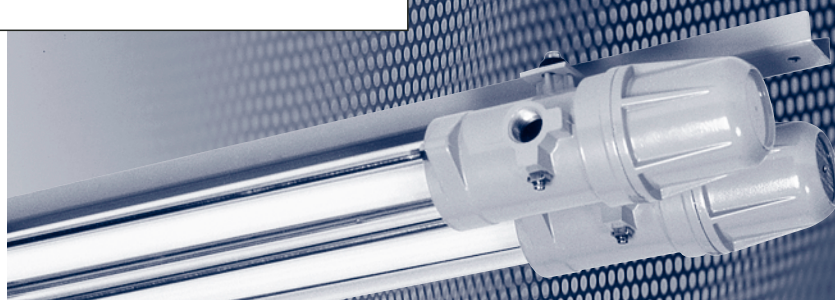
Ordering details

Type	Terminals	Enclosure	Order-No.
eLLB 20436 NIB	M25K	Painted steel sheet	1 2190 436 002
eLLB 20436 NIB	M25K	Stainless steel 316	1 2190 436 012
eLLB 20436 NIB	M20M	Painted steel sheet	1 2190 436 102
eLLB 20436 NIB	M20M	Stainless steel 316	1 2190 436 112

Scope of delivery without lamp and fixing accessories.

EX - LIGHT FITTINGS

AB 12... and EVF... 18 - 58 W
Metal version for Zone 1

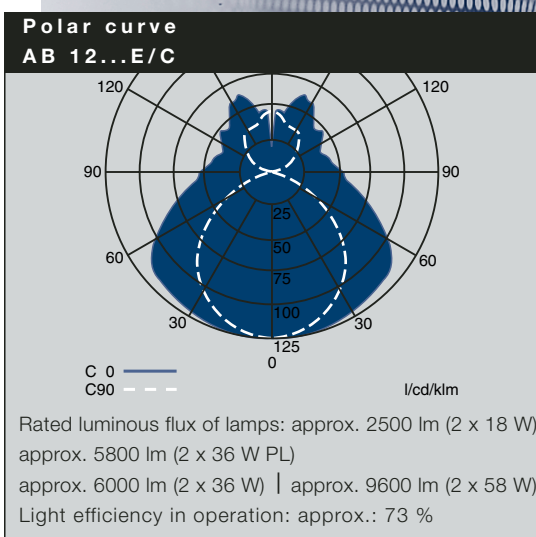
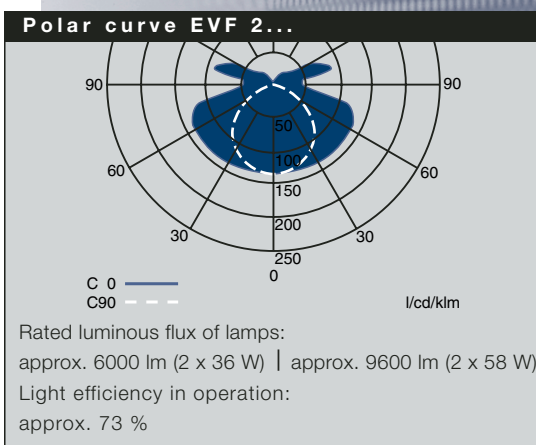
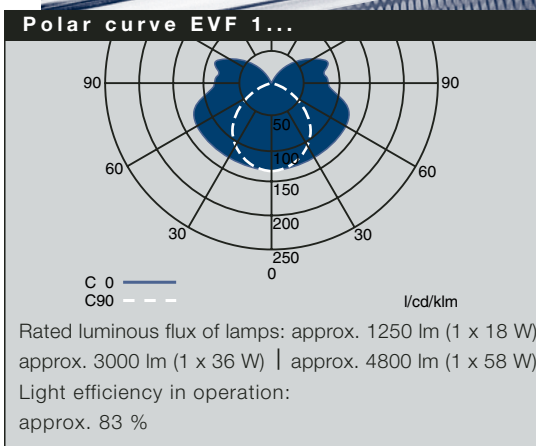


The light fittings series AB12 and EVF for fluorescent lamps are in accordance with the ATEX-Directive 94/9/EG and can be used in the Zones 1, 2, 21 and 22.

They are fitted alternatively with electronic or electromagnetic ballasts for fluorescent lamps with G13 sockets.

The flameproof housing is made of copper-free aluminium ($\text{Cu} < 0,1 \%$), the protective tube is made of borosilicate glass with high mechanical and thermal stability.

The easy to open threaded cover, the large terminal compartment and lamp guide on a guide carriage make it simple for servicing.



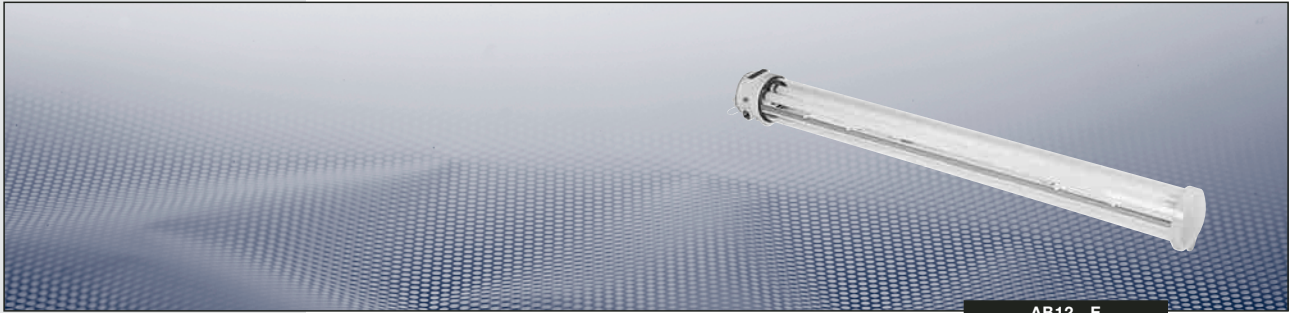
Robust housing

Easy opening due to screw plug on end

2 individual circuits (double lamp version)

Large terminal compartment

Temperature class T6

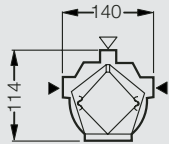


AB12...E

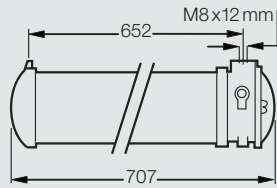
EX - LIGHT FITTINGS

| Type AB 12...E with electronic ballast |

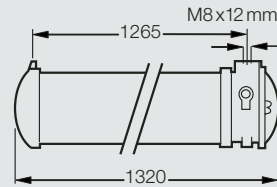
2.31



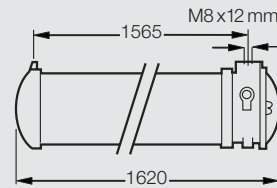
▷ optional entries, on request
▷ entries



AB 12220E



AB 12240E



AB 12265E

Technical data

Type AB 12...E

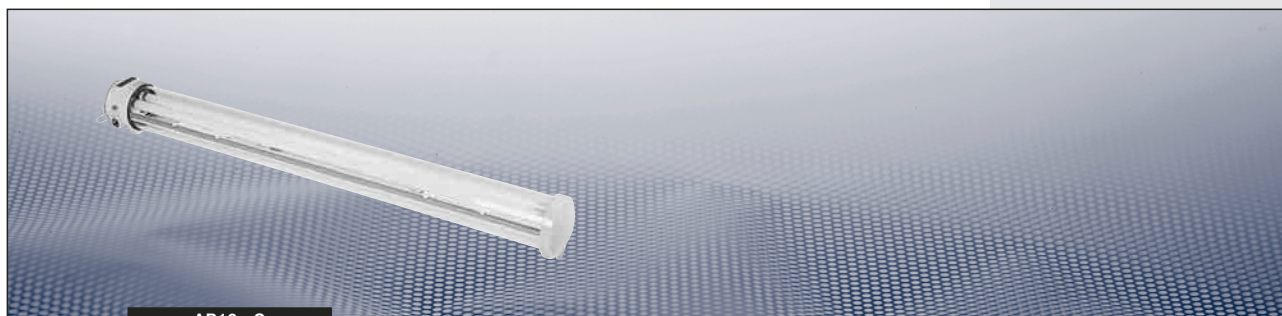
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T78 °C
Type of protection	EEx d IIB T5
EC-Type Examination Certificate	LOM 02 ATEX 2013 X
Enclosure material	Copper-free aluminium, polyester finish
Transparent cover	Borosilicate-glass
Rated voltage	AC: 198 - 254 V, 50 Hz DC: 176 - 280 V
Circuit	EVG
Power factor cos φ	> 0.95
Degree of protection to EN 60529	IP 67
Protection class	I
Permissible ambient temperature	- 20 °C to + 40 °C
Enclosure entry holes	Direct entry: 2 x 3/4" ISO 7/1 1 x Ex d-blanking plug 3/4"
Connecting terminals	L1, N and PE: 2 x 2.5 mm² PE ext. 2 x 6 mm²
Lamps	Bi-pin lamp 18 W, 36 W, 58 W, socket G13, see accessories
Options	Through-wiring with terminals L1, L2, L3, N und PE: 2 x 2.5 mm², Other lamps, single lamp version

Ordering details

Type	Lamp	Rated current	Weight approx.	Cable entry for	Order No.
		(230 V/50 Hz)		Cable Ø 3-15 mm	
AB12220E	2 x 18 W	0.17 A	7.0 kg	1 x 3/4"	NOR 000 005 060 301
	2 x 18 W	0.17 A	7.0 kg	–	NOR 000 005 060 300
AB12240E	2 x 36 W	0.48 A	12.0 kg	1 x 3/4"	NOR 000 005 060 309
	2 x 36 W	0.48 A	12.0 kg	–	NOR 000 005 060 308
AB12265E	2 x 58 W	0.49 A	14.0 kg	1 x 3/4"	NOR 000 005 060 317
	2 x 58 W	0.49 A	14.0 kg	–	NOR 000 005 060 316

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42



AB12...C

2.32

E X - L I G H T F I T T I N G S

| Type AB 12...C with electromagnetic ballast |

Technical data

Type AB 12...C

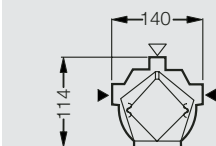
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T93 °C
Type of protection	EEx d IIB T5
EC-Type Examination Certificate	LOM 02 ATEX 2013 X
Enclosure material	Copper-free aluminium, polyester finish
Transparent cover	Borosilicate-glass
Rated voltage	230 V ± 10 %, 50 Hz
Circuit	conventional ballast with ignitor
Power factor cos φ	≥ 0.9
Degree of protection to EN 60529	IP 67
Protection class	I
Permissible ambient temperature	– 20 °C to + 55 °C
Enclosure entry holes	Direct entry: 2 x 3/4" ISO 7/1 1 x Ex d-blanking plug 3/4"
Connecting terminals	L1, N and PE: 2 x 2.5 mm² PE ext. 2 x 6 mm²
Lamps	Bi-pin lamp 18/20 W, 36/40 W, 58/65 W, socket G13, Vierstift (2G11) PL 36 W, see accessories
Options	Through-wiring with terminals L1, L2, L3, N und PE: 2 x 2.5 mm², Other PL-lamps, single lamp version

Ordering details

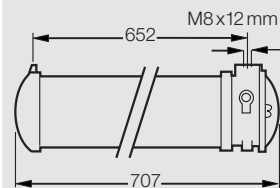
Type	Lamp	Rated current	Weight approx.	Cable entry for	Order No.
		(230 V/50 Hz)		cable Ø 3-15 mm	
AB12220C	2 x 18/20 W	0.37 A	7.0 kg	1 x 3/4"	NOR 000 005 060 347
	2 x 18/20 W	0.37 A	7.0 kg	–	NOR 000 005 060 346
AB12236PL	2 x 36 W-PL	0.39 A	8.5 kg	1 x 3/4"	NOR 000 005 060 670
	2 x 36 W-PL	0.39 A	8.5 kg	–	NOR 000 005 060 669
AB12240C	2 x 36/40 W	0.43 A	12.0 kg	1 x 3/4"	NOR 000 005 060 355
	2 x 36/40 W	0.43 A	12.0 kg	–	NOR 000 005 060 354
AB12265C	2 x 58/65 W	0.67 A	14.0 kg	1 x 3/4"	NOR 000 005 060 363
	2 x 58/65 W	0.67 A	14.0 kg	–	NOR 000 005 060 362

Scope of delivery without lamp and fixing accessories.

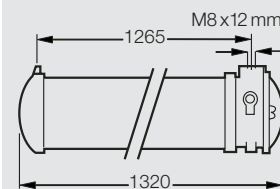
See fixing materials and accessories for light fittings on page 2.42



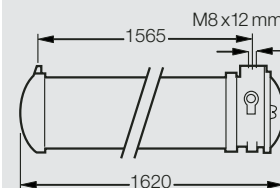
▷ optional entries, on request
▷ entries



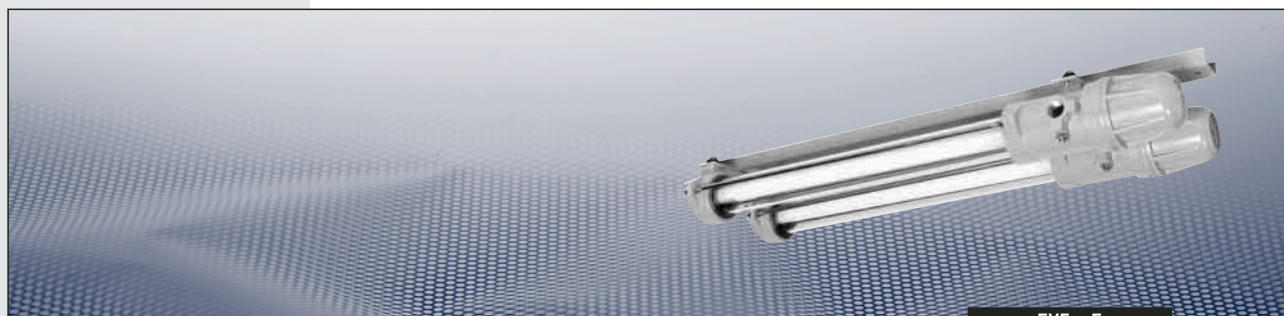
AB 12220C | AB 12236PL



AB 12240C



AB 12265C



EVF ...E

EX - LIGHT FITTINGS

2.33

| Type EVF...E with electronic ballast |

Technical data

Type EVF...E

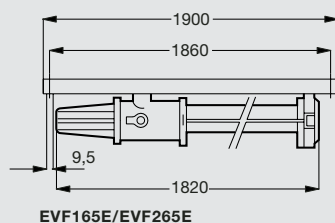
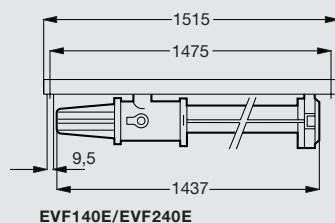
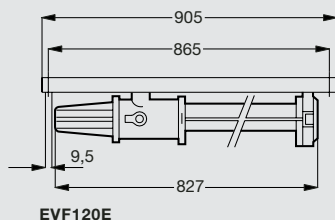
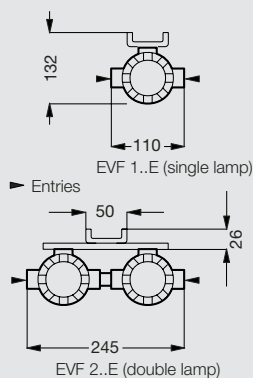
Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx d IIC T6
EC-Type Examination Certificate	LOM 02 ATEX 2019 X
Enclosure material	Copper-free aluminium, polyester finish
Transparent cover	Borosilicate-glass
Rated voltage	AC: 198-254 V, 50 Hz DC: 176-280 V
Circuit	EVG
Power factor cos ϕ	> 0.95
Degree of protection to EN 60529	IP 67
Protection class	I
Permissible ambient temperature	- 20 °C to + 40 °C
Enclosure entry holes	Direct entry: 2 x 3/4" ISO 7/1 1 x Ex d-blanking plug 3/4"
Connecting terminals	L1, N and PE: 2 x 2,5 mm ² PE ext. 2 x 6 mm ²
Lamps	Bi-pin lamp: 18 W, 36 W, 58 W; socket G13, see accessories

Ordering details

Type	Lamp	Rated current	Weight approx.	Cable entry for	Order No.
		(230 V/50 Hz)		cable Ø 3-15 mm	
EVF120E	1 x 18 W	0.09 A	6.2 kg	1 x 3/4"	NOR 000 005 070 301
	1 x 18 W	0.09 A	6.2 kg	—	NOR 000 005 070 300
EVF140E	1 x 36 W	0.16 A	9.0 kg	1 x 3/4"	NOR 000 005 070 309
	1 x 36 W	0.16 A	9.0 kg	—	NOR 000 005 070 308
EVF165E	1 x 58 W	0.25 A	14.6 kg	1 x 3/4"	NOR 000 005 070 317
	1 x 58 W	0.25 A	14.6 kg	—	NOR 000 005 070 316
EVF240E	2 x 36 W	0.48 A	16.9 kg	1 x 3/4"	NOR 000 005 070 329
	2 x 36 W	0.48 A	16.9 kg	—	NOR 000 005 070 328
EVF265E	2 x 58 W	0.49 A	26.4 kg	1 x 3/4"	NOR 000 005 070 335
	2 x 58 W	0.49 A	26.4 kg	—	NOR 000 005 070 333

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42



Dimensions in mm



Crouse-Hinds

COOPER CROUSE-HINDS GMBH

2.33

1

2

3

4

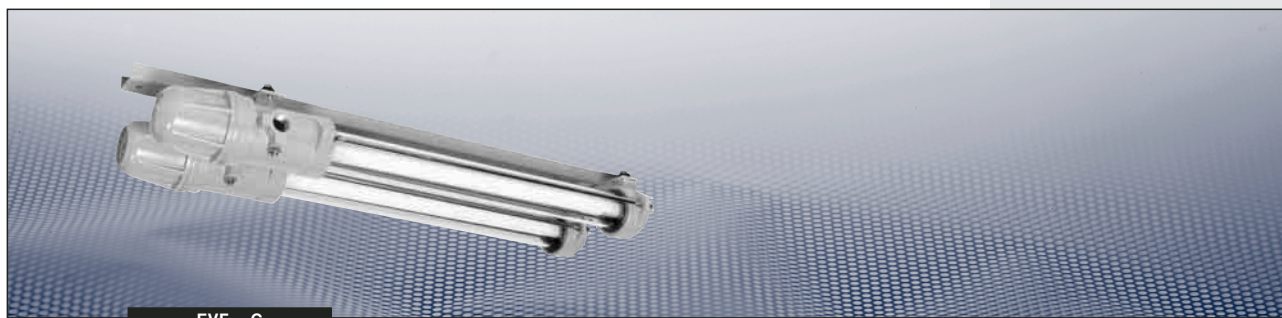
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9



EVF ...C

EX - LIGHT FITTINGS

| Type EVF...C with electromagnetic ballast |

Technical data

Type EVF...C

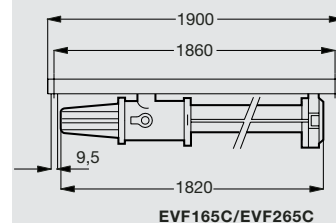
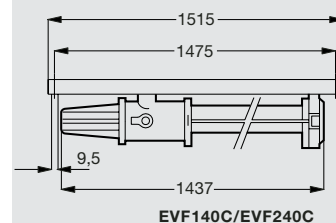
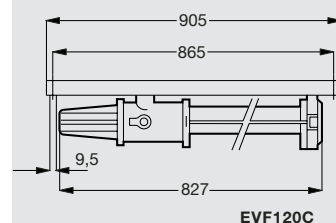
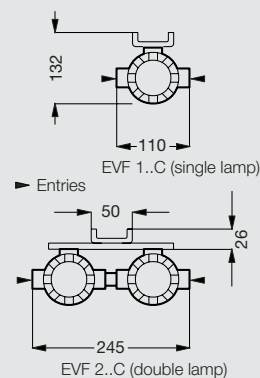
Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx d IIC T6 (20 W + 40 W) T5 (65 W)
EC-Type Examination Certificate	LOM 02 ATEX 2019 X
Enclosure material	Copper-free aluminium, polyester finish
Transparent cover	Borosilicate-glass
Rated voltage	230 V ± 10 %, 50 Hz
Circuit	conventional ballast with ignitor
Power factor cos φ	> 0.95
Degree of protection to EN 60529	IP 67
Protection class	I
Permissible ambient temperature	– 20 °C to + 55 °C
Enclosure entry holes	Direct entry: 2 x 3/4" ISO 7/1 1 x Ex d-blanking plug 3/4"
Connecting terminals	L1, N und PE: 2 x 2.5 mm ² PE ext. 2 x 6 mm ²
Lamps	Bi-pin lamp 18/20 W, 36/40 W, 58/65 W; socket G13, see accessories

Ordering details

Type	Lamp	Rated current	Weight approx.	Cable entry for	Order No.
		(230 V/50 Hz)		cable Ø 3-15 mm	
EVF120C	1 x 18/20 W	0.15 A	6.2 kg	1 x 3/4"	NOR 000 005 070 065
	1 x 18/20 W	0.15 A	6.2 kg	–	NOR 000 005 070 064
EVF140C	1 x 36/40 W	0.25 A	9.0 kg	1 x 3/4"	NOR 000 005 070 031
	1 x 36/40 W	0.25 A	9.0 kg	–	NOR 000 005 070 030
EVF165C	1 x 58/65 W	0.39 A	14.6 kg	1 x 3/4"	NOR 000 005 070 403
	1 x 58/65 W	0.39 A	14.6 kg	–	NOR 000 005 070 402
EVF240C	2 x 36/40 W	0.50 A	16.9 kg	1 x 3/4"	NOR 000 005 070 023
	2 x 36/40 W	0.50 A	16.9 kg	–	NOR 000 005 070 022
EVF265C	2 x 58/65 W	0.78 A	26.4 kg	1 x 3/4"	NOR 000 005 070 429
	2 x 58/65 W	0.78 A	26.4 kg	–	NOR 000 005 070 428

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42



EX - LIGHT FITTINGS

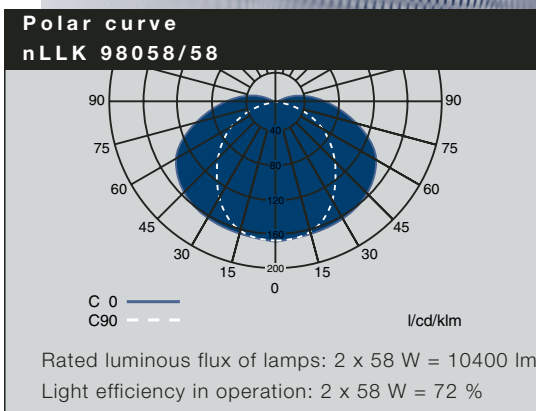
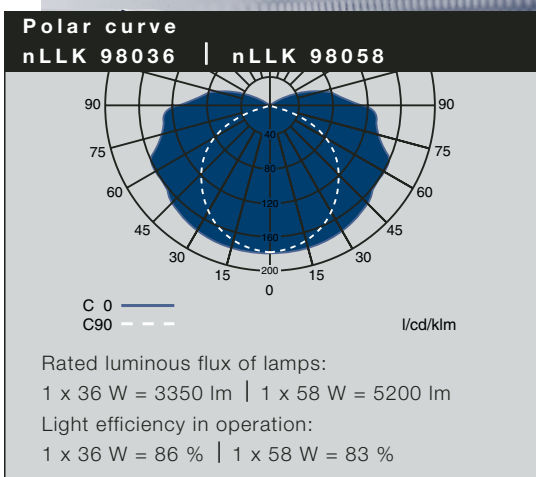
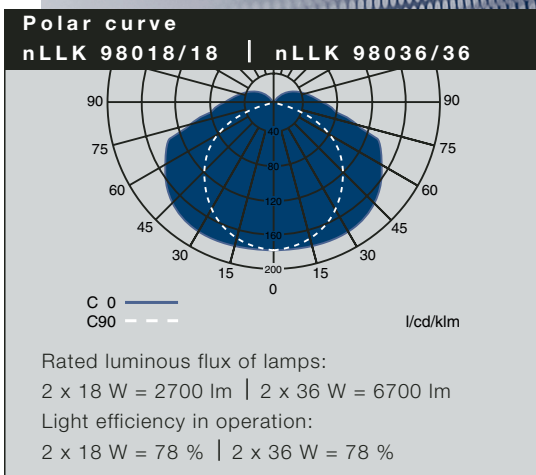
nLLK 98... 18 - 58 W
All-plastic design for Zone 2

The explosion-protected light fittings of the series nLLK 98 conform to the requirements of the ATEX-Directive 94/9/EG. They have been certified for use in the Zones 2, 21 and 22.

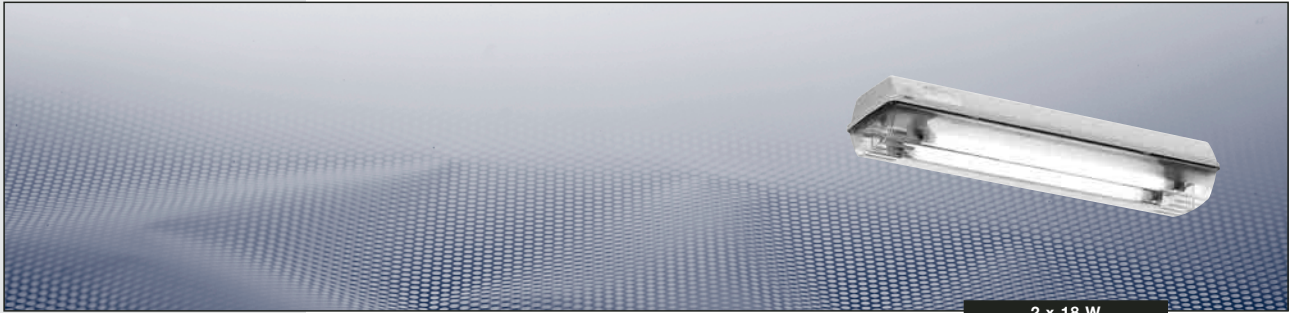
They are equipped with electronic ballasts (EVGs) for G13 bi-pin fluorescent lamps and are available for 18 W, 36 W and 58 W.

The standard single-sided through-wiring architecture in conjunction with the generously large terminal compartment offers a cost efficient installation. Double-sided lock with 10, 20 or 24 latch points allows the protective bowl to be hingeable on both sides meaning the fitting can be mounted without having to pay attention to which side is the right side.

With the optional CG-S module, single monitoring of the lamp is possible with the CEAG Emergency Light Supply Systems.



Cost efficient installation due to single-sided through-wiring
With electronic ballast
Double-sided safety lock
Safety standard IP 65
Integration in the
CEAG Emergency Light Supply System
International Approvals

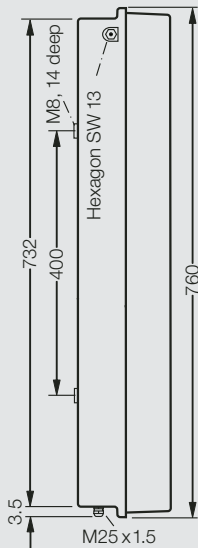
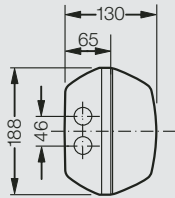


2 x 18 W

EX - LIGHT FITTINGS

| nLLK 98018/18 |

2.37



nLLK 98018/18

Technical data

nLLK 98018/18

Marking to 94/9/EC	Ex II 3 G Ex II 2 D/II 3 D T80 °C
Type of protection	EEx nA II T4 to EN 50021
EC-Type Examination Certificate	PTB 98 ATEX 2208
EC-Type Examination Certificate	DMT 02 ATEX E116
Enclosure material	Glass-fibre reinforced polyester
Protective bowl	Polycarbonate
Rated voltage	AC: 220-230 V ± 10 %, 50-60 Hz DC: 196-230 V ± 10 %
Circuit	EVG
Rated current	0.16 A resp. 0.17 A (CG-S-variant)
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 65
Protection class	I
Permissible ambient temperature	- 20 °C to + 40 °C
Cable entries	EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm
Connecting terminals	L, N, PE; max. 2 x 2,5 mm², plug-type terminals
Lamps	Bi-pin lamp: 18 W, socket G13, see accessories
Weight	approx. 4.0 kg approx. 5.5 kg (CG-S-variant)

Ordering details

Type	Connecting terminals	Through-wiring	Cable entries ³⁾	Plugs	Order No.
nLLK 98018/18 (2 x 18 W)					
1/3-1	1 x 3	x	–	1 x M25 x 1.5 1 x threaded	1 3465 218 001
2/5-2	2 x 5	–	x	2 x M25 x 1.5 2 x threaded	1 3465 218 011
2/6-2 M ¹⁾ 4)	2 x 6	–	x	4 x M20 x 1.5 2 x threaded	1 3465 218 021
nLLK 98018/18 CG-S²⁾ (2 x 18 W)					
2/6-2 ⁴⁾	2 x 6	–	x	2 x M25 x 1.5 2 x threaded	1 3465 218 912
2/6-M ¹⁾ 4)	2 x 6	–	x	4 x M20 x 1.5 2 x threaded	1 3465 218 922

¹⁾ M: with metal thread, without cable entry

²⁾ Design single monitored emergency light fitting for use in CEAG Emergency light supply unit

³⁾ With dustcap for unclosed entries/metal thread

⁴⁾ With screw-type terminals max. 2 x 6 mm² single wire

Design with luminaire switch on demand.

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42



1 x 36 W

2 x 36 W

EX - LIGHT FITTINGS

| nLLK 98036 | nLLK 98036/36 |

Technical data

nLLK 98036 | nLLK 98036/36

Marking to 94/9/EC	Ex II 3 G Ex II 2 D/II 3 D T 80 °C
Type of protection	EEx nA II T4 nach EN 50021
EC-Type Examination Certificate	PTB 98 ATEX 2208
EC-Type Examination Certificate	DMT 02 ATEX E116
Enclosure material	Glass-fibre reinforced polyester
Protective bowl	Polycarbonate
Rated voltage	AC: 220-230 V ± 10 %, 50-60 Hz DC: 196-230 V ± 10 %
Circuit	EVG
Rated current	0.16 A (1 x 36 W) 0.31 A (2 x 36 W) 0.35 A (2 x 36 W) CG-S-variant
Power factor cos φ	≥ 0,95
Degree of protection to EN 60529	IP 65
Protection class	I
Permissible ambient temperature	- 20 °C to + 40 °C
Cable entries	EEx e-cable entries M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm
Connecting terminals	L, N, PE; max. 2 x 5 mm², plug-type terminals
Lamps	Bi-pin lamp: 36 W, socket G13, see accessories
Weight	approx. 6.7 kg approx. 8.5 kg (CG-S-variant)

Ordering details

Type	Connecting terminals	Through-wiring	Cable	Plugs	Order No.
		single-ended	double-ended	entries ³⁾	
nLLK 98036 (1 x 36 W)					
1/3-1	1 x 3	x	-	1 x M25 x 1.5 1 x threaded	1 3465 136 001
2/5-2	2 x 5	-	x	2 x M25 x 1.5 2 x threaded	1 3465 136 011
2/6-2M ^{1) 4)}	2 x 6	-	x	4 x M20 x 1.5 2 x threaded	1 3465 136 021
nLLK 98036/36 (2 x 36 W)					
1/3-1	1 x 3	x	-	1 x M25 x 1.5 1 x threaded	1 3465 236 001
2/5-2	2 x 5	-	x	2 x M25 x 1.5 2 x threaded	1 3465 236 011
2/6-2M ^{1) 4)}	2 x 6	-	x	4 x M20 x 1.5 2 x threaded	1 3465 236 021
nLLK 98036/36 CG-S ²⁾ (2 x 36 W)					
2/6-2 ⁴⁾	2 x 6	-	x	2 x M25 x 1.5 2 x threaded	1 3465 236 912
2/6-2M ^{1) 4)}	2 x 6	-	x	4 x M20 x 1.5 2 x threaded	1 3465 236 922

¹⁾ M: with metal thread, without cable entry

²⁾ Design single monitored emergency light fitting for use in CEAG Emergency light supply unit

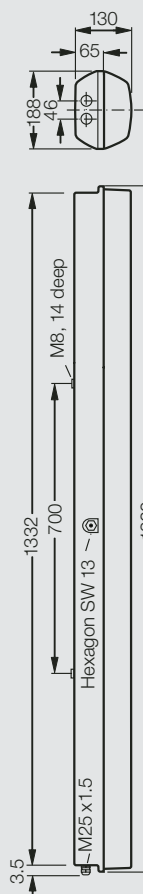
³⁾ With dustcap for unclosed entries/metal thread

⁴⁾ With screw-type terminals max. 2 x 6 mm² single wire

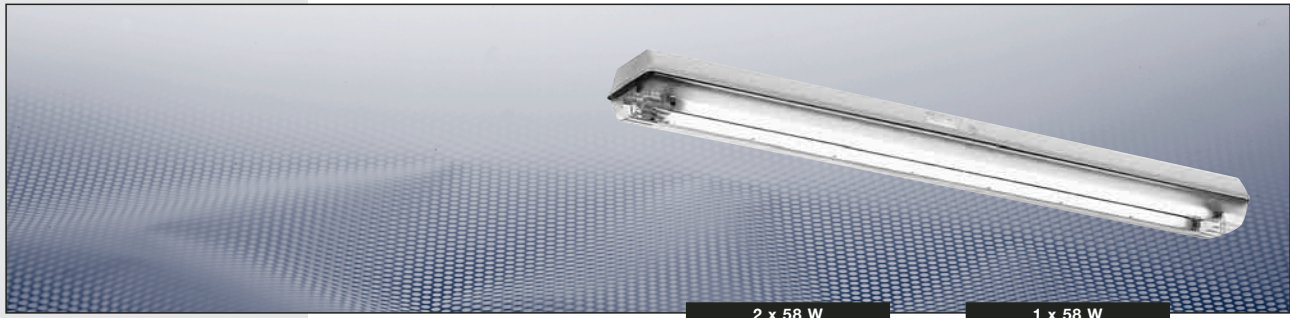
Design with luminaire switch on demand.

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42



nLLK 98036
nLLK 98036/36



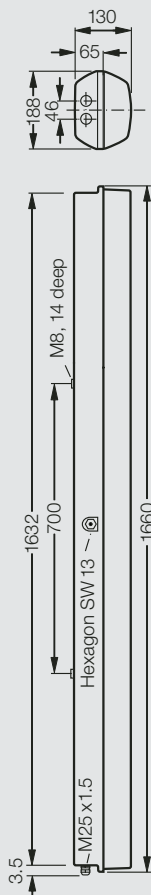
2 x 58 W

1 x 58 W

EX - LIGHT FITTINGS

| nLLK 98058 | nLLK 98058/58 |

2.39



nLLK 98058
nLLK 98058/58

Technical data

nLLK 98058 | nLLK 98058/58

Marking to 94/9/EC	Ex II 3 G Ex II 2 D/II 3 D T80 °C
Type of protection	EEx nA II T4 to EN 50021
EC-Type Examination Certificate	PTB 98 ATEX 2208
EC-Type Examination Certificate	DMT 02 ATEX E116
Enclosure material	Glass-fibre reinforced polyester
Protective bowl	Polycarbonate
Rated voltage	AC: 220-230 V ± 10 %, 50-60 Hz DC: 196-230 V ± 10 %
Circuit	EVG
Rated current	0.25 A (1 x 58 W) 0.45 A (2 x 58 W) 0.54 A (2 x 58 W) CG-S-variant
Power factor cos φ	≥ 0.95
Degree of protection to EN 60529	IP 65
Protection class	I
Permissible ambient temperature	- 20 °C to + 40 °C
Cable entries	EEx e-cable entries M25 x 1,5 (plastic) for cables from Ø 8 - 17 mm
Connecting terminals	L, N, PE; max. 2 x 2,5 mm², plug-type terminals
Lamps	Bi-pin lamp: 58 W, socket G13, see accessories
Weight	approx. 7.3 kg approx. 9.8 kg (CG-S-variant)

Ordering details

Type	Connecting terminals	Through-wiring	Cable entries ³⁾	Plugs	Order No.
nLLK 98058 (1 x 58 W)					
1/3-1	1 x 3	x	–	1 x M25 x 1.5 1 x threaded	1 3465 158 001
2/5-2	2 x 5	–	x	2 x M25 x 1.5 2 x threaded	1 3465 158 011
2/6-2M ^{1) 4)}	2 x 6	–	x	4 x M20 x 1.5 2 x threaded	1 3465 158 021
nLLK 98058/58 (2 x 58 W)					
1/3-1	1 x 3	x	–	1 x M25 x 1.5 1 x threaded	1 3465 258 001
2/5-2	2 x 5	–	x	2 x M25 x 1.5 2 x threaded	1 3465 258 011
2/6-2M ^{1) 4)}	2 x 6	–	x	4 x M20 x 1.5 2 x threaded	1 3465 258 021
nLLK 98058/58 CG-S²⁾ (2 x 58 W)					
2/6-2 ⁴⁾	2 x 6	–	x	2 x M25 x 1.5 2 x threaded	1 3465 258 912
2/6-2M ^{1) 4)}	2 x 6	–	x	4 x M20 x 1.5 2 x threaded	1 3465 258 922

¹⁾ M: with metal thread, without cable entry

²⁾ Design single monitored emergency light fitting for use in CEAG Emergency light supply unit

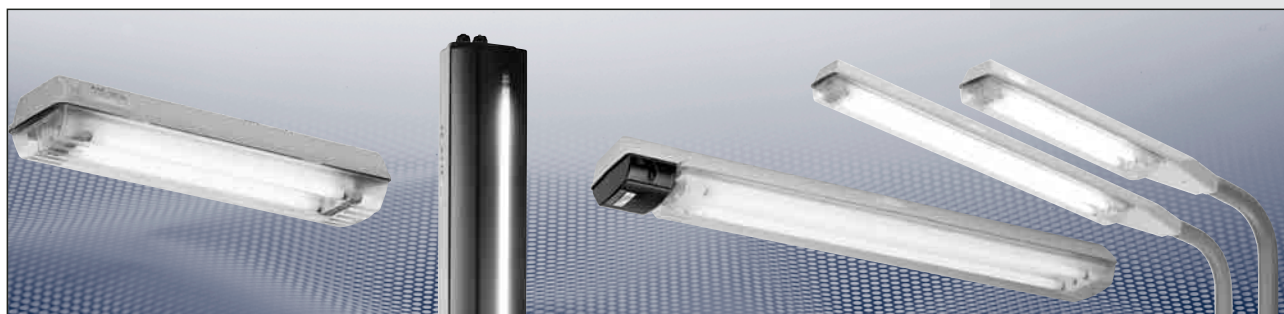
³⁾ With dustcap for unclosed entries/metal thread

⁴⁾ With screw-type terminals max. 2 x 6 mm² single wire

Design with luminaire switch on demand.

Scope of delivery without lamp and fixing accessories.

See fixing materials and accessories for light fittings on page 2.42



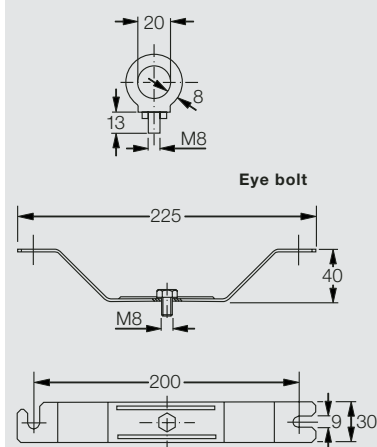
2.46

Fixing materials and accessories eLLK 92/nLLK 98

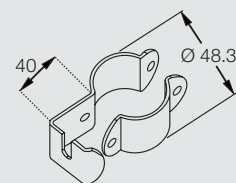
Type/ code	Corrosion protected	Qty. per light fitting	Order No.
Eye bolt A2	galvanized	2	2 2480 002 000
Heyagon screw S4	stainless steel	2	2 2480 054 000
Ceiling mounting bracket incl. screws and washer D92	stainless steel	2	2 2480 092 000
Fixing bracket, Ø 48.3 mm	stainless steel	2	2 2480 510 017

Fixing materials and accessories

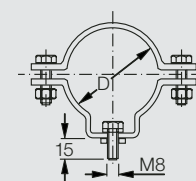
Type/ code	Corrosion protection	for pipes DIN	Outer Ø D (mm)	Qty. per light fitting	Order No.
Pipe clamp					
R12	hot galvanized	1 1/4"	38 - 42	2	2 2480 462 000
R14	CrNi	1 1/4"	38 - 42	2	2 2480 464 000
R22	hot galvanized	1 1/2"	47 - 51	2	2 2480 472 000
R32	hot galvanized	2"	56 - 60	2	2 2480 482 000
Wall bracket W27	hot galvanized		1 1/4"	1	2 2483 027 000
Luminaire wall suspension 30° inclusive screw and washer	hot galvanized			2	2 2480 000 122



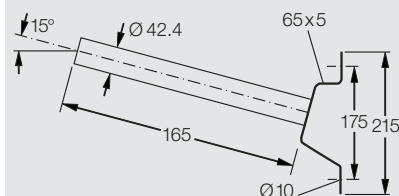
Ceiling mounting bracket D92



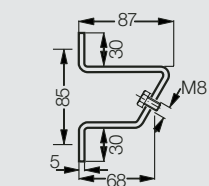
Fixing bracket



Pipe clamp

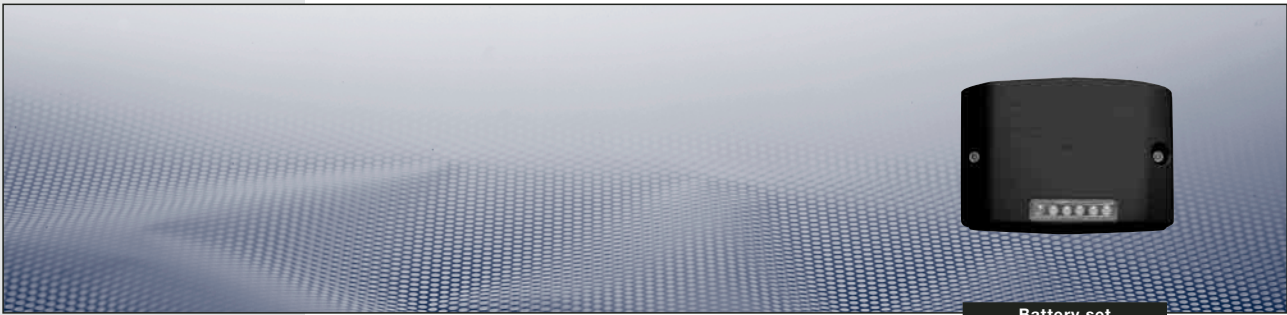


Wall bracket

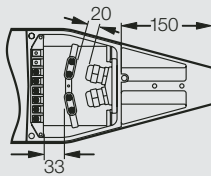


Luminaire wall suspension 30°

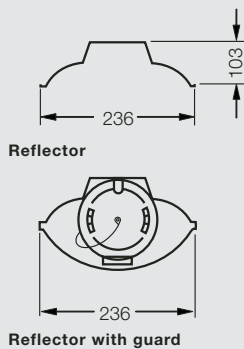
Dimensions in mm



Battery set



Terminals assembled



Reflector

Reflector with guard

Dimensions in mm

eLLM 92...

Type	Order No.
Single-ended through wiring 2/6 with 2 entries M25, include. clamping and fixing material	2 2218 602 000

Serien eLLK 92..., eLLM 92... und nLLK 98...

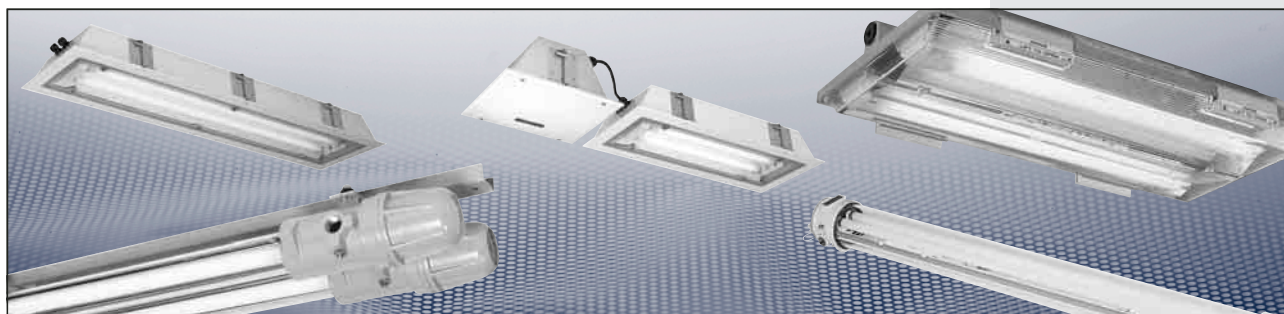
Type	Order No.
Hexagon key SW 13	3 2485 000 005

eLLK 92...NIB | eLLM 92...NIB

Type	Order No.
Battery set type 2710-3 with LED display and micro-processor monitoring	2 2710 904 000

AB 12 and EVF

Type	for lamp	Order No.
Reflector		
RAB 220	AB 12220 C/E and AB 12236 PL	NOR 000 005 060 403
RAB 240	AB 12240 C/E	NOR 000 005 060 411
RAB 265	AB 12265 C/E	NOR 000 005 060 429
Reflector with guard		
GRAB 220	AB 12220 C/E and AB 12236 PL	NOR 000 005 060 479
GRAB 240	AB 12240 C/E	NOR 000 005 060 487
GRAB 265	AB 12265 C/E	NOR 000 005 060 495
Guard		
REVF 20	EVF 120C/E	NOR 000 000 507 385
REVF 40	EVF 140C/E and 240C/E	NOR 000 000 507 393
REVF 65	EVF 165C/E and 265C/E	NOR 000 000 507 319



2.48

Lamps

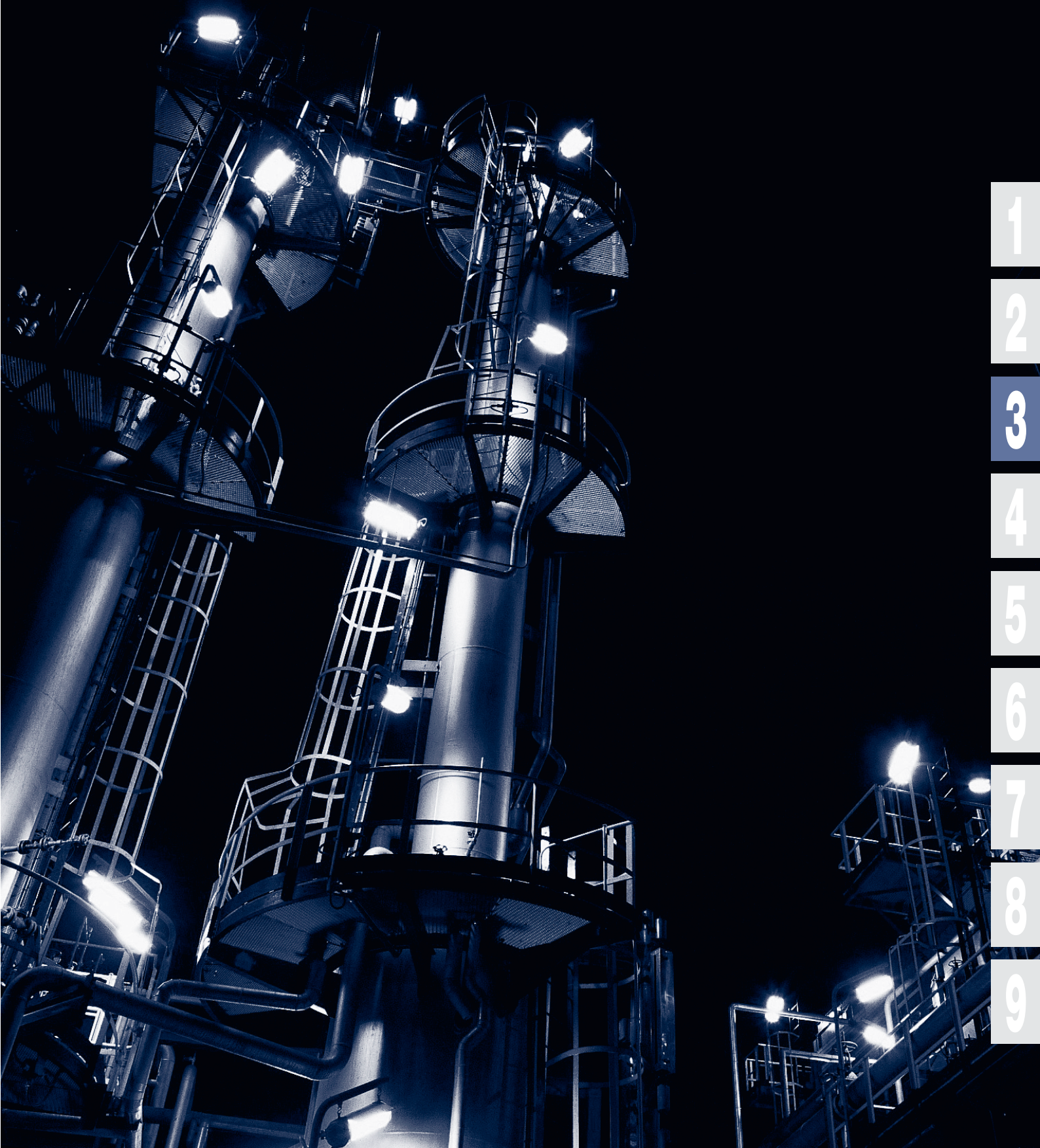
For Luminaire, Type	Lamp type socket/ Diameter	Power	Luminous flux light colour	Order No.
eLLK92/eLLM92 nLLK 98 eLLB 20 AB12 EVF	T26/Ø 26 mm	18 W	1350 lm	3 2475 900 081
	G13-IEC-60081-BI. 22/20		universal-white	
	bi-pin cap G13			
	T26/Ø 26 mm	36 W	3350 lm	3 2475 900 082
AB 12236 PL FVS	G13-IEC-60081-BI. 24/20		universal-white	
	bi-pin cap G13			
	T26/Ø 26 mm	58 W	5200 lm	3 2475 900 083
	G13-IEC-60081-BI. 21/22		universal-white	
eLLK 92 3.../ eLLM 92 3...	bi-pin cap G13			
	TC-L-four pin/Ø 18 mm 36 W		2900 lm	on request
	socket 2G11		universal-white	
	TC-L-four pin/Ø 18 mm 40 W		3500 lm	on request
eLLK 92 3.../ eLLM 92 3... with separate EC-Type Examination certificate	socket 2G11		universal-white	
	T-HS 26/Ø 26 mm	18 W	1150 lm	on request
	single pin cap Fa 6	36 W	3000 lm	on request
	(Aura Super Ex)	58 W	4800 lm	on request
eLLK 92 3.../ eLLM 92 3... with separate EC-Type Examination certificate			universal-white	
	T-HS 38/Ø 38 mm	20 W	1000 lm	on request
	single pin cap Fa 6	40 W	2350 lm	on request
	(z. B. TL-X or	65 W	4600 lm	on request
L.../...X)			universal-white/ daylight-white	

E X - S I G N A L - A N D E S C A P E S I G N L U M I N A I R S

EMERGENCY LIGHTING – CENTRAL OR DECENTRAL	3.2
EX-ESCAPE SIGN LUMINAIRES EXIT	3.4
EX-EMERGENCY LIGHT FITTING AB 12108-EVG	3.6
EX-EMERGENCY LIGHT FITTING EE11 PL	3.8
EX-SIGNAL AND EMERGENCY LIGHT FITTING dKLK 88	3.10
EX-SAFETY AND EMERGENCY LIGHT FITTING SL/RZ 6011.1	3.12
ACCESSORIES	3.14

HOW CAN YOU ACHIEVE THE MONITORING OF ALL YOUR SAFETY LAMPS SIMULTANEOUSLY?

(CENTRAL MONITORING: PAGE 3.3ff)



1

2

3

4

5

6

7

8

9



Emergency Lighting – central or decentral

Appertaining to Emergency Lighting in hazardous areas, there are two general philosophies. That of the supply assurance, the test and maintenance effort and that of the economic efficiency.

Emergency light fittings with a self-contained battery system

Emergency light fittings with self-contained battery systems provide the required Emergency lighting decentral, independent from central systems. That means the battery, the charger and the electronics are integrated in the light fitting.



Ex-Emergency Light Fitting EXIT

Taking the availability and the redundancy into consideration, this system has with respect to the supply assurance in safety-engineering sensible areas a very high standard.

Taking the economic efficiency into consideration, the required effort of testing, maintenance and the environmental effect on the battery life span of each self-contained battery system has to be taken into account.

Taking the above into consideration it is without reason the best solution when emergency light fittings with a self-contained battery system are used in large and spacious explosion hazardous areas where the number of fittings to be used is limited.

The CEAG Emergency light fittings with self-contained battery systems EXIT N, Ex-Lite E (in preparation) and EE 11 PL have been designed for a 3 hour or 1 hour Emergency Lighting duration. They do in part have an automatic self-test system for functionality and duration tests.



Ex-Emergency Light Fitting AB 12108-EVG



Central Emergency Lighting Supply using system light fittings with CG- and CG-S-Modules

A centrally monitored emergency light system using the CEAG group supply and a central battery system is installed when a large number of emergency lights are conglomerated and can be used as a system emergency lighting.

These battery systems are generally, not installed in the hazardous areas and therefore do not have to cope with the same environmental conditions as the light fittings themselves. This usually results in an extended life span of the batteries with a minimized maintenance effort. One must of course take into consideration that the cable laying from the central battery to each light fitting in the hazardous areas affords an increased effort.

To be able to run the CEAG emergency light system we offer versions with CG-modules for the emergency and escape sign fittings. This controlling module monitors amongst other things the data exchange with the main emergency lighting system and reports all functional errors.

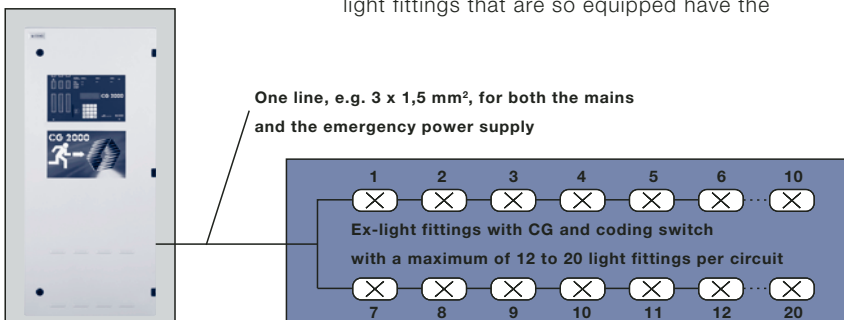
In connection with the CG-Modules all CEAG light fittings that are so equipped have the

possibility of being connected to the CEAG emergency light system with monitoring facility. This means that each individual light fitting can be monitored individually. With this the explosion-protected light fittings EXIT CG-S, Ex-Lite CG-S (in preparation), dKLK 23 CG and the AB 12108-EVG can be integrated into the monitoring system and be used as system light fittings.

This combination offers the following advantages:

- Automatic performance of the necessary function and duration tests with a central record of all operating functions and error reports
- Enormous cost savings as manual testing is no longer necessary
- Programming function to enable a multiple lighting modus on a single power supply circuit (with CG-S-Module); that means a choice of permanent or stand-by modus as well as a switching with the general lighting.
- High degree of safety of emergency lighting due to constant display of availability
- Simplified installation:
 - mains and emergency power supply have a common connection
 - no separate data line is required
 - a maximum of 12 light fittings or 20 light fittings with CG-S-Modules can be connected and addressed separately on one circuit

Non-hazardous area
CEAG Emergency
supply system



EXIT - ESCAPE SIGN LUMINAIRES

EXIT

Moulded plastic version with LED technology for Zone 1 and Zone 21

The EXIT series of explosion-protected escape sign luminaire fulfils the requirements of ATEX Directive 94/9/EC and EN 60598, Section 2.22 for emergency lighting luminaires. The luminaires are suited for marking escape routes and exits in potentially explosive atmospheres.

Only white, high-efficiency LEDs are used as illuminants for these luminaires. This guarantees maintenance-free operation, as the illuminants do not need replacing throughout the complete service life of the luminaire.

The supply electronics are also laid out for this service life; the LED circuits are intrinsically safe.

The wide input voltage range allows international use. The housing of these luminaires is made of high-grade polycarbonate: the escape signs comply with the latest standards.

Thanks to the robust design and high degree of protection, these luminaires are suited for both indoor and outdoor use.

As an emergency lighting luminaire with self-contained battery system, the EXIT N features an NC battery and automatic function monitoring with operating time test.

With the optional built-in CG-S monitoring module with coding switch for max. 20 addresses, this luminaire can also be used as an individually monitored emergency lighting luminaire that is connected to a CEAG emergency lighting supply system. With this, the operator can programme the switching mode according to the respective requirements. Thus, as many as 20 luminaires with different switching modes can be connected to one end circuit.

All-plastic polycarbonate housing

Power-saving LED technology

Maintenance-free LED technology throughout service life

High degree of protection IP 66

Luminaire with self-contained battery unit and automatic function monitoring

Connection and monitoring with CEAG emergency lighting supply systems possible



For all types of application

The escape sign luminaires of the EXIT series are available as mains luminaires "EXIT", e.g. for specially safeguarded industrial networks in production plants, as "EXIT CG-S" emergency lighting luminaires with individual function monitoring for use in CEAG emergency lighting supply systems, and as "EXIT-N" emergency lighting luminaires with self-contained battery systems and automatic function and operating time tests.

Green light for all zones

On account of the robust, all-plastic polycarbonate housing in the high degree of protection IP 66, the EXIT luminaire can be installed almost anywhere, both indoors and out. The luminaire is designed in the type of protection EEx em ib IIC up to T6 and in accordance with the ATEX Directive. It can be used in hazardous areas with potentially explosive gas atmospheres (Zones 1 and 2) and potentially explosive dust atmospheres (Zones 21 and 22).



Maintenance-free operation

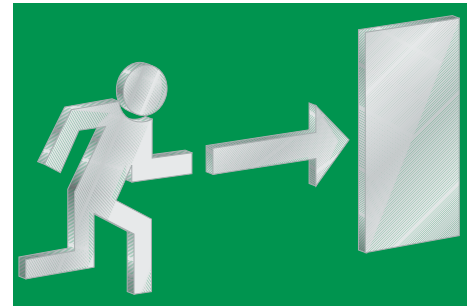
The white LED technology used as the light source allows maintenance-free operation without replacement of the illuminant. The lighting values specified for the escape sign are maintained throughout the complete service life of the LEDs, namely ca. 50,000 hours. It goes without saying that the supply electronics are also designed for this extremely long operating time. This reduces operating costs and increases the operating safety enormously, in particular in locations that are not easily accessible.

For international use

The LED escape sign luminaire of the EXIT series was designed to meet the requirements of a large number of different safety concepts. Thanks to the wide input voltage range from 110 V to 277 V AC and 250 V DC, this luminaire can be used internationally, whereby the supply circuits of the LED circuits are intrinsically safe. The luminaire has a visibility range of 25 metres and it is available with a wide variety of pictograms.



Installation-friendly
hinged frame for easy
electrical connection



Conformity to standards

The EXIT explosion-protected escape sign luminaire series fulfils the requirements of ATEX Directive 94/9/EC and EN 60598, Part 2.22 for emergency lighting luminaires. It is suited for marking escape routes and exits in potentially explosive atmospheres. The housing of this luminaire is made of high-grade polycarbonate and it goes without saying that the escape sign comply with the latest standards.

Double safety

Whenever the operational safety of explosion-protected safety and escape sign luminaires is involved, there is no room for compromises, as only a luminaire that is fully functional at all times can save human lives. The new series of explosion-protected LED escape sign luminaires not only fulfils the extremely high explosion protection requirements, but it also fulfils the legal requirements for emergency and safety lighting installations. The new EXIT is capable of safely showing the right way to go at all times, even in complex and often badly laid out industrial installations with potentially explosive atmospheres.





EXIT and EXIT CG-S

Central emergency lighting supply via system luminaires with CG-S module

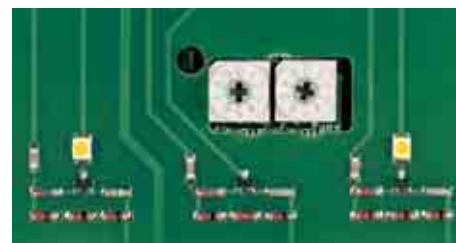
A central emergency lighting supply using CEAG group supply and central battery systems are used wherever a large number of emergency lighting luminaires can be combined and operated as system luminaires.

These battery systems are generally installed outside the hazardous areas and, therefore, they are not subjected to the ambient conditions of the luminaires in the field. As a result, the operating life of the battery is relatively long and the amount of maintenance required is minimal.

The mains and emergency lighting supplies of these luminaires are fed via separate circuits from the emergency lighting power supply installation to the escape sign luminaire in the hazardous area. Various luminaires with CG-S function can be operated in these circuits.

Better safe than sorry

In addition to the EXIT for use as a mains luminaire, e.g. for specially safeguarded industrial networks in production plants, there is also the EXIT CG-S version with easy function monitoring. In conjunction with the CG-S monitoring module with coding switch for max. 20 addresses, this luminaire can be operated as emergency lighting luminaire with individual monitoring. The operator can programme the switching mode according to his individual requirements, thus allowing the operation of up to 20 luminaires with different switching modes in one end circuit.



Addressing switch in the EXIT CG-S

No additional installation work is required. The central control unit monitors all the functions of the luminaire, checks the feed line for shorts or open circuits and indicates any incidents clearly on the display. Thus, even with highly complex installations, troubleshooting and eliminating faults are not a problem. Another considerable advantage: all the function and operating time tests are carried out automatically and recorded by the central control unit. This saves no end of time and money. During this function test, the correct functioning of the luminaire is monitored by the built-in CG-S module and any faults are reported to the central control unit. Thus, for example, the failure of LED groups is indicated automatically.





EXIT | EXIT CG-S



PL

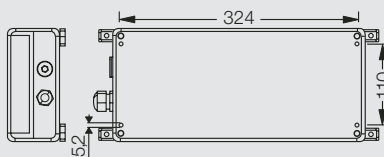
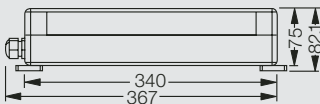
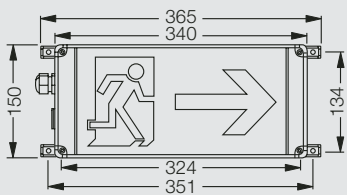


PR



PU

Escape sign acc. to
current standard



EXIT

Dimensions in mm

E X - E S C A P E S I G N L U M I N A I R E S

| EXIT | EXIT CG-S |

5

Technical data

EXIT | EXIT CG-S

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 60 °C
Explosion protection	EEx e m ib IIC T6 (t _a max. +40 °C), T5 (t _a max. +50 °C)
EC-Type Examination Certificate	PTB 02 ATEX 2111
Visibility range	up to 25 m
Enclosure material	Polycarbonate
Protective cover	Polycarbonate
Cable entries	1 x Ex e cable entry M20 x 1.5 (moulded plastic) 1 x Ex e blanking plug M20 x 1.5
Enclosure colour	Grey, RAL 7035
Mounting	Wall mounting by means of external fixing lugs
Dimensions in mm (L x H x D)	340 x 150 x 75
Connection terminals	4 x cage clamp terminals, max. 2.5 mm², double engagement
Rated voltage EXIT	AC: 110 - 277 V, 50/60 Hz DC: 110 V - 250 V DC: 12 - 24 V ±20 % (optional)
Rated voltage EXIT CG-S	AC: 220 - 254 V, 50/60 Hz DC: 195 V - 250 V
Rated power	approx. 6 VA
Rated current	DC: 220 V = 20 mA, 110 V = 40 mA
Permissible temperature range	- 20 °C to + 50 °C
Illuminants	High-efficiency LEDs, white
Insulation class	I
Degree of protection EN 60529	IP 66

Ordering details

Type	Scope of delivery ¹⁾	Order No.
EXIT	incl. cover with silk-screen pictogram PR	1 2191 000 001
	incl. cover with silk-screen pictogram PL	1 2191 000 002
	incl. cover with silk-screen pictogram PU	1 2191 000 003
	incl. cover, clear without pictogram	1 2191 000 004
EXIT CG-S	incl. cover with silk-screen pictogram PR	1 2191 020 001
	incl. cover with silk-screen pictogram PL	1 2191 020 002
	incl. cover with silk-screen pictogram PU	1 2191 020 003
	incl. cover, clear without pictogram	1 2191 020 004

Option: Versions for M20 metal cable entries

¹⁾ Other pictograms or inscriptions available on request



EXIT N

Emergency lighting luminaires with self-contained battery systems

Emergency lighting luminaires with self-contained battery systems provide the required emergency lighting from a decentralized source, independent of central systems.

These luminaires are particularly economical when used in extensive plants. Until now, compared to centrally operated and monitored installations, the disadvantage of the emergency lighting luminaires with self-contained battery systems was that they did not provide any information on the state of the luminaire. However, this monitoring function has been incorporated in the EXIT N escape sign luminaire. Five green LEDs supply constant information on the charging

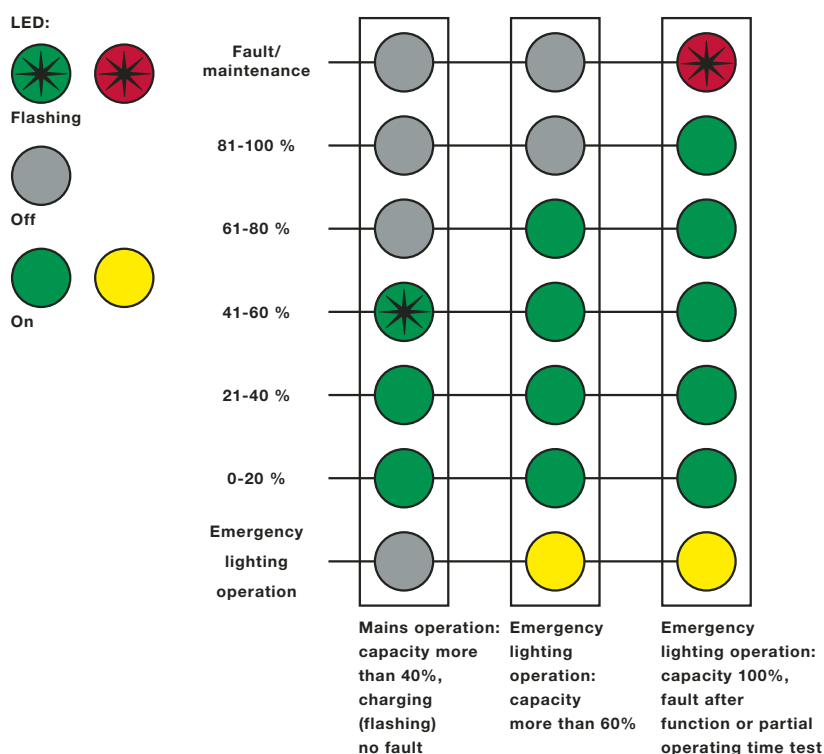
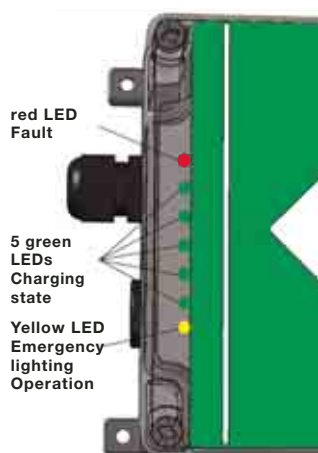
state and available battery capacity. A yellow LED indicates the emergency lighting operation mode and an additional red LED indicates any faults.

Monitoring functions

The extended self-monitoring with automatic function and partial duty cycle test is also new. The five green LEDs behind the protective cover provide continuous indication of the charging state and the current battery capacity. Charging is signaled by a flashing green LED. The charged capacity is indicated in 20% stages. The yellow LED indicates emergency lighting operation.

An automatic function test lasting 5 minutes is carried out on a weekly basis. For this, the LEDs are switched electronically from mains to battery operation. The emergency lighting function is tested and any faults are indicated by the flashing red LED.

After ca. 3 months a part-operating time test (35 mins.) is initiated automatically. If a minimum emergency lighting operating time of 30 minutes is not reached, it is signaled by the flashing red LED. After the cause of the fault has been eliminated, e.g. by charging or replacing the battery, the fault indication is reset during the next emergency lighting operation (manual or automatic) when the minimum operating time of > 30 minutes has been reached.





EXIT N

E X - E S C A P E S I G N L U M I N A I R E S

| EXIT N |

6



PL

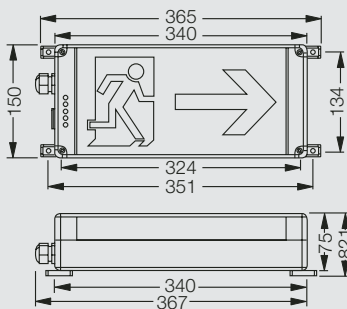


PR



PU

Escape sign acc. to
current standard



EXIT N

Dimensions in mm

Technical data

EXIT N

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 60 °C
Explosion protection	EEx e m ib IIC T5 (t _a max. +40 °C), T4 (t _a max. +50 °C)
EC-Type Examination Certificate	PTB 02 ATEX 2111
Visibility range	up to 25 m
Enclosure material	Polycarbonate
Protective cover	Polycarbonate
Cable entries	1 x Ex e cable entry M20 x 1.5 (moulded plastic) 1 x Ex e blanking plug M20 x 1.5
Enclosure colour	Grey, RAL 7035
Mounting	Wall mounting
Dimensions in mm (L x H x D)	340 x 150 x 75
Connection terminals	4 x cage clamp terminals, max. 2.5 mm², double engagement
Rated voltage	AC: 110 - 277 V, 50/60 Hz DC: 110 - 250 V
Rated power	approx. 8 VA
Battery	NC-Akku 12 V/600 mAh
Charging time (cap. > 90 %)	28 h
Rated emergency lighting cycle	3 h
Permissible temperature range	- 20 °C to + 50 °C, specified data +5 °C to +35 °C
Illuminants	High-efficiency LEDs, white
Insulation class	I
Degree of protection to EN 60529	IP 66

Ordering details

Type	Scope of delivery ¹⁾	Order No.
EXIT N	incl. cover with silk-screen pictogram PR	1 2191 030 001
	incl. cover with silk-screen pictogram PL	1 2191 030 002
	incl. cover with silk-screen pictogram PU	1 2191 030 003
	incl. cover, clear without pictogram	1 2191 030 004

Option: Versions of M20 metal cable entries

¹⁾ Other pictograms or inscriptions available on request

EX - ESCAPE SIGN LUMINAIRES

Ex-Lite **Metal version with LED technology for Zone 1 and Zone 21**

The Ex-Lite series of explosion-protected escape sign luminaire fulfils the requirements of ATEX Directive 94/9/EC and EN 60598, Section 2.22 for emergency lighting luminaires. The luminaires are suited for marking escape routes and exits in potentially explosive atmospheres. Only white, high-efficiency LEDs are used as illuminants for these luminaires. This guarantees maintenance-free operation, as the illuminants do not need replacing throughout the complete service life of the luminaire.

The supply electronics are also laid out for this service life; the LED circuits are intrinsically safe.

The wide input voltage range allows international use. The housing of these luminaires is made of robust light alloy: the escape signs comply with the latest standards.

Thanks to the very robust design and high degree of protection, these luminaires are suited although under rough conditions for both indoor and outdoor use.

As an emergency lighting luminaire with self-contained battery system, the Ex-Lite N features an NC battery and automatic function monitoring with operating time test.

With the optional built-in CG-S monitoring module with coding switch for max. 20 addresses, this luminaire can also be used as an individually monitored emergency lighting luminaire that is connected to a CEAG emergency lighting supply system. With this, the operator can programme the switching mode according to the respective requirements. Thus, as many as 20 luminaires with different switching modes can be connected to one end circuit.

Robust light alloy housing

Power-saving LED technology

Maintenance-free LED technology throughout service life

High degree of protection IP 66

Luminaire with self-contained battery unit and automatic function monitoring

Connection and monitoring with CEAG emergency lighting supply systems possible

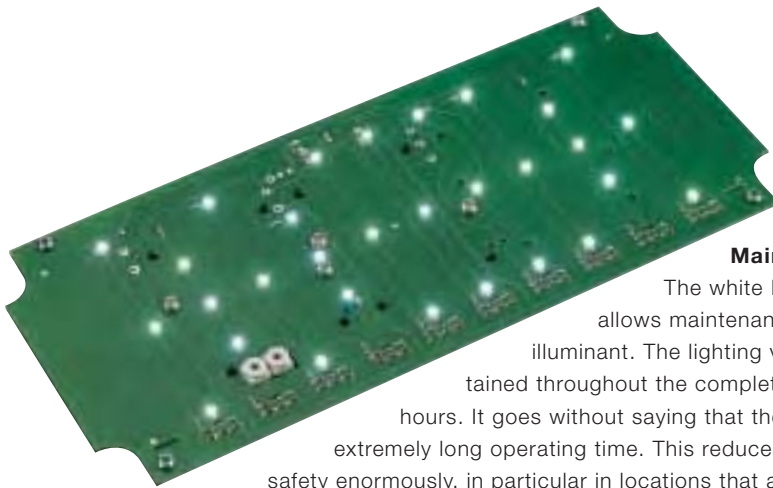


For all types of application

The escape sign luminaires of the Ex-Lite series are available as mains luminaires "Ex-Lite", e.g. for specially safeguarded industrial networks in production plants, as "Ex-Lite CG-S" emergency lighting luminaires with individual function monitoring for use in CEAG emergency lighting supply systems, and as "Ex-Lite-N" emergency lighting luminaires with self-contained battery systems and automatic function and operating time tests.

Green light for all zones

On account of the very robust, light alloy housing in the high degree of protection IP 66, the Ex-Lite luminaire can be installed almost anywhere, both indoors and out. The luminaire is designed in the type of protection EEx e m ib IIC up to T6 and in accordance with the ATEX Directive. It can be used in hazardous areas with potentially explosive gas atmospheres (Zones 1 and 2) and potentially explosive dust atmospheres (Zones 21 and 22).



Maintenance-free operation

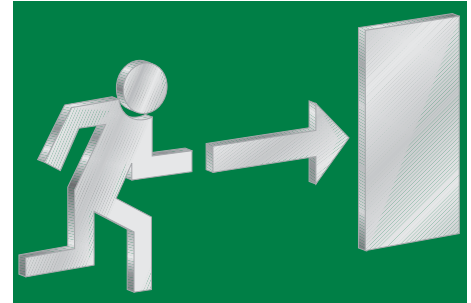
The white LED technology used as the light source allows maintenance-free operation without replacement of the illuminant. The lighting values specified for the escape sign are maintained throughout the complete service life of the LEDs, namely ca. 50,000 hours. It goes without saying that the supply electronics are also designed for this extremely long operating time. This reduces operating costs and increases the operating safety enormously, in particular in locations that are not easily accessible.

For international use

The LED escape sign luminaire of the Ex-Lite series was designed to meet the requirements of a large number of different safety concepts. Thanks to the wide input voltage range from 110 V to 277 V AC and 250 V DC, this luminaire can be used internationally, whereby the supply circuits of the LED circuits are intrinsically safe. The luminaire has a visibility range of 28 metres and it is available with a wide variety of pictograms.



Simply change
of the pictogram



Conformity to standards

The Ex-Lite explosion-protected escape sign luminaire series fulfils the requirements of ATEX Directive 94/9/EC and EN 60598, Part 2.22 for emergency lighting luminaires. It is suited for marking escape routes and exits in potentially explosive atmospheres. The housing of this luminaire is made of light alloy and it goes without saying that the escape sign comply with the latest standards.

Double safety

Whenever the operational safety of explosion-protected safety and escape sign luminaires is involved, there is no room for compromises, as only a luminaire that is fully functional at all times can save human lives. The new series of explosion-protected LED escape sign luminaires not only fulfils the extremely high explosion protection requirements, but it also fulfils the legal requirements for emergency and safety lighting installations. The new Ex-Lite is capable of safely showing the right way to go at all times, even in complex and often badly laid out industrial installations with potentially explosive atmospheres.





Ex-Lite and Ex-Lite CG-S

Central emergency lighting supply via system luminaires with CG-S module

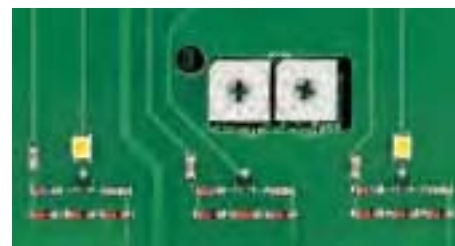
A central emergency lighting supply using CEAG group supply and central battery systems are used wherever a large number of emergency lighting luminaires can be combined and operated as system luminaires.

These battery systems are generally installed outside the hazardous areas and, therefore, they are not subjected to the ambient conditions of the luminaires in the field. As a result, the operating life of the battery is relatively long and the amount of maintenance required is minimal.

The mains and emergency lighting supplies of these luminaires are fed via separate circuits from the emergency lighting power supply installation to the escape sign luminaire in the hazardous area. Various luminaires with CG-S function can be operated in these circuits.

Better safe than sorry

In addition to the Ex-Lite for use as a mains luminaire, e.g. for specially safeguarded industrial networks in production plants, there is also the Ex-Lite CG-S version with easy function monitoring. In conjunction with the CG-S monitoring module with coding switch for max. 20 addresses, this luminaire can be operated as emergency lighting luminaire with individual monitoring. The operator can programme the switching mode according to his individual requirements, thus allowing the operation of up to 20 luminaires with different switching modes in one end circuit.



Addressing switch in the Ex-Lite CG-S

No additional installation work is required. The central control unit monitors all the functions of the luminaire, checks the feed line for shorts or open circuits and indicates any incidents clearly on the display. Thus, even with highly complex installations, troubleshooting and eliminating faults are not a problem. Another considerable advantage: all the function and operating time tests are carried out automatically and recorded by the central control unit. This saves no end of time and money. During this function test, the correct functioning of the luminaire is monitored by the built-in CG-S module and any faults are reported to the central control unit. Thus, for example, the failure of LED groups is indicated automatically.





Ex-Lite | Ex-Lite CG-S

EX-ESCAPE SIGN LUMINAIRES

| Ex-Lite | Ex-Lite CG-S |

5



PL

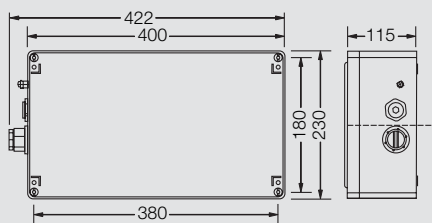


PR



PU

Escape sign acc. to
current standard



Ex-Lite

Technical data

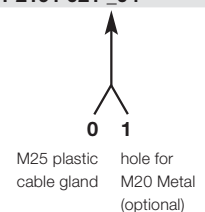
Ex-Lite | Ex-Lite CG-S

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 60 °C
Explosion protection	EEx e m ib IIC T6 (t _a max. +40 °C), T5 (t _a max. +50 °C)
EC-Type Examination Certificate	PTB 02 ATEX 2111
Visibility range	up to 28 m
Enclosure material	Light alloy
Protective cover	Mineral glass
Cable entries	1 x Ex e cable entry M25 x 1.5 (moulded plastic) 1 x Ex e blanking plug M25 x 1.5
Enclosure colour	Grey, RAL 7035
Mounting	Wall mounting
Dimensions in mm (L x H x D)	400 x 230 x 115
Connection terminals	4 x cage clamp terminals, max. 2.5 mm ² , double engagement
Rated voltage Ex-Lite	AC: 110 - 277 V, 50/60 Hz DC: 110 V - 250 V DC: 12 - 24 V ±20 % (optional)
Rated voltage Ex-Lite CG-S	AC: 220 - 254 V, 50/60 Hz DC: 195 V - 250 V
Rated power	approx. 6 VA
Rated current	DC: 220 V = 20 mA, 110 V = 40 mA
Permissible temperature range	- 20 °C to + 50 °C
Illuminants	High-efficiency LEDs, white
Insulation class	I
Degree of protection EN 60529	IP 66

Ordering details

Type	Scope of delivery ¹⁾	Order No.
Ex-Lite	incl. cover with pictogram PR	1 2191 011 _01
	incl. cover with pictogram PL	1 2191 011 _02
	incl. cover with pictogram PU	1 2191 011 _03
	incl. cover, clear without pictogram	1 2191 011 _04
Ex-Lite CG-S	incl. cover with pictogram PR	1 2191 021 _01
	incl. cover with pictogram PL	1 2191 021 _02
	incl. cover with pictogram PU	1 2191 021 _03
	incl. cover, clear without pictogram	1 2191 021 _04

¹⁾ Other pictograms or inscriptions available on request



Dimensions in mm



Ex-Lite N

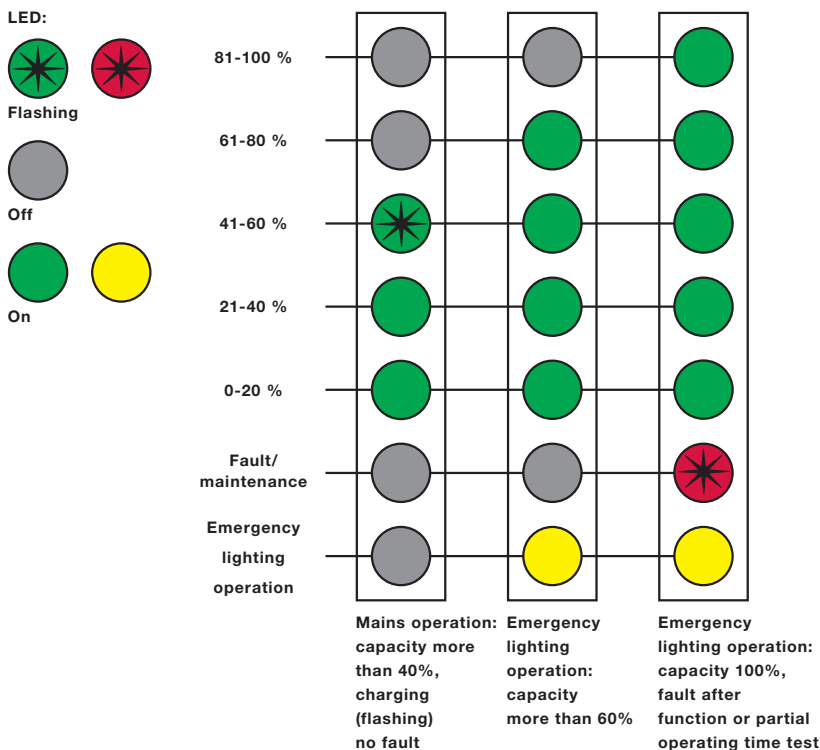
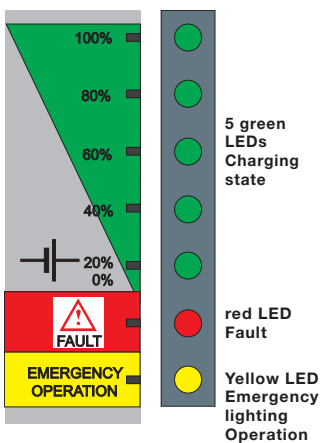
Emergency lighting luminaires with self-contained battery systems

Emergency lighting luminaires with self-contained battery systems provide the required emergency lighting from a decentralized source, independent of central systems. These luminaires are particularly economical when used in extensive plants. Until now, compared to centrally operated and monitored installations, the disadvantage of the emergency lighting luminaires with self-contained battery systems was that they did not provide any information on the state of the luminaire. However, this monitoring function has been incorporated in the Ex-Lite N escape sign luminaire. Five green LEDs supply constant information on the

charging state and available battery capacity. A yellow LED indicates the emergency lighting operation mode and an additional red LED indicates any faults.

Monitoring functions

The extended self-monitoring with automatic function and partial duty cycle test is also new. The five green LEDs behind the protective cover provide continuous indication of the charging state and the current battery capacity. Charging is signalized by a flashing green LED. The charged capacity is indicated in 20% stages. The yellow LED indicates emergency lighting operation.



An automatic function test lasting 5 minutes is carried out on a weekly basis. For this, the LEDs are switched electronically from mains to battery operation. The emergency lighting function is tested and any faults are indicated by the flashing red LED.

After ca. 3 months a part-operating time test (35 mins.) is initiated automatically. If a minimum emergency lighting operating time of 30 minutes is not reached, it is signalized by the flashing red LED. After the cause of the fault has been eliminated, e.g. by charging or replacing the battery, the fault indication is reset during the next emergency lighting operation (manual or automatic) when the minimum operating time of > 30 minutes has been reached.



Ex-Lite N

E X - E S C A P E S I G N L U M I N A I R E

Ex-Lite N

6



PL

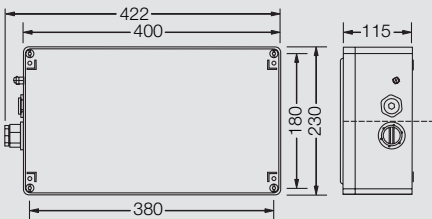


PR



PU

Escape sign acc. to
current standard



Ex-Lite N

Technical data

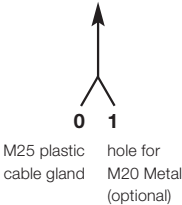
Ex-Lite N

Marking to 94/9/EC	II 2 G II 2 D T 60 °C
Explosion protection	EEx e m ib IIC T5 (ta max. +40 °C), T4 (ta max. +50 °C)
EC-Type Examination Certificate	PTB 02 ATEX 2111
Visibility range	up to 28 m
Enclosure material	Light alloy
Protective cover	Mineral glass
Cable entries	1 x Ex e cable entry M25 x 1.5 (moulded plastic) 1 x Ex e blanking plug M25 x 1.5
Enclosure colour	Grey, RAL 7035
Mounting	Wall mounting
Dimensions in mm (L x H x D)	400 x 230 x 115
Connection terminals	4 x cage clamp terminals, max. 2.5 mm², double engagement
Rated voltage	AC: 110 - 277 V, 50/60 Hz DC: 110 - 250 V
Rated power	approx. 8 VA
Battery	NC-Akku 12 V/600 mAh
Charging time (cap. > 90 %)	28 h
Rated emergency lighting cycle	3 h
Permissible temperature range	- 20 °C to + 50 °C, specified data +5 °C to +35 °C
Illuminants	High-efficiency LEDs, white
Insulation class	I
Degree of protection to EN 60529	IP 66

Ordering details

Type	Scope of delivery ¹⁾	Order No.
Ex-Lite N	incl. cover with pictogram PR	1 2191 031 _01
	incl. cover with pictogram PL	1 2191 031 _02
	incl. cover with pictogram PU	1 2191 031 _03
	incl. cover, clear without pictogram	1 2191 031 _04

¹⁾ Other pictograms or inscriptions available on request



EX-EMERGENCY LIGHT FITTING

AB 12108-EVG
Metal version for Zone 1

These light fittings are in accordance to the European Norm EN 50014ff. for the temperature class T6. It is therefore certified for use in the Zones 1 and 2.

Additionally they fulfill the directive EN 60598, Part 2.22 for Emergency Lighting accordingly. The Ex-light fitting AB 12108-EVG is fitted with an electronic ballast and an 8 W fluorescent lamp. It is used for illuminating emergency exit routes, as well as for pictographic emergency light fittings.

The housing is made of a copper-free aluminium and has a borosilicate glass tube. The built-in reflector is made of a high-polished aluminium allowing a maximum of illumination.

With the integrated CG-S-Monitoring module with coding switch (for max. 20 light fittings) which assigns an address to each light fitting, they can be connected as singularly monitored emergency light fittings to the CEAG emergency lighting supply system. The switching mode can be freely programmed by the operator for mixed operation in a single circuit.

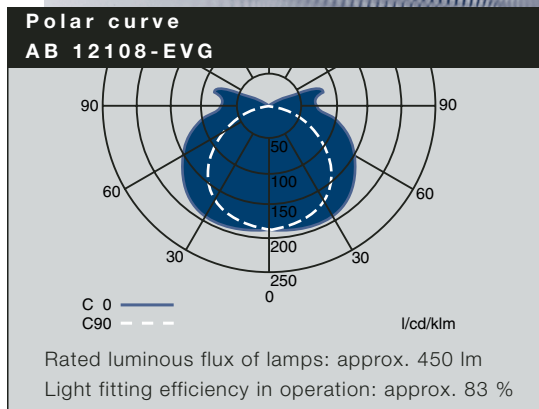


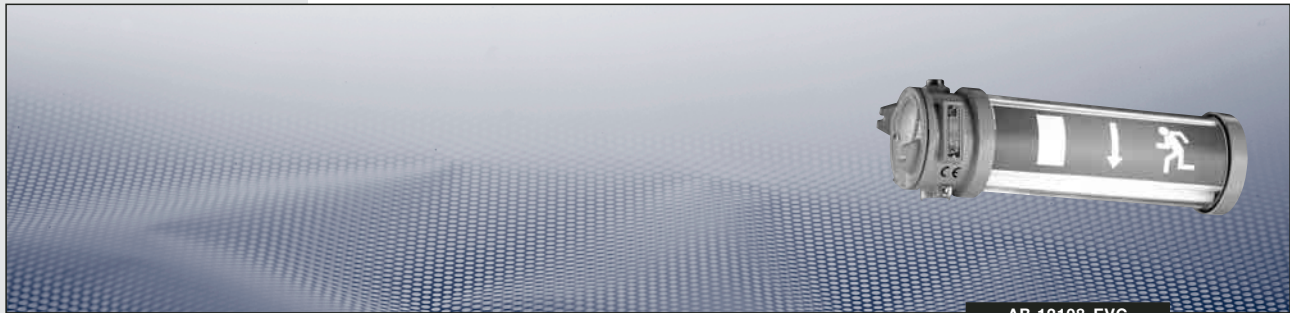
Connection with the CEAG emergency lighting supply system with programmable modus choice and individual monitoring

Housing made of copper-free aluminium with a borosilicate glass tube

8 W fluorescent lamp for mains and emergency lighting

Safety Standard IP 67



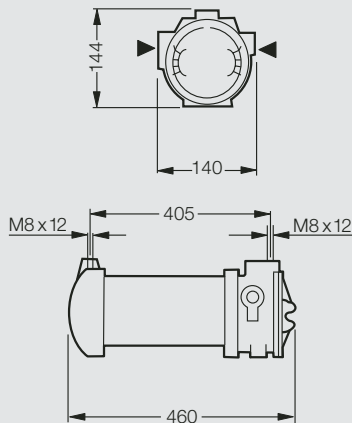


AB 12108-EVG

EX - SAFETY LIGHT FITTING

| AB 12108-EVG |

3.7



► Entries

AB 12108-EVG

Technical data

Type AB 12108-EVG

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx d IIC T6
EC-Type Examination Certificate	LOM 02 ATEX 2013 X
Viewing distance with legend foil	approx. 15 m
Enclosure material	copper-free aluminium
Glass tube	Borosilicate glass
Rated voltage	AC: 230 V, $\pm 10\%$, 50/60 Hz DC: 220 V, $+25\% - 20\%$
Luminous flux Φ_E/Φ_N	
at the end of rated operating time	75 %
Degree of protection acc. to EN 60529	IP 67
Insulation class	I
Permissible temperature range	$-20\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$ (specified data: $-10\text{ }^{\circ}\text{C}$ to $+40\text{ }^{\circ}\text{C}$)
Cable entries	see ordering details
Connecting terminals	$2 \times 2.5\text{ mm}^2$
Lamps	1 x 8 W/T5-flourescent lamp for mains and emergency lighting operating with G5 lamp socket
Weight	approx. 5.3 kg

Ordering details

Type, incl. Lamp	Entry holes	Cable entry Ex-d for $\varnothing 3-15\text{ mm}$	Blanking plug Ex-d	Order No.
AB12108-EVG	$2 \times 3/4"$	$1 \times 3/4"$	$1 \times 3/4"$	NOR 000 005 060 837
AB12108-EVG	$2 \times 3/4"$	—	$1 \times 3/4"$	NOR 000 005 060 820

Scope of delivery with lamp and without fixing accessories.

See fixing materials and accessories for light fittings on page 3.14.

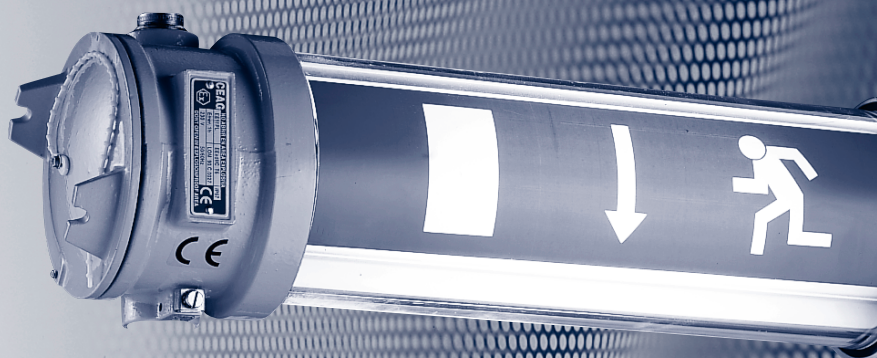
EX-EMERGENCY LIGHT FITTING

EE11 PL Individual emergency light fitting Metal version for Zone 1

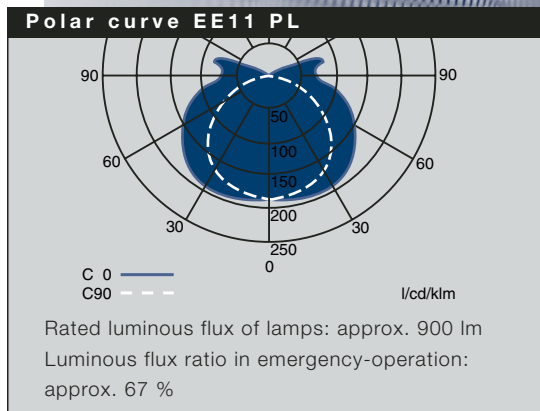
These light fittings are in accordance to the European Norm EN 50014ff for the temperature class T6. It is therefore certified for use in the Zones 1 and 2. Additionally they fulfill the directive EN 60598, Part 2.22 for Emergency Lighting accordingly. The Ex-light fitting EE 11 PL with a self-contained battery system is fitted with an 11 W compact fluorescent lamp and was designed for a 1.5 hour Emergency Lighting duration.

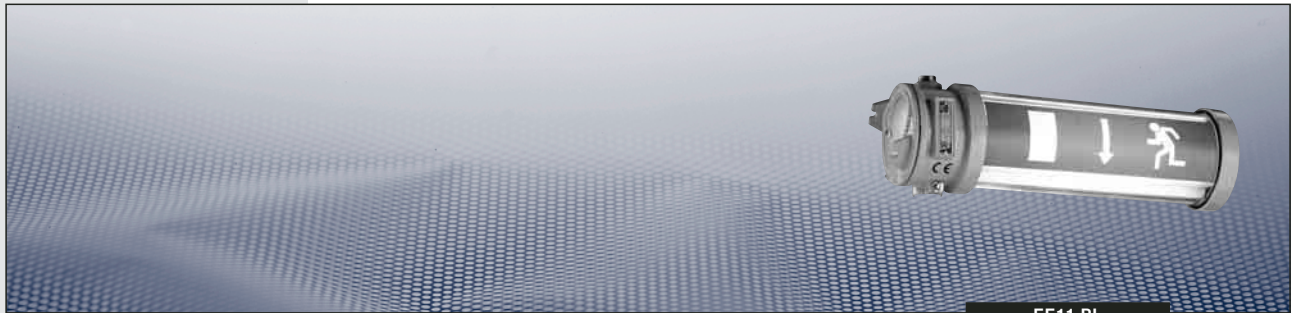
It is used for illuminating emergency exit routes, as well as for pictographic emergency light fittings.

The housing is made of a copper-free aluminium and has a borosilicate glass tube. The light fitting has a Micro-computer which controls the lighting functions and monitoring. Per LED's, possible faults in the emergency lighting circuit, battery or lamp defects are shown. Additionally the charging status, battery capacity plus the necessary function and duration test which have to be carried out are also shown.



Micro-computer controlled charging and fault monitoring, shown per LED's
Housing made of copper-free aluminium with a borosilicate glass tube
11 W compact fluorescent lamp for emergency lighting
Safety Standard IP 67



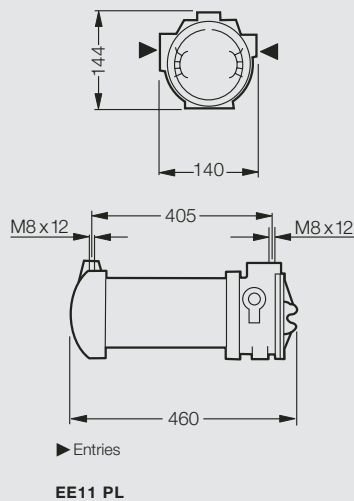


EE11 PL

EX - EMERGENCY LIGHT FITTING

EE11 PL

3.9



Technical data

Type EE11 PL

Type of protection	EEx d IIC T6
EC-Type Examination Certificate	LOM 03 ATEX 2036 X
Viewing distance with legend foil	ca. 15 m
Enclosure material	copper-free aluminium
Glass tube	Borosilicate glass
Rated voltage	AC: 220-240 V \pm 10 %, 50/60 Hz alt. 108-127 V \pm 10 %, 50/60 Hz
Degree of protection acc. to EN 60529	IP 67
Insulation class	I
Permissible temperature range	- 5 °C to + 40 °C*
Cable entries	see ordering details
Connecting terminals	2 x 2.5 mm ²
Lamps	1 x 11 W compact fluorescent lamp, cap 2G7
Weight	approx. 5.6 kg
Battery	Nickel-Cadmium 4 Ah
Rated duration of emergency op.	1.0 h
Circuit	non maintained switching mode
Function and fault indication	fault indication: red LED
	function- and charging ind.: red + yellow LED
	Mains and testfunction: yellow LED

Note! Only open light fittings outside of the hazardous area!

* Longer charging times are necessary for temperatures below - 5 °C

Ordering details

Type, incl. Lamps	Rated voltage	Entry holes	Cable entry Ex-d for Ø 10-14 mm	Blanking plug Ex-d	Order No.
EE11PL	220-240 V	2 x 3/4"	1 x 3/4"	1 x 3/4"	NOR 000 005 160 012
	\pm 10 % 50/60 Hz	2 x 3/4"	-	1 x 3/4"	NOR 000 005 160 013
EE11PL	108-127 V	2 x 3/4"	1 x 3/4"	1 x 3/4"	NOR 000 005 160 015
	\pm 10 % 50/60 Hz	2 x 3/4"	-	1 x 3/4"	NOR 000 005 160 014

Scope of delivery with lamp and without fixing accessories.

See fixing materials and accessories for light fittings on page 3.14.

EX-SIGNAL AND EMERGENCY LIGHT FITTING

dKLK 23 **Plastic version for Zone 1**

These light fittings meet the requirements of ATEX-Directive 94/9/EC and EN 50014ff. It is therefore certified for use in hazardous areas of the Zones 1 and 2 also for the temperature class T6 and dust-ex areas of the Zones 21 and 22.

Additionally they fulfill the directive EN 60598, Part 2.22 for Emergency Lighting. The Ex-light fitting dKLK 23 are built for compact fluorescent lamps 5-8 W with integrated electronic ballast. By use of a flash module (optional) the light fitting can be used also as a strobe light.

The housing is made of a fibre-glass reinforced polyester and the protective globe of a transparent or coloured polycarbonate. When fitted with coloured protective covers they are used as signal light fittings but also as safety and emergency light fittings in conjunction with the exit cubes.

The light fitting is connected by a flame-proof eXLink inlet.

With the optional CG-S monitoring module with coding switch (for max. 20 light fittings) which assigns an address to each light fitting, they can be connected as singularly monitored emergency light fittings to the CEAG emergency lighting supply system (dKLK 23 CG-S).



Signal light fitting, even with coloured protective globe in temperature class T6 environments

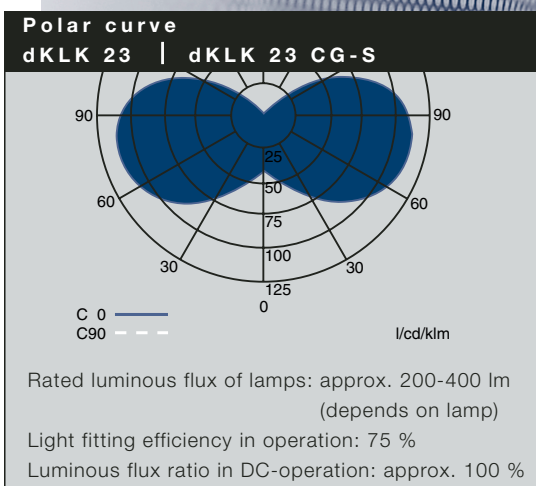
For compact fluorescent lamp with integrated EVG

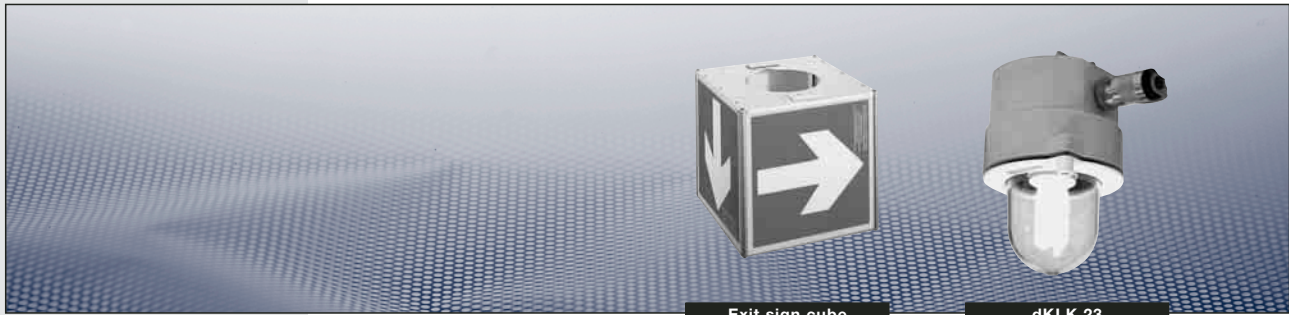
For ceiling and wall mounting

Safety Standard IP 66

With possible connection to the CEAG emergency lighting supply systems

Optional flash module





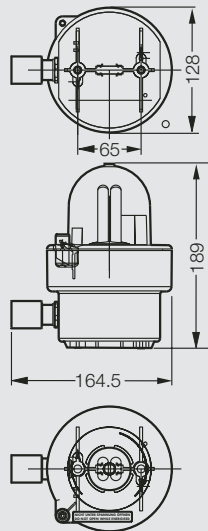
Exit sign cube

dKLK 23

EX - SIGNAL AND EMERGENCY LIGHT FITTING

| dKLK 23 | dKLK 23 CG-S |

3.11



dKLK 23

Technical data

Type dKLK 23/dKLK 23 CG-S¹⁾

Marking to RL 94/9/EG	Ⓔ II 2 G EEx de IIC T6 Ⓔ II 2 D IP66 T80 °C
EC-Type Examination Certificate	PTB 04 ATEX 1017X
Enclosure material	Polyester reinforced
Protective cover	Polycarbonate
Rated voltage	AC: 230 V +/- 10 %, 50-60 Hz DC: 230 V +/- 10 %
Power	max. 25 mA
Protection category to EN 60529	IP 66
Insulation class	I
Permissible ambient temperature	-20 °C to max. +45 °C (depends on lamp power and mounting position)
Power connection	flameproof inlet eXLink, 3pole
Connector (enclosed)	2 + PE cage clamp for cables from Ø 8-11 mm and max. 1.5 mm ² or flameproof cable gland M20 x 1.5 for cables from Ø 8.5-16 mm, L, N, PE max. 2.5 mm ² plug type terminals
Lamps	Compact fluorescent with integrated EVG, socket E27, power 5-8 W, brand: Osram DULUX EL LL, Philips MASTER PL Electronic or equal or flash module (see accessories)
Weight	approx. 1.7 kg

Accessories flash modul Type Eurolite E27 Strobe

Rated voltage	230 V/50 Hz +/- 10 %
Power consumption	5 W
Flash frequency	1-3 Hz

Ordering details

Type/Connection	Colour protective cover	Order No.
dKLK 23/eXLink	clear	GHG 871 1001 R 0001
dKLK 23/eXLink	red	GHG 871 1101 R 0001
dKLK 23/eXLink	green	GHG 871 1201 R 0001
dKLK 23/eXLink	blue	GHG 871 1301 R 0001
dKLK 23 CG-S ¹⁾ /eXLink	clear with CG-S monitoring and addressing switch	GHG 871 2001 R 0001
dKLK 23/EEEx d M20	clear	GHG 871 1001 R 0101
dKLK 23/EEEx d M20	red	GHG 871 1101 R 0101
dKLK 23/EEEx d M20	green	GHG 871 1201 R 0101
dKLK 23/EEEx d M20	blue	GHG 871 1301 R 0101
dKLK 23 CG-S ¹⁾ /EEEx d M20	clear with CG-S monitoring and addressing switch	GHG 871 2001 R 0101

¹⁾ for connection to CEAG emergency supply systems, with address switch for 20 addresses.

Scope of delivery without lamp and with fixing accessories.

See fixing materials and accessories for light fittings on page 3.14.

Dimensions in mm

EX-SAFETY AND EMERGENCY LIGHT FITTING

Ex 6011.1
according to EN 50021 for Zone 2/Zone 22

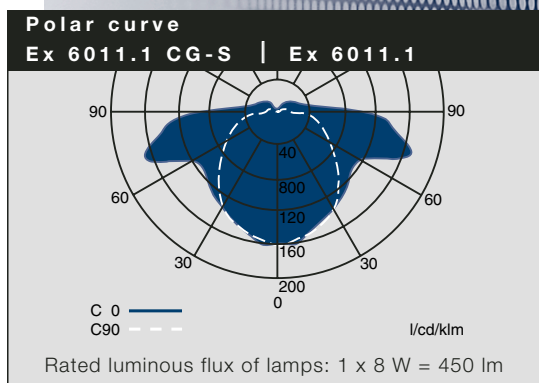
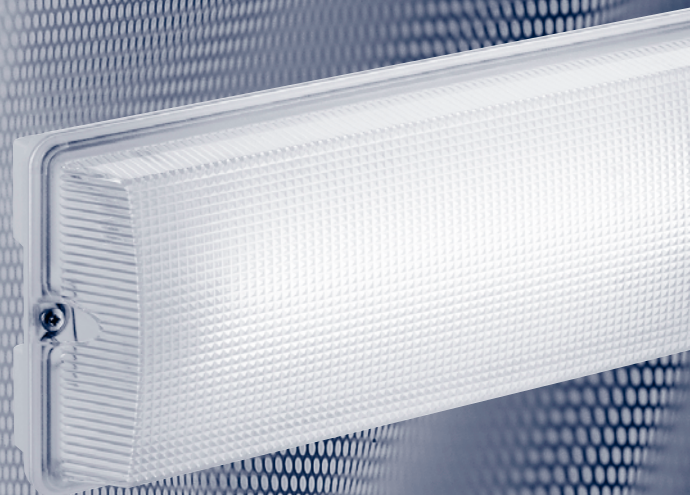
The Ex-safety and emergency exit luminaire Ex 6011.1 are in accordance to the ATEX-Directive 94/9/EG.

They are built and tested according to the European Norm EN 50021 for explosion-protected products for Zone 2 and 22 as well as the European Norm EN 60598, Part 2.22 for emergency light fittings.

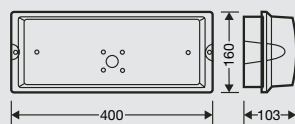
They are certified for the illumination of emergency exit routes, as well as for the marking of exit doors in Zone 2 hazardous areas, especially in conjunction with emergency lighting apparatus.

Housing and protective cover are made of polycarbonate. They are fitted with electronic ballasts and an 8 W fluorescent lamp. There are 3 emergency exit stickers provided for direct application where needed. Due to their robust architecture and the high safety standard, they can be used as an in and/or outdoor light fitting.

With the CG-S-Module (for max. 20 light fittings) they can be connected as singularly monitored emergency light fittings to the CEAG emergency lighting supply system. The switching mode can be freely programmed by the operator for mixed operation in a single circuit.



Housing/Cover made of Polycarbonate
Energy-saving EVG
with 8 W fluorescent lamp
Safety standard IP 54
Connection to the CEAG emergency
lighting supply system possible



SL/RZ 6011.1

EX - SAFETY AND EMERGENCY LIGHT FITTING

| Ex 6011.1 | Ex 6011.1 CG-S¹⁾ |

3.13

Technical data

Ex 6011.1 and Ex 6011.1 CG-S¹⁾

Marking to 94/9/EC	Ex II 3 G Ex II 3 G T48 °C
Type of protection	EEx nA II T4 to EN 50021
Conformity statement	BVS 04 E 208
Viewing distance	app. 26 m
Enclosure material	Polycarbonate, light grey
Enclosure colour	Grey RAL 7035
Protective cover	Polycarbonate
Rated voltage	AC: 230 V ± 10 %, 50-60 Hz DC: 220 V + 25 % - 20 %
Power consumption	approx. 16 VA
Battery current	approx. 30 mA
Protection category to EN 60529	IP 54
Insulation class	I
Permissible temperature range	-10 °C to +40 °C
Cable entries	1 x EEx e-cable entry M20 x 1.5 1 x EEx e-blanking plug M20 x 1.5
Connecting terminals	3 x 2.5 mm ² double terminals
Dimensions in mm (L x H x D)	400 x 160 x 103
Mounting	Wall- and ceiling-mounting
Lamps	8 W fluorescent lamp T5
Weight	approx. 1.4 kg

Ordering details

Type	Scope of delivery	Order No.
Ex 6011.1	Luminaire with cover, incl. 3 legends PR, PL, PU	4 0071 349 523
Ex 6011.1 CG-S ¹⁾	Luminaire with CG-S-module 20 addresses switch, with cover incl. 3 legends PR, PL, PU	4 0071 349 520

¹⁾ for connection to CEAG emergency supply systems, with address switch for 20 addresses.

Scope of delivery with lamp and without fixing accessories.

See fixing materials and accessories for light fittings on page 3.14.

FIXING MATERIALS AND ACCESSORIES

On the following sides you will find fixing materials and accessories for CEAG explosion-protected light fittings. For a problem-free lamp changing you will find additionally a table of light fittings with the appropriate fluorescent lamps.

Spare Parts

As well as the above, there is also a large amount of spare parts available for maintenance and repair work.

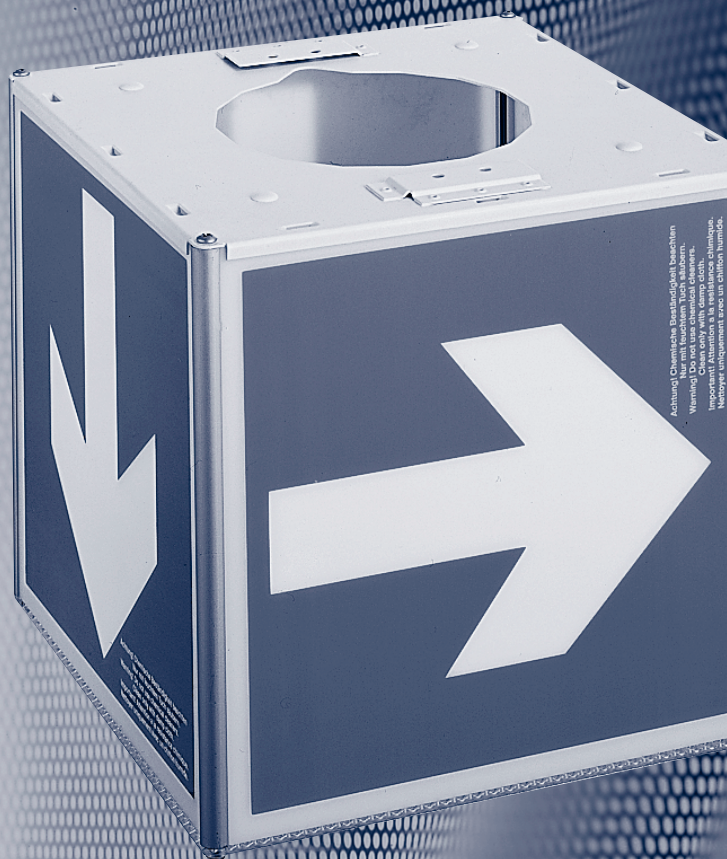
If required, please contact us, you will find that we will be more than pleased to help you.

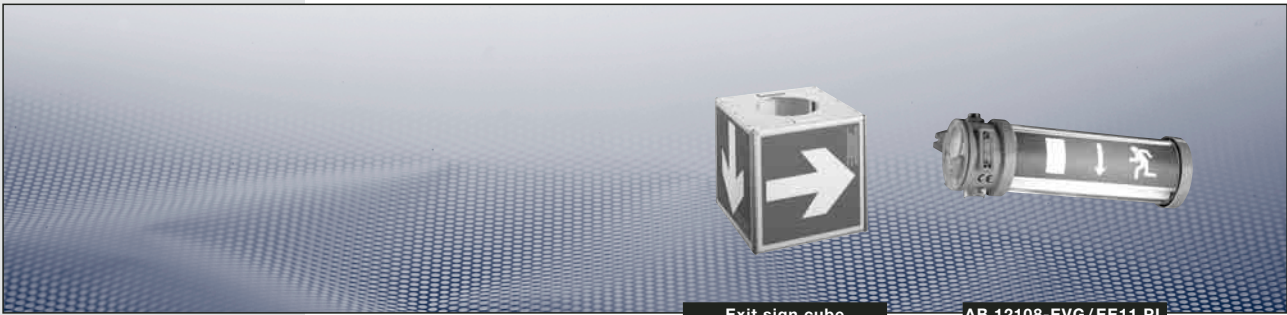
We must point your attention to the fact that repair work done on explosive-protected products must be carried out with original spare parts only! If this is not the case and third-party parts are used, the Certification and Approval for the product will be forfeited and a possible reduction of the explosion-protection may be achieved.

Repair Service

Of course Cooper Crouse-Hinds GmbH upholds its own Repair Department where customer repairs are carried out. Our qualified and schooled personnel carry out repairs and overhauling using original spare parts, quickly and efficiently. This service also includes the end quality testing needed for explosion-protected products.

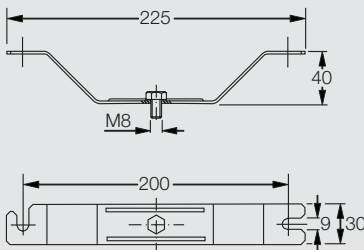
With this service you have an "assured safety" as do all overhauled Ex-Lamps and products by Cooper Crouse-Hinds GmbH.



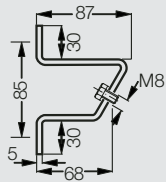


Exit sign cube

AB 12108-EVG/EE11 PL



Ceiling bracket D92



Luminaire wall suspension 30°

Ex-Emergency luminaires AB 12108-EVG and EE11 PL

Type	Order No.
Legend LWRE	NOR 000 000 506 915
Legend LWRD	NOR 000 000 506 907
Legend LWRH	NOR 000 000 506 965
Legend LWRl	NOR 000 000 506 966
Ceiling bracket D 92 (CrNi, 2 pcs.)	2 2480 092 000
Luminaire wall suspension 30° (hot galvanized) with screws and washer (2 pcs.)	2 2480 000 122

Ex-signal and exit sign luminaire dKLK 23/dKLK 88 110

Type	Order No.
Flash module Eurolite E27 Strobe (only for dKLK 23)	GHG 870 1912 R 0001
Exit sign cube (242 x 227 x 242 mm)	4 0071 344 115

Lamps for Ex-emergency- and signal luminaires

For luminaire Type	Lamp type/ cap/ diameter	Power	Luminous flux approx.	Order No.
AB 12108-EVG SL/RZ 6011.1	T5, cap G5, Ø 16 mm	8 W	450 lm	4 0040 004 623
EE11 PL	TC-SEL, 4-pin cap 2G7	11 W	900 lm	on request
dKLK 88	TC-DEL, 4-pin cap G24q-1	10 W	600 lm	3 0601 035 000

EX - PENDANT LIGHT FITTINGS AND FLOODLIGHT

FIELD OF APPLICATION	4.2
EX-CEILING AND PENDANT LIGHT FITTINGS AB 50 UND AB 80	4.4
EX-PENDANT LIGHT FITTINGS EVI UND EV...	4.8
EX-FLOODLIGHTS FZD EN	4.16
EX-PENDANT LIGHT FITTING dHLS 85...	4.18
EX-FLOODLIGHT dTLS 85...	4.20
EX-FLOODLIGHTS PX...	4.22
EX-VESSEL LIGHT FITTING KFL	4.26
EX-PENDANT LIGHT FITTINGS NVMV CHAMP UP TO 150 W	4.28
EX-PENDANT LIGHT FITTINGS NVMV CHAMP UP TO 400 W	4.30
EX-FLOODLIGHTS NFMV	4.32
ACCESSORIES AND FIXING MATERIALS	4.34

**ARE YOU SURE THAT THE ENVIRONMENTAL TEMPERATURE
ALWAYS TAKES CARE TO BE WITHIN THE NORM?**

(TO BE SURE: PAGE 4.4ff ONWARDS)



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Field of application of pendant light fittings and floodlights with high pressure discharge lamps in hazardous areas.

Where a lot of light is needed and/or where large complexes or areas have to be illuminated, or where there are high ceilings, these are the ideal situations for pendant light fittings and floodlights.

The main field of operation is the illumination in hazardous explosive environments such as On- and Offshore areas, production and storage buildings or Ex-companies in the chemical industry. Also the illumination of outside areas such as loading zones, harbour areas or even refineries.



The pendant light fittings and floodlights are usually fitted with high pressure discharge lamps such as Mercury-Halogen metal or Sodium vapour lamps.

They offer a high output of light and a relatively long life span.

With the CEAG pendant light fittings and floodlights for the Zones 1, 2, 21 and 22 you have a safety assurance even in difficult environmental conditions such as high and low temperature, high humidity, dusty and aggressive explosive atmospheres. The high safety standard required is assured for even after a long period of usage time.

A long service life and the high reliability factor of the used electrical and mechanical components makes these lamps extremely cost-effective.

Especially the innovative illuminant technology of the induction lamps used in the EVQ light fittings guarantees a lamp life expectancy of > 60,000 hours. This makes these light fittings destined for usage in uncomfortable and hard to access areas where one can efficiently minimize the maintenance costs.



Pendant light fitting EVQ for Induction lamps

The easy changing of the lamp, for example in the new CEAG floodlight series FZD (you just change the complete lamp module), also effectively reduces the maintenance costs. Even in extreme environments and temperatures of -40° C you can be sure that the light fittings will be quickly back in use. The actual lamp replacement can then take place in the workshop at a later date.



FZD flood light: cartridge change

EX-CEILING AND PENDANT LIGHT FITTINGS

AB 50 and AB 80 for Incandescent lamps of up to 100 W
Metal version for Zone 1

Description

These explosion-protected light fittings for incandescent and discharge lamps are in accordance to the ATEX-Directive 94/9/EG as well as the European Norms EN 50014, EN 50018, EN 50019 and EN 60598.

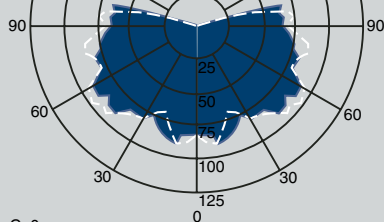
The light fittings are fitted with an impact-resistant and thermally stable dome-shaped glass. All external screws are made of high quality stainless steel. The distinguishing characteristics of this series are the low weight and the simple installation.

The AB 50 is a pendant light fitting, the AB 80 light fitting is a flat light fitting for ceiling mounting and the robust SPG 1 N with guard is designed as a portable work light.

Due to their robust architecture, these light fittings are suitable for use in the chemical industry and have been certified for usage in environments with a temperature of up to +55° C.



Polar curve AB 50



Rated luminous flux of lamps:

60 W incandescent lamp: approx. 710 lm

100 W incandescent lamp: approx. 1360 lm

Light fitting efficiency in operation: 67.9 %

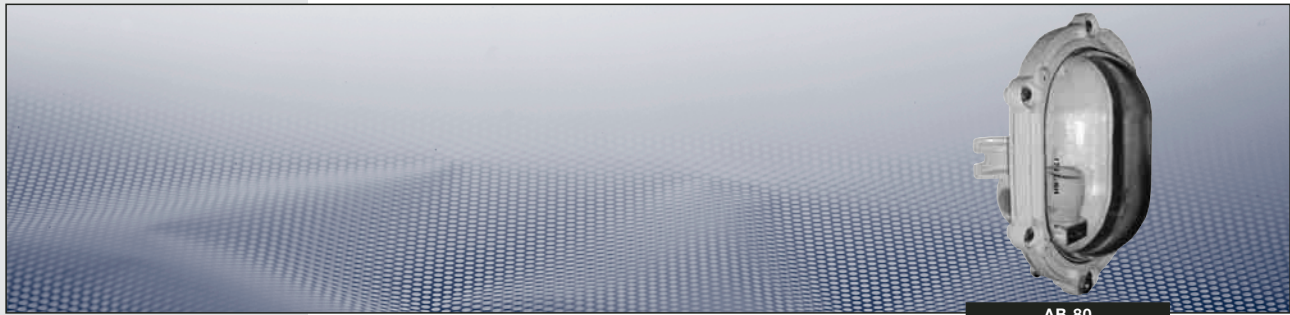
Certified for environmental temperatures of up to +55° C

Fulfills highest requirements on corrosion protection and mechanical stability

Robust light alloy housing

Easy installation

High quality stainless steel screws, easier lamp replacement

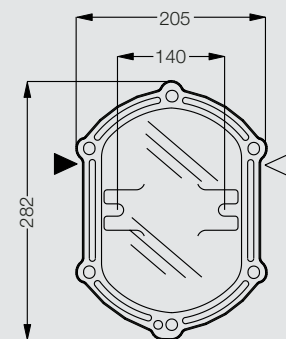


AB 80

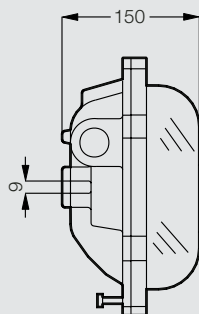
EX - CEILING LIGHT FITTINGS

| AB 80 |

4.5



▶ entry
▽ optional entry, on request



AB 80

Technical data

Type AB 80

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx d IIB T4 (incandescent lamp 60 W + 100 W), T6 (PL-lamp 11 W)
EC-Type Examination Certificate	LOM 01 ATEX 2041 X
Enclosure material	Cast iron
Light transmitting cover	Borosilicate glass
Rated voltage	≤ 250 V AC
Protection category to EN 60529	IP 55
Insulation class	I
Permissible ambient temperature	-20 °C to +55 °C
Cable entry holes	direct entry EEx d: 2 x 3/4" ISO 7/1 -thread
Connecting terminals	L1 and N: 1 x 2.5 mm ² (or 2 x 1.5 mm ²) PE intern. and ext.: 2 x 6 mm ²
Lamp holder	E27 accord. IEC 60238
Lamps	Incandescent lamp 60/100 W compact fluorescent lamp 11 W
Weight	approx. 6.6 kg

Ordering details

Type	Entry holes	Cable entry Ex-d for cable Ø	Blanking plug Ex-d	Order No.
AB 80	2 x 3/4"	10 - 14 mm	1 x 3/4"	NOR 000 005 120 125
AB 80	2 x 3/4"	–	1 x 3/4"	NOR 000 005 120 124

Scope of delivery without illuminant and fixing accessories.

See fixing materials for Ex-pendant light fittings and floodlights on page 4.34.

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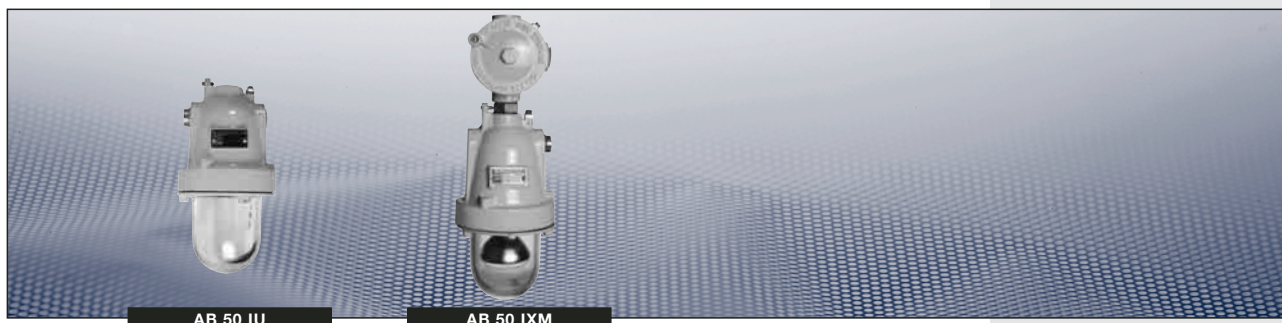
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AB 50 IU

AB 50 IXM

4.6

EX - PENDANT LIGHT FITTINGS

| AB 50 | SPG 1N |

Technical data

Type AB 50 und SPG 1N

Marking to 94/9/EC	Ex II 2 G Ex II 2 D ²⁾
Type of protection	EEx d IIC T3 (direct entry) ¹⁾ EEx de IIC T3 (indirect entry) ¹⁾ EEx d IIC T3 (portable light fixture) ¹⁾
EC-Type Examination Certificate	LOM 02 ATEX 2018 X
Enclosure material	copper-free aluminium, polyester resin finish, grey
Light transmitting cover	Borosilicate glass
Rated voltage	≤ 250 V AC
Protection category to EN 60529	IP 67
Insulation class	I
Permissible ambient temperature	-20 °C to +55 °C
Cable entry holes	AB 50 IU: 2 x 3/4" ISO 7/1-thread AB 50 IXM: 2 x M25 x 1,5-thread SPG 1N: 1 x 3/4" ISO 7/1-thread
Connecting terminals	direct entry: L, N, PE; 1 x 2.5 mm ² or 2 x 2.5 mm ² external PE 2 x 6 mm ² indirect entry: L, N, max. 2 x 4 mm ² , PE max. 2 x 6 mm ²
Lamp holder	E27 accd. IEC 60238
Lamps	Incandescent lamp 60/100 W
Weight	AB 50 IU: approx. 1.5 kg AB 50 IXM: approx. 2.6 kg SPG 1N: approx. 2.2 kg

Ordering details

Type	Entry holes	Cable entry for cable Ø ³⁾	Blanking plug	Order No.
AB 50 IU	2 x 3/4"	10 - 14 mm Ex-d	1 x 3/4" Ex-d	NOR 000 115 110 292
direct entry	2 x 3/4"	—	—	NOR 000 115 110 289
AB 50 IXM	2 x M25 x 1.5	10 - 14 mm Ex-e	1 x M25 x 1.5 Ex-e	NOR 000 115 110 321
indirect entry	2 x M25 x 1.5	—	—	NOR 000 115 110 320
SPG 1N				
portable light fixture	1 x 3/4"	10 - 14 mm Ex-d	—	NOR 000 005 110 745

¹⁾ Temperature class T4 with 60 W incandescent lamp and ta max. = 40 °C

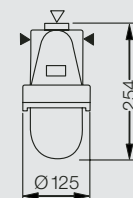
²⁾ T 145 °C for 60 W, T 180 °C for 100 W (ta max. 55 °C)

T 130 °C for 60 W, T 165 °C for 100 W (ta max. 40 °C)

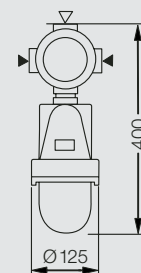
³⁾ Temperature stability of cable being used: ≥ 100 °C

Scope of delivery without illuminant and fixing accessories.

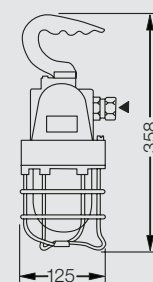
See fixing materials for Ex-pendant light fittings and floodlights on page 4.34.



AB 50 IU



AB 50 IXM



SPG 1N

► entry
▷ optional entry, on request

EX - PENDANT LIGHT FITTINGS

EV 500 .. for incandescent and high pressure discharge lamps up to 500 W
Metal version for Zone 1

Description

The explosion-protected pendant light fitting of the series EV 500... for Incandescent, and High Pressure Discharge are in accordance with the European Directive 94/9/EG (ATEX) as well as the European Standards EN 50014, EN 50018, EN 50019 and EN 60598.

The housing is made of a copper-free aluminium. The ballast for the high pressure discharge lamps (EVM/EVS/EVH) is thermally separated in its own compartment in the top part of the housing.

The dome-shaped glass enclosure is made of borosilicate glass which has a high mechanical and thermal stability. All external screws and the reflector are made of stainless steel.

The lamp replacement is done by opening the PTFE coated connection ring. Both the glass enclosure and the connection ring are hinged for easy access.

Due to their robust architecture, these light fittings are suitable for use in the chemical industry and have been certified for usage in environments with a temperature of up to +55° C.

The explosion-protected pendant light fittings of the EV 500 series are for universal use and offer, due to the different sizes and usage of nearly all lamp types, solutions for a wide variety of applications. The following lamp types can be used:

- Incandescent lamps with a rating of 300 W to 500 W
- Mixed light lamps with a rating of 250 W
- Sodium, Mercury and Halogen metal vapour lamps with a rating of 150 W to 250 W

For environmental temperatures from -50 °C up to +55° C

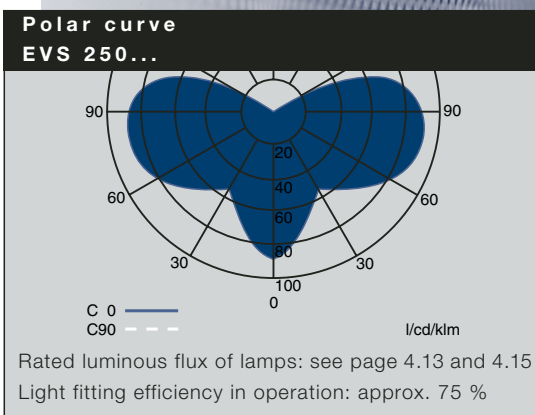
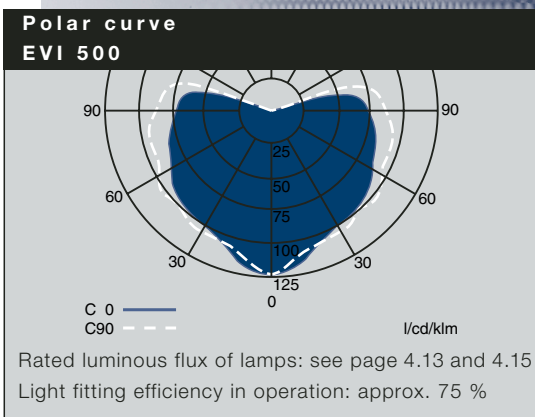
Safety Standard IP 67

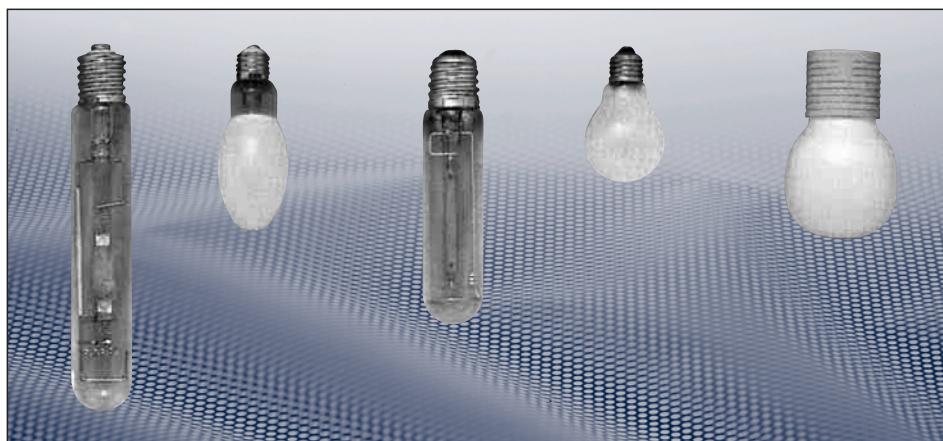
Robust light alloy housing

Easy to open lamp and control gear compartment

Easy to maintain

Easy to install





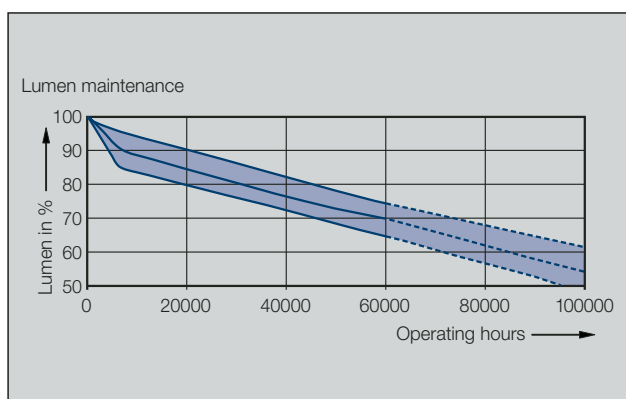
4.9

The explosion-protected pendant light fittings of the EV series are for universal use and offer, due to the different sizes and usage of nearly all lamp types, solutions for a wide variety of applications.

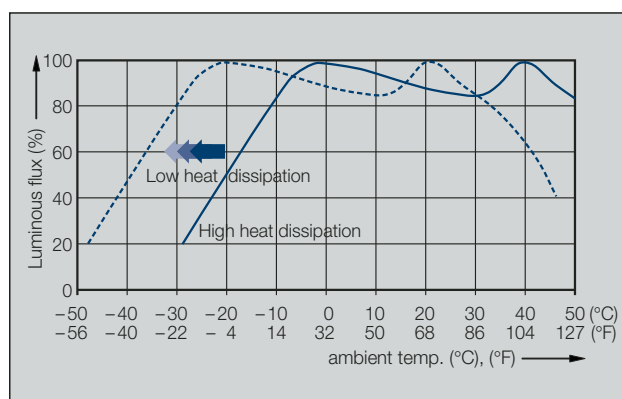
The following illuminant types can be used:

- Incandescent lamps with a rating of 150 W to 500 W
- Mixed light lamps with a rating of 160 W to 250 W
- Sodium, Mercury and Halogen metal vapour lamps with a rating of 70 W to 250 W
- Induction lamps with a rating of 55 W to 165 W

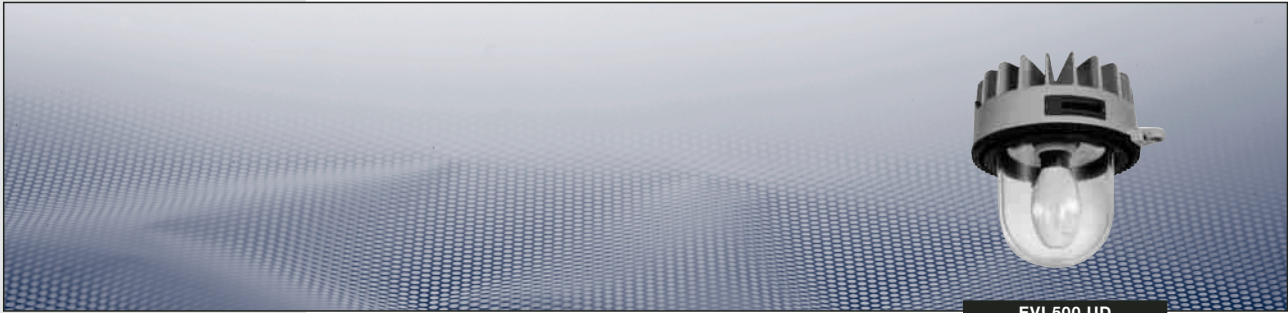
Especially the new QL induction lamps when used in the EVQ light fitting types offers a remarkable advantage against normal lamps when life span and their ability to cope with the different environmental temperatures (see the illustration below) are taken into consideration.



Luminance in conjunction with the operating hours
Source: Phillips Lighting



Influence of the ambient temperature on the relative luminance
(QL 55 W and QL 85 W) Source: Phillips Lighting

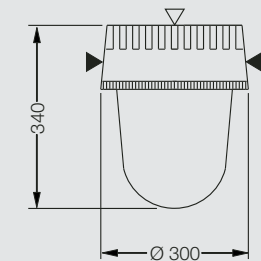


EVI 500 UD

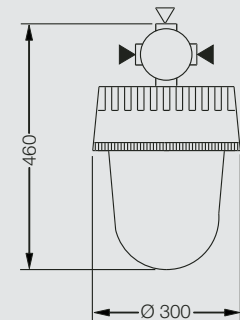
EX - PENDANT LIGHT FITTINGS

| EVI for incandescent and high pressure discharge lamps |

4.10



EVI 500 UD



EVI 500 XM

- ▶ entry
▽ optional entry, on request

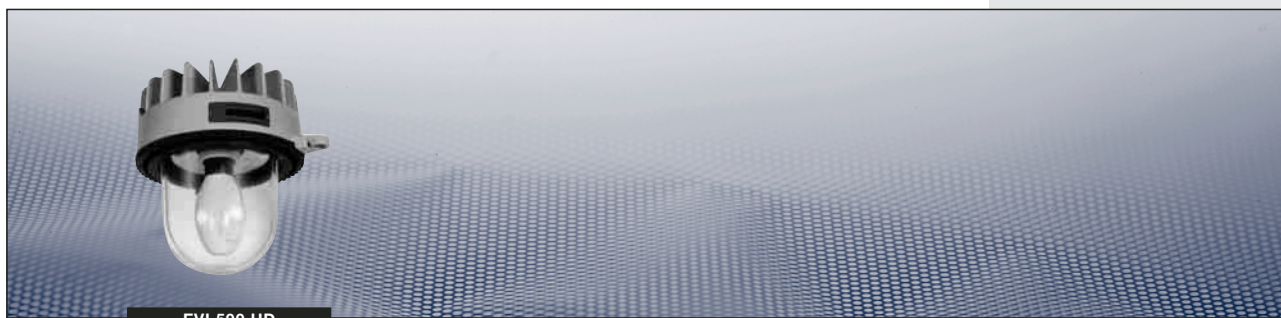
Technical data

Type EV 500 ...

Marking to 94/9/EC	⚡ II 2 G EEx d IIC T ¹⁾ (direct entry) ⚡ II 2 G EEx de IIC T ¹⁾ (indirect entry) ⚡ II 2 D IP 67 T °C ¹⁾
EC-Type Examination Certificate	LOM 02 ATEX 2012
GOST 'R'	POCC 05.B00729
Explosion protection marking	1ExdIICT3-T5 2ExdeLICT3-T5
Enclosure material	copper-free aluminium, polyester resin finish, grey Screw connection ring made of cast iron, green PTFE coating
Light transmitting cover	Borosilicate glass
Rated voltage	≥ 250 V AC
Rated current	see table „design“
Protection category to EN 60529	IP 67
Insulation class	I
Permissible ambient temperature	-50 °C to +55 °C
Cable entry holes	direct entry EEx d: 2 x 3/4" ISO 7/1 ²⁾ indirect entry EEx e: 2 x M25 x 1.5
Connecting terminals	direct entry: L1, N and PE: 1 x 2.5 mm ² (or 2 x 1.5 mm ²) indirect entry: L1, N and PE: 2 x 2.5 mm ² external PE: 2 x 6 mm ²
Lamp holder	E27/E40 up to IEC 60238
Lamps	A: incandescent lamp HME-SB: mixed light lamp HME: Mercury vapour high pressure lamp HSE: Sodium vapour high pressure lamp HIE: Halogen metal vapour lamp
Weight	approx. 12.8 kg (EVI 500 UD) approx. 13.6 kg (EVI ... XM)
Options (on request)	Other voltages and frequencies, PTFE coating through wiring with indirect entry L1, L2, L3, N and PE: 2 x 4 mm ² , external PE: 2 x 6 mm ² Entry from top for conduit installation

¹⁾ Temperature class and max. surface temperature see table

²⁾ Entry from top for conduit installation



EVI 500 UD

4.11

EX - PENDANT LIGHT FITTINGS

| EVI for incandescent and high pressure discharge lamps |

Temperature class (II G)/max. surface temperature (II D)							
Type	EVI 500/EVI 500 XM						
Lamp type	A		HME-SB	HME ²⁾	HSE ²⁾		HIE ¹⁾
Lamp power	300 W	500 W	250 W	250 W	150 W	250 W	250 W
Tamb.	T4/	T3/	T4/	T4/	T5/	T4/	T4/
max. +40 °C	T115 °C	T155 °C	T125 °C	T125 °C	T90 °C	T110 °C	T100 °C
Tamb.	T4/	T3/	T3/	T3/	T4/	T4/	T3/
max. +55 °C	T130 °C	T170 °C	T140 °C	T140 °C	T115 °C	T125 °C	T115 °C
Rated current/A	1.3	2.2	1.1	2.1	1.8	3.0	3.0

EVI 500 UD: for direct cable entry

EVI 500 XM: with separate Ex-e terminal compartment for indirect cable entries

²⁾ Ballast in separate enclosure necessary, not part of delivery!

Ordering details (light fittings without ballast)				
Type	Entry holes	Cable entry for cable Ø	Blanking plug	Order No.
Min. ambient temperature -20 °C, direct entry				
EVI 500 UD	2 x 3/4"	9 - 14 mm, Ex-d	1 x 3/4", Ex-d	NOR 000 005 110 762
EVI 500 UD	2 x 3/4"	—	1 x 3/4", Ex-d	NOR 000 005 110 761
Min. ambient temperature -20 °C, indirect entry				
EVI 500 XM	2 x M25 x 1.5	9 - 14 mm, Ex-e	1 x M25 x 1.5, Ex-e	NOR 000 005 110 942
EVI 500 XM	2 x M25 x 1.5	—	1 x M25 x 1.5, Ex-e	NOR 000 115 110 942
Min. ambient temperature -50 °C, direct entry				
EVI 500 UD	2 x 3/4"	—	1 x 3/4", Ex-d	on request
Min. ambient temperature -50 °C, indirect entry				
EVI 500 XM	2 x M25 x 1.5	—	1 x M25 x 1.5, Ex-e	on request

Scope of delivery without lamp and fixing accessories.

See fixing materials for Ex-pendant light fittings and floodlights on request.

Rated luminous flux of lamps:

approx. 5.000 lm (300 W)

approx. 8.400 lm (500 W)

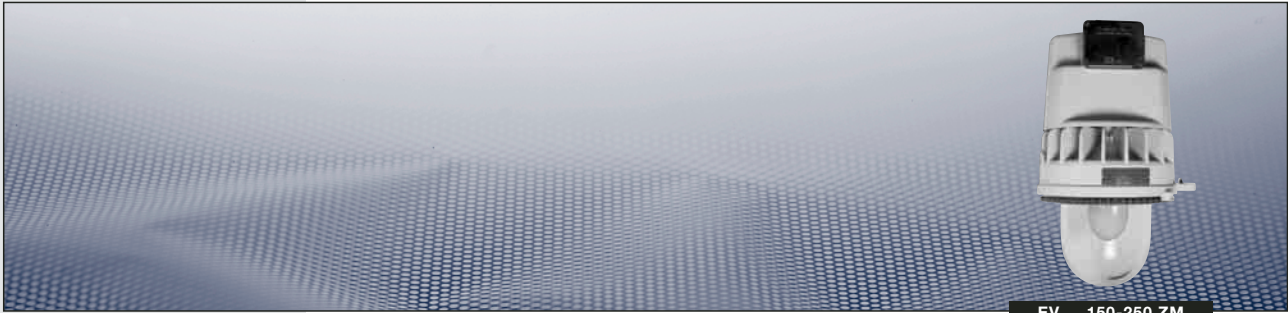
approx. 5.600 lm (250 W/HME-SB)

approx. 13.000 lm (250 W/HME)

approx. 14.000 lm (150 W/HSE)

approx. 25.000 lm (250 W/HSE)

approx. 17.000 lm (250 W/HIE)

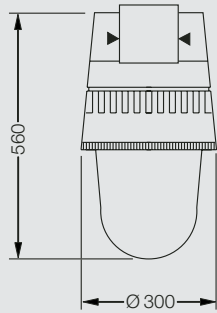


EV ... 150-250 ZM

EX - PENDANT LIGHT FITTINGS

| EVM | EVS | EVH | for high pressure discharge lamps |

4.12



► entries

EV... 150 - 250 ZM

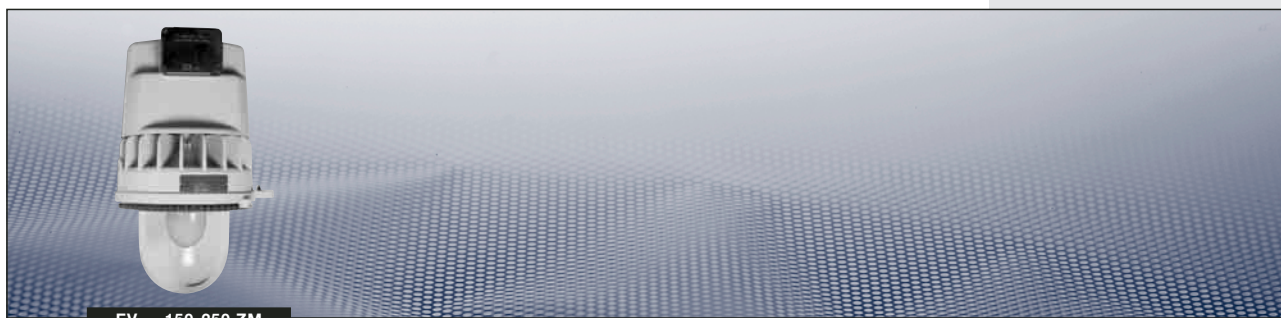
Technical data

Type EVM/EVS/EVH

Marking to 94/9/EC	Ex II 2 G EEx d IIC T ¹⁾ (direct entry) Ex II 2 G EEx de IIC T ¹⁾ (indirect entry) Ex II 2 D IP 67 T °C ¹⁾
EC-Type Examination Certificate	LOM 02 ATEX 2012
GOST 'R'	POCC 05.B00729
Explosion protection marking	1ExdIICT3-T5 2ExdeLICT3-T5
Enclosure material	copper-free aluminium, polyester resin finish, grey Screw connection ring made of cast iron, green PTFE coating
Light transmitting cover	Borosilicate glass
Rated voltage with built-in ballast	230 V +5 % – 10 %, 50 Hz, cos ϕ approx. 0.95, comp. ²⁾
Protection category to EN 60529	IP 67
Insulation class	I
Permissible ambient temperature	-45 °C to +55 °C
Cable entry holes indirect entries	2 x M25 x 1.5
Connecting terminals	L1, N and PE: 2 x 2.5 mm ² external PE: 2 x 6 mm ²
Lamp holder	E40 up to IEC 60238
Lamps	HME: Mercury vapour high pressure lamp HSE: Sodium vapour high pressure lamp HIE: Halogen metal vapour lamp
Weight	approx. 22.4 kg
Options (on request)	Other voltages and frequencies, PTFE coating through wiring with indirect entry L1, L2, L3, N and PE: 2 x 4 mm ² , external PE: 2 x 6 mm ²

¹⁾ Temperature class and max. surface temperature see table

²⁾ Other voltages and frequencies on request



EV ... 150-250 ZM

4.13

EX - PENDANT LIGHT FITTINGS

| EVM | EVS | EVH | for high pressure discharge lamps |

Ordering details					
Type	Lamp	Entry holes	Cable entry for cable Ø	Blanking plug	Order No.
Min. ambient temperature -20 °C					
EVM 250 ZM	HME 250 W	2 x M25 x 1.5	9 - 14 mm/Ex e	1 x M25	NOR 000 115 110 080
	HME 250 W	2 x M25 x 1.5	–	1 x M25	NOR 000 115 110 881
EVS 150 ZM	HSE 150 W	2 x M25 x 1.5	9 - 14 mm/Ex e	1 x M25	NOR 000 115 110 087
	HSE 150 W	2 x M25 x 1.5	–	1 x M25	NOR 000 115 110 883
EVS 250 ZM	HSE 250 W	2 x M25 x 1.5	9 - 14 mm/Ex e	1 x M25	NOR 000 115 110 088
	HSE 250 W	2 x M25 x 1.5	–	1 x M25	NOR 000 115 110 882
EVH 250 ZM	HIE 250 W	2 x M25 x 1.5	9 - 14 mm/Ex e	1 x M25	NOR 000 115 110 046
	HIE 250 W	2 x M25 x 1.5	–	1 x M25	NOR 000 115 110 945
EVM 250 ZM	HME 250 W	2 x M25 x 1.5	9 - 14 mm/Ex e	1 x M25	NOR 000 115 110 080
Min. ambient temperature -45 °C					
EVM 250 ZM	HME 250 W	2 x M25 x 1.5	–	1 x M25	on request
EVS 150 ZM	HSE 150 W	2 x M25 x 1.5	–	1 x M25	on request
EVS 250 ZM	HSE 250 W	2 x M25 x 1.5	–	1 x M25	on request
EVH 250 ZM	HIE 250 W	2 x M25 x 1.5	–	1 x M25	on request

Temperature class and max. surface temperatures				
Type	EVM 250 ZM	EVS 150 ZM	EVS 250 ZM	EVH 250 ZM
Lamp type	HME	HSE		HIE
Lamp power	250	150	250	250
Tamb.	T4/	T5/	T4/	T4/
max. +40 °C	T125 °C	T90 °C	T110 °C	T100 °C
Tamb.	T3/	T4/	T4/	T3/
max. +55 °C	T140 °C	T115 °C	T125 °C	T115 °C
Rated current/A	2.1	1.8	3.0	3.0

Scope of delivery without lamp and fixing accessories.

See fixing materials for Ex-pendant light fittings and floodlights on request.

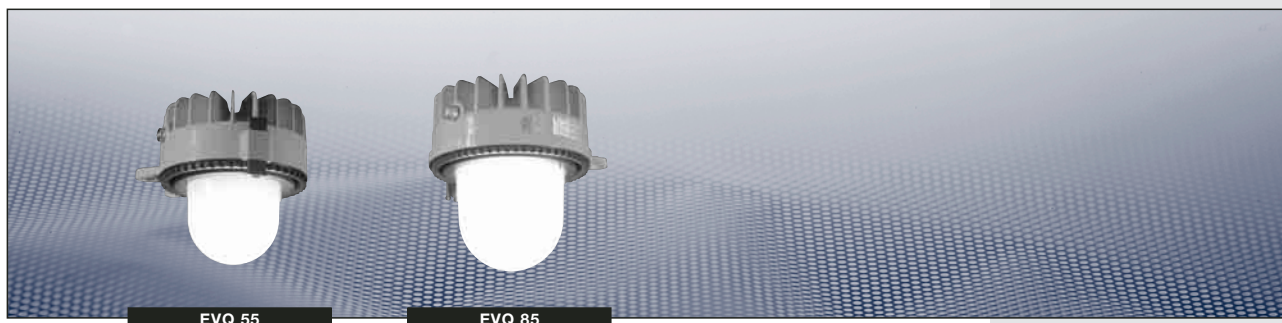
Rated luminous flux of lamps:

approx. 13.000 lm (250 W/HME)

approx. 14.000 lm (150 W/HSE)

approx. 25.000 lm (250 W/HSE)

approx. 17.000 lm (250 W/HIE)



EVQ 55

EVQ 85

EX - PENDANT LIGHT FITTINGS

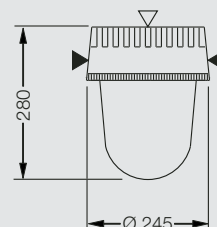
| EVQ | for Induction lamps |

Technical data

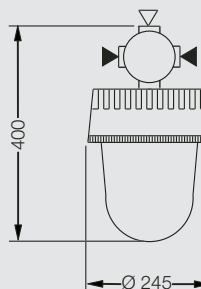
Type EVQ

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T85°
Type of protection	EEx d IIC T6 (direct entry) EEx de IIC T6 (indirect entry)
EC-Type Examination Certificate	LOM 02 ATEX 2012 X
Enclosure material	copper-free aluminium, polyester resinfinit, grey Screw connection ring made of cast iron, green PTFE coating
Light transmitting cover	Borosilicate glass, opak
Rated voltage	230 V ± 10 %, 50/60 Hz AC/DC
Rated current	0.26 A (55 W), 0.40 A (85 W)
Power factor cos φ	0.96, comp.
Protection category to EN 60529	IP 67
Insulation class	I
Permissible ambient temperature	-20 °C to +40 °C
Cable entry holes	direct entry EEx d: 2 x 3/4" ISO 7/1 indirect entry EEx e: 2 x M25 x 1.5
Connecting terminals	direct entry: L1, N and PE: 2 x 2.5 mm² indirect entry: L1, N and PE: 2 x 2.5 mm² external PE: 2 x 6 mm²
Ballast	HF-generator in combination with QL-lamp
Lamps	Compact discharge lamp with in inductive light generation, 55 W, 85 W*
Weight	approx. 12.8 kg (EVQ 85 UD) approx. 13.6 kg (EVQ 85 XM)
Options (on request)	PTFE coating, through wiring with L1, L2, L3, N and PE: 2 x 4 mm², external PE: 2 x 6 mm²

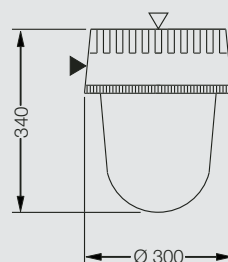
*Included in scope of delivery



EVQ 55 UD

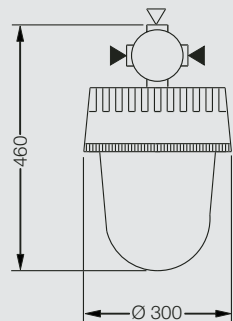
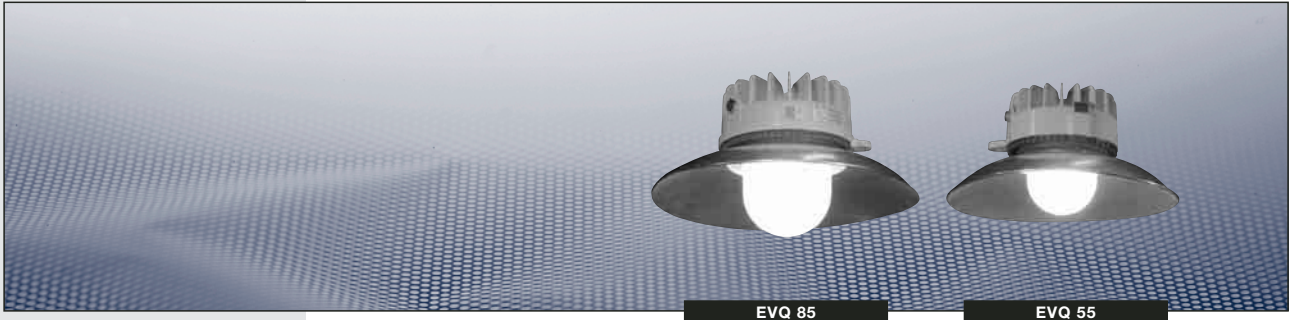


EVQ 55 XM



EVQ 85 UD

▶ entry
▽ optional entry, on request



EVQ 85 XM

- ▶ entries
- ▷ optional cable entries, on request

Rated luminous flux of lamps:

approx. 3.500 lm (55 W/QL)
approx. 6.000 lm (85 W/QL)

EX - PENDANT LIGHT FITTINGS

| EVQ | for Induction lamps |

4.15

Ordering details				
Type ¹⁾	Lamp	Cable entry for cable Ø	Blanking plug	Order No.
EVQ 55 UD	55 W	10-14 mm Ex-d	1 x 3/4", Ex-d	NOR 000 115 110 851
		–	1 x 3/4", Ex-d	NOR 000 115 110 850
EVQ 85 UD	85 W	10-14 mm Ex-d	1 x 3/4", Ex-d	NOR 000 115 110 853
		–	1 x 3/4", Ex-d	NOR 000 115 110 852
EVQ 55 XM	55 W	10-14 mm Ex-e	1 x M25 x 1.5, Ex-e	NOR 000 115 110 855
		–	1 x M25 x 1.5, Ex-e	NOR 000 115 110 854
EVQ 85 XM	85 W	10-14 mm Ex-e	1 x M25 x 1.5, Ex-e	NOR 000 115 110 857
		–	1 x M25 x 1.5, Ex-e	NOR 000 115 110 856

¹⁾ EVQ ... UD for direct cable entry

EVQ ... XM/ZM with separate Ex-e terminal compartment, for indirect cable entries

Lamp and HF-generator are part of delivery, without fixing material and external reflector.

See fixing materials for Ex-pendant light fittings and floodlights on page 4.34.

EX - FLOODLIGHTS

FZD 04 for High Pressure Discharge Lamps Metal Design for Zone 1

The explosion-protected floodlight FZD 04 for high-pressure discharge lamps meets the requirements of the ATEX directive 94/9/EC. The modular floodlight reflector comprises an Ex-e housing for the starter and a separate mounted Ex-e enclosure with ballast and the p.f. correction capacitor. The floodlight enclosure made of high grade aluminium and stainless steel components is a light weight, which can be installed easily by a single electrician without need of a crane or other heavers.

All main components are certified separately as components. The flameproof lamp module can easily be separated from the housing once a screw has been loosened. Two sealing systems of degree of protection IP 66 ensure permanently protected Ex-d contacts.

There is no need to switch off the mains voltage to separate the module from the luminaire.

This means that a simple lamp change and easy cleaning of the lamp module is possible, even outside the potentially explosive atmospheres. Optionally, the module can be used with narrow-angle and wide-angle reflectors – even retrospectively and without any complicated installation.

By simply and quickly exchanging the lamp-module, changing the lamp is not a problem, even in extreme weather or climate conditions.

Simple lamp change by exchanging the Ex-d lamp module

Light weight floodlight enclosure – easy to install

Modular Ex-e/Ex-d housing

High degree of protection IP 66

Internal wide-angle reflector or, optionally, narrow-angle reflector

Can also be used in low ambient temperatures of up to -45 °C





FZD 04

E X - F L O O D L I G H T

| FZD 04 |

Technical data

Type FZD 04

EC-Type Examination Certificate	PTB 02 ATEX 1158
Category of application	⊕ II 2 G EEx de IIC T4/T3 ¹⁾ ⊕ II 2 D IP 66 T ¹⁾
Voltage	230 V ²⁾ ±10 %
Frequency	50 Hz ²⁾
Power factor	0.90
Rated current	250 W approx. 1.25 A 400 W approx. 1.8 (HIT)/2.1 A (HST)
Insulation class to EN 60 598	I
Degree of protection to IEC 60529	IP 66
Permissible ambient temperature	
during operation	-45 °C to +40 °C
storage temperature	-45 °C to +60 °C

Lamp module/Floodlight enclosure

Enclosure material	Diecasted light alloy (lamp module) Light alloy (enclosure)
Protective cover	temper safety glass
Lamp cap acc. to EN 60061-1	E 40
Lamps ³⁾	250 W/400 W metal halide high pressure HIT or 250 W/400 W high pressure sodium HST 600 W high pressure sodium HST ⁴⁾
Supply terminal clamping capacity	
2 x per terminal	2 x 2.5 mm ² + 2.5 mm ² PE
EEx-e cable entry standard version	1 x M25 x 1.5 for cable Ø (8 to 17 mm)
Weights	
Floodlight enclosure	appr. 4.3 kg
Lamp module	appr. 10.6 kg (250/400 W) 15 kg (600 W)

Ballast enclosure

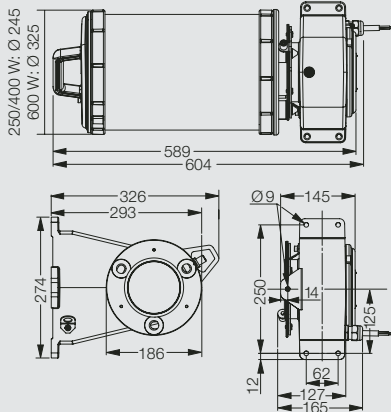
Enclosure material	reinforced polyester or stainless steel ¹⁾
Supply terminal clamping capacity	
2 x per terminal	3 x 4 mm ²
EEx-e cable entry standard version	2 x M25 x 1.5 for cable Ø (8 to 17 mm), 1 x EEx-e blanking plug
Weight	appr. 9 kg appr. 10 kg

¹⁾ see ordering details

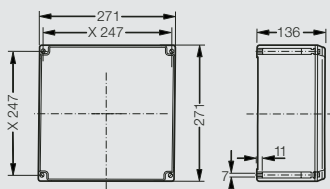
²⁾ other voltages and frequencies on request

³⁾ 150 W HIT/HST-lamps and HME lamps on request

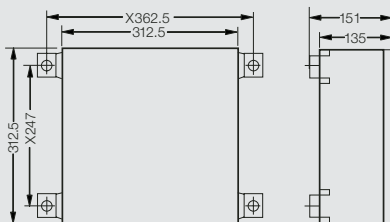
⁴⁾ applied for



FZD 04 250/400/600 W



Ballast enclosure: plastic



Ballast enclosure: stainless steel

Dimensions in mm



FZD 04

E X - F L O O D L I G H T

| FZD 04 |

Ordering details for FZD 04 with ballast enclosure made of glass-fibre reinforced polyester with cable entry

Type	Lamp	Temp.- class	max. surface temp.	Reflector	Order No.
FZD 04	250 W HIT/HST	T4*	150 °C	narrow	NOR 000 005 192 505
FZD 04	250 W HIT/HST	T4*	150 °C	wide	NOR 000 005 192 506
FZD 04	400 W HIT	T3	180 °C	narrow	NOR 000 005 194 105
FZD 04	400 W HIT	T3	180 °C	wide	NOR 000 005 194 106
FZD 04	400 W HST	T3	180 °C	narrow	NOR 000 005 194 005
FZD 04	400 W HST	T3	180 °C	wide	NOR 000 005 194 006

Ordering details for FZD 04 with ballast enclosure made of stainless-steel with cable entry

Type	Lamp	Temp.- class	max. surface flächen-Temp.	Reflector	Order No.
FZD 04	250 W HIT/HST	T4*	150 °C	narrow	NOR 000 005 192 501
FZD 04	250 W HIT/HST	T4*	150 °C	wide	NOR 000 005 192 502
FZD 04	400 W HIT	T3	180 °C	narrow	NOR 000 005 194 101
FZD 04	400 W HIT	T3	180 °C	wide	NOR 000 005 194 102
FZD 04	400 W HST	T3	180 °C	narrow	NOR 000 005 194 001
FZD 04	400 W HST	T3	180 °C	wide	NOR 000 005 194 002

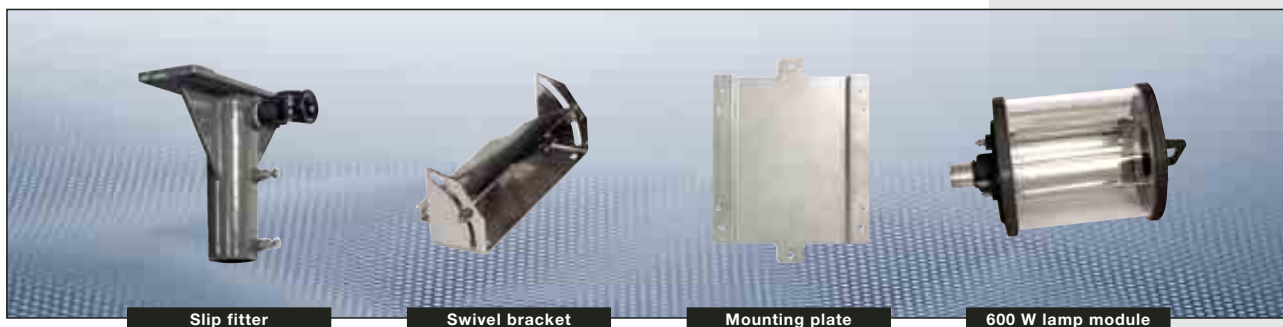
Ordering details for FZD 04 with ballast enclosure made of glass-fibre reinforced polyester without cable entry

Type	Lamp	Temp.- class	max. surface temp.	Reflector	Order No.
FZD 04	250 W HIT/HST	T4*	150 °C	narrow	NOR 000 005 192 507
FZD 04	250 W HIT/HST	T4*	150 °C	wide	NOR 000 005 192 508
FZD 04	400 W HIT	T3	180 °C	narrow	NOR 000 005 194 107
FZD 04	400 W HIT	T3	180 °C	wide	NOR 000 005 194 108
FZD 04	400 W HST	T3	180 °C	narrow	NOR 000 005 194 007
FZD 04	400 W HST	T3	180 °C	wide	NOR 000 005 194 008

Ordering details for FZD 04 with ballast enclosure made of stainless-steel without cable entry

Type	Lamp	Temp.- class	max. surface temp.	Reflector	Order No.
FZD 04	250 W HIT/HST	T4*	150 °C	narrow	NOR 000 005 192 503
FZD 04	250 W HIT/HST	T4*	150 °C	wide	NOR 000 005 192 504
FZD 04	400 W HIT	T3	180 °C	narrow	NOR 000 005 194 103
FZD 04	400 W HIT	T3	180 °C	wide	NOR 000 005 194 104
FZD 04	400 W HST	T3	180 °C	narrow	NOR 000 005 194 003
FZD 04	400 W HST	T3	180 °C	wide	NOR 000 005 194 004

Scope of delivery without illuminant and fixing accessories; *T4 angle of distribution downloads (max. ± 135°)

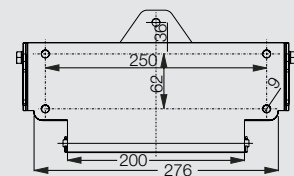
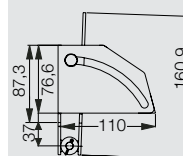
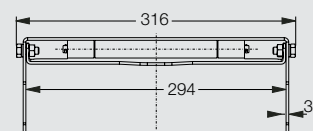


E X - F L O O D L I G H T

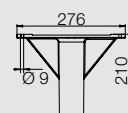
| FZD 04 |

Accessories

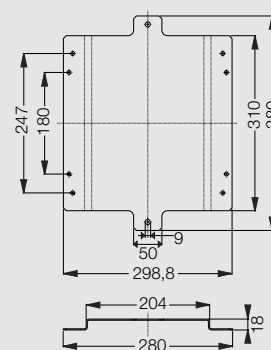
Type	Content	Order No.
Lamp module	Lamp module 250 W/400 W complete with internal reflector, narrow-angle reflector	1 3041 000 011
	with internal reflector, wide-angle reflector	1 3041 000 012
Slip fitter	fitter for pole 1 1/4" mounting complete with fixing screws	NOR 000 005 190 021
Slip fitter	fitter for pole 2" mounting complete with fixing screws	NOR 000 005 190 022
Swivel bracket	Ajustable hinge for wall/pole mounting	NOR 000 005 190 023
Mounting plate	Stainless steel plate for wall or pole installation (using pipe clamps, not incl.)	2 3041 520 200
Pipe clamp	1 1/4" pipe clamp (1 pcs) galvanized Ø 38 - 42 mm	2 2480 462 000
Pipe clamp	1 1/4" pipe clamp (1 pcs) stainless steel Ø 38 - 42 mm	2 2480 464 000
Pipe clamp	1 1/2" pipe clamp (1 pcs) galvanized Ø 47 - 51 mm	2 2480 472 000
Pipe clamp	2" pipe clamp (1 pcs) galvanized Ø 56 - 60 mm	2 2480 482 000



Swivel bracket



Slip fitter



Mounting plate

E X - F L O O D L I G H T

PX 04 for high pressure discharge lamps Metal version for Zone 1

Description

The explosion-protected floodlight PX 04 for high pressure discharge and halogen lamps are in accordance to the EC Directive 94/9/EC (ATEX) as well as the European Norms EN 50014, EN 50018 and EN 50019.

They can be used in Zones 1, 2, 21 and 22. The light fitting housing is made of copper-free aluminium, the glass cover of a mechanical and thermal resistant borosilicate glass. All external screws are made of stainless steel.

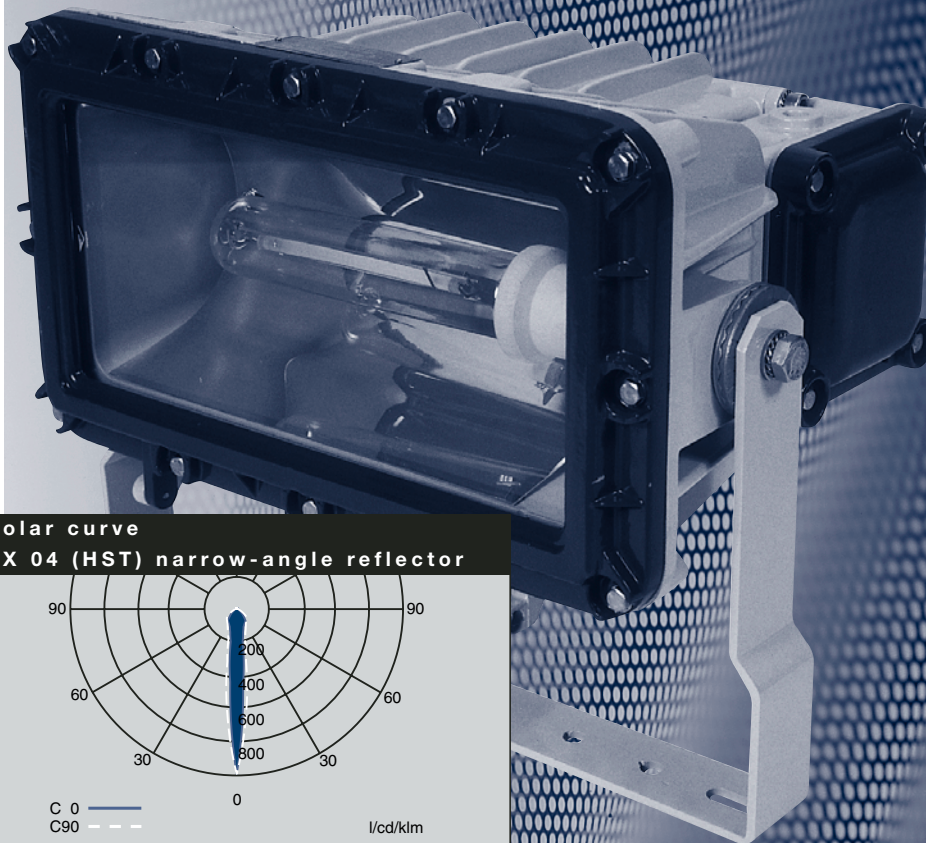
The electrical components are thermically separated in their own compartment and have a separate large Ex-e maintenance-friendly connection compartment.

The complete control gear is removable from its housing, locking and easy to maintain.

The Internal reflector made of anodized aluminium is available as narrow or- wide beam reflector.

With the adjustable mounting frame an optimum on light guidance is reached.

Due to the robust architecture it has more than proven its reliability in chemical factories and offshore platforms for illuminating large areas and selective large objects.

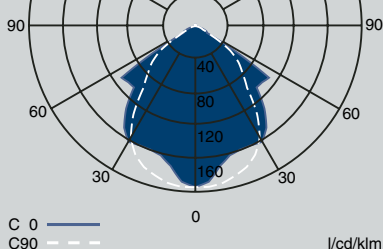


Polar curve
PX 04 (HST) narrow-angle reflector



Light fitting efficiency in operation: 62 %

Polar curve
PX 04 (HST) wide-angle reflector



Rated luminous flux of lamps:
approx. 90.000 lm (600 W/HST-T)
approx. 48.000 lm (400 W/HST-T)
approx. 27.000 lm (250 W/HST-T)
approx. 17.000 lm (150 W/HST-T)
approx. 35.000 lm (400 W/HIT-T)
approx. 20.000 lm (250 W/HIT-T)
approx. 14.000 lm (150 W/HIT-T)
approx. 10.000 lm (500 W/QT 38)
Light fitting efficiency in operation: 48 %

**For environmental temperatures
of up to + 55° C**

Safety Standard IP 67

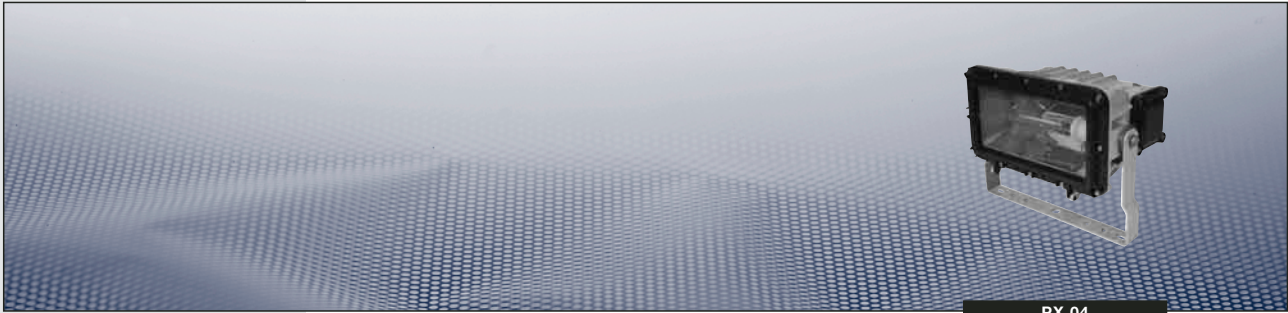
Robust light alloy housing

Captive screws made of stainless steel

Large Ex e connection compartment

Easy to maintain

Easy to install

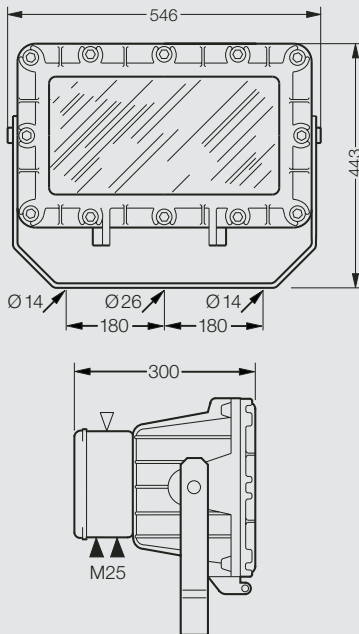


PX 04

E X - F L O O D L I G H T

| PX 04 for high pressure discharge lamps |

4.23



▷ optional entry, on request
▶ entry

PX 04

Technical data

Type PX 04...

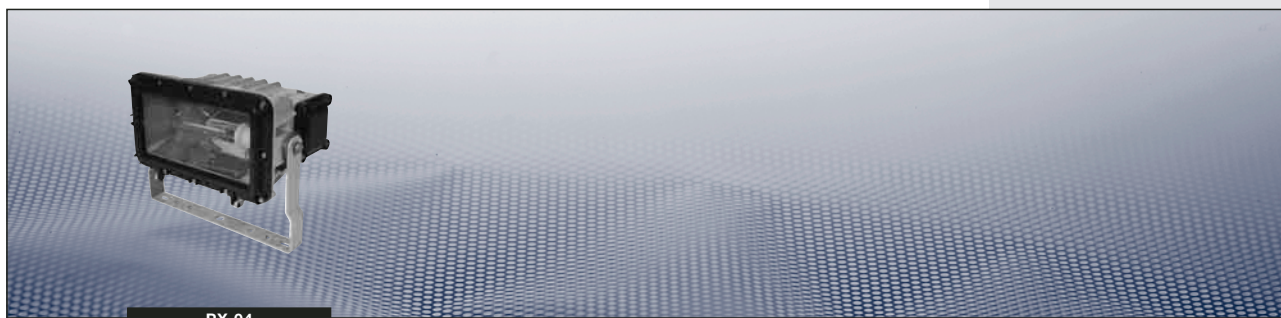
Marking to 94/9/EC	Ex II 2 G EEx de IIB T ¹⁾ Ex II 2 D IP 6X T ¹⁾
EC-Type Examination Certificate	PTB 04 ATEX 1046
Enclosure material	Copper-free aluminium, polyester resin finish, grey
Light transmitting cover	Borosilicate glass
Rated voltage	with built-in ballast: 230 V/50 Hz, cos $\phi \geq 0.85$ comp. ²⁾ without built-in ballast: ≤ 250 V AC
Protection category to EN 60529	IP 67
Insulation class	I
Permissible ambient temperature	- 20 °C to + 55 °C
Cable entry holes indirect entries	2 x M25 x 1.5
Connecting terminals	L1, N: 2 x 4 mm ² PE: 2 x 6 mm ²
Internal reflector	wide angle narrow angle
Lamp holder	E 27/E 40 acc. IEC 60238
Lamp	HST ³⁾ : sodium vapour high-pressure lamp HIT ³⁾ : Halogen metal vapour lamp QT 38: halogene lamp with protective bulb
Weight	with ballast: approx. 31 kg without ballast: approx. 23 kg
Options (on request)	Others voltages from 220 V to 254 V; 50/60 Hz Indirect entries for through circuits: L1, L2, L3, N: 2 x 4 mm ² PE: 2 x 6 mm ² PTFE-coating Mercury vapour lamps (HME)

¹⁾ see table temperature class and max. surface temperature

²⁾ other voltages and frequencies on request

³⁾ Lamps with ellipsoid bulb possible, but not recommended

⁴⁾ not part of the delivery



PX 04

4.24

E X - F L O O D L I G H T

| PX 04... for high pressure discharge lamps |

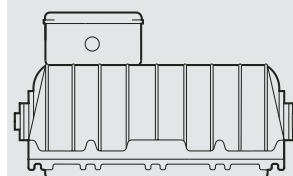
Ordering details

Type	Lamp	Internal reflector	Entry holes for cable Ø	Cable entry ²⁾	Blanking plug	Order No.
PX 0407	HS_/_	Narrow beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 230
	HI_ 70 W ³⁾	Narrow beam	2 x M25 x 1.5	–	1 x M25	NOR 000 115 170 229
PX 0415	HST/_	Narrow beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 246
	HIT	Narrow beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 233
	150 W	Wide beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 346
		Wide beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 333
PX 0425	HST/_	Narrow beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 245
	HIT	Narrow beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 227
	250 W ⁴⁾	Wide beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 345
		Wide beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 327
PX 0440	HST	Narrow beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 244
		Narrow beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 221
		Wide beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 344
		Wide beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 321
PX 0440	HIT	Narrow beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 149
		Narrow beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 222
		Wide beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 349
		Wide beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 322
PX 0460	HST	Narrow beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 243
		Narrow beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 215
		Wide beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 343
		Wide beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 315
PX 0405	QT38	Narrow beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 248
	500W/_	Narrow beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 209
	HME-SB	Wide beam	2 x M25 x 1.5	9 -14 mm/Exe	1 x M25	NOR 000 115 170 348
	500	Wide beam	2 x M25 x 1.5	-	1 x M25	NOR 000 115 170 309

Ellipsoid bulb-type lamp possible, not recommended

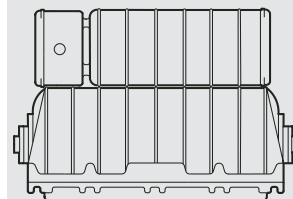
Scope of delivery without illuminant and fixing accessories.

See fixing materials for Ex-pendant light fittings and floodlights on request.



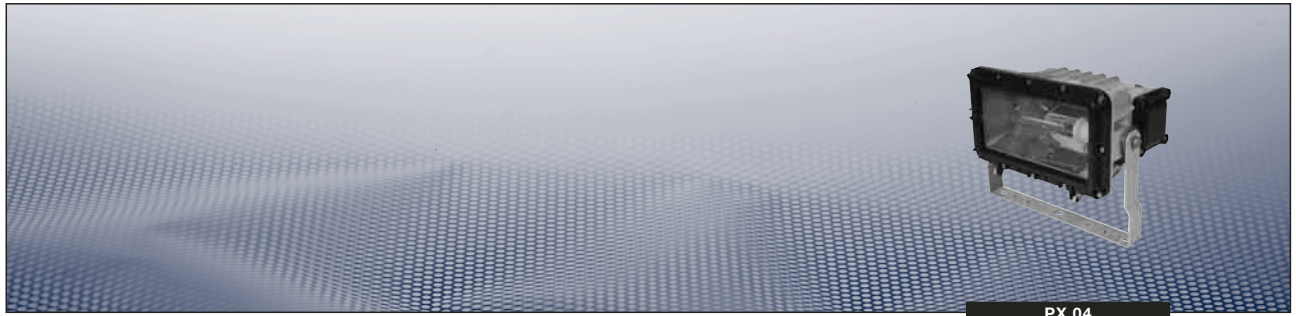
PX 04

without ballast for QT- and HME-SB-Lamps



PX 04

with ballast for all high pressure discharge lamps



PX 04

E X - F L O O D L I G H T

| PX 04 for high pressure discharge lamps |

4.25

Temperature Classes/max. Surface Temperatures						
Type	Lamp	Power	› II 2 G		› II 2 D	
			Tamb. -20°C to +40°C		Tamb. > 40°C to +55°C	
PX0470	HS_	70 W	T4	T 85°C	T4	T 100°C
	HI_	70 W	T4	T 90°C	T4	T 105°C
PX0415	HST	150 W	T4	T 115°C	T4	T 130°C
	HIT	150 W	T4	T 105°C	T4	T 120°C
PX0425	HST	250 W	T4	T 130°C	T3	T 145°C
	HIT	250 W	T4	T 130°C	T3	T 145°C
	HME	250 W	T3	T 150°C	T3	T 165°C
PX0440	HST	400 W	T3	T 175°C	T3	T 190°C
	HIT	400 W	T3	T 170°C	T3	T 185°C
	HME	400 W	T3	T 186°C	T2	T 201°C
PX0460	HST	600 W	T3	T 195°C	T2	T 210°C
PX0405	QT38	500 W	T3	T 185°C	T2	T 200°C

Accessories for Ex –floodlight PX 04		
Type	Qty.	Order No.
Pipe fixing (Ø 48 mm to Ø 64 mm) SB	1	NOR 000 005 170 583
Portable stand ATP painted steel	1	NOR 000 005 170 715

EX - PENDANT LIGHT FITTINGS

dHLS 85... for high pressure discharge lamps
Metal version for Zone 1

Description

The explosion-protected pendant light fittings dHLS 85... for high pressure discharge lamps are in accordance to the ATEX-Directive 94/9/EG as well as the European Norms EN 50014, EN 50018 and EN 50019. They are certified for use in the Zones 1 and 2.

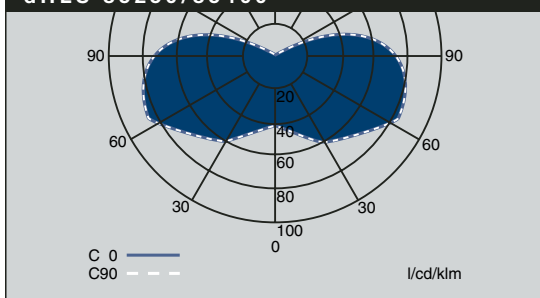
The housing is made of a light alloy with a powdered coating. The pressed-in threading for the flameproof thread gap is made of brass. This provides for an easy lamp replacement even after a longer operating periods.

The pendant light fitting was designed for outdoor use. Due to the high safety standard it has more than proven its reliability in chemical factories and offshore platforms for illuminating large areas and selective large objects.

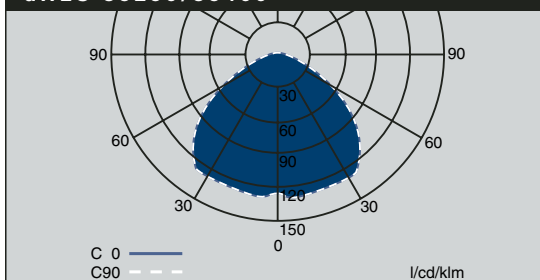
The light fitting is fitted with a dome-shaped glass cover and can also be fitted with an external reflector.



Polar curve without external reflector
dHLS 85250/85400



Polar curve with external reflector
dHLS 85250/85400



Cost-effective illumination
of large objects

For use in chemical factories
and offshore platforms

Robust light alloy housing
with a powdered coating

Easy lamp replacement even after
extended time of operation

Or with an external reflector

Rated luminous flux of lamps:

approx. 13.000 lm (250 W/HME)

approx. 22.000 lm (400 W/HME)

approx. 25.000 lm (250 W/HSE)

approx. 47.000 lm (400 W/HSE)

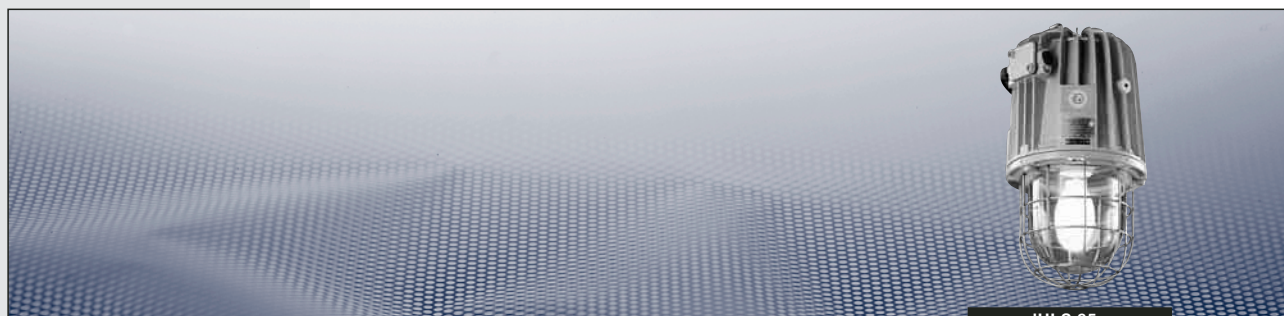
Light fitting efficiency in operation:

dHLS 85250: approx. 77 % (without AR)

dHLS 85400: approx. 71 % (without AR)

dHLS 85250: approx. 55 % (with AR)

dHLS 85400: approx. 53 % (with AR)

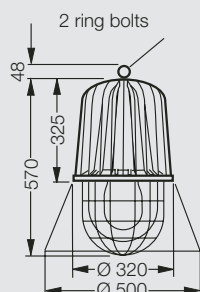


dHLS 85...

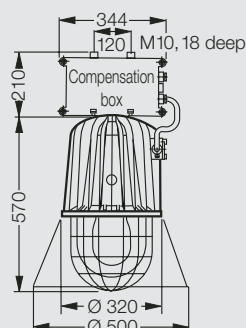
EX - PENDANT LIGHT FITTINGS

| dHLS 85... for high pressure discharge lamps |

4.19



dHLS 85 ... ind.



dHLS 85 ... komp.

Technical data

Type dHLS 85250/dHLS 85400

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T3
EC-Type Examination Certificate	DMT 03 ATEX E 039
Enclosure material	cast light metal with powder coating, grey
Transparent cover	Borosilicate glass
Rated voltage	230 V ±10 %
Protection category to EN 60529	IP 65
Insulation class	I
Permissible ambient temperature	-20 °C to +50 °C
Cable entries	1 x M 25 x 1.5 for cables from Ø 8-17 mm 1 x M 25 x 1.5 with blanking plug
Connecting terminals	L + N + PE; max. 2.5 mm ²
Lamp holder	E40 acc. IEC 60238
Lamps	Mercury vapour high pressure lamp HME Sodium vapour high pressure lamp HSE
Weight	approx. 30 kg approx. 37 kg with compensation box

Ordering details

Type	Lamp	Rated current	Power factor cos φ	Order No.
dHLS 85250	250 W HME	2.2 A	0,5 ind. ¹⁾	CGS 123 8688 P0001
	250 W HME	1.1 A	0,9 comp. ²⁾	CGS 123 8688 P1001
	250 W HSE	3.0 A	0,5 ind. ¹⁾	CGS 123 8688 P2001
	250 W HSE	1.5 A	0,9 comp. ²⁾	CGS 123 8688 P3001
dHLS 85400	400 W HME	3.25 A	0,6 ind. ¹⁾	CGS 123 8788 P0001
	400 W HME	2.5 A	0,9 comp. ²⁾	CGS 123 8788 P1001
	400 W HSE	4.4 A	0,5 ind. ¹⁾	CGS 123 8788 P2001
	400 W HSE	3.0 A	0,9 comp. ²⁾	CGS 123 8788 P3001

¹⁾ see dimensions drawing 1

²⁾ see dimensions drawing 2

Scope of delivery without illuminant and fixing accessories.

See fixing materials for Ex-pendant light fittings and floodlights on page 4.34.

E X - F L O O D L I G H T

dTLS 85... for high pressure discharge lamps
Metal version for Zone 1

Description

The explosion-protected floodlight dTLS 85... for high pressure discharge lamps is in accordance to the ATEX-Directive 94/9/EG as well as the European Norms EN 50014, EN 50018 and EN 50019. They are certified for use in the Zones 1 and 2.

The housing is made of a light alloy with a powdered coating. The pressed-in threading for the flameproof thread gap is made of brass. This provides for an easy lamp replacement even after a longer operating periods.

The floodlight light fitting was designed for outdoor use. Due to the high safety standard it has more than proven its reliability in chemical factories and offshore platforms for illuminating large areas and selective large objects.

The vaporized reflectors are designed for various angles of dispersion.

Cost-effective illumination of large objects

For use in chemical factories and offshore platforms

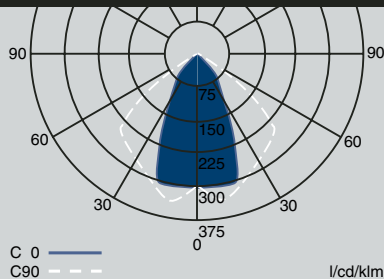
Robust light alloy housing with a powdered coating

Easy lamp replacement even after extended time of operation

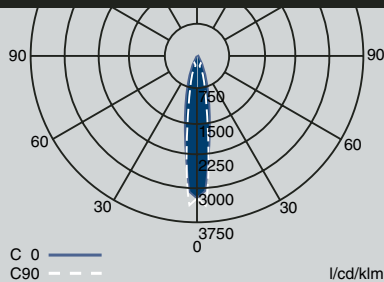
Vaporized reflector for various angles of dispersion



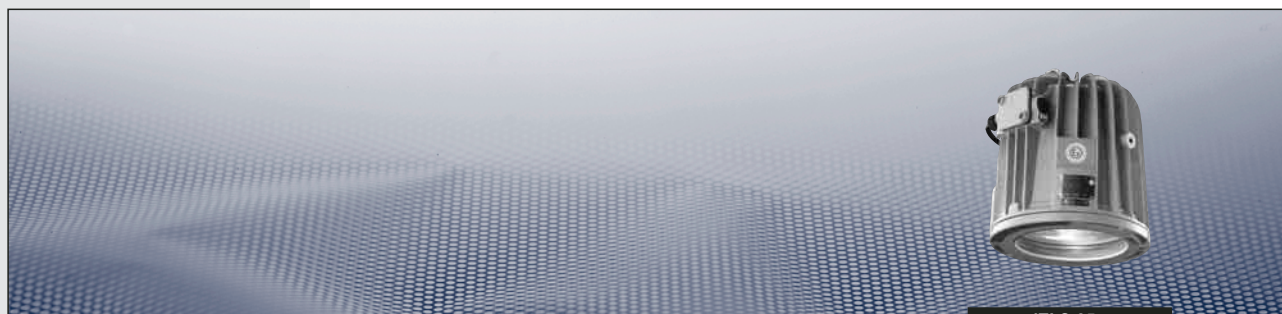
Polar curve
Stepped reflector with diffuser
dTLS 85250 S



Parabolic reflector
dTLS 85250 P



Rated luminous flux of lamps:
 approx. 19.000 lm (HIT-DE 250 W)
 approx. 25.000 lm (HST-DE 250 W)
 Light fitting efficiency in operation:
 dTLS 85250 S with diffuser approx. 46 %
 dTLS 85250 P with diffuser approx. 72 %

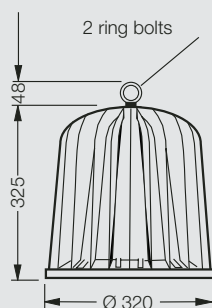


dTLS 85...

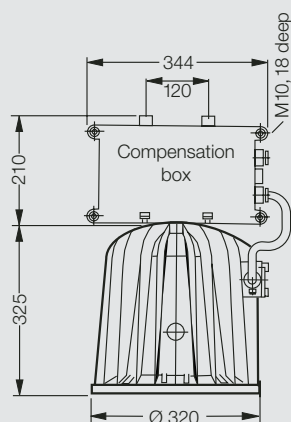
EX - FLOODLIGHTS

| dTLS 85... for high pressure discharge lamps |

4.21



dTLS 85250 ind.



dTLS 85250 komp.

Technical data

Type dTLS 85250

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T3
EC-Type Examination Certificate	DMT 03 ATEX E 039
Enclosure material	cast light metal with powder coating, grey
Light transmitting cover	Borosilicate glass
Rated voltage	230 V $\pm 10\%$, 50 Hz ¹⁾
Protection category to EN 60529	IP 65
Insulation class	I
Permissible ambient temperature	-20 °C to +50 °C
Cable entries	1 x M25 x 1.5 for cables from Ø 8-17 mm 1 x M25 x 1.5 with blanking plug
Connecting terminals	L + N + PE; max. 2.5 mm ²
Lamp holder	Fc2
Lamps	High-pressure metal-vapour HIT-DE Sodium vapour high pressure lamp HST-DE
Weight	approx. 25 kg approx. 32 kg with compensation box

Ordering details

Type	Lamp	Rated current	Power factor cos φ	Order No.
dTLS 85250 S	250 W HIT/HST	3.0 A	0.4 ind. ²⁾	CGS 123 8588 P0001
with diffuser	250 W HIT/HST	1.5 A	0.9 comp. ³⁾	CGS 123 8588 P1001
dTLS 85250 P	250 W HIT/HST	3.0 A	0.4 ind. ²⁾	CGS 123 8588 P0002
with parabolic-ref.	250 W HIT/HST	1.5 A	0.9 comp. ³⁾	CGS 123 8588 P1002

¹⁾ Other voltages, frequencies or entries on request

²⁾ see dimensions drawing 1

³⁾ see dimensions drawing 2

Scope of delivery without illuminant and fixing accessories.

See fixing materials for Ex-pendant light fittings and floodlights on page 4.34.

EX - V E S S E L L I G H T F I T T I N G

KFL with halogen reflector lamp Metal version for Zone 1

Description

This explosion-protected vessel light fitting KFL is in accordance to the ATEX-Directive 94/9/EG as well as the European Norms EN 50014, EN 50018 und EN 50019. It has been certified for use in the Zones 1 and 2.

This powerful vessel light fitting is fitted with a halogen reflector incandescent lamp and is ideally equipped for the usage in the illumination of boilers, containers and agitators.

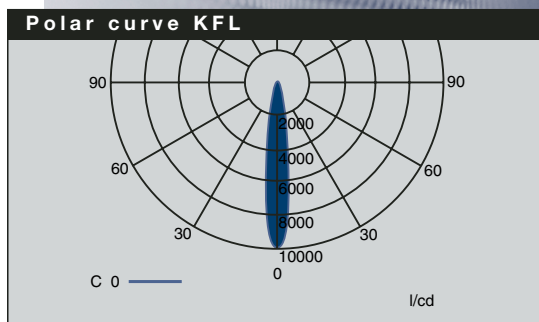
The housing is made of a copper-free aluminium.

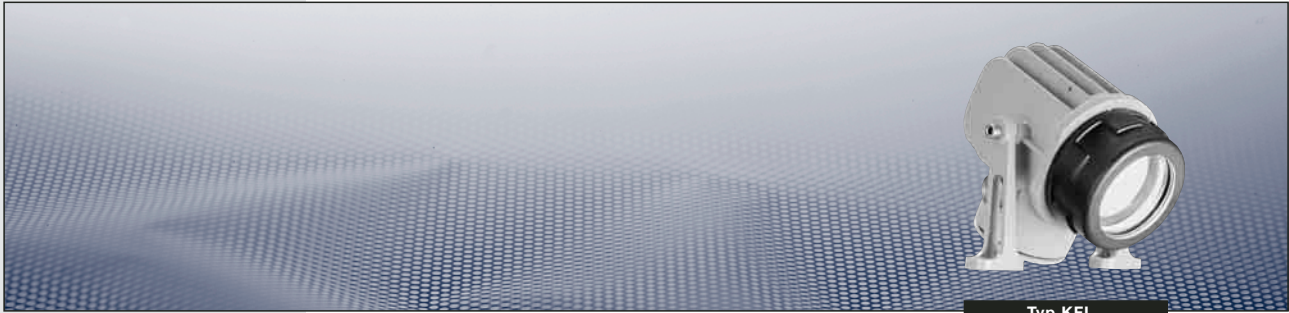
The aluminium collar has a PTFE (Teflon) coating, additionally it has a viton sealant. With the light fitting holder PR it can be mounted on inspection windows according to DIN 28120.

The fitted halogen reflector incandescent lamp with 12 V/50 W has an integrated power supply transformer. Alternatively customer can also use a 12 V/20 W lamp.



- Compact architecture
- Connection ready for 230 V AC
- With halogen reflector incandescent lamp with 50 W
- High illumination
- Generously dimensioned terminal compartment
- Mounting onto inspection windows according to DIN 28120



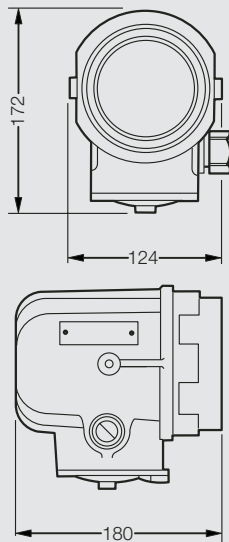


Typ KFL..

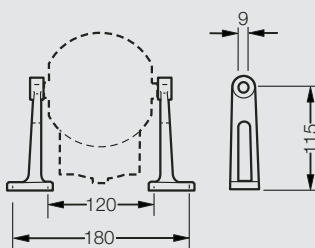
EX - VESSEL LIGHT FITTINGS

| KFL 50 |

4.27



KFL 50 TIM



Light fixing facility PR



DIN 40/50



DIN 80



DIN 100



DIN 125

Windows, nominal width

Technical data

Type KFL 50

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T125 °C, T140 °C
Type of protection	EEx de IIC T4/T3
EC-Type Examination Certificate	LOM 02 ATEX 2035
Enclosure material	Copper-free aluminium
Cover	Borosilicate glass
Rated voltage	230 V ± 10 %, 50 Hz
Protection category to EN 60529	IP 67
Insulation class	I
Permissible ambient temperature	-20 °C to +40 °C (T4/T125 °C) -20 °C to +55 °C (T3/T140 °C)
Cable entry holes	see ordering details
Connecting terminals	L and N: 2 x 4 mm ² PE-connection, internal und external 6 mm ²
Lamps	Halogen reflector lamp, socket BA 15d, 12 V/50 W
Weight	approx. 3.0 kg

Ordering details

Type	Entry holes	Cable entry for cable Ø	Blanking plug	Order No.
KFL 50 TIM ¹⁾	2 x M25 x 1.5	8.5-16 mm	1 x M25 x 1.5	NOR 000 005 140 701
KFL 50 TIM	2 x M25 x 1.5	–	1 x M25 x 1.5	NOR 000 005 140 897

¹⁾ With light fixing facility PR

Alternatively can be fitted with lamp 12 V/20 W:

Permissible ambient temperature -20 °C to +55 °C (T4/T120 °C)

Lamp is part of delivery, light fitting facility as part of delivery depends on the order no.

See fixing materials for Ex-pendant light fittings and floodlights on page 4.34.

EX - PENDANT LIGHT FITTING

NVMV CHAMP for high pressure discharge lamps of up to 150 W
Metal version for Zone 2 according to EN 50021

Description

The explosion-protected light fittings of the NVMV CHAMP series are in accordance to the ATEX-Directive 94/9/EG.

They have been built and tested according to the European Norm EN 50021 and the Australian Norm for Gas-Ex-Areas of Zone 2 classification as well as to the EN 50281-1-1 for use in Dust-Ex-Areas of Zone 22.

The light fittings series NVMV CHAMP with the small housing is designed for lamps with a rating of 70 W up to 150 W.

The transparent part consists of a temperature stable, impact resistant glass globe that refracts the light and which is protected with a safetyguard.

The modular architecture allows for a quick and cost-effective installation of the light fittings. For pole mounting, a thread of 1 1/4" BSP is integrated in the light fitting.

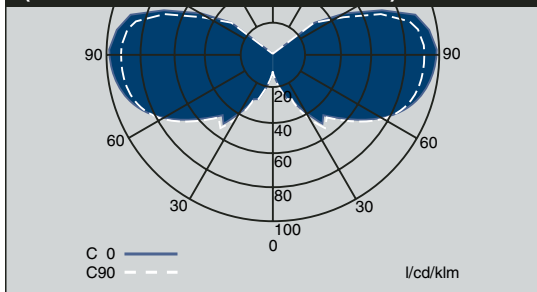
Apart from ceiling mounting, there are versions available for mast mounting (25° angle) and wall mounting.

A particularly durable sealing system for use under extreme climatic conditions brings additional reliability.

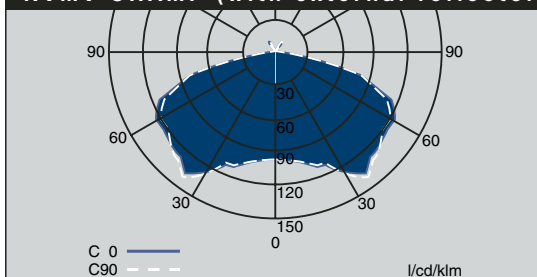
The restricted breathing version allows a high illumination combined with a high temperature classification.



**Polar curve NVMV CHAMP
(without external reflector)**



**Polar curve
NVMV CHAMP (with external reflector)**



Rated luminous flux of lamps:

approx. 5.600 lm (70 W/HSE)

approx. 14.000 lm (150 W/HSE)

approx. 6.300 lm (125 W/HME)

approx. 5.900 lm (70 W/HIE)

approx. 13.000 lm (150 W/HIE)

Light fitting efficiency in operation: ap. 74 % (witho. AR)

Light fitting efficiency in operation: ap. 61 % (with AR)

Ideal for installation at low or medium heights, for wall, ceiling or mast mounting

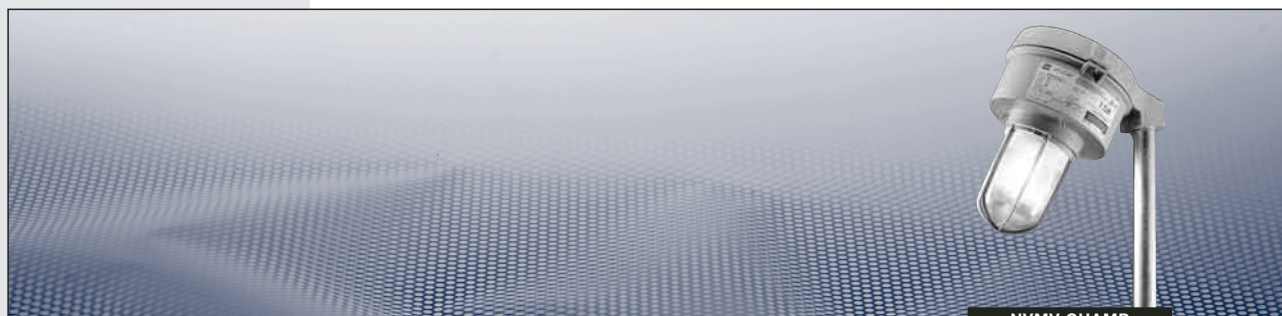
Compact and light-weight

Safety Standard IP 66/67

High corrosion resistance

Restricted breathing version for temperature classes up to T4

Environmental temperatures up to +55 °C

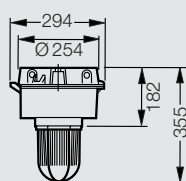


NVMV CHAMP

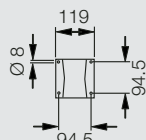
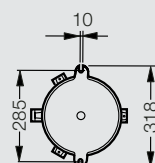
EX-PENDANT LIGHT FITTING

NVMV CHAMP

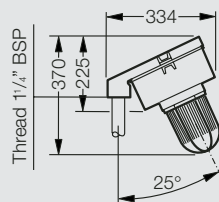
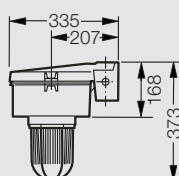
4.29



Ceiling mounting



Wall mounting



Pole mounting

Technical data

Type NVMV CHAMP for high pressure discharge lamp up to 150 W

Marking to 94/9/EC	Ex II 3 G/Ex II 3 D ¹⁾
Type of protection	EEx nR II, temperature class depends on lamp power
Conformity statement	PTB 00 ATEX 2215
Enclosure material	copper-free aluminium with epoxy powder coating
Transparent cover	Borosilicat glass
Rated voltage	240 V/50 Hz, other voltage on request
Power factor cos φ	> 0.9
Protection category to EN 60529	IP 66/67
Insulation class	I
Permissible ambient temperature	-20 °C up to +55 °C
Cable entries	Drilling 4 x M25 x 1.5 with blanking plug M25
Connecting terminals	L, N and PE; max. 2 x 2.5 mm ²
Lamp holder	E 27 resp. E 40 (150 W) to IEC 60238
Weight	see ordering details

¹⁾ Max. surface temperatures for dust Ex-areas on request

Ordering details

Type	Mounting	HSE	HME	HIE	Temp.- class	Weight (approx. kg)	Order No.
NVMV ...							
S2MC076P000	Ceiling	70 W			T4	6.6	1 2341 000 001
S2MC156P000	Ceiling	150 W			T3	7.0	1 2341 000 002
H2MC126P000	Ceiling		125 W		T3	7.0	1 2341 000 003
M2MC076P000	Ceiling			70 W	T4	6.6	1 2341 000 004
M2MC156P000	Ceiling			150 W	T3	7.0	1 2341 000 005
S2MW076P000	Wall	70 W			T4	6.6	1 2341 000 051
S2MW156P000	Wall	150 W			T3	7.0	1 2341 000 052
H2MW126P000	Wall		125 W		T3	7.0	1 2341 000 053
M2MW076P000	Wall			70 W	T4	6.6	1 2341 000 054
M2MW156P000	Wall			150 W	T3	7.0	1 2341 000 055
S4BJ076P000	Thread* 1 1/4", BSP	70 W			T4	6.6	1 2341 000 101
S4BJ156P000	Thread* 1 1/4", BSP	150 W			T3	7.0	1 2341 000 102
H4BJ126P000	Thread* 1 1/4", BSP		125 W		T3	7.0	1 2341 000 103
M4BJ076P000	Thread* 1 1/4", BSP			70 W	T4	6.6	1 2341 000 104
M4BJ156P000	Thread* 1 1/4", BSP			150 W	T3	7.0	1 2341 000 105

*Thread for pole mounting

Scope of delivery without illuminant and fixing accessories.

See fixing materials and fixing accessories for Ex-pendant light fittings and floodlights on page 4.34.

EX - PENDANT LIGHT FITTINGS

NVMV CHAMP for high pressure discharge lamps up to 400 W
Metal version for Zone 2 according to EN 50021

Description

The explosion-protected light fittings of the NVMV CHAMP series are in accordance to the ATEX-Directive 94/9/EG.

They have been built and tested according to the European Norm EN 50021 and the Australian Norm for Gas-Ex-Areas of Zone 2 classification as well as to the EN 50281-1-1 for use in Dust-Ex-Areas of Zone 22.

The light fittings series NVMV CHAMP with the large housing is designed for lamps with a rating of 250 W up to 400 W.

The transparent part consists of a temperature stable, impact resistant glass globe that refracts the light and which is protected with a safetyguard.

The modular architecture allows for a quick and cost-effective installation of the light fittings. For pole mounting, a thread of 1 1/4" BSP is integrated in the light fitting.

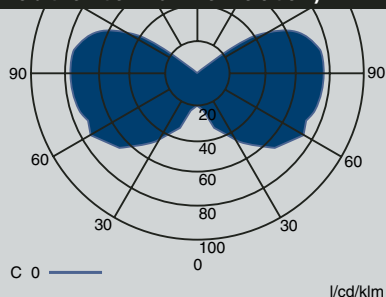
Apart from ceiling mounting, there are versions available for mast mounting (25° angle) and wall mounting.

A particularly durable sealing system for use under extreme climatic conditions brings additional reliability.

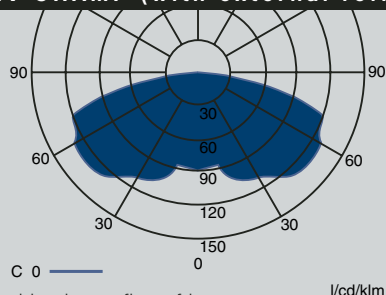
The restricted breathing version allows a high illumination combined with a high temperature classification.



**Polar curve NVMV CHAMP
(without external reflector)**



**Polar curve
NVMV CHAMP (with external reflector)**



Rated luminous flux of lamps:
 approx. 25.000 lm (250 W/HSE)
 approx. 47.000 lm (400 W/HSE)
 approx. 13.000 lm (250 W/HME)
 approx. 17.000 lm (250 W/HIE)
 approx. 30.000 lm (400 W/HIE)

Light fitting efficiency in operation: ap. 78 % (witho. AR)

Light fitting efficiency in operation: ap. 64 % (with AR)

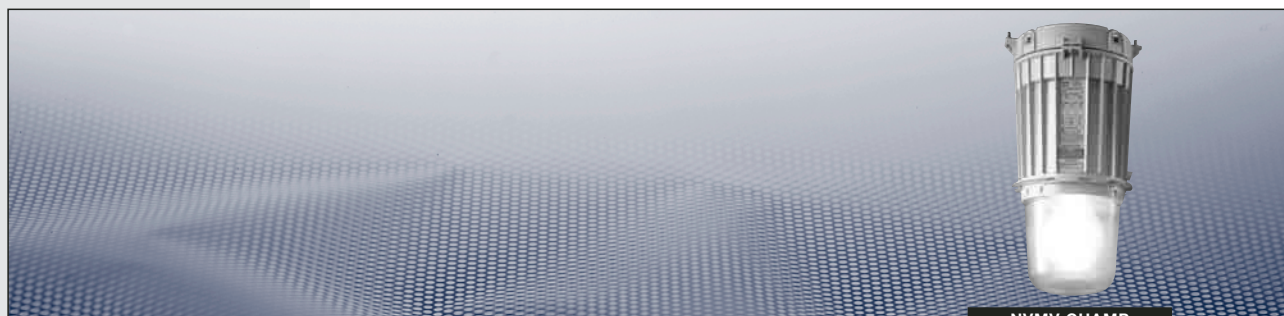
Ideal for installation at low or medium heights, for wall, ceiling or mast mounting

Compact and light-weight

Safety Standard IP 66/67

High corrosion resistance

Restricted breathing version for temperatures up to +55° C

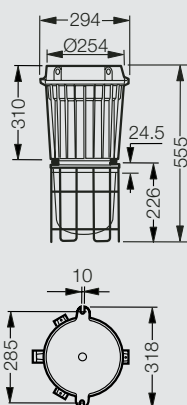


NVMV CHAMP

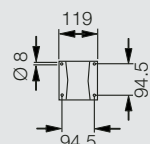
EX-PENDANT LIGHT FITTINGS

NVMV CHAMP

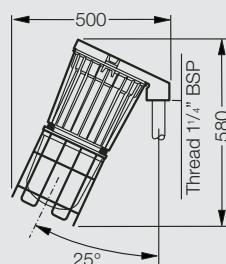
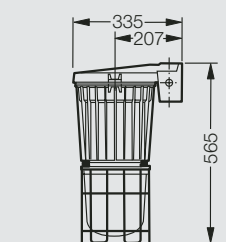
4.31



NVMV CHAMP ceiling mounting



NVMV CHAMP wall mounting



NVMV CHAMP pole mounting

Technical data

Type NVMV CHAMP for high pressure discharge lamps up to 400 W

Marking to 94/9/EC	Ex II 3 G/Ex II 3 D*
Type of protection	EEx nR II, temperature class depends on lamp power
Conformity statement	PTB 00 ATEX 2215
Enclosure material	copper-free aluminium with epoxy powder coating
Transparent cover	Borosilicate glass
Rated voltage	240 V/50 Hz, other voltage on request
Power factor cos φ	> 0.9
Protection category to EN 60529	IP 66/67
Insulation class	I
Permissible ambient temperature	-20 °C to +55 °C
Cable entries	drilling 4 x M25 x 1.5 with blanking plug M25
Connecting terminals	L, N and PE; max. 2 x 2,5 mm²
Lamp holder	E 40 to IEC 60238
Weight	see ordering details

* Max. surface temperatures for dust Ex-areas on request

Ordering details

Type	Mounting	HSE	HME	HIE	Temp.-class	Weight (approx. kg)	Order No.
NVMV ...							
S2MC256PL00	Ceiling	250 W			T3 ¹⁾	14.2	1 2342 000 001
S2MC406PL00	Ceiling	400 W			T3	17.5	1 2342 000 002
H2MC256PL00	Ceiling		250 W		T3 ²⁾	14.2	1 2342 000 003
M2MC256PL00	Ceiling			250 W	T3 ¹⁾	14.2	1 2342 000 004
M2MC406PL00	Ceiling			400 W	T2 ^{3/4)}	17.5	1 2342 000 005
S2MW256PL00	Wall	250 W			T3 ¹⁾	15.5	1 2342 000 051
S2MW406PL00	Wall	400 W			T3	17.6	1 2342 000 052
H2MW256PL00	Wall		250 W		T3 ²⁾	15.5	1 2342 000 053
M2MW256PL00	Wall			250 W	T3 ¹⁾	15.5	1 2342 000 054
M2MW406PL00	Wall			400 W	T2 ^{3/4)}	17.6	1 2342 000 055
S4BJ256PL00	Thread* 1 1/4", BSP	250 W			T3 ¹⁾	14.4	1 2342 000 101
S4BJ406PL00	Thread* 1 1/4", BSP	400 W			T3	17.6	1 2342 000 102
H4BJ256PL00	Thread* 1 1/4", BSP		250 W		T3 ²⁾	14.4	1 2342 000 103
M4BJ256PL00	Thread* 1 1/4", BSP			250 W	T3 ¹⁾	14.4	1 2342 000 104
M4BJ406PL00	Thread* 1 1/4", BSP			400 W	T2 ^{3/4)}	17.6	1 2342 000 105

*Thread for pole mounting

¹⁾ Temp.-class T4 in combination with external reflector RD 4A

²⁾ Temp.-class T4 in combination with external reflector RD 4A and ta max. + 50 °C

³⁾ Temp.-class T3 in combination with external reflector RD 4A

⁴⁾ Temp.-class T4 in combination with external reflector RD 4A and ta max. + 40 °C

Scope of delivery without illuminant and fixing accessories.

See fixing materials and fixing accessories for Ex-pendant light fittings and floodlights page 4.34.

E X - F L O O D L I G H T

NFMV for high pressure discharge lamps Metal version for Zone 2 according to EN 50021

Description

The floodlight light fitting NFMV is in accordance to the ATEX-Directive 94/9/EG.

They have been built and tested according to the European Norm EN 50021 and the Australian Norm for Gas-Ex-Areas of Zone 2 classification as well as to the EN 50281-1-1 for use in Dust-Ex-Areas of Zone 22.

The light fitting series NFMV is for lamps with a rating of 250 W up to 400 W and has a high quality built-in reflector. The transparent part consists of a temperature stable, impact resistant glass.

The modular architecture allows for a quick and cost-effective installation of the light fittings. Apart from the direct mounting per swivel bracket there is also a mast version available.

A particularly durable sealing system for use under extreme climatic conditions brings additional reliability.

The restricted breathing version allows a high illumination combined with a high temperature classification.



**Polar curve
NFMV**



Rated luminous flux of lamps:
 approx. 25.000 lm (250 W/HSE)
 approx. 47.000 lm (400 W/HSE)
 approx. 13.000 lm (250 W/HME)
 approx. 22.000 lm (400 W/HME)
 approx. 17.000 lm (250 W/HIE)
 approx. 30.000 lm (400 W/HIE)
 Light fitting efficiency in operation: approx. 44 %

**Rotate and swivel light fitting housing,
also for mast mounting**

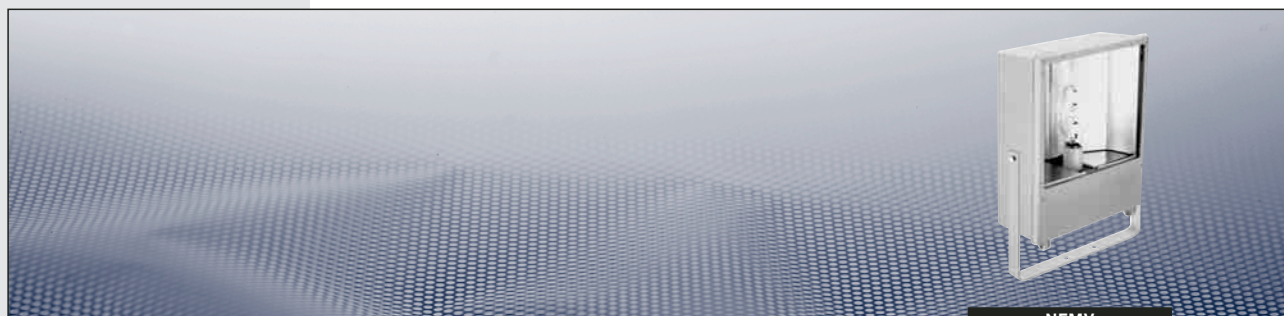
**Ideal for illumination of large areas and
selective individual objects**

Safety Standard IP 66

High corrosion resistance

Restricted breathing version

Environmental temperatures up to +55° C

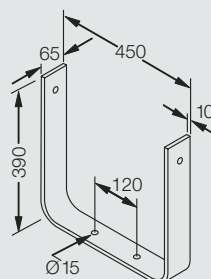
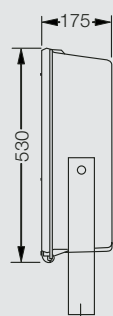
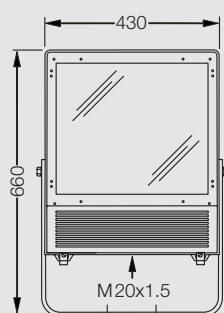


NFMV

EX - FLOODLIGHT

4.33

NFMV



NFMV

Technical data

Type NFMV

Marking to 94/9/EC	Ex II 3 G/Ex II 3 D (max. surface temp. see ordering details)
Type of protection	EEx nR II, temperature class depends on lamp power
Conformity statement	PTB 00 ATEX 2214
Enclosure material	copper-free aluminium with epoxy powder coating
Transparent cover	Borosilicate glass
Rated voltage	240 V/50 Hz, other voltage on request
Power factor λ	> 0.9
Protection category to EN 60529	IP 66
Insulation class	I
Permissible ambient temperature	-20 °C to +55 °C
Cable entries	Drilling: 2 x M20 x 1.5 with blanking plug M20
Connecting terminals	L, N and PE; max. 2 x 2.5 mm²
Lamp holder	E 40 to IEC 60238
Weight	see ordering details

Ordering details

Type	Moun- ting	HSE	HME	HIE	Temp.- class	max. surface temp.	Weight (approx. kg)	Order No.
S1MY2560000	bracket	250 W			T3 ¹⁾	150 °C	16.9	1 2346 000 001
S1MY4060000	bracket	400 W			T3	195 °C	18.6	1 2346 000 002
H1MY2560000	bracket		250 W		T3	155 °C	20.5	1 2346 000 003
H1MY4060000	bracket		400 W		T3	195 °C	22.0	1 2346 000 004
M1MY2560000	bracket			250 W	T3 ¹⁾	150 °C	16.9	1 2346 000 005
M1MY4060000	bracket			400 W	T3	195 °C	18.6	1 2346 000 006

¹⁾ Temp.-class T4 at ta max. +40 °C

Scope of delivery without illuminant and fixing accessories.

See fixing materials and fixing accessories for Ex-pendant light fittings and floodlights on page 4.34.

ACCESSORIES AND FIXING MATERIALS

Ex-Pendant light fittings and Floodlight

On the following sides you will find fixing materials and accessories for the CEAG explosion-protected light fittings. For a problem-free lamp changing you will find additionally a table of light fittings with the appropriate fluorescent lamps.

Spare Parts

As well as the above, there is also a large amount of spare parts available for maintenance and repair work.

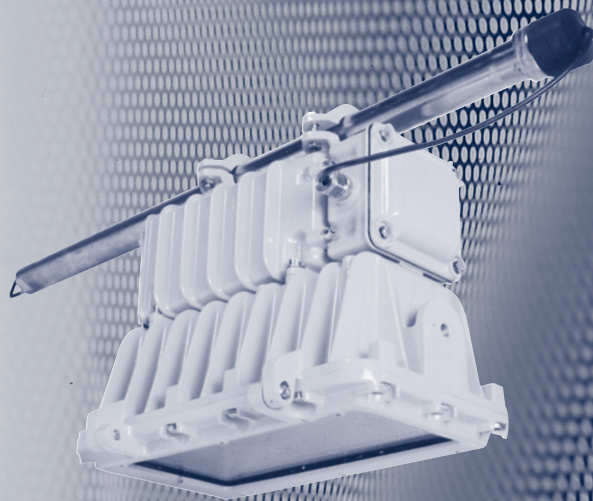
If required, please contact us, you will find that we will be more than pleased to help you.

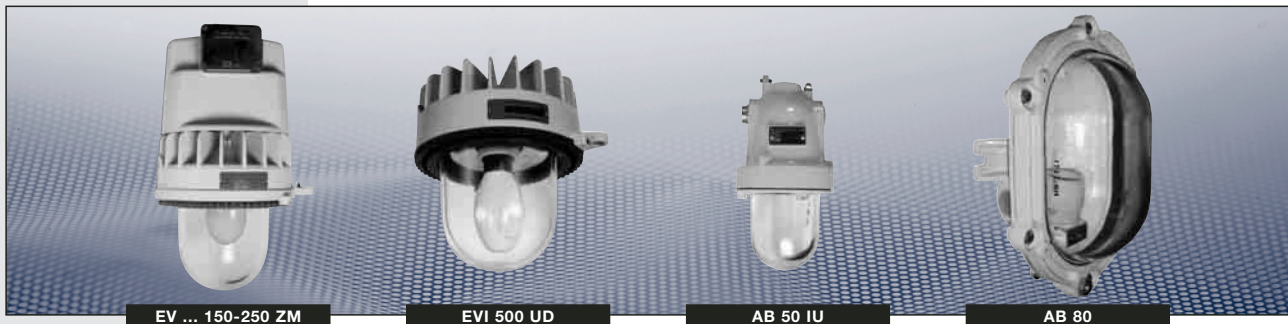
We must point your attention to the fact that repair work done on explosive-protected products must be carried out with original spare parts only! If this is not the case and third-party parts are used, the Certification and Approval for the product will be forfeited and a possible reduction of the explosion-protection may be achieved.

Repair Service

Of course Cooper Crouse-Hinds GmbH upholds its own Repair Department where customer repairs are carried out. Our qualified and schooled personnel carry out repairs and overhauling using original spare parts, quickly and efficiently. This service also includes the end quality testing needed for explosion-protected products.

With this service you have an "assured safety" as do all overhauled Ex-Lamps and products by Cooper Crouse-Hinds GmbH.





EV ... 150-250 ZM

EVI 500 UD

AB 50 IU

AB 80

4.35

Accessories for Ex-Ceiling light fitting AB 80

Type	Order No.
Guard GAB 80	NOR 000 005 120 439
Guard AB 50	NOR 000 115 110 875
Reflector AB 50	NOR 000 115 110 718
Hook AB 50	NOR 000 111 511 275

Accessories for Ex-Pendant light fitting AB 50

Type	Order No.
Ceiling bracket with screws 3/4" AS.EV/AB	NOR 000 005 110 828

Accessories for Ex-Pendant light fitting EVI/EVQ 55 UD/EVQ 85

Type		for	Order No.
Guard	G. EV 200/AB 51	EVI 200	NOR 000 005 110 860
	G. EV 500	EVI 500	NOR 000 005 110 878
External reflector	PC. EV 200/AB 51	EVI 200 / EVQ 55	NOR 000 005 110 894
	PC. EV 500	EVI 500 / EVQ 85	NOR 000 005 110 901
Lamp key	KEY, EV	EV ...	NOR 000 005 110 886
Eye bolt	CEV/AB	EV ...	NOR 000 005 110 852
Ceiling bracket	AS. EV/AB	EV ...	NOR 000 005 110 828
adjustable			
Wall mounting	SPU. EV/AB	EV ...	NOR 000 005 110 951
Pole mounting	BC. EV/AB	EV ...	NOR 000 005 110 836
Wall mounting	SP. EV 200	EVI 200	NOR 000 005 110 935
	SP. EV 500	EVI 500	NOR 000 005 110 943

Accessories for Ex-Pendant light fitting EVM/EVS/EVM/EVQ 165 ZM

Type		for	Order No.
Guard	G. EV 200/AB 51	EVM 125 ZM / EVS 70 ZM	NOR 000 005 110 860
	G. EV 500	EVM 250 ZM / EVS 150 ZM	
		EVS 250 ZM / EVH 250 ZM	NOR 000 005 110 878
External reflector	PC. EV 200/AB 51	EVM 125 ZM / EVS 70 ZM	NOR 000 005 110 894
	PC. EV 500	EVM 250 ZM / EVS 150 ZM	
		EVS 250 ZM / EVH 250 ZM	NOR 000 005 110 901
Lamp key	KEY, EV	EV	NOR 000 005 110 886
Eye bolt	CEV/AB	EV	NOR 000 005 110 852
Ceiling bracket	AS. EV/AB	EV	NOR 000 005 110 828
adjustable			
Wall mounting	SPU. EV/AB	EV	NOR 000 005 110 951
Pole mounting	BC. EV/AB	EV	NOR 000 005 110 836
Wall mounting	SP. EV 200	EVM 125 ZM / EVS 70 ZM	NOR 000 005 110 935
	SP. EV 500	EVM 250 ZM / EVS 150 ZM	
		EVS 250 ZM / EVH 250 ZM	NOR 000 005 110 943



FZD EN

dHLS 85...

PX 04

4.36

Accessories for Ex-floodlights FZD EN

Type	Order No.
Lamp module 250 W / 400 W complete, without lamp with internal reflector, narrow-angle reflector	1 3041 000 011
with internal reflector, wide-angle reflector	1 3041 000 012

Accessories for Ex-pendant light fitting dHLS 85... and Ex-floodlight dTLS 85...

Type	Order No.
Eye bolt (10 pcs.)	GHG 690 1921 R0003
Mounting bracket L 218 ¹⁾	GHG 690 1913 R0001
Mounting bracket L 430 ¹⁾	GHG 690 1913 R0002
External reflector (AR) (nur dHLS 85...)	CGS 223 7990 P1000

¹⁾ see dimensions drawing**Accessories for Ex-floodlight PX...**

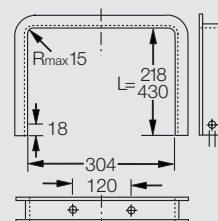
Type	Order No.
Pipe fixing (Ø 48 mm to Ø 64 mm) SB	NOR 000 005 170 583

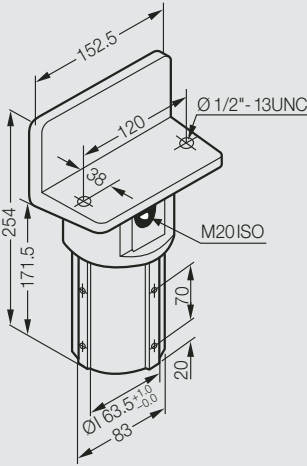
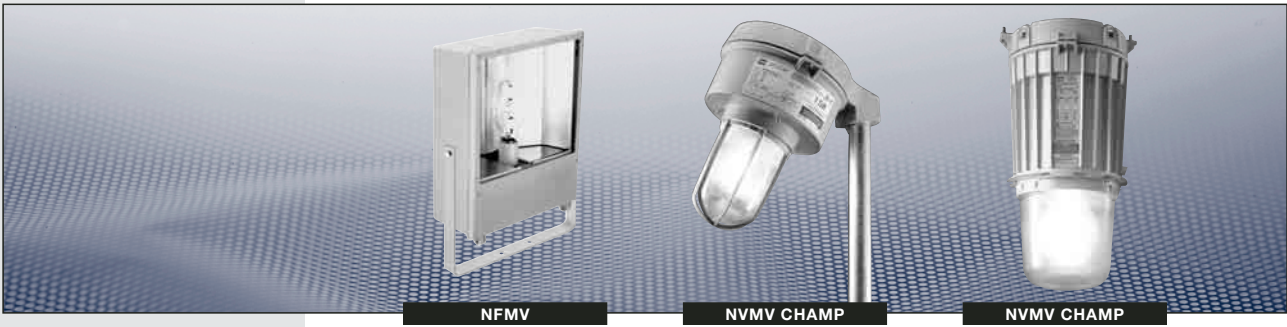


Lamp module for FZD EN



SB

Mounting bracket
for dHLS 85/dTLS 85



Slip-fit adapter for NFMV

Accessories for Ex-pendant light fitting NVMV Champ up to 150 W

Type	Order No.
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External reflector RD 70	3 2341 001 001
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Accessories for Ex-pendant light fitting NVMV Champ up to 400 W

Type	Order No.
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External reflector RD 4A	3 2342 001 001
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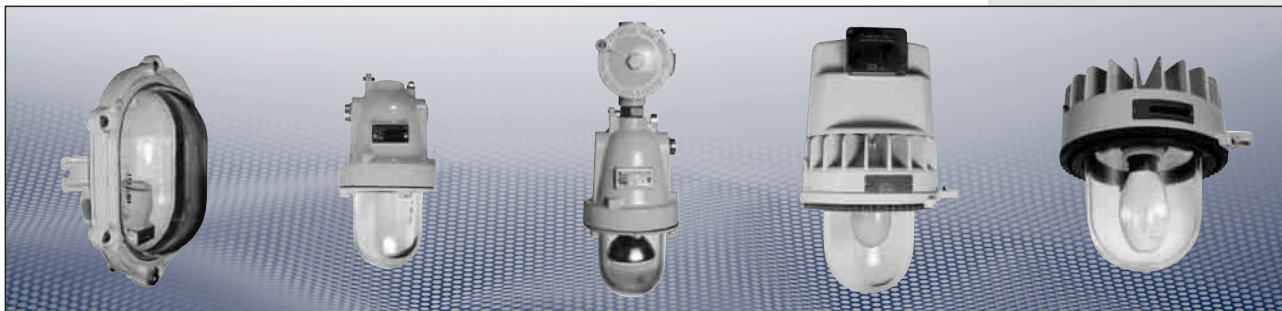
Accessories for Ex-floodlight NFMV

Type	Weight (kg)	Order No.
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Slip-fit adapter 2"	1,8	3 2346 001 002
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Luminare poles for pole-fitting of pendant light fittings and floodlights see chapter 2:
up from page 2.42.

(Special designs and dimensions on request)



4.38

Accessories for Ex-pendant and floodlight light fittings					
For fitting	Lamp type	Cup	Power	Luminous flux ¹⁰⁾ approx. lm	Order No.
AB 80	A ¹⁾	E 27	60 W/100 W	710/1360	on request
AB 50/SPG 1N	A ¹⁾	E 27	60 W/100 W	710/1360	on request
AB 80	TC-DSE ²⁾	E 27	11 W	660	on request
EVI	A ¹⁾	E 27	150 W/200 W	2200/3100	on request
		E 40	300 W/500 W	5000/8400	on request
	HME-SB ³⁾	E 27	160 W	3100	on request
		E 40	250 W	5600	on request
	HME ⁴⁾	E 27	80 W	3800	on request
		E 27	125 W	6300	on request
	HSE ⁵⁾	E 40	250 W	13000	on request
		E 27	70 W	5600	on request
		E 40	150 W	14000	on request
	HIE ⁶⁾	E 40	250 W	25000	on request
		E 40	250 W	17000	on request
EVM	HME ⁴⁾	E 27	125 W	6300	on request
		E 40	250 W	13000	on request
EVS	HSE ⁵⁾	E 27	70 W	5600	on request
		E 40	150 W	14000	on request
		E 40	250 W	25000	on request
EVH	HIE ⁶⁾	E 40	250 W	17000	on request
EVQ 55	Master QL ⁷⁾	–	55 W	3500	on request
EVQ 85	Master QL ⁷⁾	–	85 W	6000	on request
EVQ 165	Master QL ⁷⁾	–	165 W	12000	on request

¹⁾ A = incandescent lamp

²⁾ TC-DSE = compact fluorescent lamp with built-in electronic ballast

³⁾ HME-SB = mixed light lamp

⁴⁾ HME = Mercury vapour high pressure lamp

⁵⁾ HSE/HST = Sodium vapour high pressure lamp

⁶⁾ HIE/HIT = Halogen-High-pressure metal-vapour

⁷⁾ Trade mark of Philips company

⁸⁾ Single components of this system as spare parts available

– Lamp QL (55 W/85 W/165 W)

– Power Coupler QL (55 W/85 W/165 W)

– HF-generator QL (55 W/85 W/165 W)

⁹⁾ QT = halogene lamp with protective bulb

¹⁰⁾ Diviations of lamp rated luminous flux possible depending to used product



4.39

Accessories for Ex-pendant and floodlight light fittings					
For fitting	Lamp type	Cup	Power	Luminous flux ¹⁰⁾ approx. lm	Order No.
FZD	HIT ⁶⁾	E 40	250 W	19000	on request
		E 40	400 W	35000	on request
	HST ⁵⁾	E 40	250 W	27000	on request
		E 40	400 W	48000	on request
dHLS 85	HME ⁴⁾	E 40	250 W	13000	CGS 323 7990 P 1010
		E 40	400 W	22000	CGS 323 7990 P 1011
	HSE ⁵⁾	E 40	250 W	25000	CGS 323 8600 P 1009
		E 40	400 W	47000	CGS 323 8700 P 1009
dTLS 85	HIT ⁶⁾	Fc2	250 W	19000	CGS 323 7990 P 1009
	HST ⁵⁾	Fc2	250 W	25000	CGS 323 8500 P 1009
PX	HIT ⁶⁾	E 40	150 W	14000	on request
		E 40	250 W	20000	on request
		E 40	400 W	35000	on request
	HST ⁵⁾	E 40	150 W	17000	on request
		E 40	250 W	33000	on request
		E 40	400 W	55500	on request
		E 40	600 W	90000	on request
	HME-SB ³⁾	E 40	500 W	14000	on request
	QT ⁹⁾	E 40	500 W	10000	on request

¹⁾ A = incandescent lamp

²⁾ TC-DSE = compact fluorescent lamp with built-in electronic ballast

³⁾ HME-SB = mixed light lamp

⁴⁾ HME = Mercury vapour high pressure lamp

⁵⁾ HSE/HST = Sodium vapour high pressure lamp

⁶⁾ HIE/HIT = Halogen-High-pressure metal-vapour

⁷⁾ Trade mark of Philips company

⁸⁾ Single components of this system as spare parts available

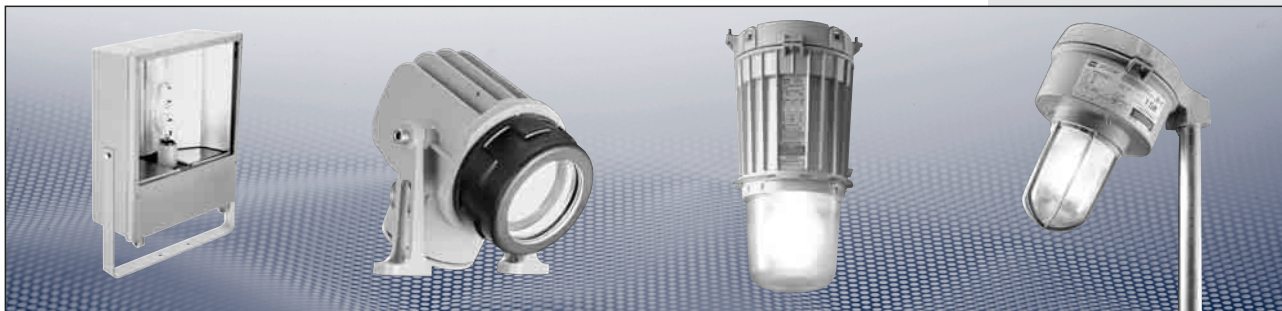
– Lamp QL (55 W/85 W/165 W)

– Power Coupler QL (55 W/85 W/165 W)

– HF-generator QL (55 W/85 W/165 W)

⁹⁾ QT = halogene lamp with protective bulb

¹⁰⁾ Deviations of lamp rated luminous flux possible depending to used product



4.40

Accessories for Ex-pendant and floodlight light fittings					
For fitting	Lamp type	Cup	Power	Luminous flux ¹⁰⁾ approx. lm	Order No.
KFL	Halogen-Reflektorlampe		12 V/50 W		3 2369 100 001
			12 V/20 W		3 2369 100 002
NVMV Champ bis 150 W	HSE ⁵⁾	E 27	70 W	5600	on request
		E 40	150 W	14000	on request
	HME ⁴⁾	E 27	125 W	6300	on request
	HIE ⁶⁾	E 27	70 W	5900	on request
NVMV Champ bis 400 W		E 40	150 W	13000	on request
	HSE ⁵⁾	E 40	250 W	25000	on request
		E 40	400 W	47000	on request
	HME ⁴⁾	E 40	250 W	13000	on request
	HIE ⁶⁾	E 40	250 W	17000	on request
NFMV			400 W	30000	on request
	HSE ⁵⁾	E 40	250 W	25000	on request
		E 40	400 W	47000	on request
	HME ⁴⁾	E 40	250 W	13000	on request
		E 40	400 W	22000	on request
	HIE ⁶⁾	E 40	250 W	17000	on request
		E 40	400 W	30000	on request

¹⁾ A = incandescent lamp

²⁾ TC-DSE = compact fluorescent lamp with built-in electronic ballast

³⁾ HME-SB = mixed light lamp

⁴⁾ HME = Mercury vapour high pressure lamp

⁵⁾ HSE/HST = Sodium vapour high pressure lamp

⁶⁾ HIE/HIT = Halogen-High-pressure metal-vapour

⁷⁾ Trade mark of Philips company

⁸⁾ Single components of this system as spare parts available

– Lamp QL (55 W/85 W/165 W)

– Power Coupler QL (55 W/85 W/165 W)

– HF-generator QL (55 W/85 W/165 W)

⁹⁾ QT = halogene lamp with protective bulb

¹⁰⁾ Deviations of lamp rated luminous flux possible depending to used product

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EX - INSTALLATION UNITS AND MATERIAL

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ACCESSORIES FOR CABLE AND CABLE ENTRIES	5.130

DO YOU STOP THE PRODUCTION JUST TO INSTALL A PLUG AND SOCKET

(INSTEAD OF A HOT WORK PERMIT: PAGE 5.62 pp)



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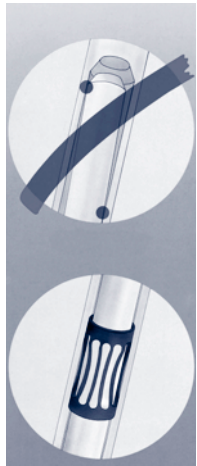
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Installation units and Installation material

Always a reliable contact

The principal feature is the pin and sleeve contact point. It determines the overall



quality of the plug and socket system; inadequately designed contacts mean high insertion and withdrawal forces, unreliable contact-making, high transition resistances and high thermal loads. The explosion protection stands and falls with these features. The self-cleaning EEx-e multi-contact connections are made of louver-like pun-

ched and specially treated copper beryllium band. A large number of contact points ensure a perfect and durable electrical connection with low insertion and withdrawal forces – and this has been the case for decades, since this kind of contact technique has been standard at CEAG products since 1985.

Corrosion, no thank you!

Electrical equipment in the offshore area is often strongly attacked by aggressive chemicals or salt water. In order to ensure that our plugs and sockets remain in good working order, even after long-term use in an aggressive atmosphere, we have provided the plug pins with a high-grade nickel plating. All other exterior metal parts are made of high quality stainless steel. It goes without saying that the enclosures are made of corrosion, cold and impact resistant plastics.

Short circuit protection

It's better to be on the safe side – should a fault occur in the connected electrical apparatus, the plug and socket must maintain the explosion protection. No problem, because, in conjunction with a back-up fuse that can be so generously rated that during the normal start-up of a three-phase current motor with separate thermal protection no tripping occurs, the explosion protection and the function of the switch are not affected, even in the event of a direct short-circuit.

Switching under full capacity

Functionality even at the top-end. The integrated interlock switch warranties not only a voltage free connection of the contacts but also an AC-3 motor switching capability. Meaning even when you plug in an appliance that is switched on, you have no problems. This means that even electric motors can be switched on and off and up to full capacity without damaging the interlock switch.

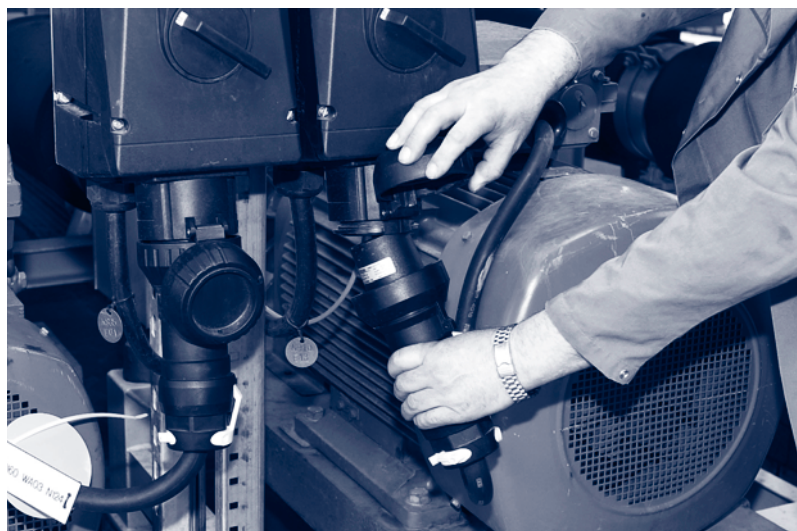
Well connected

Practice shows that a hundred percent electrical connection is not the only feature marking a high-quality plug and socket system. In particular, in the often very harsh industrial environments mechanical strength is of great importance. In addition to a good electrical connection, the patented plug-in-and-turn switching of the plug and socket also guarantees a rugged mechanical connection. Even if you pull hard, it won't come apart.

On request with auxillary contacts

Auxillary contacts are a fine thing. With them, you can hand-on selective messages. For example during a routine maintenance, when you want to know which plug sockets are momentarily in use. The auxiliary contact can be fitted in all 4- and 5-pole wall sockets, also at a later date.





because the socket pins are always voltage-free before the interlock is actuated or after it has been released.

Variable cable entries

Regardless of the application, whether using metal or plastic cable entries or hubs for the connection of conduit systems to UL, whether as standard on the bottom or optionally on the top, the new wall sockets can be fitted with a wide variety of cable entries. On request, an internal metal frame for potential equalization can be integrated when using metal cable glands.

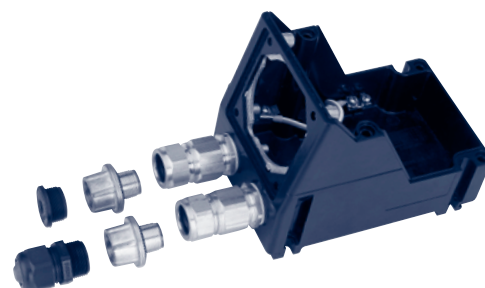
5.3

Simply clip on

A fully compatible clip-on mounting system is available for fixing the new wall socket onto walls, channels and pipes.

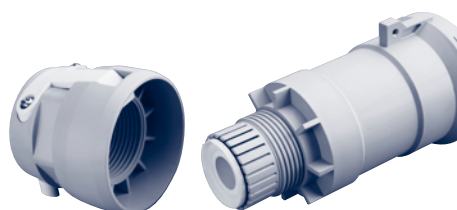
Mounting plates made of glass-fibre reinforced plastic – if required, with a stainless steel canopy – are available in different sizes. They are simply pre-installed where required. The wall socket is then clipped onto the pre-installed mounting plate – its that simple!

Thus, this system does not only simplify installation, but it also allows greater flexibility when replacing components and last, but not least, it saves time and money.



All-in-One

The easily accessible cable clamp of the plugs and couplers provide strain relief and protection against twisting in one. The advantage: Any external forces on the cable are efficiently intercepted and do not affect the electrical connections.



Voltage-free connection and disconnection

All CEAG explosion-protected sockets and couplers up to a rated current of 32 A are fitted with a flameproof interlocking switch that does not allow power to be drawn until the **correct plug** has been inserted and turned, whereby, not only the individual phases, but also the neutral conductor are switched. Therefore, arcing cannot occur when inserting or withdrawing the plug,

Seal and IP protection

The particularly long seal of the cable entry ensures the high IP 66 ingress protection. Foreign matter and moisture have no chance. The diverse sealants that can be used allow for a generous clamp and sealing area.

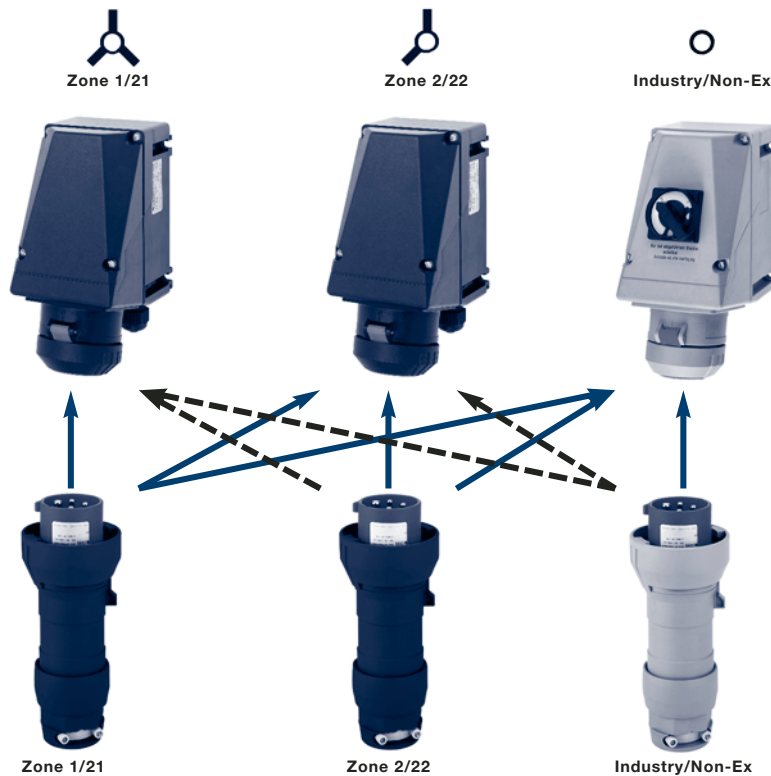


The key to safety

Plugs and sockets with a cleverness:
The innovative coding of apparatus allows plugs used for Zone 1 to be used in sockets for Zone 2 and/or for usage with industrial sockets as well. Hence, plugs and sockets for Zone 1 can be used anywhere. However, by the same token, the coding ensures that Zone 2 plugs cannot be operated in sockets with Zone 1 coding. That guarantees safety with an enormous flexibility in their usage. Speaking of flexibility: It goes without saying that the plugs of the existing range also fit into the new sockets.

Zone 1	Zone 2	Industry

Coding of the plugs and sockets



possible **not possible**

Combination of possible/not possible connections of plug/wall socket



High ingress protection

The new plugs and sockets reliably supply electrical power, even under the most difficult circumstances. From minus 50°C to plus 55°C there are no problems due to the ingress of water or dirt, because when the plug has been withdrawn, the sockets and couplers fulfil the requirements for the degree of protection IP 66; and thanks to the new type of bayonet ring, the degree of protection IP 66 is also ensured when the plug is inserted – we tested that for you.

CEE plugs and sockets

A first step towards creating an international standard for industrial plugs and sockets was taken with the IEC 60309 and CEE Publication 17, “Requirements for Plugs and Sockets for Industrial Use”.

“IEC” stands for “INTERNATIONAL ELECTRICAL COMMISSION”. When selecting plugs and sockets from the existing ranges for standardization, preference was given to round plugs and sockets, as the contact-making insert can be arranged in various positions (hours of day). This allows a high degree of differentiation of plugs and sockets with regard to the various types of currents, voltages, frequencies, etc.

Voltage	Colour	h (PE)
2-pole + PE		
110 - 130V 50/60Hz	yellow	4 h
200 - 250V 50/60Hz	blue	6 h
3-pole + PE		
200 - 250V 50/60Hz	blue	9 h
480 - 500V 50/60Hz	black	7 h
380 - 415V 50/60Hz	red	6 h
600 - 690V 50/60Hz	black	5 h
3-pole + N + PE		
480 - 500V 50/60Hz	black	7 h
380 - 415V 50/60Hz	red	6 h
600 - 690V 50/60Hz	black	5 h

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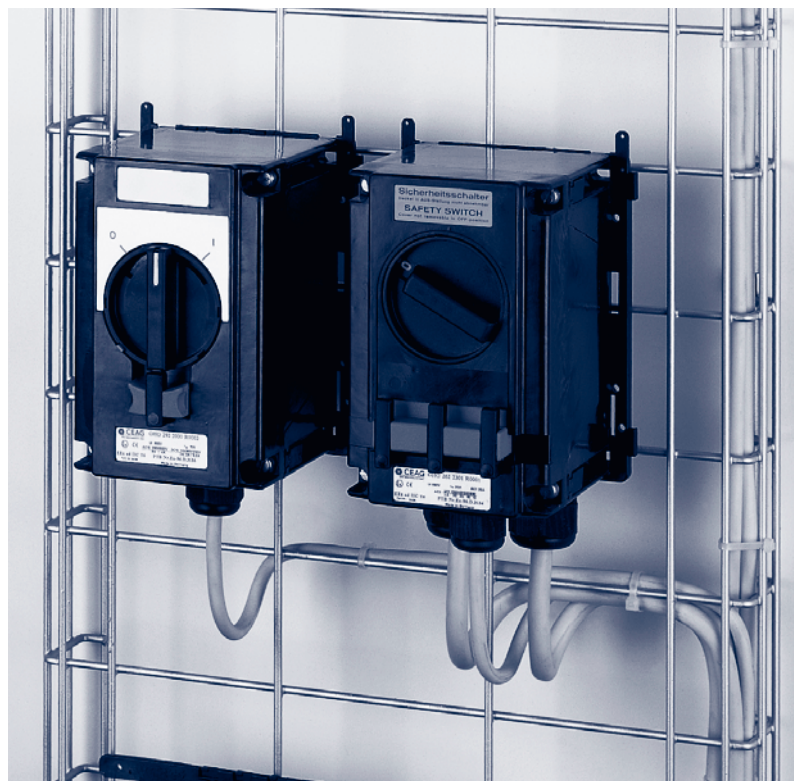
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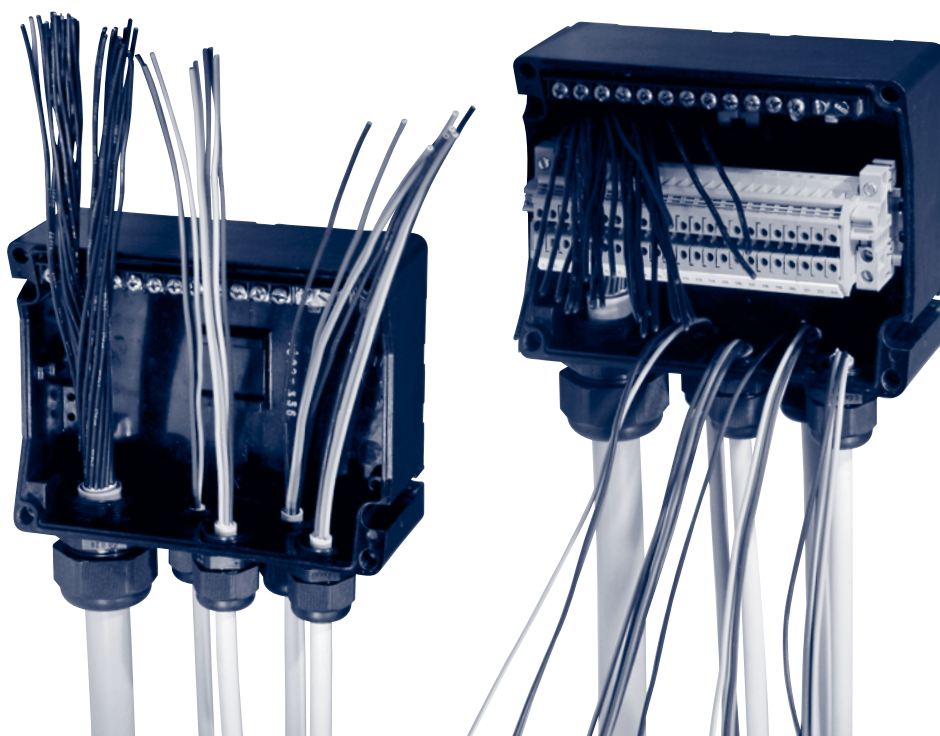
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The new standard for user-friendly technology and installation

The innovative clip-on mounting system has in conjunction with the new apparatus series the advantage of being a cost reducer. Installation without a hot work permit! Using the clip-on mounting frames for the installation on walls, trellises and pipes you save time. Simply plugged! In combination with the new connection friendly apparatus you will find that the installation is now time saving and therefore saving you money.

You can find more ideas to the above on the pages 5.62 onwards!

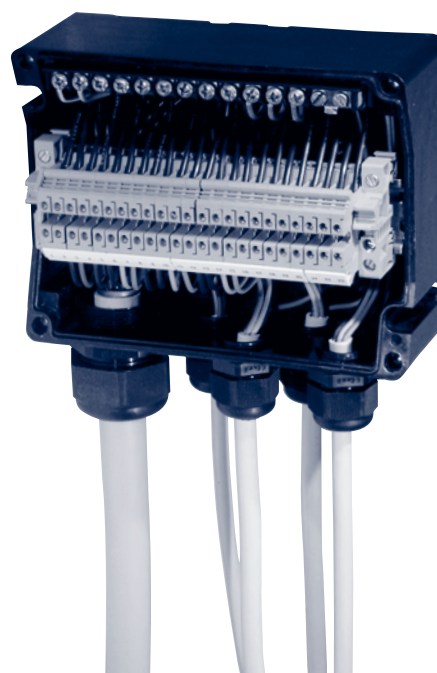




EEx-e Terminal boxes

Apparatus which during normal working conditions do not create arcing or sparking and on which there is no increased surface temperatures can be used according to the safety classification EEx-e. They must then be in accordance with the European norm EN 50019. The CEAG terminal boxes are manufactured according to this standard. Not used cable entry holes are to be closed using either a certified screw or blanking plug. Terminal boxes can be subsequently re-fitted or upgraded with certified cable entries according to national regulations and the manufacturers recommendations. The requirements on the EMC terminal boxes for use in the instrumentation and controlling fields are met with our metal and interior coated housings. The coating in combination with the affordable cable entries shield off the sensible instrumentation areas against unwanted external radiation fields.

Connection or terminal boxes of the increased safety standard, which are used in nearly every country in the world are in comparison to the flameproof encapsulated version, much cheaper and are generally much easier to install.



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EX - INSTALLATION SWITCH

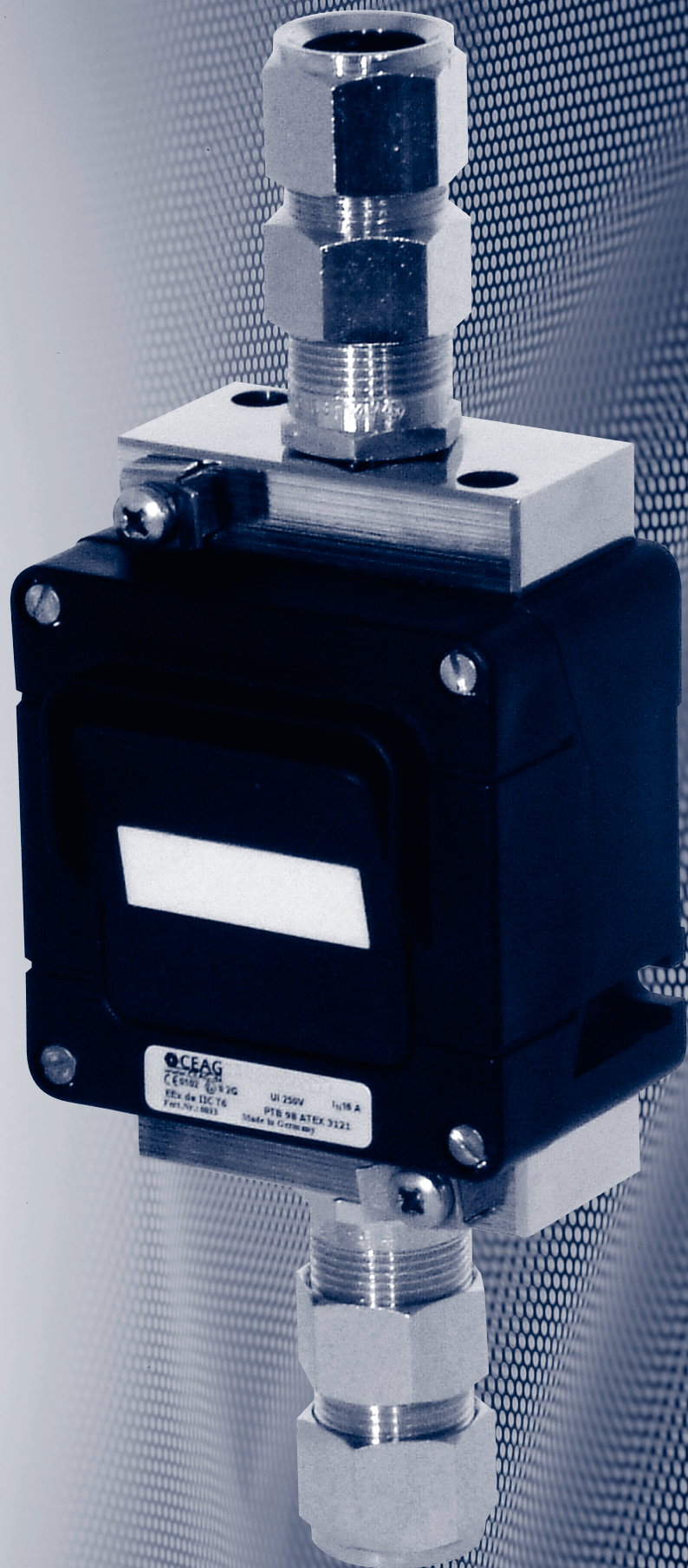
16 A, 250 V
Plastic version for Zone 1

The explosion-protected installation switches are for use in the Zones 1, 2, 21 and 22. The materials used have proved to be safe and reliable for both indoor and outdoor installations, in particular in chemical and off-shore plants. The robust housings are made of a modified polyamide material. The large actuator surface of the installation switch allows perfect operation, even when wearing working gloves. A protective collar prevents inadvertent operation.

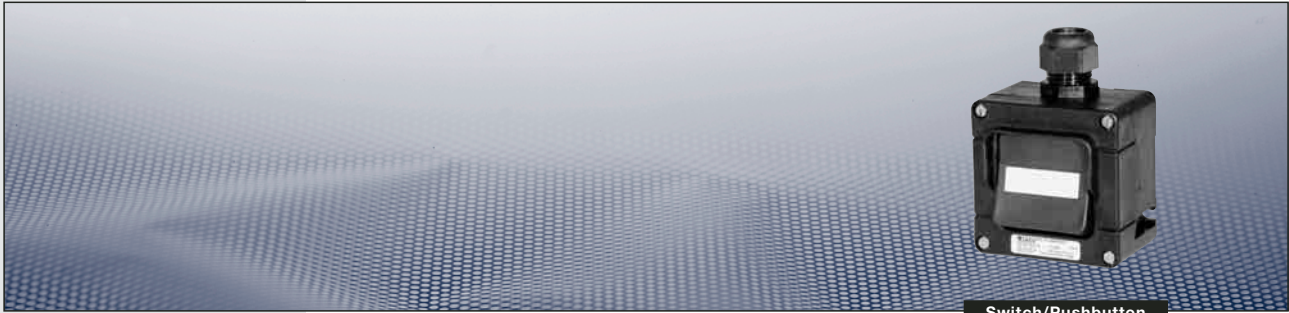
The toggle has a luminescent label which is in accordance with §7 of the Workshop Regulations and is also free from radioactive additives.

Due to the external fixing facility, the switch can be installed easily while the cover is closed. Cable entry from the top is made possible by turning the base. In special cases a through wiring is possible as one can see on the illustration opposite.

International approvals



Large toggle
also for working gloves
Safety standard IP 66
Cable entry from the top or bottom
Connecting terminals easily accessible

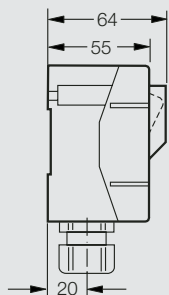
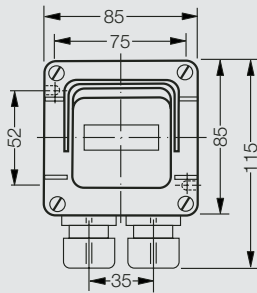
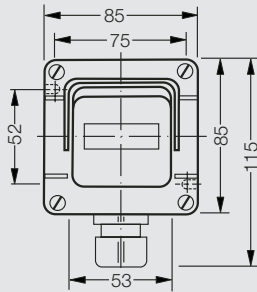


Switch/Pushbutton

EX - INSTALLATION SWITCH

Ex-installation switches and Ex-pushbuttons

5.9



Switch/pushbutton

Technical data

Ex-installation switches and Ex-pushbuttons

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 67 °C
Type of protection	EEx de IIC T6
EC-Type Examination Certificate	PTB 98 ATEX 3121
Enclosure material	polyamide
Degree of protection to EN 60529	IP 66
Rated voltage	250 V~
Rated current	16 A
Cable entry ¹⁾	EEx-e cable entries M25 for cables from Ø 8 - 17 mm
Connecting terminals	Switch terminals: 2 x 2.5 mm ² PE terminals: 4 x 2.5 mm ²
Weight	0.32 kg

Ordering details

Type	Contact arrangement	Cable entry ¹⁾	Order No.
ON-OFF switch 2-pole		1 x M25	GHG 273 2000 R0017
		2 x M25	GHG 273 2000 R0018
		2 x M20*	GHG 273 2000 R0003
Change-over switch		1 x M25	GHG 273 6000 R0011
		2 x M20*	GHG 273 6000 R0003
		2 x M25	GHG 273 6000 R0014
Pushbutton		1 x M25	GHG 273 4000 R0004
		2 x M25	GHG 273 4000 R0007

*only threaded hole

¹⁾ Base enclosure can be rotated afterwards (entry from top or down)

Other versions available on request

Fixing material and accessories see page 5.62 pp.

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EX - PLUGS AND SOCKETS

10 A to 125 A
Plastic version for Zone 1

A good contact

Providing electrical energy there, where it is most needed – even in hazardous areas for the Zones 1, 2, 21 and 22. Place changeable electrical apparatus have generally high requirements on the energy/power supply. The CEAG wall socket for instance can be mounted on to the pre-installed mounting frame without having to use tools – installation without a hot work permit. A high safety standard, a steady hold and faultless contacting even under vibration or the effects of an aggressive atmospheric environment are the basis for a secure and reliable utilization. CEAG plugs and sockets offer more, apart from the proven technology, this product series is defined by its innovative details. For example, the very efficient cable strain relief or the new coding system of the various versions offers different solutions for a secure and problem free utilization in all areas. Just to round the product off, the user in the normal industrial sector becomes exactly the same product advantages. Robust industrial versions fulfil all requirements appertaining to mechanical and chemical durability.

For the stationary repair power supplying in hazardous explosive areas, there is a specially conceived version available that fulfils all the necessary safety requirements. Used in a module sense, individual solutions are no problem at all.

Apart from the plugs and sockets for the european market, we also have plugs and sockets extra for the US market, which are in accordance to all of the necessary norms and safety protection systems used there. The available standard range used here, are the 20 A, 30 A, 60 A and 100 A.

International approvals

Safety standard IP 66 applies also in the plugged-in state

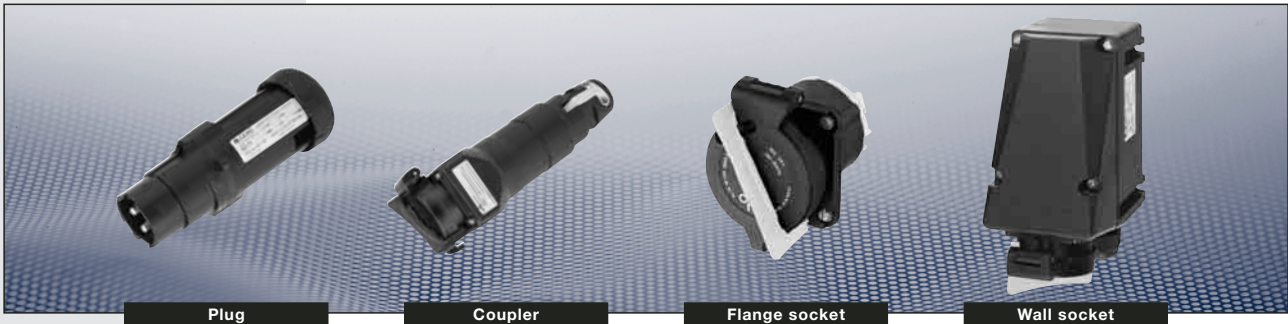
Full AC-3 switching ability

Self-cleaning lamellar contacts, low transition resistance

All-pole on/off switching

Easy plugging





Plug

Coupler

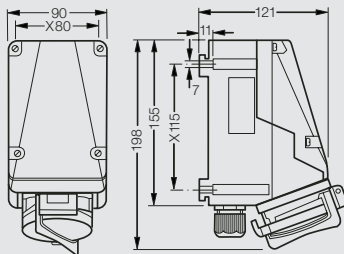
Flange socket

Wall socket

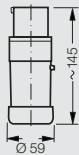
EX - PLUGS AND SOCKETS

| 16A 2-pole up to 50 V | 16A 3-pole up to 50 V |

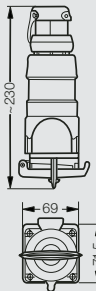
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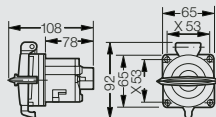
Wall socket



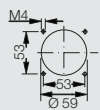
Plug



Coupler



Flange socket



Drilling for flange socket

Technical data

Ex-plugs and sockets for low voltage, 2- and 3-pole accd. to IEC 60309-1/2

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T60 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1039 Flange socket: PTB 99 ATEX 1063 U
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 50 V~ (50/60 Hz)
Rated current	up to 16 A
Switching capacity AC-3 / DC-1	16 A
Back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A
Cable entries	Wall socket: 1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-screw plug plastic (bottom) or 2 x metal thread M20 with Ex-screw plug plastic Plug and coupler: Ø 9 - 17 mm
Connecting terminals	Wall socket/coupler: 2 x 1.5 - 4 mm ² Plug: 1 x 1 - 4 mm ²

Ordering details type 2-pole low voltage

Voltage	h	Type	No. of poles	Weight approx.	Order No.
≤ 24 V		Wall socket	2	1.2 kg	GHG 513 4200 R0001
		Flange socket	2	0.4 kg	GHG 542 5200 V0000
		Coupler	2	0.7 kg	GHG 513 3200 R0001
		Plug	2	0.35 kg	GHG 542 2200 V0000
42 V		Wall socket	2	1.2 kg	GHG 513 4212 R0001
		Flange socket	2	0.4 kg	GHG 542 5212 V0000
		Coupler	2	0.7 kg	GHG 513 3212 R0001
		Plug	2	0.35 kg	GHG 542 2212 V0000

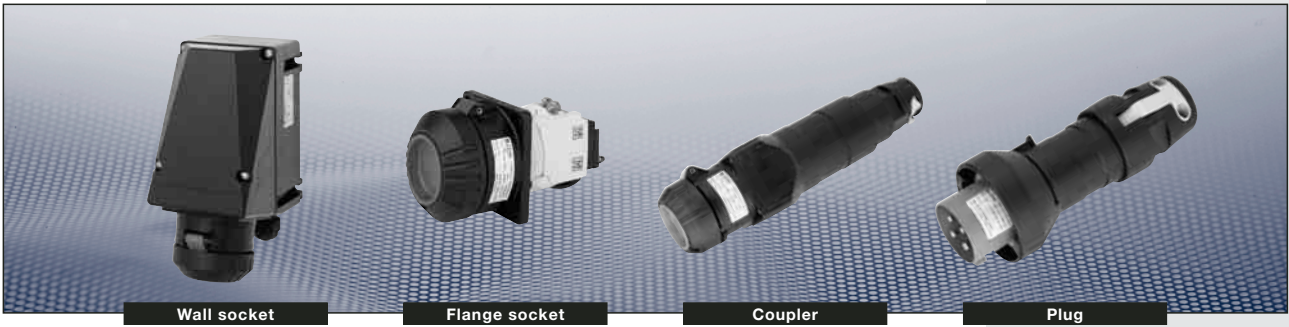
Ordering details type 3-pole low voltage

Voltage	h	Type	No. of poles	Weight approx.	Order No.
≤ 24 V		Wall socket	3	1.2 kg	GHG 513 4300 R0001
		Flange socket	3	0.4 kg	GHG 542 5300 V0000
		Coupler	3	0.7 kg	GHG 513 3300 R0001
		Plug	3	0.35 kg	GHG 542 2300 V0000
42 V		Wall socket	3	1.2 kg	GHG 513 4312 R0001
		Flange socket	3	0.4 kg	GHG 542 5312 V0000
		Coupler	3	0.7 kg	GHG 513 3312 R0001
		Plug	3	0.35 kg	GHG 542 2312 V0000

Other voltage ranges and versions available on request.

Fixing material and accessories see page 5.62 pp.

Dimensions in mm



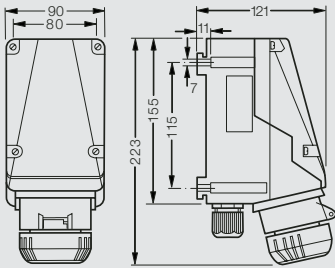
EX - PLUGS AND SOCKETS

16 A 3-pole up to 415 V

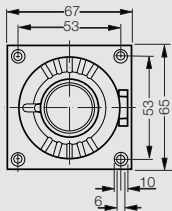
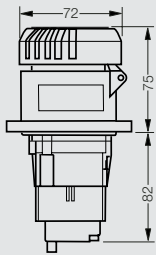
Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2

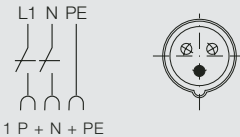
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T60 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1039 Flange socket: PTB 99 ATEX 1040 U
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 415 V~
Rated current	up to 16 A
Frequency	50/60 Hz
Switching capacity AC-3	16 A
Back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gL (rated current 16 A set to)
Cable entries	Wall socket: 1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-screw plug plastic or 2 x metal thread M20 mit Ex-screw plug plastic Plug and coupler: Ø 8 - 19 mm
Connecting terminals	Wall socket/coupler: 2 x 1 - 4 mm ² Plug: 1 x 1.0 - 2.5 mm ²

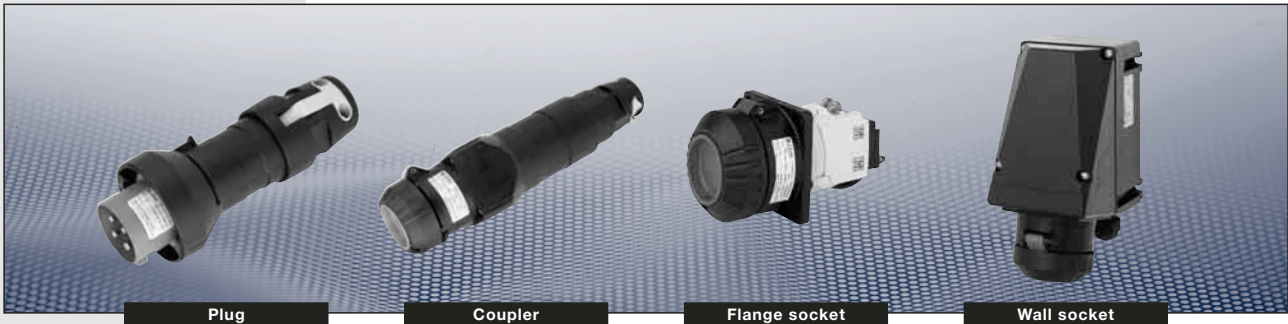


Wall socket



Flange socket





Plug

Coupler

Flange socket



Wall socket

EX - P L U G S A N D S O C K E T S

5.13

| 16A 3-pole up to 415 V |

Ordering details type 16 A 3-pole

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
110-130 V		Wall socket		M25 KU	1.2 kg	GHG 511 4304 R0001
		Wall socket		M20 GE	1.2 kg	GHG 511 4304 R0002
		Wall socket		M20 ME	1.3 kg	GHG 511 4304 R3001
		Wall socket		M20 GM	1.3 kg	GHG 511 4304 R3003
		Flange socket			0.4 kg	GHG 511 8304 R0001
		Coupler			0.7 kg	GHG 511 3304 R0001
200-250 V		Plug			0.35 kg	GHG 511 7304 R0001
		Wall socket		M25 KU	1.2 kg	GHG 511 4306 R0001
		Wall socket		M20 GE	1.2 kg	GHG 511 4306 R0002
		Wall socket		M20 ME	1.3 kg	GHG 511 4306 R3001
		Wall socket		M20 GM	1.3 kg	GHG 511 4306 R3003
		Flange socket			0.4 kg	GHG 511 8306 R0001
	6	Coupler			0.7 kg	GHG 511 3306 R0001
		Plug			0.35 kg	GHG 511 7306 R0001

Other voltage ranges and versions available on request.

KU = 1 x plastic cable glands M25 for Ø 8-17 mm, 1 x M25 Ex-screw plug plastic

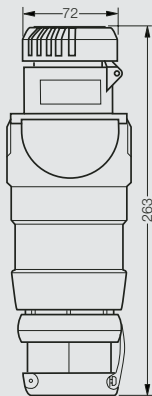
KH = 2 x plastic cable glands M25 for Ø 8-17 mm

ME = 2 x metal thread M20 with Ex-screw plug plastic

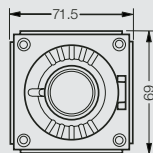
GE = 2 x plastic thread M20 without gland/screw plug

GM = 2 x metal thread M20 without gland/screw plug, with ext. PE

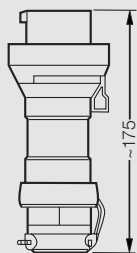
Fixing material and accessories see page 5.62 pp.



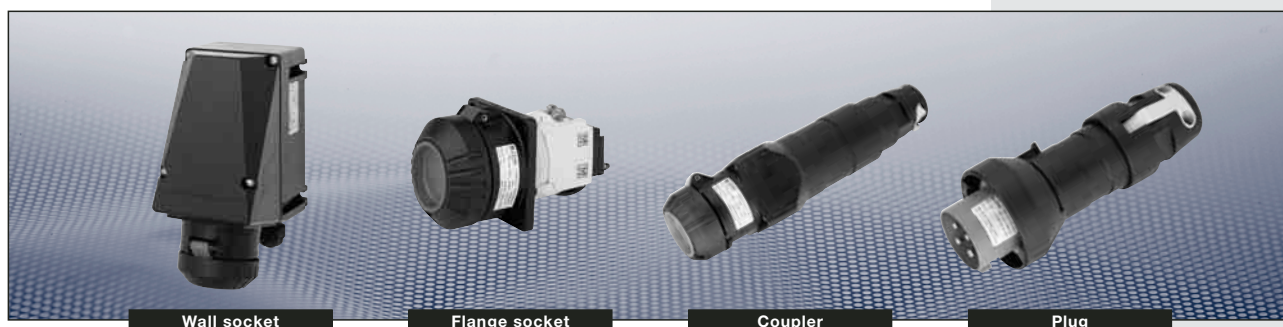
Coupler



Plug



Dimensions in mm



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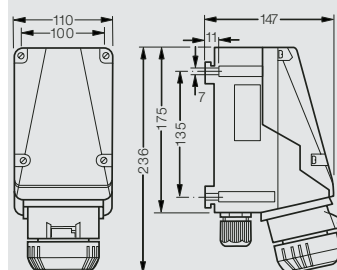
EX - PLUGS AND SOCKETS

| 16A 4-pole up to 690 V |

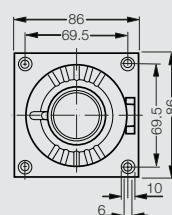
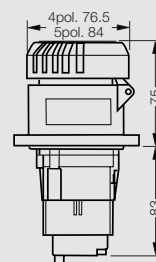
Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2

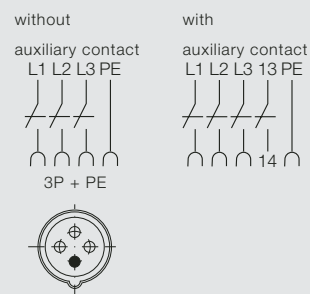
Marking to 94/9/EC	Ⓔ II 2 G Ⓔ II 2 D T60 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1039 Flange socket: PTB 99 ATEX 1040 U
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 690 V~
Rated current	up to 16 A
Frequency	50/60 Hz
Switching capacity AC-3	to 400 V~/16 A
Back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gL (rated current 16 A set to)
Cable entries	Wall socket: 1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-screw plug plastic or 2 x metal thread M20 with Ex-screw plug plastic Plug and coupler: Ø 8 - 21 mm
Connecting terminals	Wall socket/coupler: 2 x 1 - 4 mm ² Plug: 1 x 1.0 - 2.5 mm ²



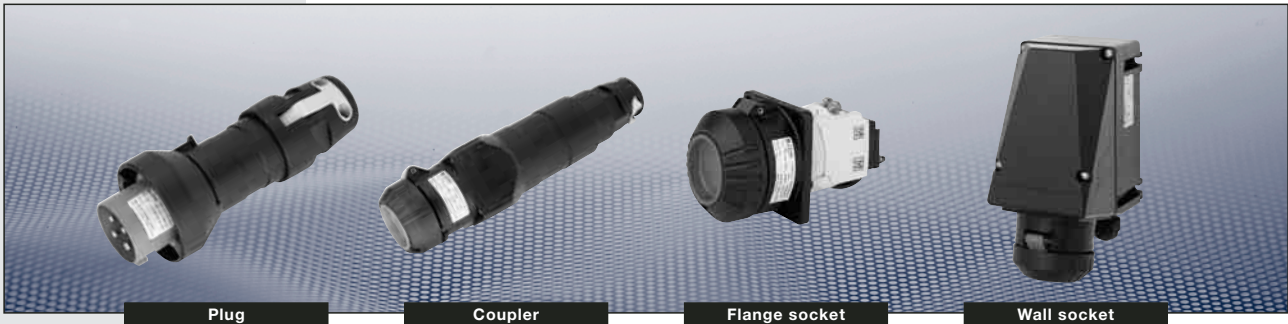
Wall socket



Flange socket



Dimensions in mm







EX - PLUGS AND SOCKETS

5.15

| 16A 4-pole up to 690 V |

Ordering details type 16 A 4-pole

Voltage	h	Type	Auxiliary kontakt	Cable entries	Weight approx.	Order No.
200-250 V		Wall socket	no	M25 KU	1.8 kg	GHG 511 4409 R0001
		Wall socket	no	M20 ME	1.9 kg	GHG 511 4409 R3001
		Flange socket			1.0 kg	GHG 511 8409 R0001
		Coupler			1.7 kg	GHG 511 3409 R0001
		Plug			0.7 kg	GHG 511 7409 R0001
380-415 V		Wall socket	no	M25 KU	1.8 kg	GHG 511 4406 R0001
		Wall socket	no	M20 ME	1.9 kg	GHG 511 4406 R3001
		Wall socket	yes	M25 KH	1.8 kg	GHG 511 4406 R0501
		Flange socket			1.0 kg	GHG 511 8406 R0001
		Coupler			1.7 kg	GHG 511 3406 R0001
480-500 V		Wall socket	no	M25 KU	1.8 kg	GHG 511 4407 R0001
		Wall socket	no	M20 ME	1.9 kg	GHG 511 4407 R3001
		Wall socket	yes	M25 KH	1.8 kg	GHG 511 4407 R0501
		Flange socket			1.0 kg	GHG 511 8407 R0001
		Coupler			1.7 kg	GHG 511 3407 R0001
600-690 V		Wall socket	no	M25 KU	1.8 kg	GHG 511 4405 R0001
		Wall socket	no	M20 ME	1.9 kg	GHG 511 4405 R3001
		Wall socket	yes	M25 KH	1.8 kg	GHG 511 4405 R0501
		Flange socket			1.0 kg	GHG 511 8405 R0001
		Coupler			1.7 kg	GHG 511 3405 R0001
		Plug			0.7 kg	GHG 511 7405 R0001

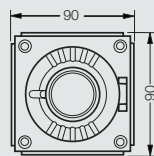
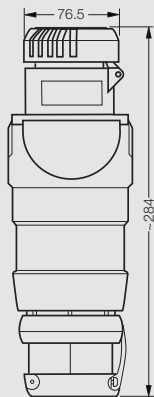
Other voltage ranges and versions available on request.

KU = 1 x plastic cable glands M25 for Ø 8-17 mm, 1 x M25 Ex-screw plug plastic

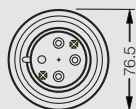
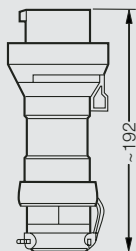
KH = 2 x plastic cable glands M25 for Ø 8-17 mm, auxiliary contact, 1 NO

ME = 2 x metal thread M20 with Ex-screw plug plastic

Fixing material and accessories see page 5.62 pp.

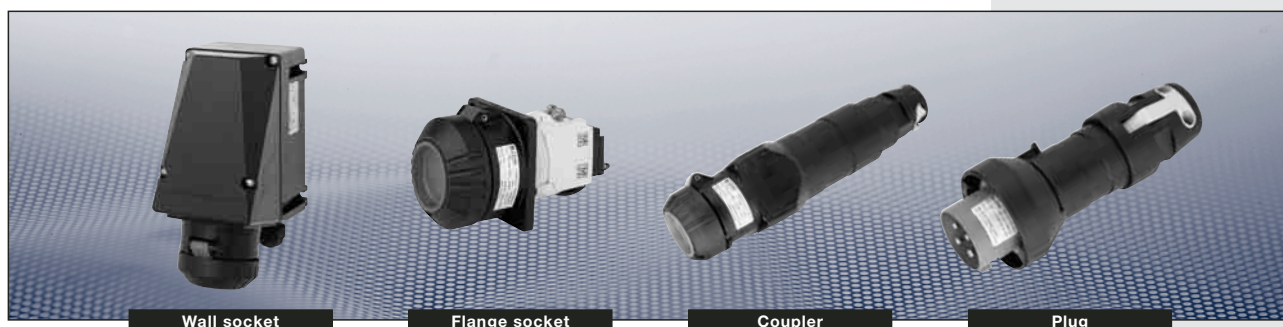


Coupler



Plug

Dimensions in mm



5.16

EX - PLUGS AND SOCKETS

| 16 A 5-pole up to 500 V |

Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T60 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1039 Flange socket: PTB 99 ATEX 1040 U
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 500 V~
Rated current	up to 16 A
Frequency	50/60 Hz
Switching capacity AC-3	to 400 V~/16 A
Back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gL (rated current 16 A set to)
Cable entries	Wall socket: 1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-screw plug plastic or 2 x metal thread M20 with Ex-screw plug plastic Plug and coupler: Ø 12 - 21 mm
Connecting terminals	Wall socket/coupler: 2 x 1 - 4 mm ² Plug: 1 x 1.0 - 2.5 mm ²

Ordering details type 16 A 5-pole

Voltage	h	Type	Aux.	Cable	Weight	Order No.
			contact	entry	approx.	
		Wall socket	no	M25 KU	1.8 kg	GHG 511 4506 R0001
200-250 V		Wall socket	no	M20 ME	1.9 kg	GHG 511 4506 R3001
380-415 V		Wall socket	yes	M25 KH	1.8 kg	GHG 511 4506 R0501
		Flange socket			1.0 kg	GHG 511 8506 R0001
		Coupler			1.7 kg	GHG 511 3506 R0001
	6	Plug			0.7 kg	GHG 511 7506 R0001



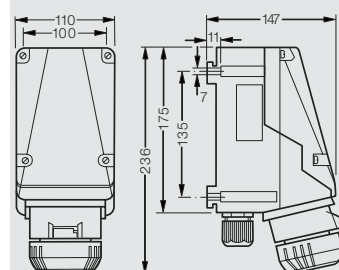
Other voltage ranges and versions available on request.

KU = 1 x plastic cable glands M25 for Ø 8-17 mm, 1 x M25 Ex-screw plug plastic

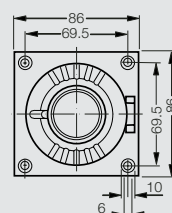
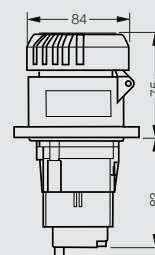
KH = 2 x plastic cable glands M25 for Ø 8-17 mm, auxiliary contact, 1 NO

ME = 2 x metal thread M20 with Ex-screw plug plastic

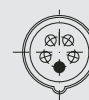
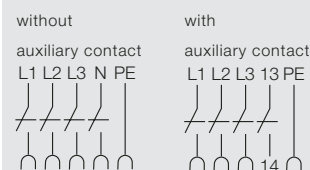
Fixing material and accessories see page 5.62 pp.



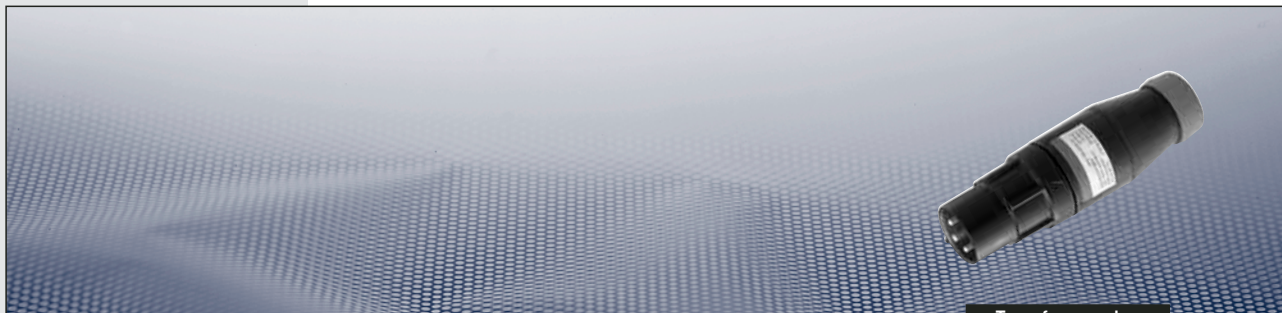
Wall socket



Flange socket



Dimensions in mm

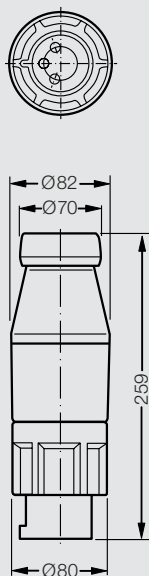


Transformer plug

EX - PLUGS AND SOCKETS

5.17

16A 4-/5-pole transf. plug | Plug with fuse |



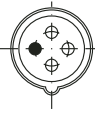
Transformer plug

Technical data

Ex-transformer plug accd. to IEC 60309-1/2, up to 415 V


Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx ed IIC T5
EC-Type Examination Certificate	PTB 99 ATEX 1039
Enclosure material	Glass-fibre reinforced polyester, polyamide
Degree of protection to EN 60529	IP 54
Rated voltage primary	415 V~ (50/60 Hz)
secondary optional	12 V, 24 V, 36 V, 42 V and 230 V~
Input power	65 VA
Fuse	0.5 A mT, replaceable
Cable entries	Ø 10 - 20 mm
Connecting terminals	1 x 1 - 4 mm ²

Ordering details 16 A transformer plug 4-pole

Voltage	h	Type	Weight approx.	Sec voltage	Order No.
200-250 V		Transformer plug 65 VA	2.3 kg	42 V	GHG 531 6469 V0000
		Transformer plug 65 VA	2.3 kg	24 V	GHG 531 6469 V5005
		Transformer plug 65 VA	2.3 kg	12 V	GHG 531 6469 V5025


9

Ordering details 16 A transformer plug 5-pole

Voltage	h	Type	Weight approx.	Sec voltage	Order No.
380-415 V		Transformer plug 65 VA	2.3 kg	42 V	GHG 531 6566 V0000
		Transformer plug 65 VA	2.3 kg	24 V	GHG 531 6566 V5005
		Transformer plug 65 VA	2.3 kg	12 V	GHG 531 6566 V5025
		Transformer plug 65 VA	2.3 kg	230 V	GHG 531 6566 V5023

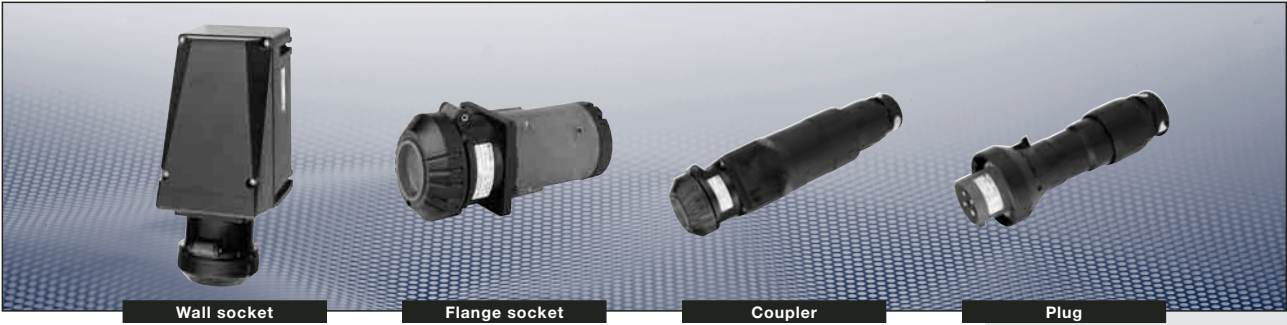
6

Ordering details plug with fuse

Voltage	h	Type	Weight approx.	Order No.
		Plug with fuse max. 6.3 A	1.3 kg	GHG 531 7536 V0000

6

Accessories see page 5.62 pp.



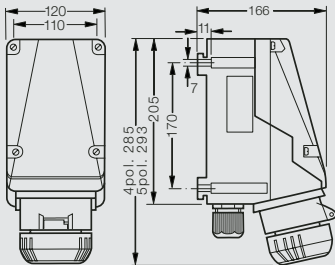
EX - PLUGS AND SOCKETS

| 32A 4-pole up to 690 V |

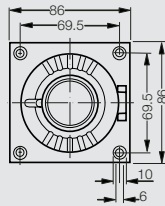
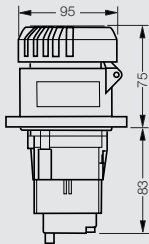
Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2

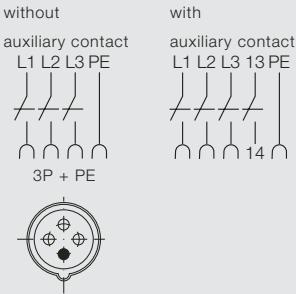
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T60 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1041 Flange socket: PTB 99 ATEX 1042 U
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 690 V~
Rated current	up to 32 A
Frequency	50/60 Hz
Switching capacity AC-3	690 V~/32 A
Back-up fuse, max.	without therm. protection: 35 A with therm. protection: 50 A gL (rated current 32 A set to)
Cable entries	Wall socket: 1 x M40 Ø 17 - 28 mm, 1 x M40 Ex-screw plug plastic or 2 x metal thread M32 with Ex-screw plug plastic Plug and coupler: Ø 17 - 28 mm
Connecting terminals	Wall socket/coupler: 2 x 4 - 10 mm ² Plug: 1 x 1 - 6 mm ²

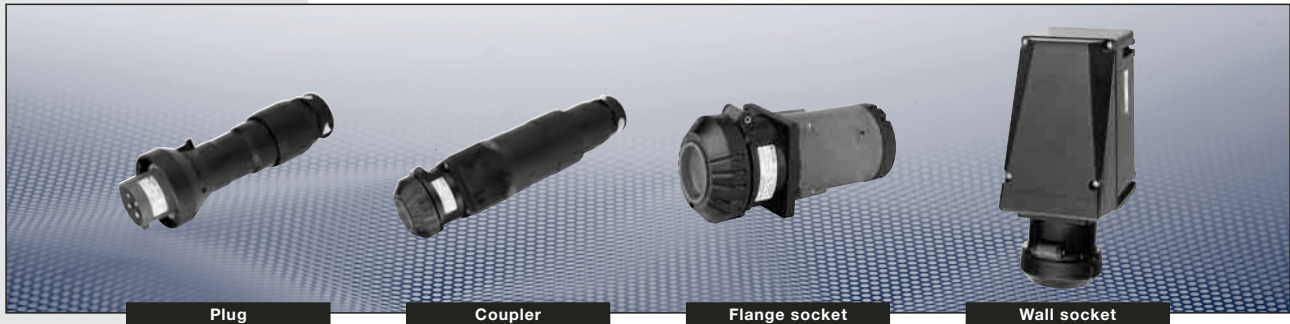


Wall socket



Flange socket









EX - PLUGS AND SOCKETS

5.19

| 32A 4-pole up to 690 V |

Ordering details type 32 A 4-pole

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	no	KU	1.8 kg	GHG 512 4409 R0001
		Wall socket	no	ME	1.9 kg	GHG 512 4409 R3001
		Flange socket			1.0 kg	GHG 512 8409 R0001
		Coupler			1.7 kg	GHG 512 3409 R0001
		Plug			0.7 kg	GHG 512 7409 R0001
380-415 V		Wall socket	no	KU	1.8 kg	GHG 512 4406 R0001
		Wall socket	no	ME	1.9 kg	GHG 512 4406 R3001
		Wall socket	yes	KH	1.8 kg	GHG 512 4406 R0501
		Flange socket			1.0 kg	GHG 512 8406 R0001
		Coupler			1.7 kg	GHG 512 3406 R0001
480-500 V		Wall socket	no	KU	1.8 kg	GHG 512 4407 R0001
		Wall socket	no	ME	1.9 kg	GHG 512 4407 R3001
		Wall socket	yes	KH	1.8 kg	GHG 512 4407 R0501
		Flange socket			1.0 kg	GHG 512 8407 R0001
		Coupler			1.7 kg	GHG 512 3407 R0001
600-690 V		Wall socket	no	KU	1.8 kg	GHG 512 4405 R0001
		Wall socket	no	ME	1.9 kg	GHG 512 4405 R3001
		Wall socket	yes	KH	1.8 kg	GHG 512 4405 R0501
		Flange socket			1.0 kg	GHG 512 8405 R0001
		Coupler			1.7 kg	GHG 512 3405 R0001
		Plug			0.7 kg	GHG 512 7405 R0001

Other voltage ranges and versions available on request.

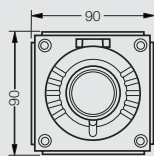
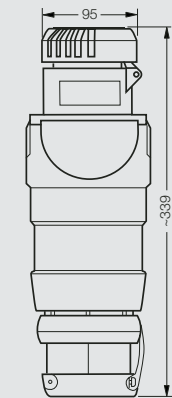
KU = 1 x plastic cable glands M40 for Ø 16-28 mm, 1 x M40 Ex-screw plug plastic

KH = 1 x plastic cable glands M40 for Ø 16-28 mm,

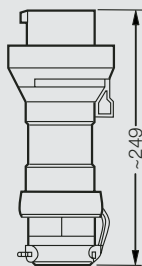
1 x plastic cable glands M25 for Ø 8 - 17 mm, with auxiliary contact, 1 NO

ME = 2 x metal thread M32 with Ex-screw plug plastic

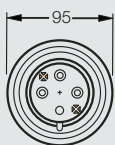
Fixing material and accessories see page 5.62 pp.



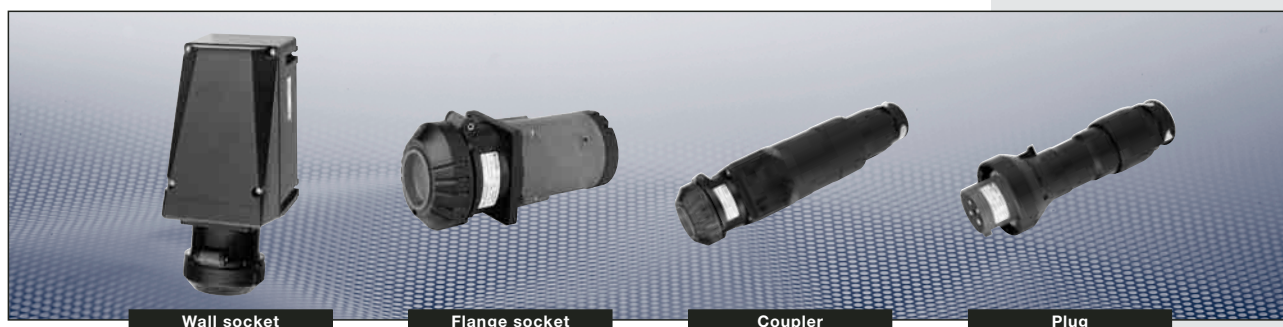
Coupler



Plug



Dimensions in mm



5.20

EX - PLUGS AND SOCKETS


| 32A 5-pole up to 690 V |

Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T60 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1041 Flange socket: PTB 99 ATEX 1042 U
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 690 V~
Rated current	up to 32 A
Frequency	50/60 Hz
Switching capacity AC-3	690 V~/32 A
Back-up fuse, max.	without therm. protection: 35 A with therm. protection: 50 A gL (rated current 32 A set to)
Cable entries	Wall socket: 1 x M40 Ø 17 - 28 mm, 1 x M40 Ex-screw plug plastic or 2 x metal thread M32 with Ex-screw plug plastic Plug and coupler: Ø 17 - 28 mm
Connecting terminals	Wall socket/coupler: 2 x 4 - 10 mm ² Plug: 1 x 1 - 6 mm ²

Ordering details type 32 A 5-pole

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
200-250 V 380-415 V		Wall socket	no	KU	1.8 kg	GHG 512 4506 R0001
		Wall socket	no	ME	1.9 kg	GHG 512 4506 R3001
		Wall socket	yes	KH	1.8 kg	GHG 512 4506 R0501
		Flange socket			1.0 kg	GHG 512 8506 R0001
		Coupler			1.7 kg	GHG 512 3506 R0001
		Plug			0.7 kg	GHG 512 7506 R0001

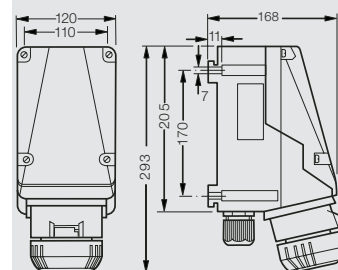
Other voltage ranges and versions available on request

KU = 1 x plastic cable glands M40 for Ø 16-28 mm, 1 x M40 Ex-screw plug plastic

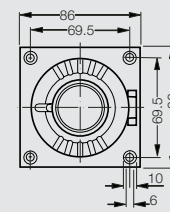
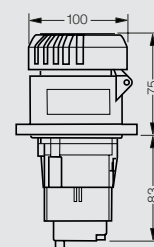
KH = 1 x plastic cable glands M40 Ø 16-28 mm, 1 x M25 Ø 8-17 mm, with auxiliary contact, 1 NO

ME = 2 x metal thread M32 with Ex-screw plug plastic

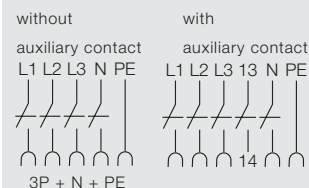
Fixing material and accessories see page 5.62 pp.

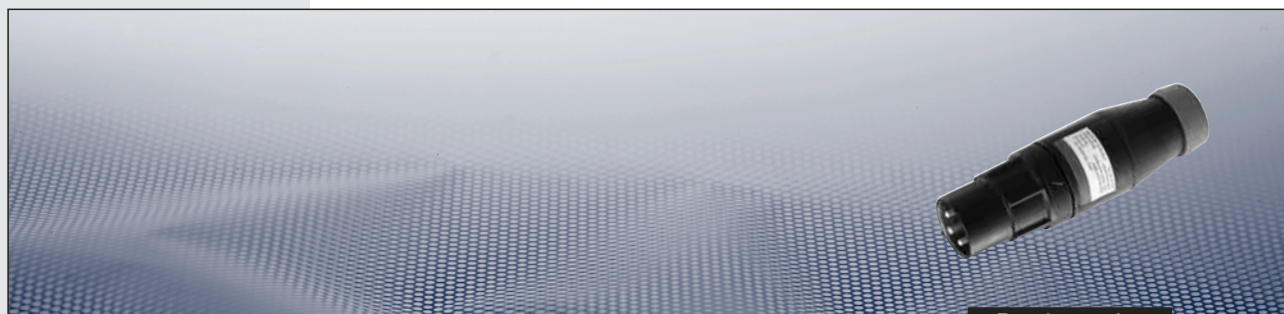


Wall socket



Flange socket



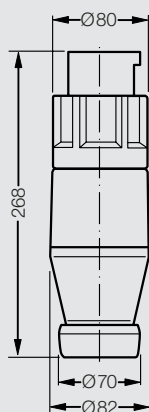


Transformer plug

EX - PLUGS AND SOCKETS

5.21

| 32A 4-/5-pole Transf. plug | Plug with fuse |



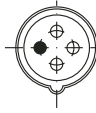
Transformer plug

Technical data

Ex-transformer plug accd. to IEC 60309-1/2, up to 415 V


Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx ed IIC T5
EC-Type Examination Certificate	PTB 99 ATEX 1041
Enclosure material	Glass-fibre reinforced polyester, polyamide
Degree of protection to EN 60529	IP 54
Rated voltage primary	up to 415 V (50/60 Hz)
secondary optional	12 V, 24 V, 36 V, 42 V or 230 V~
Input power	65 VA
Fuse	0.5 A mT, replaceable
Cable entries	Ø 10 - 20 mm
Connecting terminals	1 x 1 - 4 mm ²

Ordering details 32 A transformer plug 4-pole

Voltage	h	Type	Weight approx.	Sek. spg.	Order No.
200-250 V		Transformer plug 65 VA	2.3 kg	42 V	GHG 532 6469 V0000
		Transformer plug 65 VA	2.3 kg	24 V	GHG 532 6469 V5005
		Transformer plug 65 VA	2.3 kg	12 V	GHG 532 6469 V5025


9

Ordering details 32 A transformer plug 5-pole

Voltage	h	Type	Weight approx.	Sek. spg.	Order No.
380-415 V		Transformer plug 65 VA	2.3 kg	42 V	GHG 532 6566 V0000
		Transformer plug 65 VA	2.3 kg	24 V	GHG 532 6566 V5005
		Transformer plug 65 VA	2.3 kg	12 V	GHG 532 6566 V5025
		Transformer plug 65 VA	2.3 kg	230 V	GHG 532 6566 V5023

6

Ordering details plug with fuse

Voltage	h	Type	Weight ca.	Order No.
200-250 V		Plug with fuse max. 6.3 A	1.3 kg	GHG 532 7536 V0000

6

Accessories see page 5.62 pp.

1

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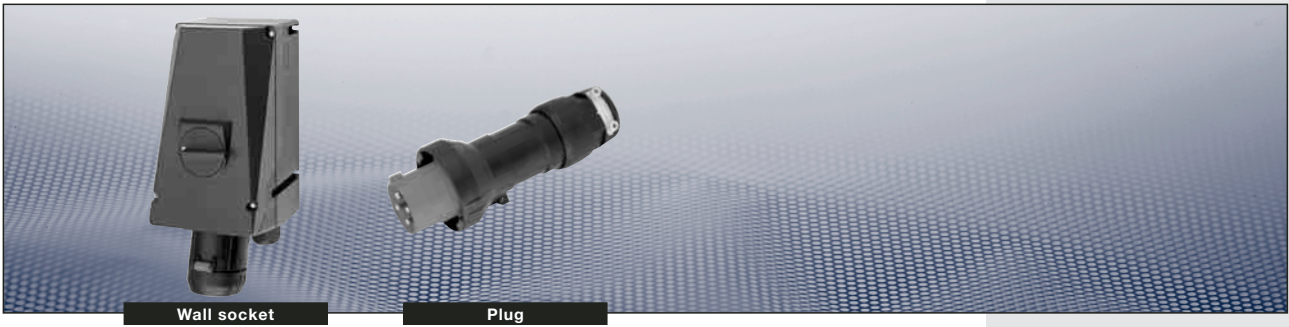
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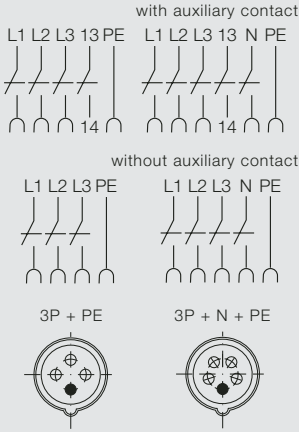
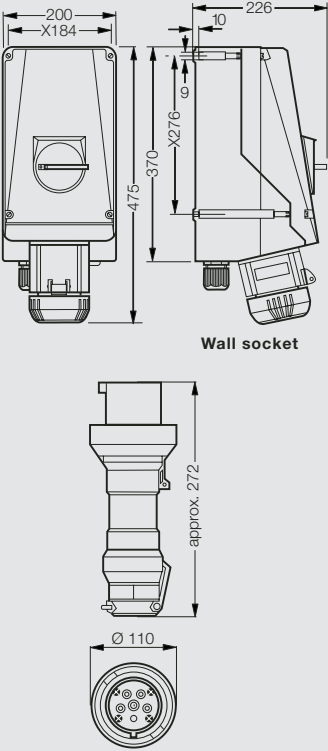
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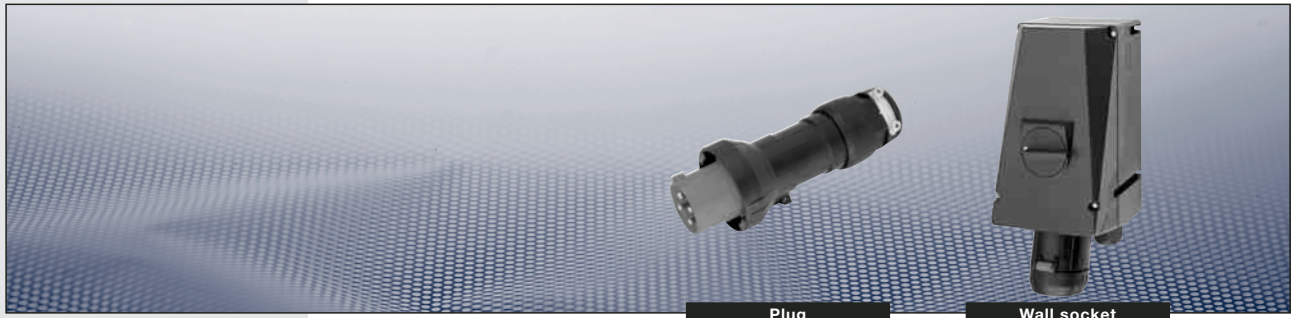


5.22
 EX - PLUGS AND SOCKETS
 | 63 A 4- and 5-pole up to 690 V |

Technical data	
Ex-plugs and sockets accd. to IEC 60309-1/2 up to 690 V	
Marking to 94/9/EC	Ⓔ II 2 G Ⓔ II 2 D T60 °C
Type of protection	EEx de IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 1070
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug: polyamide
Rated voltage	up to 690 V~
Rated current	up to 63 A
Frequency	50/60 Hz
Switching capacity AC-3	690 V/63 A
Back-up fuse, max.	without therm. protection: 63 A with therm. protection: 80 A (rated current 63 A set to)
Cable entries	Wall socket: 1 x M50 Ø 22 - 35 mm, 1 x M50 Ex-screw plug plastic or 2 x metal thread M40 with Ex-screw plug plastic Plug: Ø 19 - 34 mm
Connecting terminals	Wall socket: 2 x 4 - 25 mm² with cable lug ¹⁾ 1 x 35 mm² Plug: 1 x 4 - 16 mm²

¹⁾ use delivered cable lugs





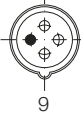

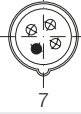

Plug


Wall socket

EX - PLUGS AND SOCKETS

5.23

| 63 A 4- and 5-pole up to 690 V |

Ordering details type 63 A 4-pole						
Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	no	KU	8.1 kg	GHG 514 4409 R0001
		Wall socket	no	ME	8.2 kg	GHG 514 4409 R3001
		Plug			0.75 kg	GHG 514 7409 R0001
380-415 V		Wall socket	no	KU	8.1 kg	GHG 514 4406 R0001
		Wall socket	no	ME	8.2 kg	GHG 514 4406 R3001
		Wall socket	yes	KH	8.2 kg	GHG 514 4406 R0501
		Plug			0.75 kg	GHG 514 7406 R0001
480-500 V		Wall socket	no	KU	8.1 kg	GHG 514 4407 R0001
		Wall socket	no	ME	8.2 kg	GHG 514 4407 R3001
		Wall socket	yes	KH	8.2 kg	GHG 514 4407 R0504
		Plug			0.75 kg	GHG 514 7407 R0001
600-690 V		Wall socket	no	KU	8.1 kg	GHG 514 4405 R0001
		Wall socket	no	ME	8.1 kg	GHG 514 4405 R3001
		Wall socket	yes	KH	8.2 kg	GHG 514 4405 R0501
		Plug			0.75 kg	GHG 514 7405 R0001

Ordering details type 63 A 5-pole						
Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	no	KU	8.1 kg	GHG 514 4506 R0001
380-415 V		Wall socket	no	ME	8.1 kg	GHG 514 4506 R3001
		Wall socket	yes	KH	8.2 kg	GHG 514 4506 R0501
		Plug			0.75 kg	GHG 514 7506 R0001

Other voltage ranges and versions available on request

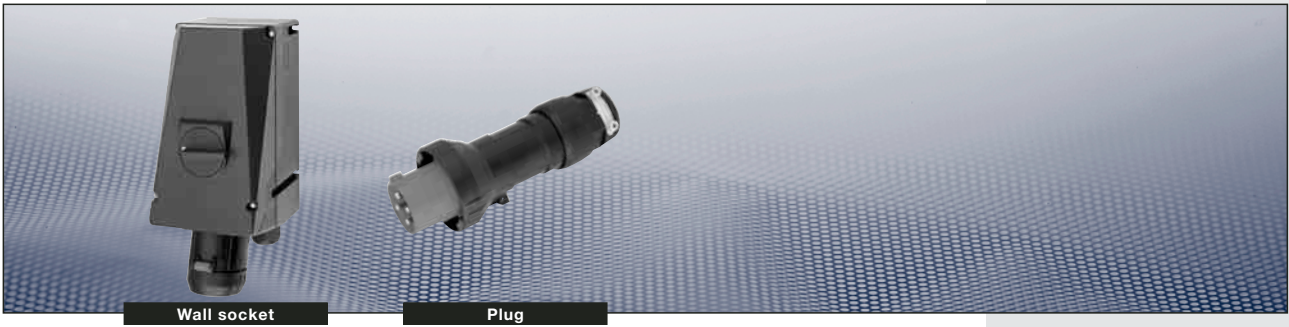
KU = 1 x plastic cable glands M50 Ø 21-35 mm, 1 x M50 Ex-screw plug plastic

KH = 1 x plastic cable glands M50 Ø 21-35 mm,

1 x M25 Ø 8-17 mm with Ex-blanking plug, with auxiliary contact, 1 NO

ME = 2 x metal thread M40 with Ex-screw plug plastic

Accessories see page 5.62 pp.



Wall socket

Plug

EX - PLUGS AND SOCKETS

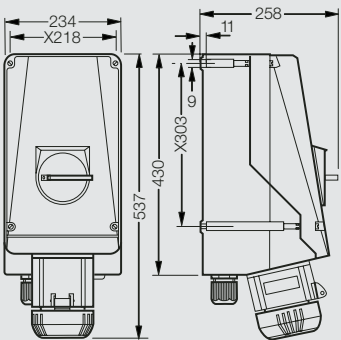
| 125 A 4- and 5-pole up to 690 V |

Technical data

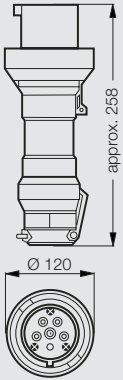
Ex-plugs and sockets accd. to IEC 60309-1/2

Marking to 94/9/EC	II 2 G II 2 D T60 °C
Type of protection	EEx de IIC T6
EC-Type Examination Certificate	PTB 01 ATEX 1069
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug: polyamide
Rated voltage	up to 690 V~
Rated current	up to 125 A
Frequency	50/60 Hz
Switching capacity AC-3	690 V/125 A
Back-up fuse, max.	without therm. protection: 125 A with therm. protection: 160 A (rated current 125 A set to)
Cable entries	Wall socket: 2 x M63 Ø 27 - 48 mm, 1 x with Ex-blanking plug plastic or 2 x metal thread M50 with Ex-screw plug plastic Plug: Ø 31 - 55 mm
Connecting terminals	Wall socket: 2 x 4 - 70 mm² with cable lug ¹⁾ 1 x 120 mm² Plug: 1 x 4 -35 mm² with pin cable lug 1 x 50 mm²

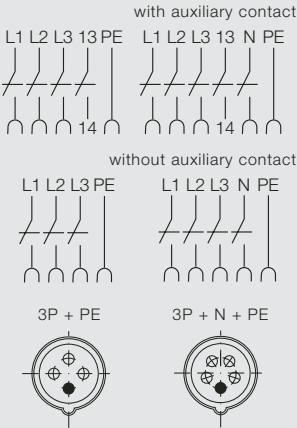
¹⁾ use delivered cable lugs



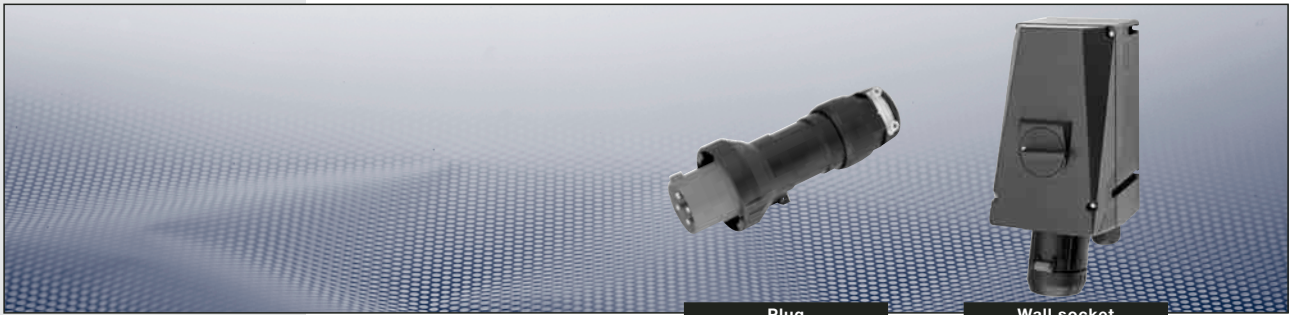
Wall socket



Plug



Dimensions in mm



Plug

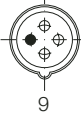

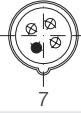

Wall socket

EX - PLUGS AND SOCKETS


5.25

| 125 A 4- and 5-pole up to 690 V |

Ordering details type 125 A 4-pole

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	no	KU	12.3 kg	GHG 515 4409 R0001
		Wall socket	no	ME	12.5 kg	GHG 515 4409 R3001
		Plug			0.9 kg	GHG 515 7409 R0001
380-415 V		Wall socket	no	KU	12.3 kg	GHG 515 4406 R0001
		Wall socket	no	ME	12.5 kg	GHG 515 4406 R3001
		Wall socket	yes	KH	12.5 kg	GHG 515 4406 R0501
		Plug			0.9 kg	GHG 515 7406 R0001
480-500 V		Wall socket	no	KU	12.3 kg	GHG 515 4407 R0001
		Wall socket	no	ME	12.5 kg	GHG 515 4407 R3001
		Wall socket	yes	KH	12.5 kg	GHG 515 4407 R0501
		Plug			0.9 kg	GHG 515 7407 R0001
600-690 V		Wall socket	no	KU	12.3 kg	GHG 515 4405 R0001
		Wall socket	no	ME	12.5 kg	GHG 515 4405 R3001
		Wall socket	yes	KH	12.5 kg	GHG 515 4405 R0501
		Plug			0.9 kg	GHG 515 7405 R0001

Ordering details type 125 A 5-pole

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	no	KU	13.0 kg	GHG 515 4506 R0001
380/415 V		Wall socket	no	ME	13.2 kg	GHG 515 4506 R3001
		Wall socket	yes	KH	13.2 kg	GHG 515 4506 R0501
		Plug			1.2 kg	GHG 515 7506 R0001

Other voltage ranges and versions available on request.

KU = 2 x plastic cable glands M63 Ø 27-48 mm, 1 x with Ex-blanking plug plastic

KH = 1 x plastic cable glands M63 Ø 27-48 mm, 1 x M25 Ø 8-17 mm with auxiliary contact, 1 NO

ME = 2 x metal thread M50 mit Ex-screw plug plastic

Accessories see page 5.62 pp.

1

2

3

4

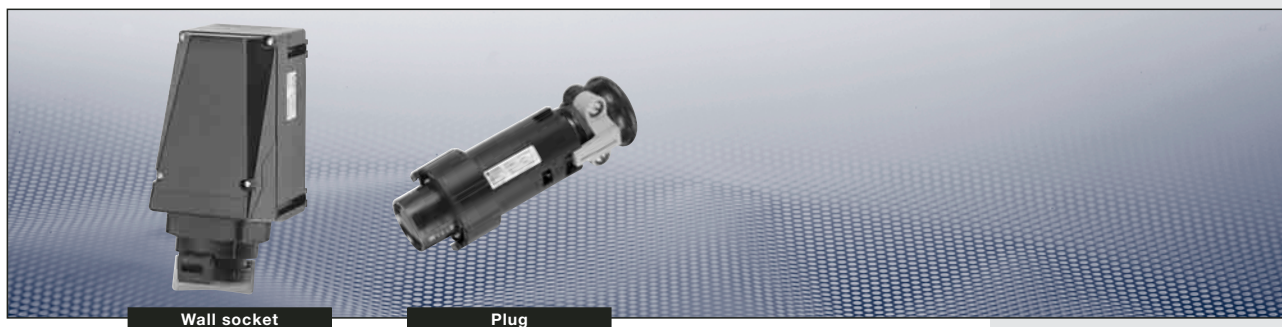
5

6

7

8

9



Wall socket

Plug

EX - PLUGS AND SOCKETS

10 A 21-pole up to 250 V

Technical data

Ex-plugs and sockets, 21-pole

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx e II T6
EC-Type Examination Certificate	PTB 00 ATEX 1109
Degree of protection to EN 60529	IP 65
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug: polyamide
Rated voltage	up to 250 V~
Rated current	up to 10 A
Frequency	50/60 Hz
Back-up fuse, max.	without therm. protection: 10 A
Cable entries	Wall socket: 1 x M40, Ø 17 28 mm oder 1 x metal thread M32 with Ex-screw plug plastic Plug: Ø 19 - 28 mm Wall socket: 1 - 2.5 mm ²
Port	Plug: 1 - 2.5 mm ² crimped or soldered connection ¹⁾

¹⁾ a special tool must be used for crimped connections

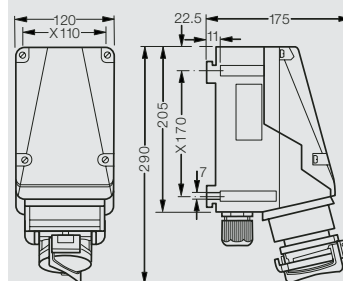
Ordering details type 10 A 21-pole

Type	h	Cable entry	Weight	Order No.
Wall socket	5 h	KU	1.8 kg	GHG 511 4905 R0001
Wall socket	6 h	KU	1.8 kg	GHG 511 4906 R0001
Wall socket	7 h	KU	1.8 kg	GHG 511 4907 R0001
Wall socket	5 h	ME	1.9 kg	GHG 511 4905 R3001
Wall socket	6 h	ME	1.9 kg	GHG 511 4906 R3001
Wall socket	7 h	ME	1.9 kg	GHG 511 4907 R3001
Plug	5 h		0.7 kg	GHG 591 2201 R0001
Plug	6 h		0.7 kg	GHG 591 2201 R0002
Plug	7 h		0.7 kg	GHG 591 2201 R0003

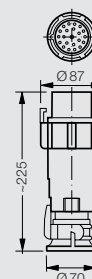
KU = 1 x plastic cable glands M40 Ø 16-28 mm

ME = 1 x metal thread M32 with Ex-screw plug plastic

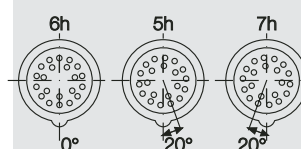
Fixing material and accessories see page 5.62 pp.

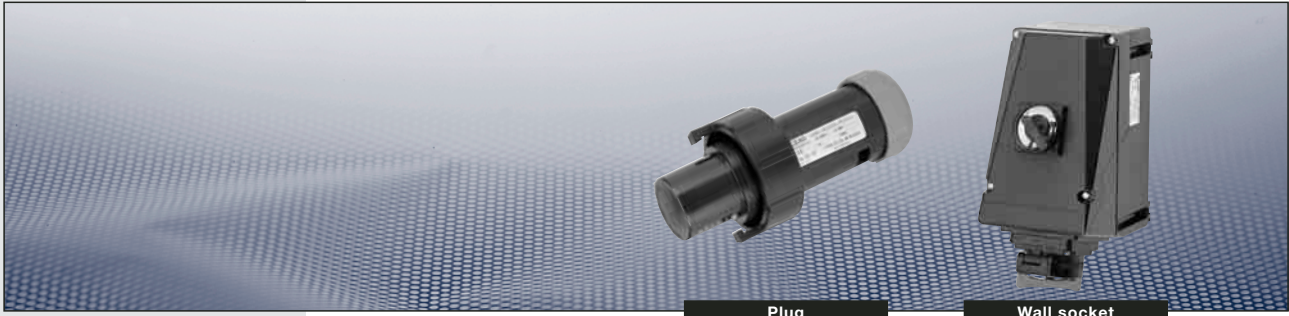


Wall socket



Plug





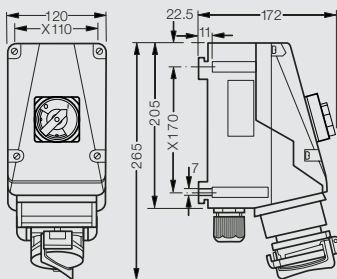
Plug

Wall socket

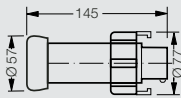
EX - PLUGS AND SOCKETS

5.27

| 20 A 7-pole up to 500 V |



Wall socket



Plug

Technical data

Ex-plugs and sockets, 7-pole

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx ed IIC T6/T5 bzw. EEx ed ia IIC T6/T5
EC-Type Examination Certificate	PTB 00 ATEX 1109
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug: polyamide
Rated voltage	up to 500 V~
Rated current	16 A/20 A (T6/T5)
Frequency	50/60 Hz
Switching capacity AC-3	to 500 V~/16 A
Back-up fuse, max.	without therm. protection: 16 A/20 A with therm. protection: 25 A (rated current 16 A/20 A selected)
Cable entries	Wall socket: 1 x M40 Ø 17 - 28 mm, 1 x metal thread M40 with Ex-screw plug plastic or 2 x metal thread M32 with Ex-screw plug plastic Plug: Ø 9 - 17 mm
Connecting terminals	Wall socket: 2 x 1.5 - 4 mm ² Plug: 1 - 2.5 mm ² crimped or soldered connection

¹⁾ a special tool must be used for crimped connections.

Ordering details type 20 A 7-pole

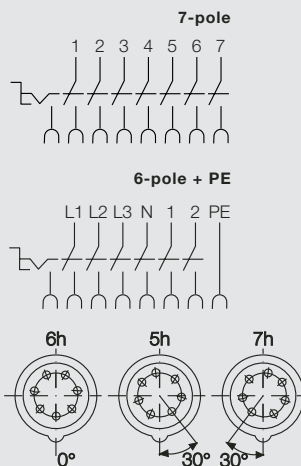
Type	h	Cable entry	Weight approx.	Order No.
Wall socket 7-pole	6 h	KU	2.2 kg	GHG 511 4706 R0001
Wall socket 7-pole	6 h	ME	2.3 kg	GHG 511 4706 R3001
Wall socket 6-pole + PE	7 h	KU	2.2 kg	GHG 511 4707 R0003
Wall socket 6-pole + PE	7 h	ME	2.3 kg	GHG 511 4707 R3003
Plug 7-pole	6 h		0.3 kg	GHG 592 2001 R0002
Plug 7-pole	7 h		0.3 kg	GHG 592 2001 R0022

Other voltage ranges and versions available on request.

KU = 1 x plastic cable glands M40 Ø 16-28 mm, 1 x M40 with Ex-screw plug plastic

ME = 2 x metal thread M32 with Ex-screw plug plastic

Fixing material and accessories see page 5.62 pp.



Dimensions in mm

EX - PLUG AND SOCKET

16 A Metallic Design for Zone 1

The explosion-protected light metal plug and socket devices of the brand "Nortem" pursuant to IEC 60309 can be used in the areas of Zone 1 and Zone 2 at no risk of explosion. Extremely harsh conditions of use in the hazardous area requires the devices to have great mechanical strength. The explosion-protected CEAG plug and socket devices can be used to supply the appropriate energy to portable electrical equipment in these harsh conditions.

The robust plug and socket devices with high-quality cast aluminium housings can be connected to a large connecting room via explosion-proof conduits or explosion-proof screwed connections.

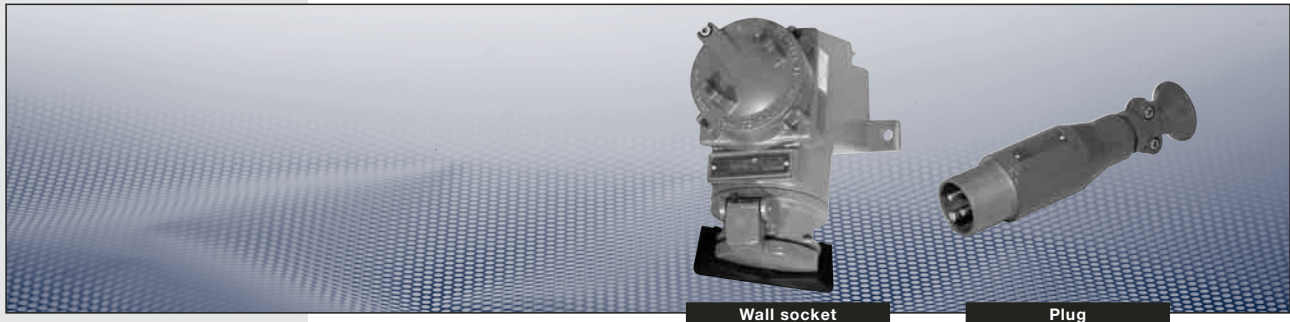
Drilled holes through which no cables are conducted should be closed with certified threaded stoppers.

The light metal plug and socket devices have an outside earthing connection.

Internationally approved.

High mechanical, chemical and thermal resistance conduit
Connecting technology





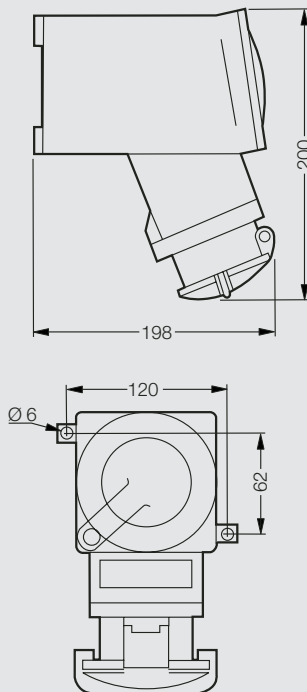
Wall socket

Plug

EX - PLUG AND SOCKET

| 16A 3-, 4- and 5-pole up to 415 V |

5.29



Wall socket

Technical data

Ex-protected plug and socket accd. to IEC 309-1/2

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx d IIC T6
EC-Type Examination Certificate	LOM 03 ATEX 2019
Protection category	IP 65
Enclosure material	Wall socket: light alloy, polyester paint finish Plug: light alloy, polyester paint finish
Rated voltage	3-pole to 230 V~ 4-/5-pole to 400 V~
Rated current	up to 16 A
Frequency	50/60 Hz
Switching capacity AC-3	up to 415 V~ 16 A
Back-up fuse, max.	without therm. protection: 16 A with therm. protection: max. 35 A gL
Cable entries	Wall socket: 2 x 3/4", 1 x Ex-screw plug Plug: Ø 8,5 - 13,5 mm
Connecting terminals	Wall socket: 2 x 2,5 mm ² Plug: 1 x 2,5 mm ² PE: 1 x 6 mm ²

Ordering details type 16 A 3-pole

Voltage	h	Type	Weight approx.	Order No.
220 - 250 V	6	Wall socket	2.7 kg	NOR 000 003 230 016
	6	Plug	0.55 kg	NOR 000 003 230 058

Ordering details type 16 A 4-pole

Voltage	h	Type	Weight approx.	Order No.
380 - 415 V	6	Wall socket	2.7 kg	NOR 000 003 230 024
	6	Plug	0.65 kg	NOR 000 002 230 066

Ordering details type 16 A 5-pole

Voltage	h	Type	Weight approx.	Order No.
380 - 415 V	6	Wall socket	2.7 kg	NOR 000 003 230 032
	6	Plug	0.7 kg	NOR 000 003 230 074

EX - PLUGS AND SOCKETS

16 A to 125 A
Plastic version for Zone 2

A good contact

Providing electrical energy there, where it is most needed – even in explosion hazardous areas for the Zones 2 and 22. Place changeable electrical apparatus have generally high requirements on the energy/power supply. The CEAG wall socket for instance can be mounted on to the pre-installed mounting frame without having to use tools – installation without a hot work permit. A high safety standard, a steady hold and faultless contacting even under vibration or the effects of an aggressive atmospheric environment are the basis for a secure and reliable utilization. CEAG plugs and sockets offer more, apart from the proven technology, this product series is defined by its innovative details. For example, the very efficient cable strain relief or the new coding system of the various versions offers different solutions for a secure and problem-free utilization in all areas. Just to round the product off, the user in the normal industrial sector becomes exactly the same product advantages. Robust industrial versions fulfil all requirements appertaining to mechanical and chemical durability.

For the stationary repair power supplying in hazardous explosive areas, there is a specially conceived version available that fulfils all the necessary safety requirements. Used in a module sense, individual solutions are no problem at all.

Apart from the plugs and sockets for the European market, we also have plugs and sockets extra for the US market, which are in accordance to all of the necessary norms and safety protection systems used there. The available standard range used here, are the 20 A, 30 A, 60 A and 100 A.

International approvals

Safety standard IP 66 applies also in the plugged-in state

Full AC-3 switching ability

Self-cleaning lamellar contacts, low transition resistance

All-pole on/off switching

Easy plugging





Plug

Coupler

Flange socket

Wall socket

EX - PLUGS AND SOCKETS

16 A 3-pole up to 250 V

5.31

Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2

Marking to 94/9/EC	Ex II 3 G Ex II 3 D T60 °C
Type of protection	EEx nC IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	3-pole to 400 V~
Rated current	up to 16 A
Frequency	50/60 Hz
Switching capacity AC-3	up to 250 V~/16 A
Back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gL (rated current 16 A set to)
Cable entries	Wall socket: 1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-screw plug plastic or 2 x metal thread M20 with Ex-screw plug plastic Plug and coupler: 3-pole: Ø 8 - 19 mm
Connecting terminals	Wall socket/coupler: 2 x 1.5 - 4 mm ² Plug: 1 x 1.0 - 2.5 mm ²

Ordering details type 16 A 3-pole

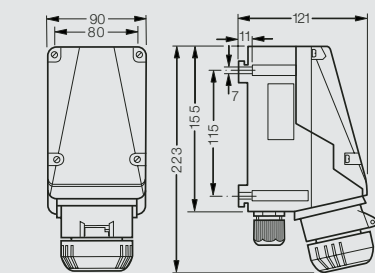
Voltage	h	Type	Cable entry	Weight approx.	Order No.
110-130 V		Wall socket	KU	1.2 kg	GHG 516 4304 R0001
		Wall socket	ME	1.3 kg	GHG 516 4304 R3001
		Flange socket		0.4 kg	GHG 516 8304 R0001
		Coupler		0.7 kg	GHG 516 3304 R0001
		Plug		0.35 kg	GHG 516 7304 R0001
200-250 V		Wall socket	KU	1.2 kg	GHG 516 4306 R0001
		Wall socket	ME	1.3 kg	GHG 516 4306 R3001
		Flange socket		0.4 kg	GHG 516 8306 R0001
		Coupler		0.7 kg	GHG 516 3306 R0001
		Plug		0.35 kg	GHG 516 7306 R0001

Other voltage ranges and versions available on request.

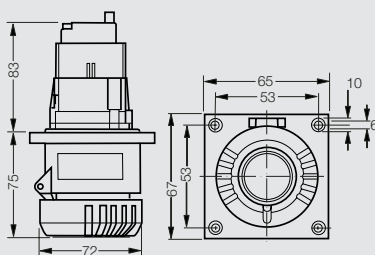
KU = 1 x plastic cable glands M25 Ø 9-17 mm, 1 x M25 Ex-screw plug plastic

ME = 2 x metal thread M20 with Ex-screw plug plastic

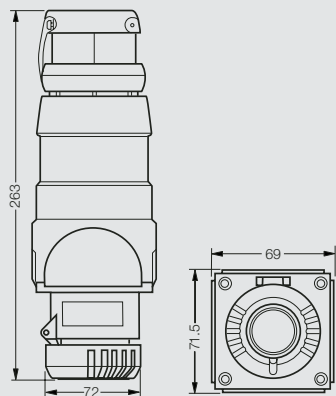
Fixing material and accessories see page 5.62 pp.



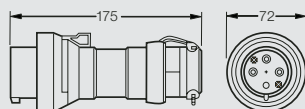
Wall socket



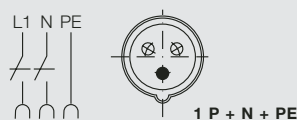
Flange socket



Coupler



Plug



1 P + N + PE

Dimensions in mm



Crouse-Hinds

COOPER CROUSE-HINDS GMBH

5.31



Wall socket

Flange socket

Coupler

Plug

5.32

EX - PLUGS AND SOCKETS

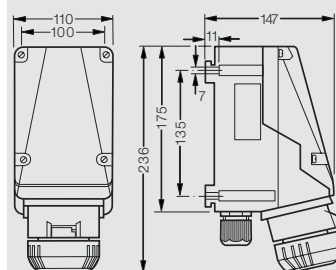
16A 4-pole up to 690 V | 16A 5-pole up to 500 V |

Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2

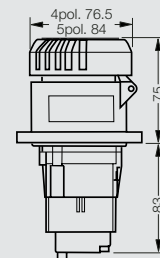
Marking to 94/9/EC	Ex II 3 G Ex II 3 D T60 °C
Type of protection	EEx nC IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	4-pole to 750 V~ 5-pole to 500 V~
Rated current	up to 16 A
Frequency	50/60 Hz
Switching capacity AC-3	up to 400 V~/16 A
Back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gL (rated current 16 A set to)
Cable entries	Wall socket: 1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-screw plug plastic or 2 x metal thread M20 with Ex-screw plug plastic Plug and coupler: 4-pole: Ø 8 - 21 mm 5-pole: Ø 12 - 21 mm
Connecting terminals	Wall socket/coupler: 2 x 1.5 - 4 mm ² Plug: 1 x 1.0 - 2.5 mm ²

4/5pole

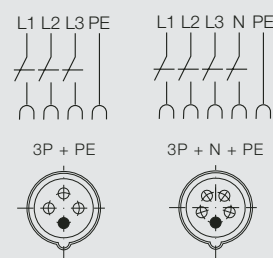


Wall socket

4/5pole



Flange socket



Dimensions in mm



Plug

Coupler

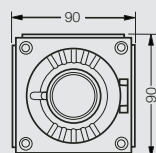
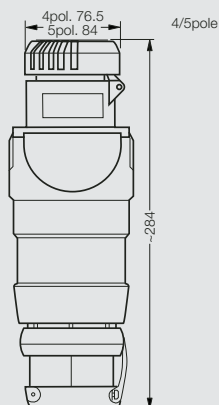
Flange socket

Wall socket

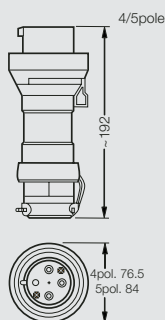
EX - PLUGS AND SOCKETS

16 A 4-pole up to 690 V | 16 A 5-pole up to 500 V |

5.33



Coupler




Plug

Ordering details type 16 A 4-pole

Voltage	h	Type	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	KU	1.8 kg	GHG 516 4409 R0001
		Wall socket	ME	1.9 kg	GHG 516 4409 R3001
		Flange socket		1.0 kg	GHG 516 8409 R0001
		Coupler		1.7 kg	GHG 516 3409 R0001
		Plug		0.7 kg	GHG 516 7409 R0001
380-415 V		Wall socket	KU	1.8 kg	GHG 516 4406 R0001
		Wall socket	ME	1.9 kg	GHG 516 4406 R3001
		Flange socket		1.0 kg	GHG 516 8406 R0001
		Coupler		1.7 kg	GHG 516 3406 R0001
		Plug		0.7 kg	GHG 516 7406 R0001
480-500 V		Wall socket	KU	1.8 kg	GHG 516 4407 R0001
		Wall socket	ME	1.9 kg	GHG 516 4407 R3001
		Flange socket		1.0 kg	GHG 516 8407 R0001
		Coupler		1.7 kg	GHG 516 3407 R0001
		Plug		0.7 kg	GHG 516 7407 R0001
600-690 V		Wall socket	KU	1.8 kg	GHG 516 4405 R0001
		Wall socket	ME	1.9 kg	GHG 516 4405 R3001
		Flange socket		1.0 kg	GHG 516 8405 R0001
		Coupler		1.7 kg	GHG 516 3405 R0001
		Plug		0.7 kg	GHG 516 7405 R0001

Ordering details type 16 A 5-pole

Voltage	h	Type	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	KU	1.8 kg	GHG 516 4506 R0001
380-415 V		Wall socket	ME	1.9 kg	GHG 516 4506 R3001
		Flange socket		1.0 kg	GHG 516 8506 R0001
		Coupler		1.7 kg	GHG 516 3506 R0001
		9 Plug		0.7 kg	GHG 516 7506 R0001

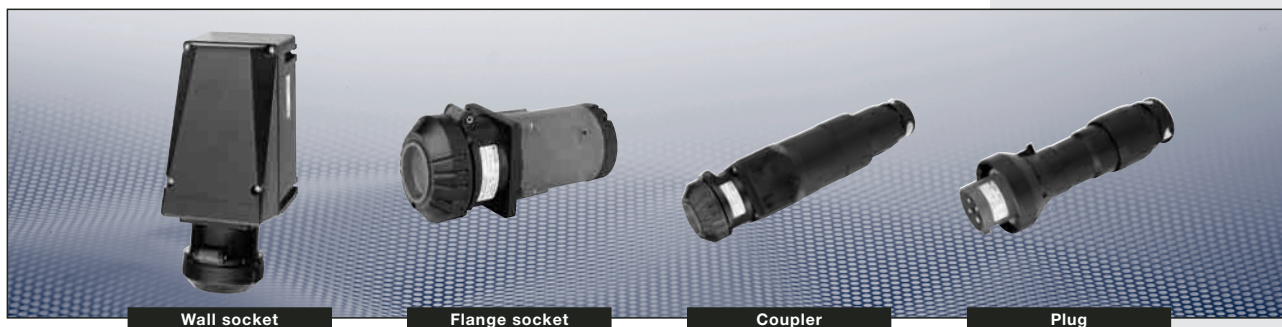
Other voltage ranges and versions for example with auxiliary contact available on request

KU = 1 x plastic cable glands M25 Ø 8-17 mm, 1 x M25 Ex-screw plug plastic

ME = 2 x metal thread M20 with Ex-screw plug plastic

with auxiliary contact on request

Fixing material and accessories see page 5.62 pp.



5.34

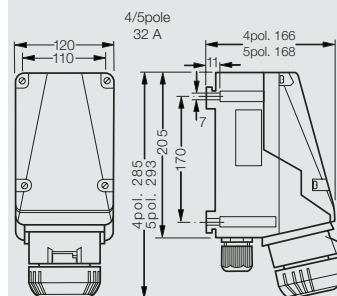
EX - PLUGS AND SOCKETS

32A 4-pole up to 690 V | 32A 5-pole up to 690 V |

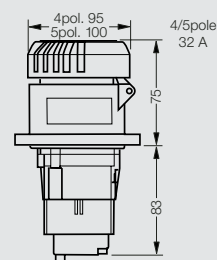
Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2

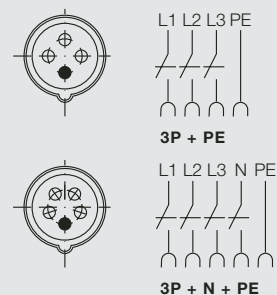
Marking to 94/9/EC	Ex II 3 G Ex II 3 D T60 °C
Type of protection	EEx nC IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	4-pole to 690 V~ 5-pole to 690 V~
Rated current	up to 32 A
Frequency	50/60 Hz
Switching capacity AC 3	690 V~/32 A
Back-up fuse, max.	without therm. protection: 35 A with therm. protection: 50 A gL (rated current 32 A set to)
Cable entries	Wall socket: 1 x M40 Ø 17 - 28 mm, 1 x M40 Ex-screw plug plastic or 2 x metal thread M32 with Ex-screw plug plastic Plug and coupler: Ø17 - 28 mm
Connecting terminals	Wall socket/coupler: 2 x 4 - 10 mm² Plug: 1 x 1 - 6 mm²



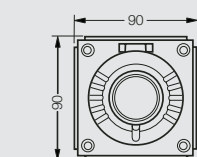
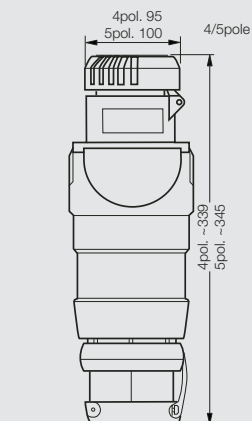
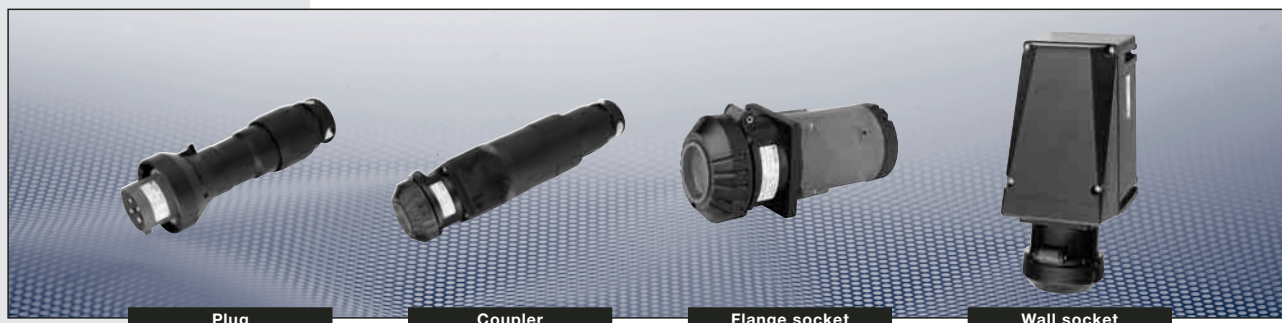
Wall socket



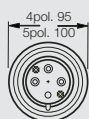
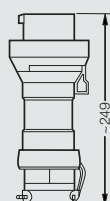
Flange socket



Dimensions in mm



Coupler



Plug

EX - P L U G S A N D S O C K E T S


| 32A 4-pole up to 690 V | 32A 5-pole up to 690 V |

5.35

Ordering details type 32 A 4-pole

Voltage	h	Type	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	KU	1.8 kg	GHG 517 4409 R0001
		Wall socket	ME	1.9 kg	GHG 517 4409 R3001
		Flange socket		1.0 kg	GHG 517 8409 R0001
		Coupler		1.7 kg	GHG 517 3409 R0001
		Plug		0.7 kg	GHG 517 7409 R0001
380-415 V		Wall socket	KU	1.8 kg	GHG 517 4406 R0001
		Wall socket	ME	1.9 kg	GHG 517 4406 R3001
		Flange socket		1.0 kg	GHG 517 8406 R0001
		Coupler		1.7 kg	GHG 517 3406 R0001
		Plug		0.7 kg	GHG 517 7406 R0001
480-500 V		Wall socket	KU	1.8 kg	GHG 517 4407 R0001
		Wall socket	ME	1.9 kg	GHG 517 4407 R3001
		Flange socket		1.0 kg	GHG 517 8407 R0001
		Coupler		1.7 kg	GHG 517 3407 R0001
		Plug		0.7 kg	GHG 517 7407 R0001
600-690 V		Wall socket	KU	1.8 kg	GHG 517 4405 R0001
		Wall socket	ME	1.9 kg	GHG 517 4405 R3001
		Flange socket		1.0 kg	GHG 517 8405 R0001
		Coupler		1.7 kg	GHG 517 3405 R0001
		Plug		0.7 kg	GHG 517 7405 R0001

Ordering details type 32 A 5-pole

Voltage	h	Type	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	KU	1.8 kg	GHG 517 4506 R0001
380-415 V		Wall socket	ME	1.9 kg	GHG 517 4506 R3001
		Flange socket		1.0 kg	GHG 517 8506 R0001
		Coupler		1.7 kg	GHG 517 3506 R0001
		6 Plug		0.7 kg	GHG 517 7506 R0001

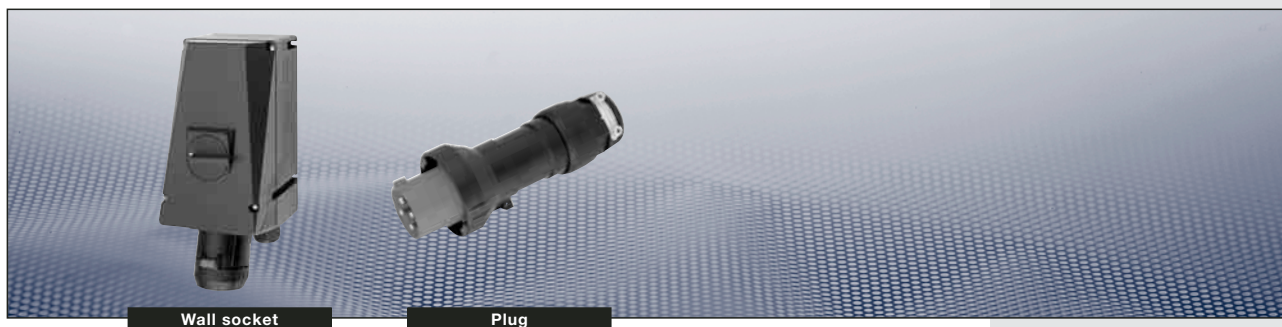
Other voltage ranges and versions for example with auxiiary contact available on request

KU = 1 x plastic cable glands M40 Ø 16-28 mm, 1 x M40 Ex-screw plug plastic

ME = 2 x metal thread M32 with Ex-screw plug plastic

with auxiliary contact on request

Fixing material and accessories see page 5.62 pp.



Wall socket

Plug

5.36

EX - PLUGS AND SOCKETS

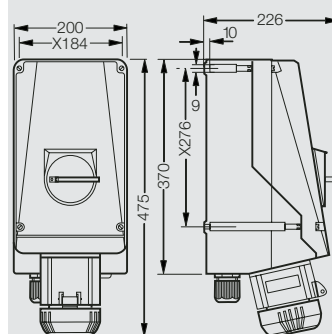
63A 4-pole up to 690 V | 63A 5-pole up to 690 V |

Technical data

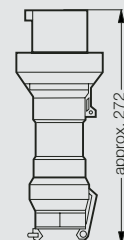
Ex-plugs and sockets accd. to IEC 60309-1/2 up to 690 V

Marking to 94/9/EC	Ex II 3 G Ex II 3 D T60 °C
Type of protection	EEx nC IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug: polyamide
Rated voltage	up to 690 V~
Rated current	up to 63 A
Frequency	50/60 Hz
Switching capacity AC-3	690 V/63 A
Back-up fuse, max.	without therm. protection: 63 A with therm. protection: 80 A (rated current 63 A set to)
Cable entries	Wall socket: 1 x M50 Ø 22 - 35 mm, 1 x M50 Ex-screw plug plastic or 2 x metal thread M40 with Ex-screw plug plastic Plug: Ø 19 - 34 mm
Connecting terminals	Wall socket: 2 x 4- 25 mm² with cable lug ¹⁾ 1 x 35 mm² Plug: 1 x 4 -16 mm²

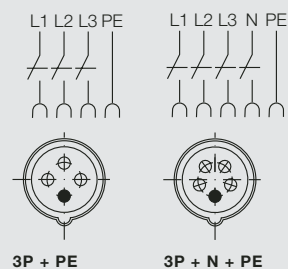
¹⁾ use delivered cable lugs



Wall socket

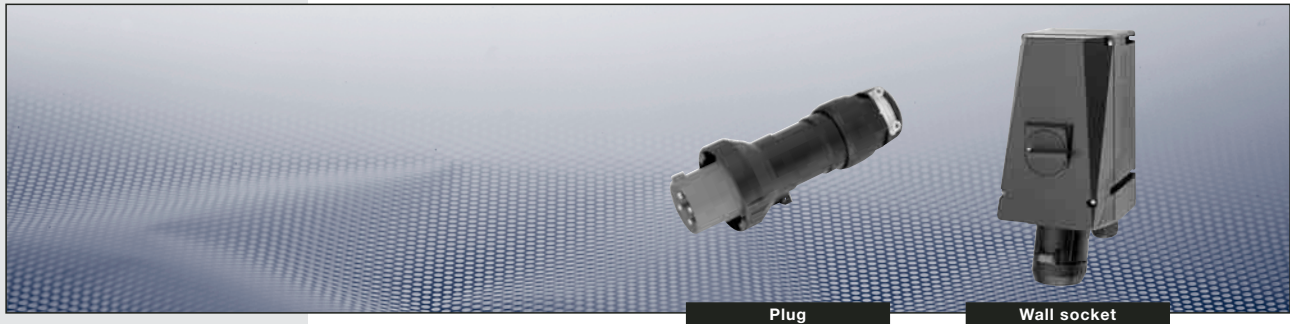


Plug



3P + PE



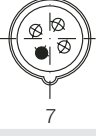

3P + N + PE




EX - PLUGS AND SOCKETS

63A 4-pole up to 690 V

63A 5-pole up to 690 V

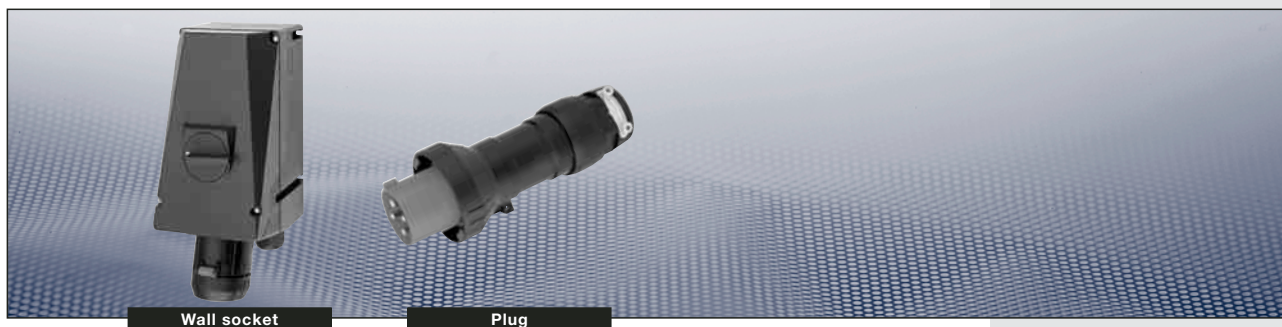
Ordering details type 63 A 4-pole					
Voltage	h	Type	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	KU	8.1 kg	GHG 518 4409 R0001
		Wall socket	ME	8.2 kg	GHG 518 4409 R3001
		Plug		0.75 kg	GHG 518 7409 R0001
380-415 V		Wall socket	KU	8.1 kg	GHG 518 4406 R0001
		Wall socket	ME	8.2 kg	GHG 518 4406 R3001
		Plug		0.75 kg	GHG 518 7406 R0001
480-500 V		Wall socket	KU	8.1 kg	GHG 518 4407 R0001
		Wall socket	ME	8.2 kg	GHG 518 4407 R3001
		Plug		0.75 kg	GHG 518 7407 R0001
600-690 V		Wall socket	KU	8.1 kg	GHG 518 4405 R0001
		Wall socket	ME	8.2 kg	GHG 518 4405 R3001
		Plug		0.75 kg	GHG 518 7405 R0001

Ordering details type 63 A 5-pole					
Voltage	h	Type	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	KU	8.15 kg	GHG 518 4506 R0001
380-415 V		Wall socket	ME	8.25 kg	GHG 518 4506 R3001
		Plug		0.75 kg	GHG 518 7506 R0001

Other voltage ranges and versions for example with auxiiary contact available on request

KU = 1 x plastic cable glands M50 Ø 21-35 mm, 1 x M50 Ex-screw plug plastic
 ME = 2 x metal thread with M40 with Ex-screw plug plastic
 with auxiiary contact on request

Fixing material and accessories see page 5.62 pp.



Wall socket

Plug

EX - PLUGS AND SOCKETS

5.38

125A 4-pole up to 690 V | 125A 5-pole up to 690 V |

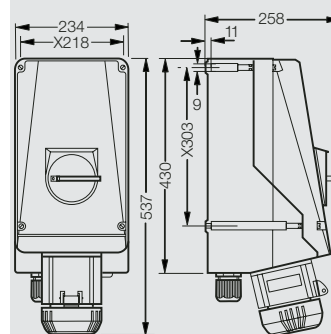
Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2 to 690 V

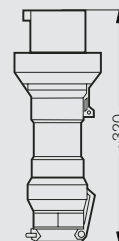
Marking to 94/9/EC	Ex II 3 G Ex II 3 D*
Type of protection	EEx de IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug: polyamide
Rated voltage	up to 690 V~
Rated current	up to 125 A
Frequency	50/60 Hz
Switching capacity AC-3	690 V/125 A
Back-up fuse, max.	without therm. protection: 125 A with therm. protection: 160 A (rated current 125 A set to)
Cable entries	Wall socket: 1 x M63 Ø 27 - 48 mm, 1 x M63 Ex-screw plug plastic or 1 x M50 Ø 21 - 35 mm, 1 x M50 Ex-screw plug plastic Plug: Ø 31 - 58 mm
Connecting terminals	Wall socket: 2 x 4 - 70 mm ² with cable lug ¹⁾ 1 x 120 mm ² Plug: 1 x 4 - 35 mm ² with pin cable lug 1 x 50 mm ²

¹⁾ use delivered cable lugs

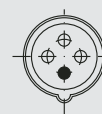
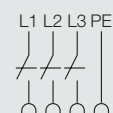
* II 3 D applied for



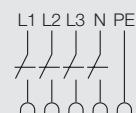
Wall socket



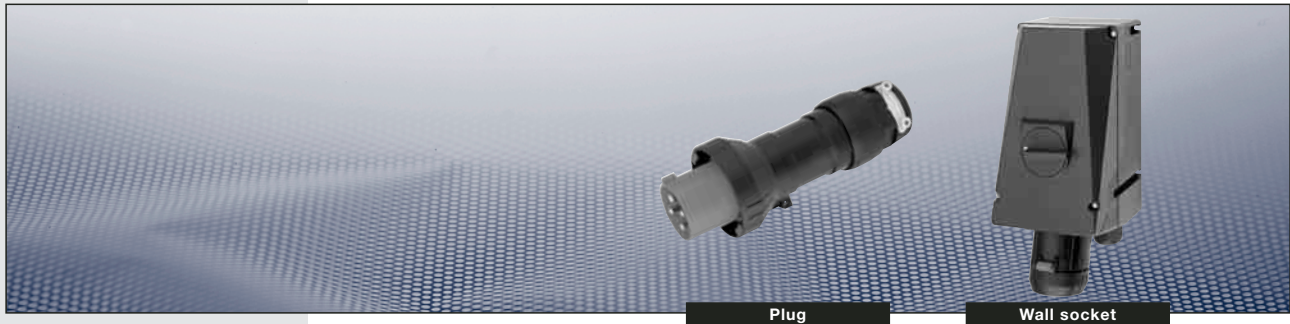
Plug



3P + PE





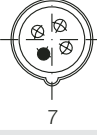

3P + N + PE




EX - PLUGS AND SOCKETS

125A 4-pole up to 690 V

125A 5-pole up to 690 V

Ordering details type 125 A 4-pole					
Voltage	h	Type	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	KU	12.3 kg	GHG 519 4409 R0001
		Wall socket	ME	12.5 kg	GHG 519 4409 R3001
		Plug		0.9 kg	GHG 519 7409 R0001
9					
380-415 V		Wall socket	KU	12.3 kg	GHG 519 4406 R0001
		Wall socket	ME	12.5 kg	GHG 519 4406 R3001
		Plug		0.9 kg	GHG 519 7406 R0001
6					
480-500 V		Wall socket	KU	12.3 kg	GHG 519 4407 R0001
		Wall socket	ME	12.5 kg	GHG 519 4407 R3001
		Plug		0.9 kg	GHG 519 7407 R0001
7					
600-690 V		Wall socket	KU	12.3 kg	GHG 519 4405 R0001
		Wall socket	ME	12.5 kg	GHG 519 4405 R3001
		Plug		0.9 kg	GHG 519 7405 R0001
5					

Ordering details type 125 A 5-pole					
Voltage	h	Type	Cable entry	Weight approx.	Order No.
200-250 V		Wall socket	KU	13 kg	GHG 519 4506 R0001
380-415 V		Wall socket	ME	13.2 kg	GHG 519 4506 R3001
		Plug		1.2 kg	GHG 519 7506 R0001
6					

Other voltage ranges and versions for example with auxiiary contact available on request

KU = 1 x plastic cable glands M63 Ø 27 - 48 mm, 1 x M63 with Ex-screw plug plastic
 ME = 1 x plastic cable glands M50 Ø 21 - 35 mm, 1 x M50 Ex-screw plug plastic
 with auxiiary contact on request

Accessories see page 5.62 pp.

PLUGS AND SOCKETS - INDUSTRY

16 A up to 125 A
Plastic version for industrial use

Not explosion-protected, but in CEAG quality

CEAG plugs and sockets are not only robust, they are also very reliable. In the "normal" industrial environment plugs and sockets are exposed to similar conditions (chemical and mechanical) as their explosion-protected counterparts. With the introduction of the new plug and socket generation Cooper Crouse-Hinds GmbH has now a complete program for industrial usage. The wall sockets can simply be clipped-on onto pre-installed mounting plates without having to use tools. These high quality plugs and sockets warrant even in harsh industrial environments a safe and reliable utilization. The long years of experience in the explosion-protection field has naturally contributed to this new plug and socket generation.

Plugs and sockets of the 16 A to 125 A range fulfil (even when they are plugged-in) the high safety standard of IP 66 and have as standard the maintenance-free and proven lamellar contacts. The variable cable entries in connection with the generously dimensioned connection terminals allow for an economical use.

Apart from the IEC 60309 Series I coded versions we also have coded versions of the Series II especially for the US market.

International approvals

**Safety standard IP 66 applies also
in the plugged-in state**

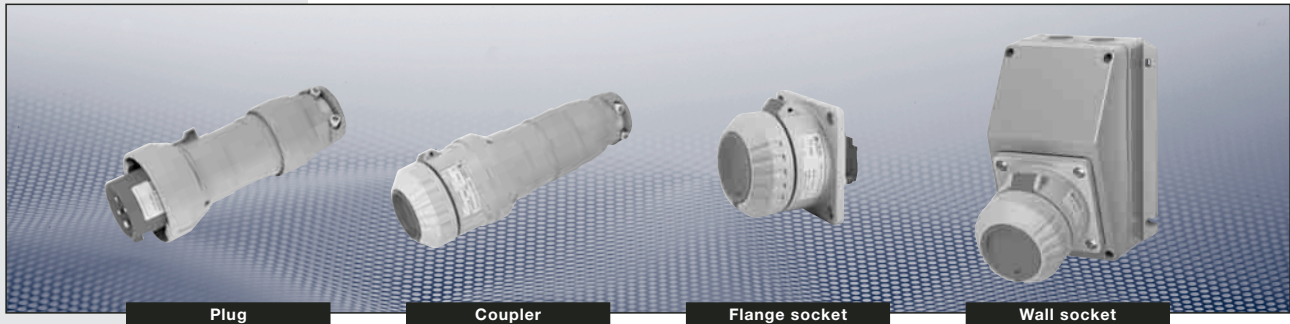
**Self-cleaning lamellar contacts,
low transition resistance**

Fibre-glass reinforced

Polyester housings

Easy plugging





Plug

Coupler

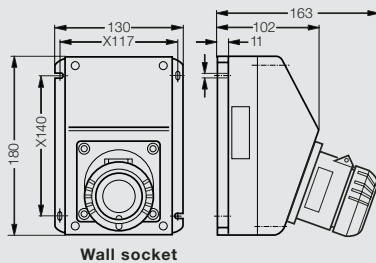
Flange socket

Wall socket

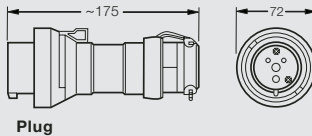
PLUGS AND SOCKETS - INDUSTRY

16A 3-pole up to 415 V

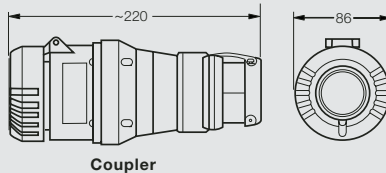
5.41



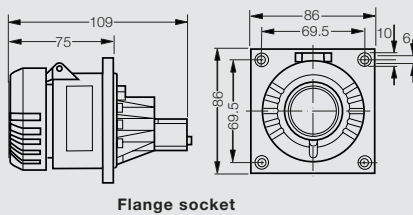
Wall socket



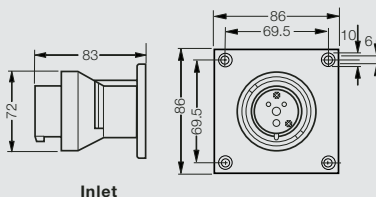
Plug



Coupler



Flange socket



Inlet

Technical data

Plugs and sockets - Industry accd. to IEC 60309-1/2 up to 690 V

Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 415 V~
Rated current	up to 16 A
Frequency	50/60 Hz
Switching capacity AC-23	
for wall socket with switch	500 V/20 A
Back-up fuse, max.	without therm. protection: 16 A
Cable entry	Wall socket with switch: 1 x M25 Ø 8 - 17 mm, 1 x M25 thread plug plastic Plug: 8-19 mm

Ordering details type 16 A 3-pole

Voltage	h	Type	Weight approx.	Order No.
110-130 V		Wall socket	0.8 kg	GHG 521 2304 R0001
		Plug	0.32 kg	GHG 521 7304 R0001
		Coupler	0.5 kg	GHG 521 3304 R0001
		Flange socket	0.37 kg	GHG 521 8304 R0001
		Inlet	0.26 kg	GHG 521 9304 R0001
200-250 V		Wall socket	0.8 kg	GHG 521 2306 R0001
		Plug	0.32 kg	GHG 521 7306 R0001
		Coupler	0.5 kg	GHG 521 3306 R0001
		Flange socket	0.37 kg	GHG 521 8306 R0001
		Inlet	0.26 kg	GHG 521 9306 R0001

Other voltage ranges and versions available on request.

Fixing material and accessories see page 5.62 pp.

Dimensions in mm



COOPER Crouse-Hinds

COOPER CROUSE-HINDS GMBH

5.41

1

2

3

4

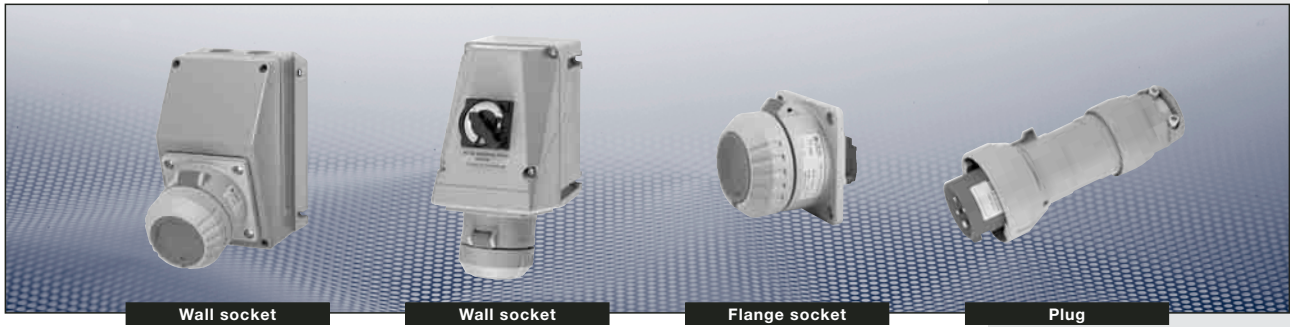
5

6

7

8

9



PLUGS AND SOCKETS - INDUSTRY





16 A 4-pole up to 690 V

Technical data

Plugs and sockets - Industry accd. to IEC 60309-1/2

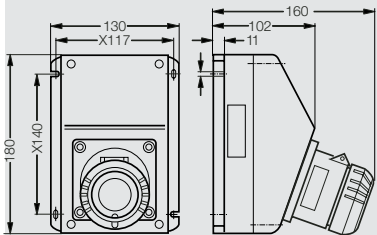
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 690 V~
Rated current	up to 16 A
Frequency	50/60 Hz
Switching capacity AC-23 for wall socket with switch	500 V/20 A
Back-up fuse, max.	without therm. protection: 16 A
Cable entry	Wall socket with switch: 1 x M25 Ø 8 - 17 mm, 1 x M25 thread plug plastic Plug and coupler: 8 - 21 mm

Ordering details type 16 A 4-pole

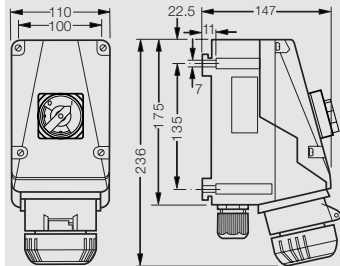
Voltage	h	Type	Weight approx.	Order No.
200-250 V		Wall socket	0.85 kg	GHG 521 2409 R0001
		Wall socket with switch	1.60 kg	GHG 521 4409 R0001
		Plug	0.39 kg	GHG 521 7409 R0001
		Coupler	0.65 kg	GHG 521 3409 R0001
		Flange socket	0.42 kg	GHG 521 8409 R0001
		Inlet	0.31 kg	GHG 521 9409 R0001
380-415 V		Wall socket	0.85 kg	GHG 521 2406 R0001
		Wall socket with switch	1.60 kg	GHG 521 4406 R0001
		Plug	0.39 kg	GHG 521 7406 R0001
		Coupler	0.65 kg	GHG 521 3406 R0001
		Flange socket	0.42 kg	GHG 521 8406 R0001
		Inlet	0.31 kg	GHG 521 9406 R0001
480-500 V		Wall socket	0.85 kg	GHG 521 2407 R0001
		Wall socket with switch	1.60 kg	GHG 521 4407 R0001
		Plug	0.39 kg	GHG 521 7407 R0001
		Coupler	0.65 kg	GHG 521 3407 R0001
		Flange socket	0.42 kg	GHG 521 8407 R0001
		Inlet	0.31 kg	GHG 521 9407 R0001
600-690 V		Wall socket	0.85 kg	GHG 521 2405 R0001
		Wall socket with switch	1.60 kg	GHG 521 4405 R0001
		Plug	0.39 kg	GHG 521 7405 R0001
		Coupler	0.65 kg	GHG 521 3405 R0001
		Flange socket	0.42 kg	GHG 521 8405 R0001
		Inlet	0.31 kg	GHG 521 9405 R0001

Other voltage ranges and versions available on request.

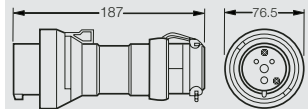
Fixing material and accessories see page 5.62 pp.



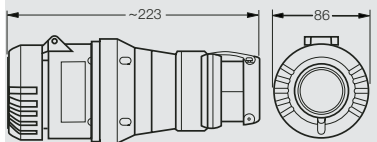
Wall socket without switch



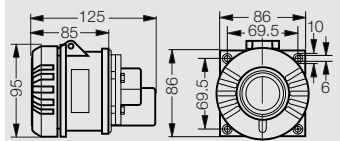
Wall socket with switch



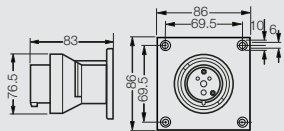
Plug



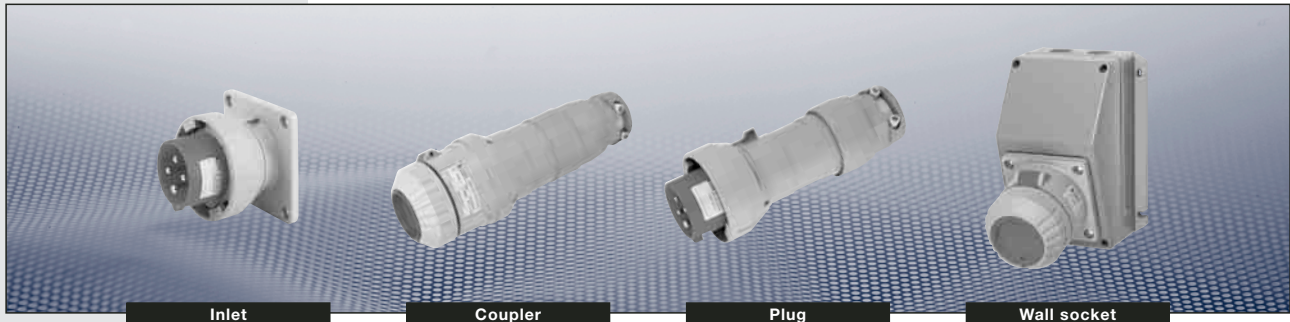
Coupler



Flange socket



Inlet



Inlet

Coupler

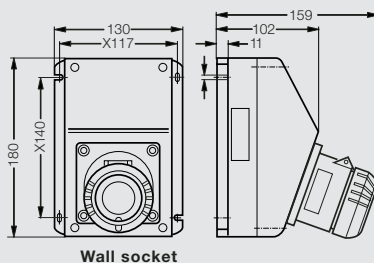
Plug

Wall socket

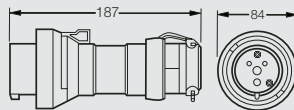
PLUGS AND SOCKETS - INDUSTRY

16 A 5-pole up to 690 V

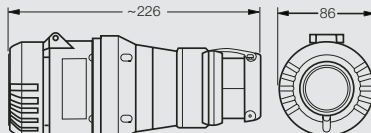
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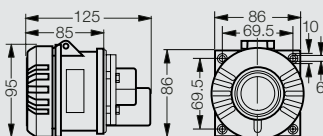
Wall socket



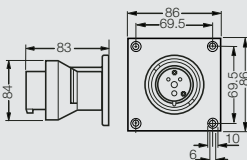
Plug



Coupler



Flange socket



Inlet

Technical data

Plugs and sockets - Industry accd. to IEC 60309-1/2

Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 690 V~
Rated current	up to 16 A
Frequency	50/60 Hz
Switching capacity AC-23 for wall socket with switch	500 V/20 A
Back-up fuse, max.	without therm. protection: 16 A
Cable entry	Wall socket with switch: 1 x M25, 1 x M25 thread plug plastic Plug and coupler: 12 - 21 mm

Ordering details type 16 A 5-pole

Voltage	h	Type	Weight approx.	Order No.
200-250 V		Wall socket	0.90 kg	GHG 521 2506 R0001
380-415 V		Wall socket with switch	1.65 kg	GHG 521 4506 R0001
		Plug	0.42 kg	GHG 521 7506 R0001
		Coupler	0.75 kg	GHG 521 3506 R0001
		Flange socket	0.47 kg	GHG 521 8506 R0001
		Inlet	0.34 kg	GHG 521 9506 R0001

Other voltage ranges and versions available on request.

Fixing material and accessories see page 5.62 pp.

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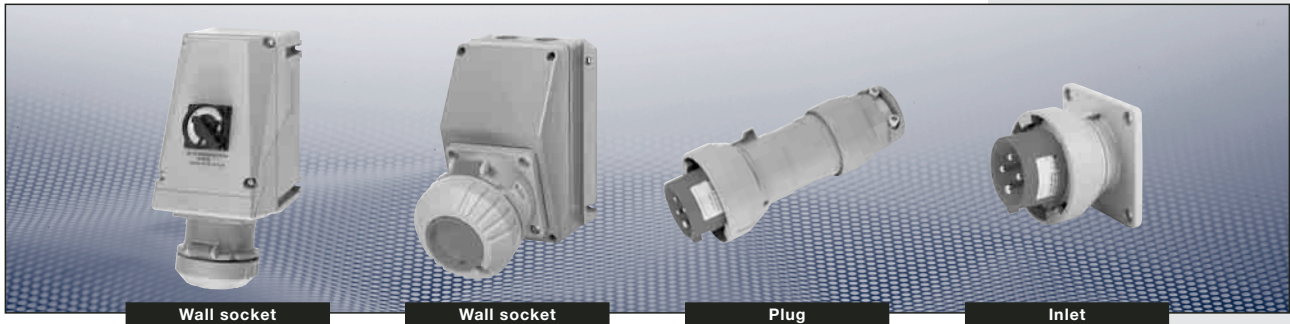
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PLUGS AND SOCKETS - INDUSTRY

32 A 4-pole up to 690 V

Technical data

Plugs and sockets - Industry accd. to IEC 60309-1/2

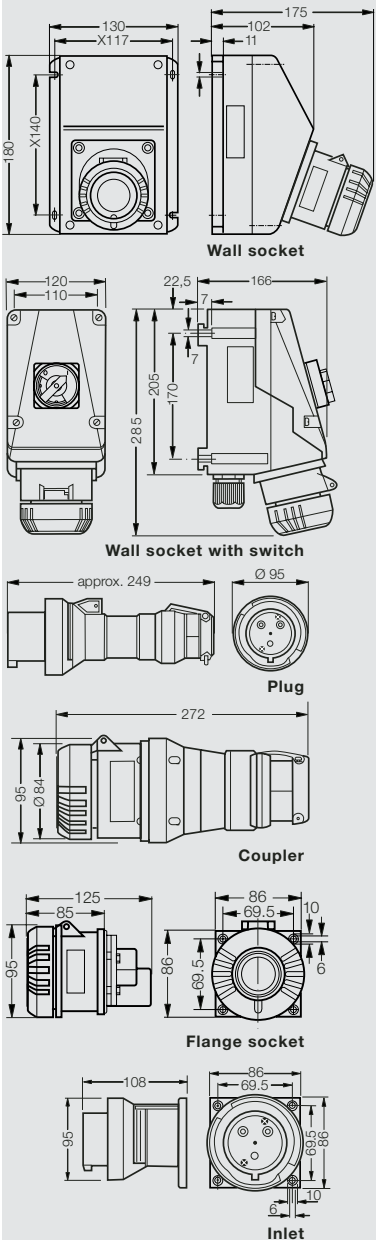
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 690 V~
Rated current	up to 32 A
Frequency	50/60 Hz
Switching capacity AC-23 for wall socket with switch	500 V/23 A
Back-up fuse, max.	without therm. protection: 32 A
Cable entry	Wall socket with switch: 1 x M40 Ø 17 - 28 mm, 1 x M40 thread plug plastic Plug and coupler: 17 - 28 mm

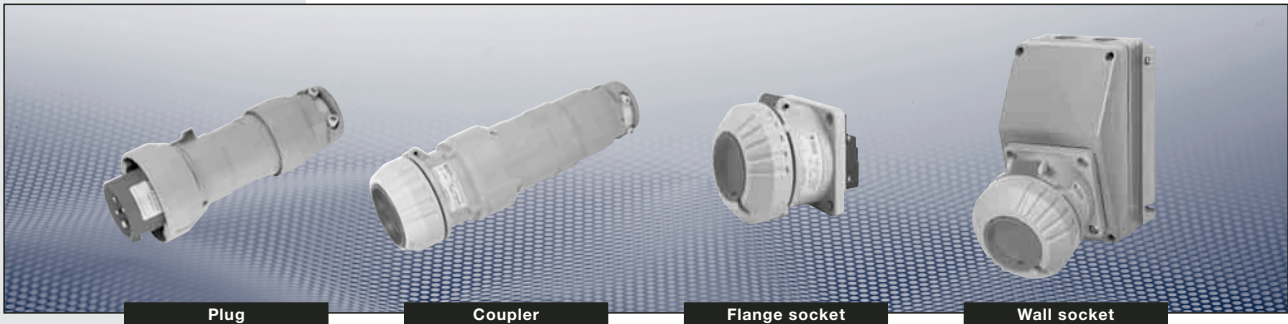
Ordering details type 16 A 4-pole

Voltage	h	Type	Weight approx.	Order No.
200-250 V		Wall socket	1.0 kg	GHG 522 2409 R0001
		Wall socket with switch	2.15 kg	GHG 522 4409 R0001
		Plug	0.6 kg	GHG 522 7409 R0001
		Coupler	1.5 kg	GHG 522 3409 R0001
		Flange socket	0.5 kg	GHG 522 8409 R0001
		Inlet	0.32 kg	GHG 522 9409 R0001
380-415 V		Wall socket	1.0 kg	GHG 522 2406 R0001
		Wall socket with switch	2.15 kg	GHG 522 4406 R0001
		Plug	0.6 kg	GHG 522 7406 R0001
		Coupler	1.5 kg	GHG 522 3406 R0001
		Flange socket	0.5 kg	GHG 522 8406 R0001
		Inlet	0.32 kg	GHG 522 9406 R0001
480-500 V		Wall socket	1.0 kg	GHG 522 2407 R0001
		Wall socket with switch	2.15 kg	GHG 522 4407 R0001
		Plug	0.6 kg	GHG 522 7407 R0001
		Coupler	1.5 kg	GHG 522 3407 R0001
		Flange socket	0.5 kg	GHG 522 8407 R0001
		Inlet	0.32 kg	GHG 522 9407 R0001
600-690 V		Wall socket	1.0 kg	GHG 522 2405 R0001
		Wall socket with switch	2.15 kg	GHG 522 4405 R0001
		Plug	0.6 kg	GHG 522 7405 R0001
		Coupler	1.5 kg	GHG 522 3405 R0001
		Flange socket	0.5 kg	GHG 522 8405 R0001
		Inlet	0.32 kg	GHG 522 9405 R0001

Other voltage ranges and versions available on request.

Fixing material and accessories see page 5.62 pp.





Plug

Coupler

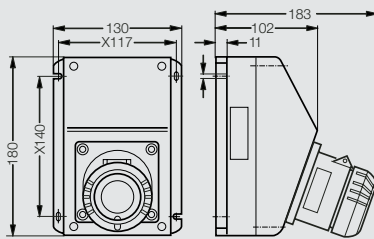
Flange socket

Wall socket

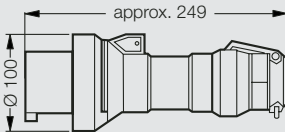
PLUGS AND SOCKETS - INDUSTRY

32A 5-pole up to 690 V

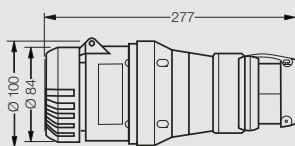
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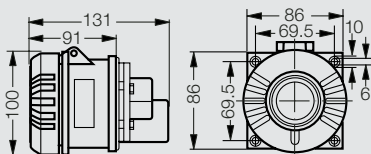
Wall socket



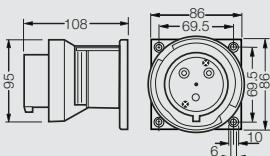
Plug



Coupler



Flange socket



Inlet

Technical data

Plugs and sockets - Industry accd. to IEC 60309-1/2

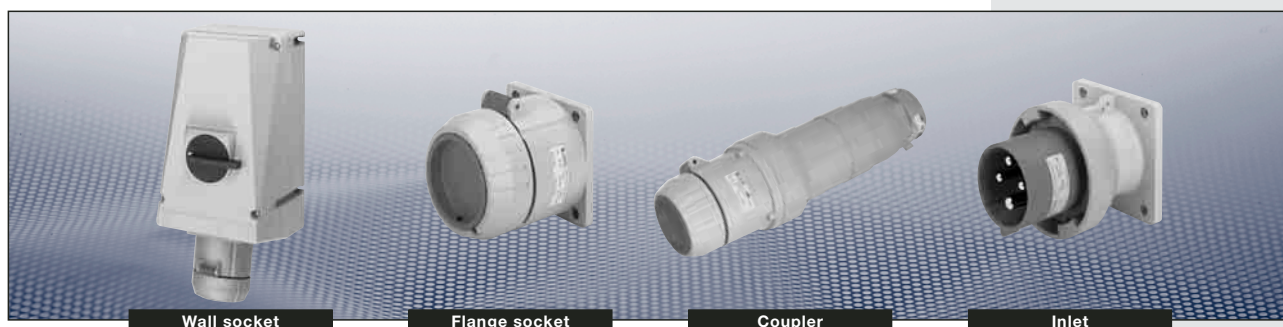
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 690 V~
Rated current	up to 32 A
Frequency	50/60 Hz
Switching capacity AC-23	
for wall socket with switch	500 V/23 A
Back-up fuse, max.	without therm. protection: 32 A
Cable entry	Wall socket with switch: 1 x M40 Ø 17 - 28 mm, 1 x M40 thread plug plastic Plug and coupler: 17 - 28 mm

Ordering details type 16 A 5-pole

Voltage	h	Type	Weight approx.	Order No.
200-250 V		Wall socket	1.1 kg	GHG 522 2506 R0001
380-415 V		Wall socket with switch	2.25 kg	GHG 522 4506 R0001
		Plug	0.65 kg	GHG 522 7506 R0001
		Coupler	1.6 kg	GHG 522 3506 R0001
		Flange socket	0.51 kg	GHG 522 8506 R0001
	6	Inlet	0.33 kg	GHG 522 9506 R0001

Other voltage ranges and versions available on request.

Fixing material and accessories see page 5.62 pp.



PLUGS AND SOCKETS - INDUSTRY

63A 4-pole up to 690 V

Technical data

Plugs and sockets - Industry accd. to IEC 60309-1/2

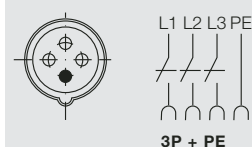
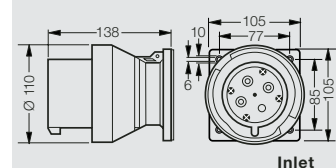
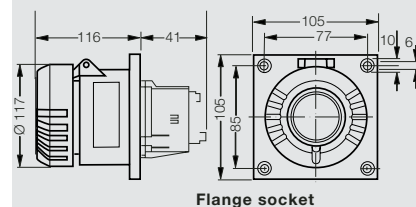
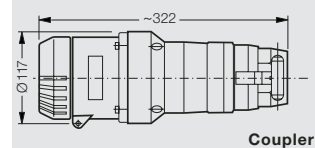
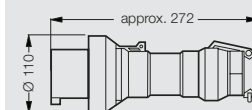
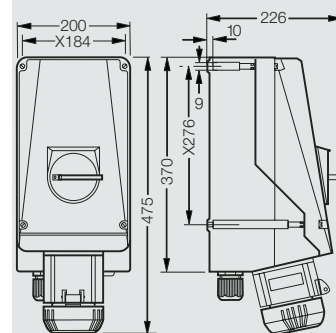
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 690 V~
Rated current	up to 63 A
Frequency	50/60 Hz
Switching capacity AC-23 for wall socket with switch	500 V/58 A
Back-up fuse, max.	without therm. protection: 63 A
Cable entry	Wall socket with switch: 1 x M50 Ø 22 - 35 mm, 1 x M50 thread plug plastic Plug and coupler: 19 - 34 mm

Ordering details type 63 A 4-pole

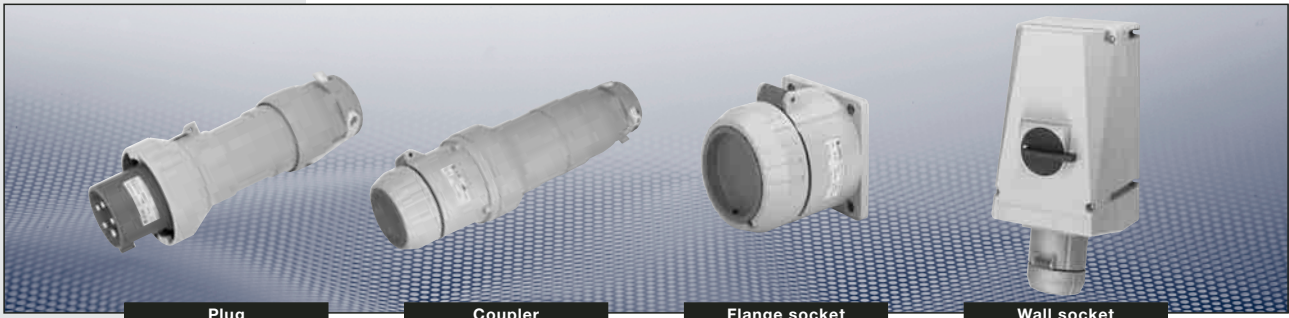
Voltage	h	Type	Weight approx.	Order No.
200-250 V		Wall socket with switch	5.5 kg	GHG 524 4409 R0001
		Plug	0.75 kg	GHG 524 7409 R0001
		Coupler	1.2 kg	GHG 524 3409 R0001
		Flange socket	1.3 kg	GHG 524 8409 R0001
		Inlet	0.9 kg	GHG 524 9409 R0001
380-415 V		Wall socket with switch	5.5 kg	GHG 524 4406 R0001
		Plug	0.75 kg	GHG 524 7406 R0001
		Coupler	1.2 kg	GHG 524 3406 R0001
		Flange socket	1.3 kg	GHG 524 8406 R0001
		Inlet	0.9 kg	GHG 524 9406 R0001
480-500 V		Wall socket with switch	5.5 kg	GHG 524 4407 R0001
		Plug	0.75 kg	GHG 524 7407 R0001
		Coupler	1.2 kg	GHG 524 3407 R0001
		Flange socket	1.3 kg	GHG 524 8407 R0001
		Inlet	0.9 kg	GHG 524 9407 R0001
600-690 V		Wall socket with switch	5.5 kg	GHG 524 4405 R0001
		Plug	0.75 kg	GHG 524 7405 R0001
		Coupler	1.2 kg	GHG 524 3405 R0001
		Flange socket	1.3 kg	GHG 524 8405 R0001
		Inlet	0.9 kg	GHG 524 9405 R0001

Other voltage ranges and versions available on request.

Fixing material and accessories see page 5.62 pp.



Dimensions in mm

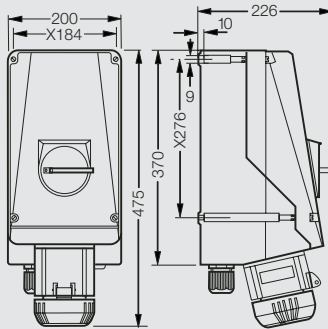


Plug

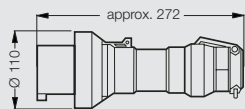
Coupler

Flange socket

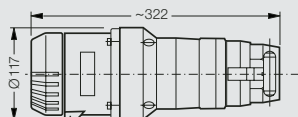
Wall socket



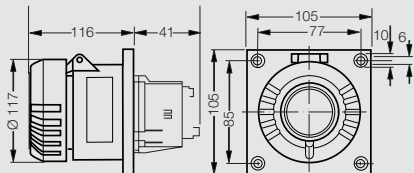
Wall socket



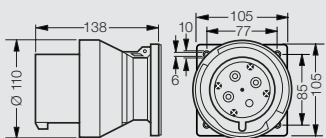
Plug



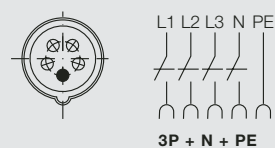
Coupler



Flange socket



Inlet



3P + N + PE

Dimensions in mm

PLUGS AND SOCKETS - INDUSTRY

63A 5-pole up to 690 V

5.47

Technical data

Plugs and sockets - Industry accd. to IEC 60309-1/2

Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 690 V~
Rated current	up to 63 A
Frequency	50/60 Hz
Switching capacity AC-23	
for wall socket with switch	500 V/58 A
Back-up fuse, max.	without therm. protection: 63 A
Cable entry	Wall socket with switch: 1 x M50 Ø 22 - 35 mm, 1 x M50 thread plug plastic Plug and coupler: 19 - 34 mm

Ordering details type 63 A 5-pole

Voltage	h	Type	Weight approx.	Order No.
200/380 V		Wall socket with switch	5.6 kg	GHG 524 4506 R0001
up to		Plug	0.8 kg	GHG 524 7506 R0001
250/415 V		Coupler	1.3 kg	GHG 524 3506 R0001
		Flange socket	1.4 kg	GHG 524 8506 R0001
		Inlet	1.0 kg	GHG 524 9506 R0001

Other voltage ranges and versions available on request.

Accessories see page 5.62 pp.

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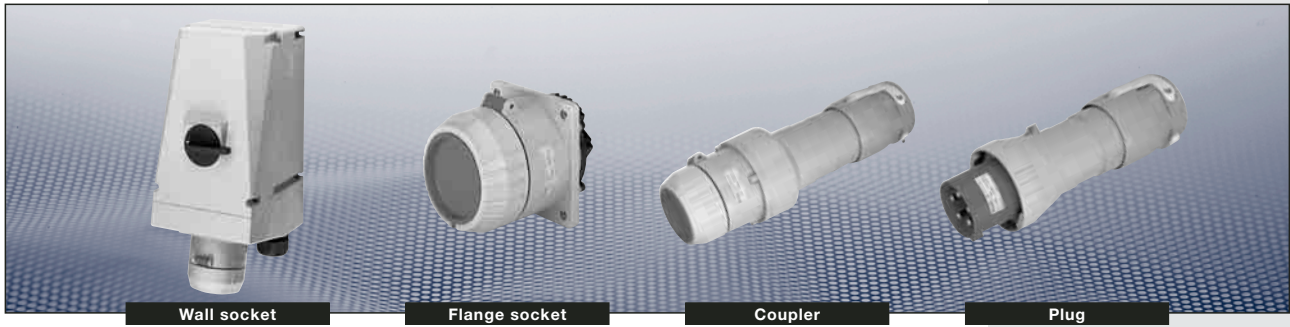
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PLUGS AND SOCKETS - INDUSTRY

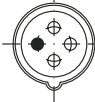



125A 4-pole up to 690 V

Technical data

Plugs and sockets - Industry accd. to IEC 60309-1/2

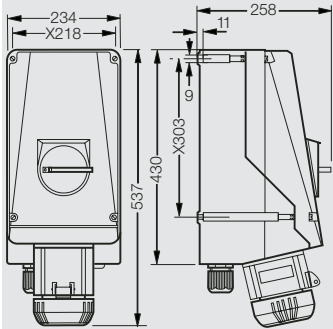
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 690 V~
Rated current	up to 125 A
Frequency	50/60 Hz
Switching capacity AC-23 for wall socket with switch	500 V/70 A
Back-up fuse, max.	without therm. protection: 125 A
Cable entry	Wall socket with switch: 1 x M63 Ø 27 - 48 mm, 1 x M63 thread plug plastic Plug and coupler: 31 - 58 mm

Ordering details type 125 A 4-pole

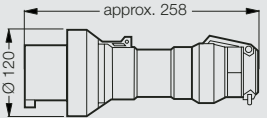
Voltage	h	Type	Weight approx.	Order No.
200-250 V		Wall socket with switch	8.6 kg	GHG 525 4409 R0001
		Plug	1.3 kg	GHG 525 7409 R0001
		Coupler	2.1 kg	GHG 525 3409 R0001
		Flange socket	1.4 kg	GHG 525 8409 R0001
		Inlet	0.9 kg	GHG 525 9409 R0001
380-415 V		Wall socket with switch	8.6 kg	GHG 525 4406 R0001
		Plug	1.3 kg	GHG 525 7406 R0001
		Coupler	2.1 kg	GHG 525 3406 R0001
		Flange socket	1.4 kg	GHG 525 8406 R0001
		Inlet	0.9 kg	GHG 525 9406 R0001
480-500 V		Wall socket with switch	8.6 kg	GHG 525 4407 R0001
		Plug	1.3 kg	GHG 525 7407 R0001
		Coupler	2.1 kg	GHG 525 3407 R0001
		Flange socket	1.4 kg	GHG 525 8407 R0001
		Inlet	0.9 kg	GHG 525 9407 R0001
600-690 V		Wall socket with switch	8.6 kg	GHG 525 4405 R0001
		Plug	1.3 kg	GHG 525 7405 R0001
		Coupler	2.1 kg	GHG 525 3405 R0001
		Flange socket	1.4 kg	GHG 525 8405 R0001
		Inlet	0.9 kg	GHG 525 9405 R0001

Other voltage ranges and versions available on request.

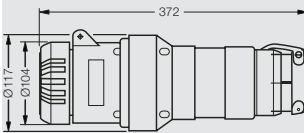
Accessories see page 5.62 pp.



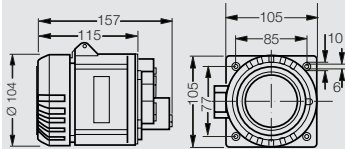
Wall socket



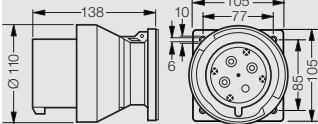
Plug



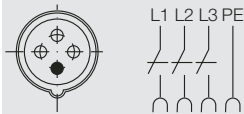
Coupler



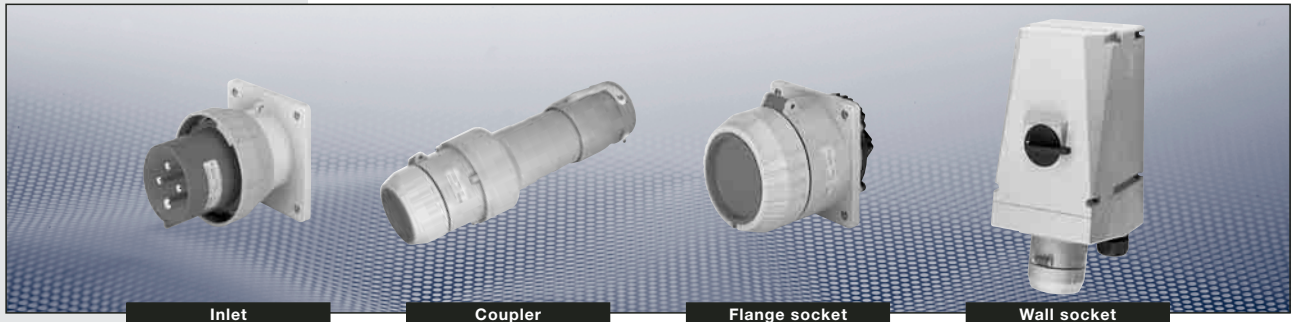
Flange socket



Inlet



3P + PE



Inlet

Coupler

Flange socket

Wall socket

PLUGS AND SOCKETS - INDUSTRY

125A 5-pole up to 690 V

5.49

Technical data

Plugs and sockets - Industry accd. to IEC 60309-1/2

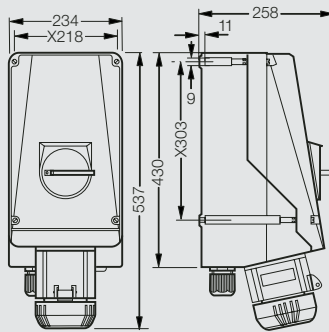
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 690 V~
Rated current	up to 125 A
Frequency	50/60 Hz
Switching capacity AC-23 for wall socket with switch	500 V/70 A
Back-up fuse, max.	without therm. protection: 125 A
Cable entry	Wall socket with switch: 1 x M63 Ø 27 - 48 mm, 1 x M63 thread plug plastic Plug and coupler: 31 - 58 mm

Ordering details type 125 A 5-pole

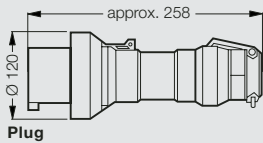
Voltage	h	Type	Weight approx.	Order No.
200-250 V		Wall socket with switch	8.8 kg	GHG 525 4506 R0001
380-415 V		Plug	1.4 kg	GHG 525 7506 R0001
		Coupler	2.2 kg	GHG 525 3506 R0001
		Flange socket	1.5 kg	GHG 525 8506 R0001
		Inlet	1.1 kg	GHG 525 9506 R0001

Other voltage ranges and versions available on request.

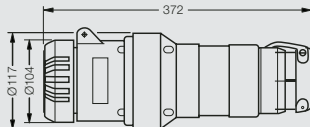
Accessories see page 5.62 pp.



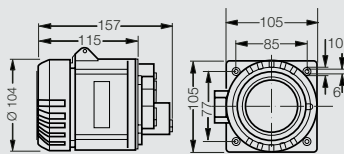
Wall socket



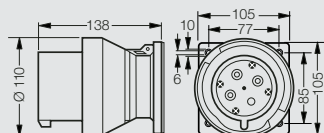
Plug



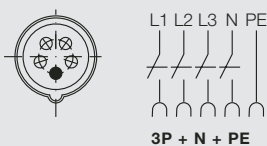
Coupler



Flange socket



Inlet



Dimensions in mm

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EX-REPAIR AND MAINTENANCE SOCKETS

16 A - 63 A
Plastic version for Zone 1

For maintenance, repair and upgrading work, appliances such as drills, welding transformers, hand grinders and such are needed but are not in accordance to the explosion-protection regulations.

To be able to use these appliances in the Zone 1, Zone 2, Zone 21 or Zone 22 explosion-protected areas a hot work permit has to be issued. For the duration of the repair or maintenance work, the environment has to be free of all explosive hazardous atmospheres.

The CEAG explosion-protected repair and maintenance sockets are in accordance to regulations that in parts require a stationary installation.

With the interlocking and lockable switch or the lockable cover the utilization of the repair and maintenance socket is selectively possible after a hot work permit has been issued.

The CEAG repair and maintenance sockets with and without an interlocking switch can be used with both industry and Ex-plugs. Interlocked repair and maintenance sockets have an internal switch who prevents that a plug can be pulled out while power is on. Repair and maintenance sockets without an interlocking switch have a red signal lamp on the top side of the housing showing the actual state of connection.

International approvals

Commercially available industrial apparatus can be used with a "hot work permit"
Sockets with lamellar contacts for a secure contact
Switch and/or socket cover are lockable
High mechanical, chemical and thermal stability

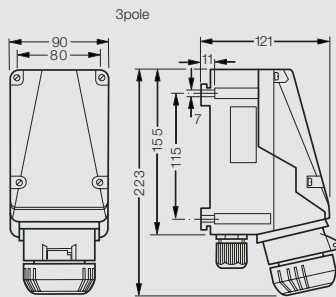




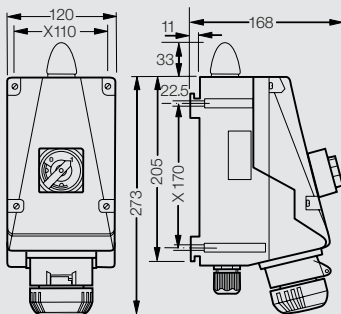
EX - REPAIR AND MAINTENANCE SOCKETS

| 16 A 3-pole up to 415 V |

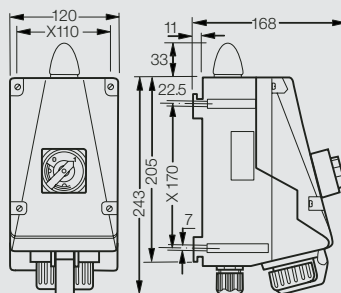
5.51



interlocked

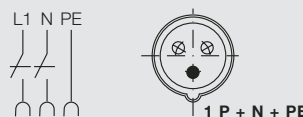


non-interlocked



non-interlocked

with earthing contact



Dimensions in mm

Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T60 °C*
Type of protection	EEx de IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 1032 X
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 415 V~
Rated current	16 A
Frequency	50/60 Hz
Switching capacity AC-3	up to 415 V~/16 A
Back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gL (rated current 16 A set to)
Cable entry	1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-thread plug plastic or 2 x metal thread M20 with Ex-thread plug plastic
Connecting terminals	2 x 1.5 - 4 mm², with cable lug 1 x 35 mm²

* only interlocked type

Ordering details type 16 A 3-pole, interlocked

Voltage	h	Type	Cable entry	Weight approx.	Order No.
200-250 V	6	Wall socket	KU	1.1 kg	GHG 511 4306 R0901
		Wall socket	ME	1.2 kg	GHG 511 4306 R3901
		Wall socket	GM	1.2 kg	GHG 511 4306 R3902

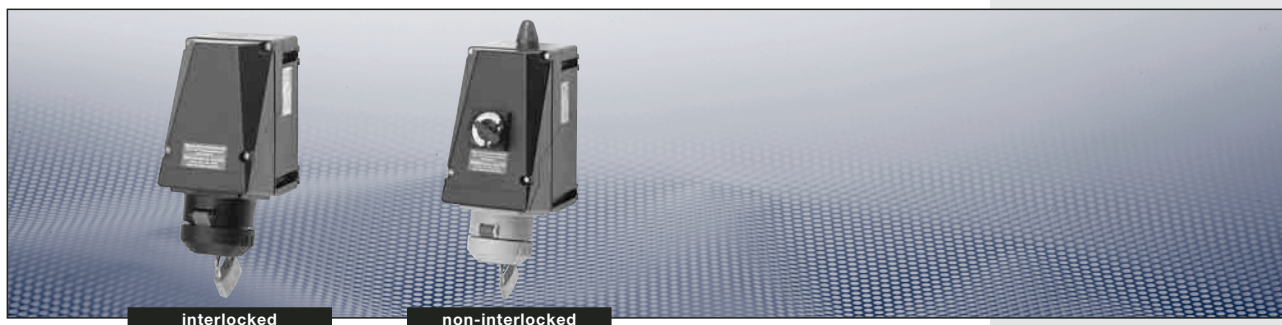
Ordering details type 16 A 3-pole, non-interlocked

Voltage	h	Type	Cable entry	Weight approx.	Order No.
200-250 V	6	Wall socket	KU	1.2 kg	GHG 511 4306 R0903
		Wall socket	ME	1.3 kg	GHG 511 4306 R3905
		Wall socket	GM	1.3 kg	GHG 511 4306 R3906

Ordering details type 16 A 2-pole with earthing contact, non-interlocked

Voltage	h	Type	Cable entry	Weight approx.	Order No.
230 V	6	Wall socket	KU	1.2 kg	GHG 511 4306 R0902
		Wall socket	ME	1.3 kg	GHG 511 4306 R3903
		Wall socket	GM	1.3 kg	GHG 511 4306 R3904

Fixing material and accessories see page 5.62 pp.



EX-REPAIR AND MAINTENANCE SOCKETS

| 16A 5-pole up to 415 V |


Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2


Marking to 94/9/EC	Ex II 2 G Ex II 2 D T60 °C*
Type of protection	EEx de IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 1032 X
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 440 V~
Rated current	16 A
Frequency	50/60 Hz
Switching capacity AC-3	up to 415 V~/16 A
Back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gL (rated current 16 A set to)
Cable entry	1 x M25 Ø 8 - 17 mm, 1 x M25 Ex-thread plug plastic or 2 x metal thread M20 with Ex-thread plug plastic
Connecting terminals	2 x 1.5 - 4 mm ²

* only interlocked type

Ordering details type 16 A 5-pole, interlocked

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
380-415 V		Wall socket	no	KU	1.6 kg	GHG 511 4506 R0901
		Wall socket	no	ME	1.7 kg	GHG 511 4506 R3901
		Wall socket	yes	KH	1.6 kg	GHG 511 4506 R0903

Ordering details type 16 A 5-pole, non-interlocked

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
380-415 V		Wall socket	no	KU	1.8 kg	GHG 511 4506 R0902
		Wall socket	no	ME	1.9 kg	GHG 511 4506 R3902
		Wall socket	yes	KH	1.8 kg	GHG 511 4506 R0904

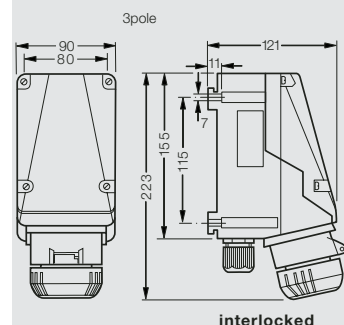
GM = 2 x metal thread M20 without cable gland/thread plug with protective earth

KU = 1 x plastic cable glands M25, 1 x M25 Ex-thread plug plastic

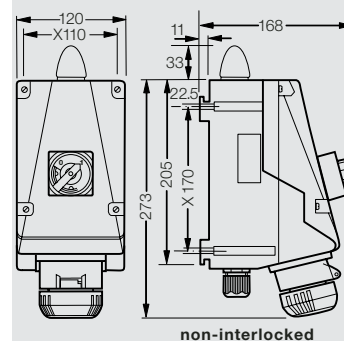
ME = 2 x metal thread M20 with Ex-thread plug plastic

KH = 2 x plastic cable glands M25 Ø 8 - 17 mm, with auxiliary contact, 1 NO

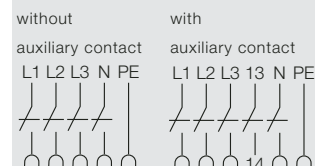
Fixing material and accessories see page 5.62 pp.



interlocked

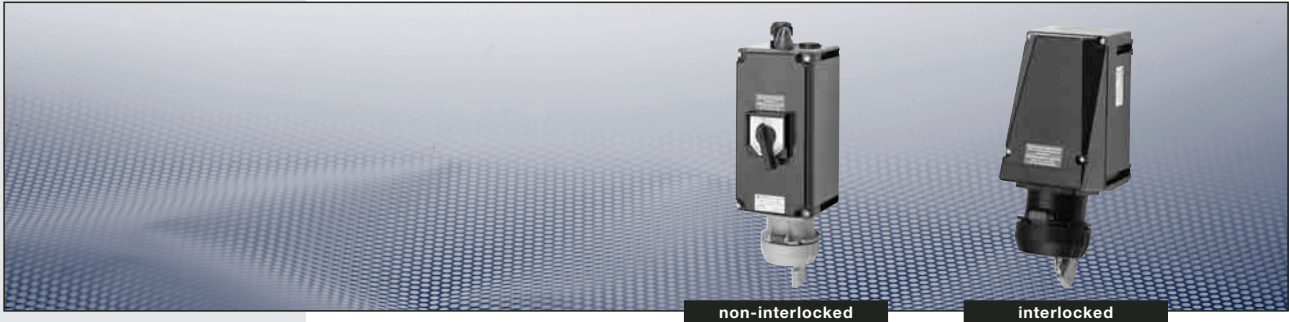


non-interlocked



3 P + N + PE

Dimensions in mm



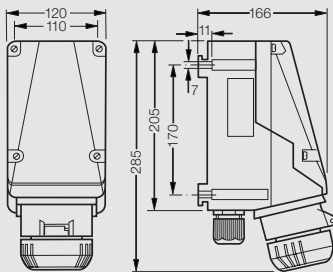
non-interlocked

interlocked

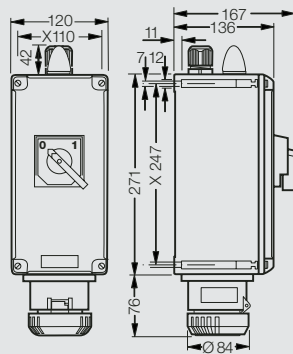
EX - REPAIR AND MAINTENANCE SOCKETS

| 32A 5-pole up to 415 V |

5.53

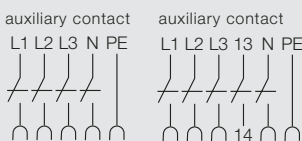


interlocked

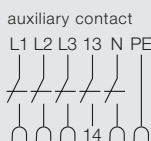


non-interlocked

Type: interlocked
without



with



Dimensions in mm

Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T60 °C*
Type of protection	EEx de IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 1032 X
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 440 V~
Rated current	32 A
Frequency	50/60 Hz
Switching capacity AC-3	up to 440 V~/32 A
Back-up fuse, max.	without therm. protection: 35 A with therm. protection: 50 A gL (rated current 32 A set to)
Cable entry	1 x M40 Ø 17 - 28 mm, 1 x M40 Ex-thread plug plastic or 2 x metal thread M32 with Ex-thread plug plastic
Connecting terminals	2 x 4 - 10 mm²

* only interlocked type

Ordering details type 32 A 5-pole, interlocked

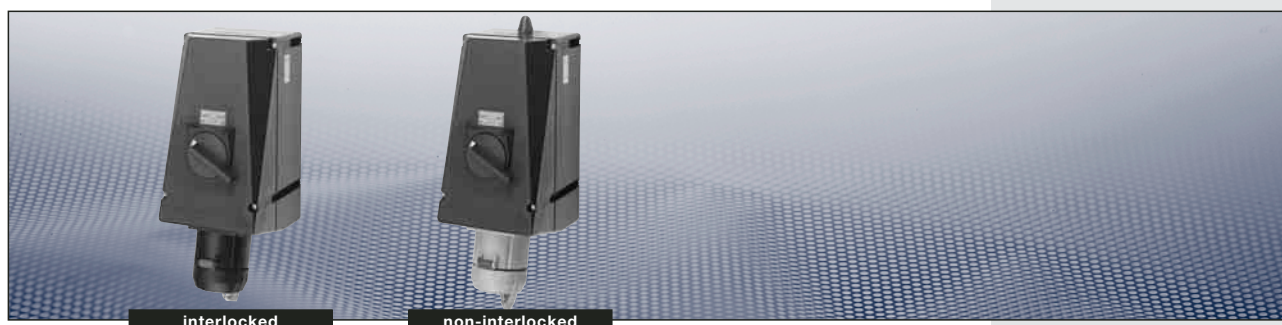
Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
380-415 V	6	Wall socket	no	KU	2.3 kg	GHG 512 4506 R0901
		Wall socket	no	ME	2.4 kg	GHG 512 4506 R3901
		Wall socket	yes	KH	2.3 kg	GHG 512 4506 R0903

Ordering details type 32 A 5-pole, non-interlocked

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
380-415 V	6	Wall socket	no	KU	1.8 kg	GHG 512 4506 R0904
		Wall socket	no	ME	1.9 kg	GHG 512 4506 R3902
		Wall socket	yes	KH	1.8 kg	GHG 512 4506 R0905

GM = 2 x metal thread M20 without cable gland/thread plug with protective earth
KU = 1 x plastic cable glands M40 Ø 16-28 mm, 1 x M40 Ex-thread plug plastic
ME = 2 x metal thread M32 with Ex-thread plug plastic
KH = 1 x plastic cable glands M40 Ø 16-28 mm,
1 x plastic cable glands M25 Ø 8-17 mm

Fixing material and accessories see page 5.62 pp.



EX - REPAIR AND MAINTENANCE SOCKETS

| 63A 5-pole up to 415 V |

Technical data

Ex-plugs and sockets accd. to IEC 60309-1/2

Marking to 94/9/EC	Ⓔ II 2 G Ⓔ II 2 D T60 °C*
Type of protection	EEx de IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 1032 X
Degree of protection to EN 60529	IP 66
Enclosure material	Wall socket: Glass-fibre reinforced polyester Plug, coupler and flange socket: polyamide
Rated voltage	up to 550 V~
Rated current	63 A
Frequency	50/60 Hz
Switching capacity AC-3	up to 550 V~/63 A
Back-up fuse, max.	without therm. protection: 63 A with therm. protection: 80 A gL (rated current 63 A set to)
Cable entry	1 x M50 Ø 22 - 35 mm, 1 x M50 Ex-thread plug plastic or 2 x metal thread M40 with Ex-thread plug plastic
Connecting terminals	2 x 4 - 25 mm ²

* only interlocked type

Ordering details type 63 A 5-pole, interlocked

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
380-415 V		Wall socket	no	KU	8.1 kg	GHG 514 4506 R0901
		Wall socket	no	ME	8.3 kg	GHG 514 4506 R3901
		Wall socket	yes	KH	8.1 kg	GHG 514 4506 R0903

Ordering details type 63 A 5-pole, non-interlocked

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
380-415 V		Wall socket	no	KU	8.1 kg	GHG 514 4506 R0904
		Wall socket	no	ME	8.3 kg	GHG 514 4506 R3902
		Wall socket	yes	KH	8.1 kg	GHG 514 4506 R0905

125 A other versions on request

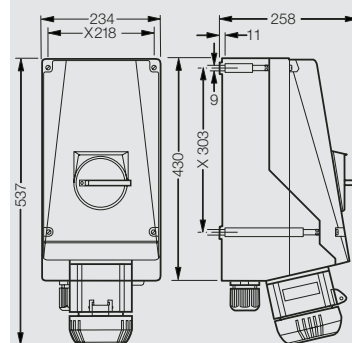
KU = 1 x plastic cable glands M50 Ø 21-35 mm, 1 x M50 Ex-thread plug plastic

ME = 2 x metal thread M40 with Ex-thread plug plastic

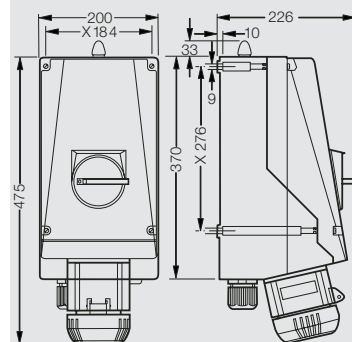
KH = 1 x plastic cable glands M50 Ø 21-35 mm,

1 x plastic cable glands M25 Ø 8-17 mm, with auxiliary contact, 1 NO

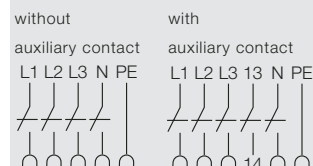
Accessories see page 5.62 pp.



interlocked



non-interlocked



3 P + N + PE

Dimensions in mm

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EX-REPAIR AND MAINTENANCE SOCKET DISTRIBUTIONS

40 A und 80 A
Plastic version for Zone 1

For maintenance, repair and upgrading work, appliances such as drills, welding transformers, hand grinders and such are needed but are not in accordance to the explosion-protection regulations.

To be able to use these appliances in the Zone 1 or Zone 2 explosion-protected areas a hot work permit has to be issued. For the duration of the repair or maintenance work, the environment has to be free of all explosive hazardous atmospheres.

The CEAG explosion-protected repair and maintenance socket distributions are in accordance to regulations that in parts require a stationary installation. With the interlocking and lockable switch the utilization of the repair and maintenance socket distributions is selectively possible after a hot work permit has been issued.

All sockets are equipped with high quality switches and have separate RCD's. Repair and maintenance sockets have a red signal lamp on the top side of the housing showing the actual state of connection.

International approvals

Commercially available industrial apparatus can be used with a "hot work permit"

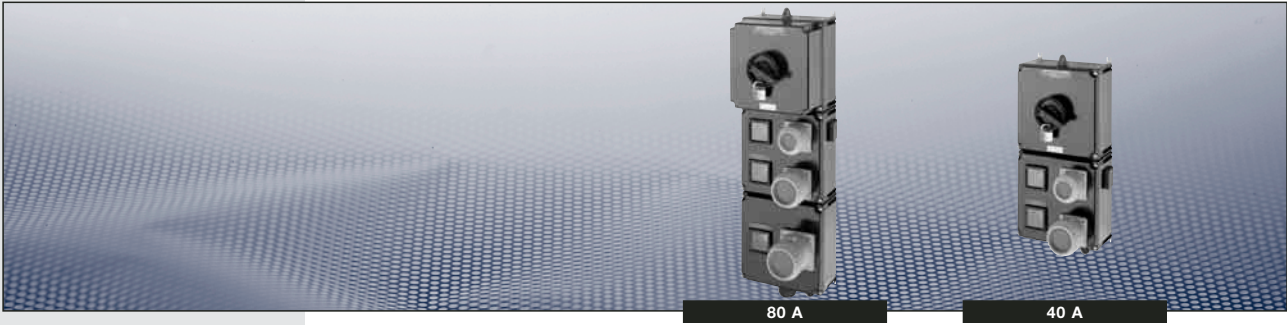
Sockets with lamellar contacts for secure contact

Lockable switch with allpole switching and AC-3 motor switching ability

High mechanical, chemical and thermal stability

5.56

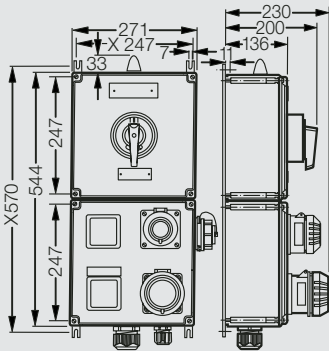




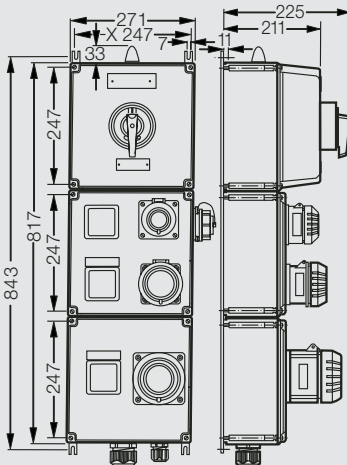
EX-REPAIR AND MAINTENANCE SOCKET DISTRIBUTIONS

Repair socket distributions 40 A and 80 A

5.57



Repair socket distributions 40 A



Repair socket distributions 80 A

Technical data	
Repair socket distributions	
Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 1100 X
Enclosure material	Glass-fibre reinforced polyester
Switching capacity AC-3	40 A switch 415 V: 40 A 80 A switch 415 V: 80 A
Degree of protection to EN 60529	IP 66

Ordering details		
Number of components	Contact arrangement	Order No.
1 switch, 4-pole, 40 A 1 IEC 60309-socket, 16 A 1 power circuit breaker, 3-pole, 16 A 1 IEC 60309-socket, 32 A 1 power circuit breaker, 3-pole, 32 A 1 earthed socket 16 A 1 power circuit breaker, 1-pole, 16 A 1 Cable entry M40 Ø 16 - 28 mm 1 Cable entry M25 Ø 8 - 17 mm 1 signal lamp Weight: 8.5 kg		GHG 981 0042 R0001
1 switch, 4-pole, 80 A 1 Fi-earth leakage circuit breaker, 63 A 1 IEC 60309-socket, 16 A 1 power circuit breaker, 3-pole, 16 A 1 IEC 60309-socket, 32 A 1 power circuit breaker, 3-pole, 32 A 1 IEC 60309-socket, 63 A 1 earthed socket 16 A 1 power circuit breaker, 1-pole, 16 A 1 Cable entry M50 Ø 21 - 35 mm 1 Cable entry M25 Ø 8 - 17 mm 1 signal lamp Weight: 15 kg		GHG 981 0043 R0001

Other types on request.

PORTABLE EX-MULTI-OUTLET DISTRIBUTION UNITS

16 A
Plastic Design for Zone 1

So that electrical equipment, such as pumps, scales, etc. can be used flexibly in areas of Zone 1 and Zone 2 that are at risk of explosions, they can be safely supplied with energy by means of portable CEAG multi-outlet distribution units.

The multi-outlet distribution units are equipped with flange-mounting socket outlets that even comply with the high degree of protection IP 66 when they are plugged in.

This means that this distribution units are also suitable for use in the harshest industrial conditions.

CEAG multi-outlet distribution units can also be used by fire brigades, as well as emergency and rescue services.

Internationally approved.

Portable distribution of electricity via sockets in the area at risk of explosions with high degree of protection IP 66
Mechanical, chemical and thermal resistance

5.58





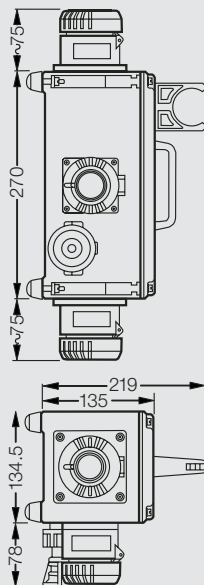
16A 5-pole

16A 3-pole

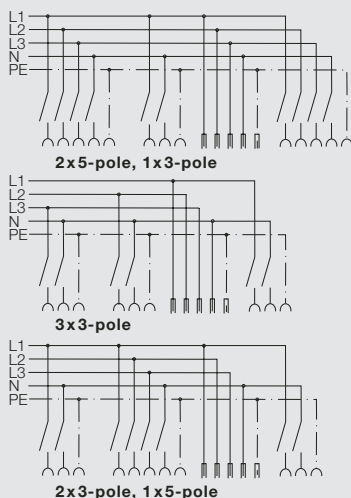
EX-MULTI-OUTLET DISTRIBUTION UNITS

| 16A 3-pole | 16A 5-pole |

5.59



Socket distribution
16A 3-pole/5-pole



Dimensions in mm

Technical data

Portable Ex-protected multi-outlet distribution units

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx ed IIC T6/T5
EC-Type Examination Certificate	PTB 02 ATEX 1035
Rated voltage	3-pole: to 500 V, 50/60 Hz 5-pole: to 400 V, 50/60 Hz (690 V at 5h)
Rated current	up to 16 A
Back-up fuse	without thermal protection: 16 A with thermal protection: 25 A gL (rated current 16 A set to)
Enclosure material	Socket distribution: Glass-fibre reinforced polyester Plug and flange socket: polyamide
Switching capacity AC-3	16 A
Degree of protection to EN 60529	IP 66
Port	Plug 16 A 5-pole 380 V - 415 V
Weight	with 2 m connecting cable 4.2 kg with 5 m connecting cable 5.2 kg

Ordering details type design with 2 m connecting cable

Design	Order No.
2 x socket 16 A 3-pole 1 x socket 16 A 5-pole	GHG 931 0003 R0011
1 x socket 16 A 3-pole 2 x socket 16 A 5-pole	GHG 931 0003 R0012
3 x socket 16 A 3-pole	GHG 931 0003 R0013

Ordering details type design with 5 m connecting cable

Design	Order No.
2 x socket 16 A 3-pole 1 x socket 16 A 5-pole	GHG 931 0003 R0021
1 x socket 16 A 3-pole 2 x socket 16 A 5-pole	GHG 931 0003 R0022
3 x socket 16 A 3-pole	GHG 931 0003 R0023

Other types on request.

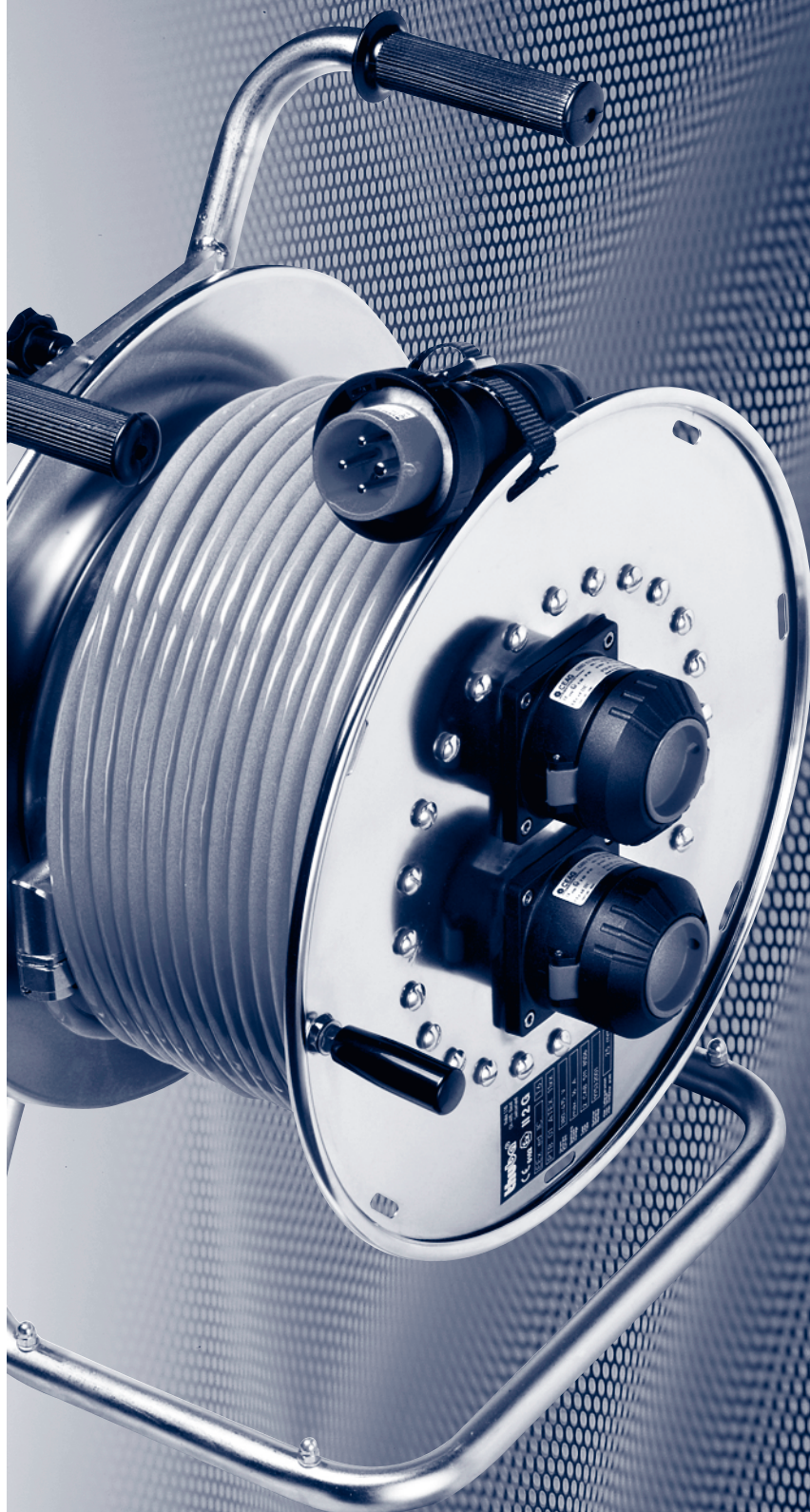
Accessories see page 5.62 pp.

PORTABLE EX - CABLE REEL

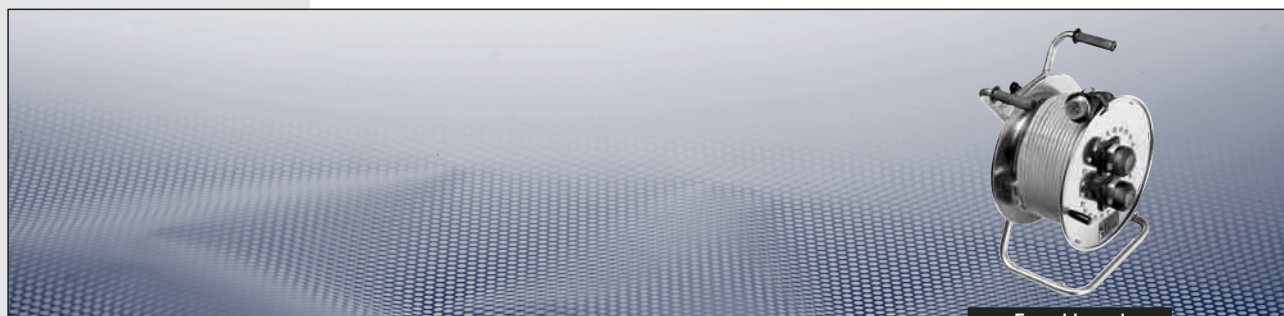
**16 A and 32 A
stainless steel design for Zone**

The portable, explosion-protected cable reel can be used to supply electricity flexibly to portable electrical equipment to areas of Zone 1 and Zone 2 that are at risk of explosions. Furthermore, the cable drum can be used as a multiple socket outlet. Different combinations of plugs and sockets allow variable deployments. The cable drum with a stainless steel housing comprises up to three explosion-protected flange-mounting socket outlets as well as the wound cable with a plug. One bolt each for inner and outer connection to the side wall are also welded on for connection to the protective conductor or equipotential bonding conductor.

Optionally, the cable reel can also be supplied with conductive reels.



High mechanical protection
Portable distribution of electricity via
sockets in areas at risk of explosions
Variable socket combinations


Ex-cable reel
P O R T A B L E E X - C A B L E R E E L
| 16 A 3- and 5-pole | 32 A 4- and 5-pole |
5.61
Technical data
Portable Ex-proof cable reel

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	PTB 01 ATEX 1116
Rated voltage	3-pole: up to 415 V, 50/60 Hz 5-pole: up to 500 V, 50/60 Hz (690 V to 5 h)
Rated current	16 A 32 A
Switching capacity AC-3	16 A 32 A
Degree of protection to EN 60529	IP 54
Enclosure material	Cable reel: enclosure stainless steel Plug and flange socket: polyamide
Port	Plug 16 A 5-pole, oder plug 32 A 5-pole 380-415 V
Weight	16 A with 20 m connecting cable approx. 22-30 kg design depending 32 A with 20 m connecting cable approx. 28-50 kg design depending

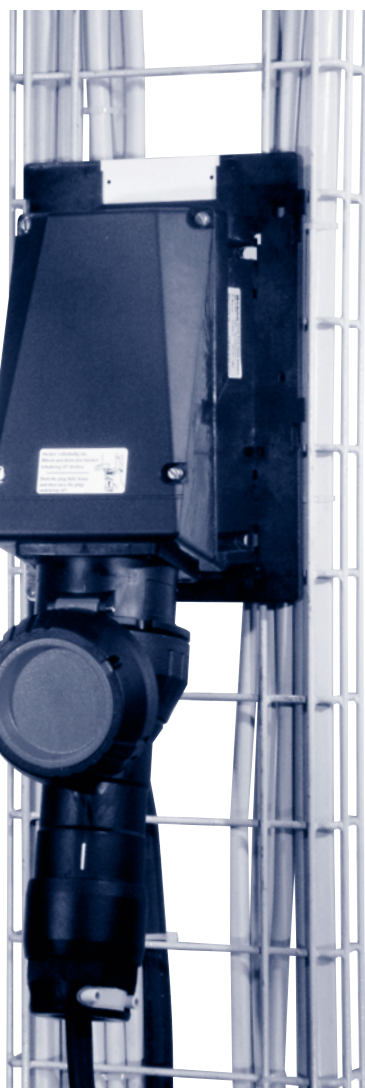
Ordering details 16 A design with 20 m connecting cable

Design	Cable	Order No.
1 x Flange socket 16 A 3-pole		
1 x Flange socket 16 A 5-pole	5 x 2.5 mm ²	GHG 931 0003 R0031
3 x Flange socket 16 A 3-pole	3 x 2.5 mm ²	GHG 931 0003 R0032
2 x Flange socket 16 A 5-pole	5 x 2.5 mm ²	GHG 931 0003 R0033

Ordering details 32 A design with 20 m connecting cable

Design	Cable	Order No.
2 x Flange socket 32 A 4-pole	4 x 4 mm ²	GHG 931 0003 R0034
2 x Flange socket 32 A 5-pole	5 x 4 mm ²	GHG 931 0003 R0035
1 x Flange socket 16 A 5-pole		
1 x Flange socket 32 A 5-pole	5 x 4 mm ²	GHG 931 0003 R0036

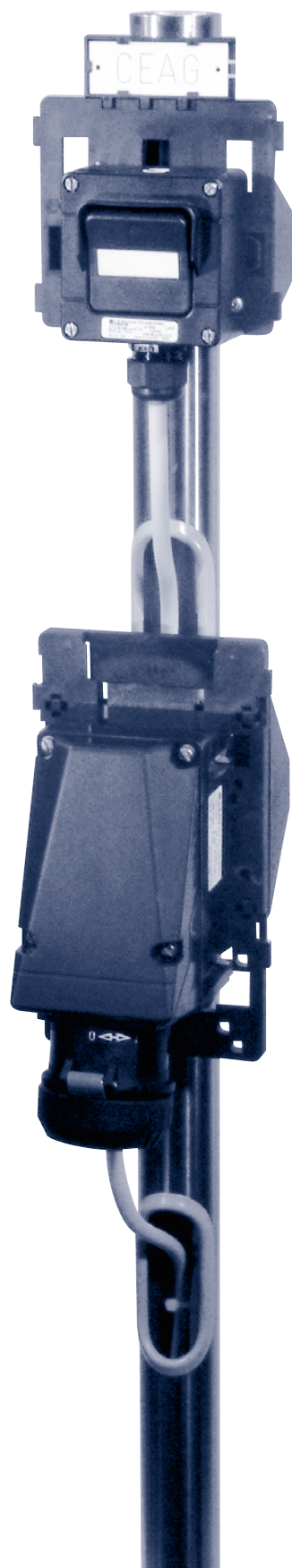
Other design and cable length on request



Mounting plates for the universal use on pipes of 1 to 2 inches as well as square tubing of 41 x 41 mm. For trellis guttering with wire of up to Ø5 mm the combined mounting plate for wall and trellis mounting is available.



So that the plug is still fully functional even after a long period of time in aggressive atmospheres there is a plug protection cap available. Soiled plugs have disadvantages, apart from the increased insertion and withdrawal effort needed there is the bad contact area creating a higher transition resistance and therefore a higher thermal stress for the plug. The plug protection cap prevents plug ends from being soiled and also prevents the intrusion of water and dirt.



5.63

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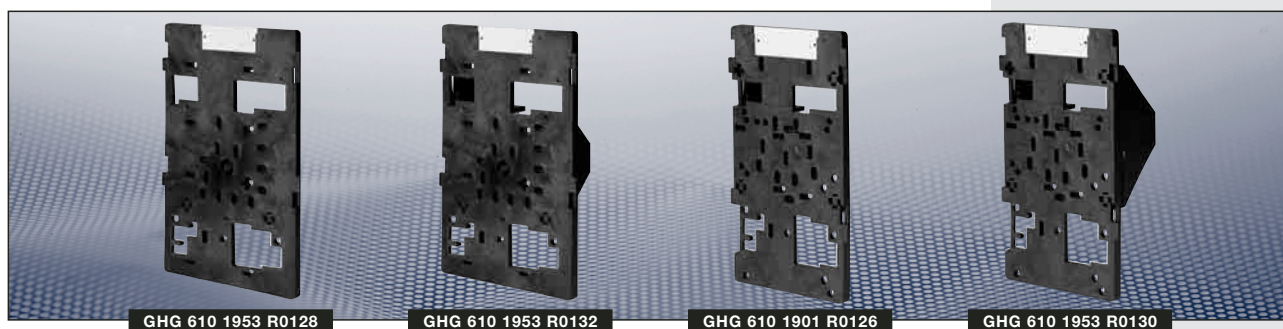
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5.64

Mounting plates for plugs and sockets 16 A

Type	Application	Fixing method	Order No.
Size 4	for wall mounting	snapped on	GHG 610 1953 R0126
Size 4	for trellis mounting	snapped on	GHG 610 1953 R0126
Size 4	for pipe mounting	snapped on	GHG 610 1953 R0130

Mounting with drillings of old wall sockets type (GHG 54./GHG 531)

Size 4	for wall mounting	snapped on GHG 531 4/5-pole	GHG 610 1953 R0151
Size 4	for wall mounting	snapped on GHG 54 3-pole	GHG 610 1953 R0152

Plug cap for plugs 16 A

Type	Order No.
Plug 16 A 3-pole	GHG 510 1901 R0001
Plug 16 A 4-pole	GHG 510 1901 R0002
Plug 16 A 5-pole	GHG 510 1901 R0003
Transformer plug 16 A 4-pole	GHG 530 1935 R0002
Transformer plug 16 A 5-pole	GHG 530 1935 R0005

Mounting plates for plugs and sockets 32 A

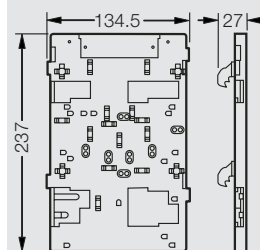
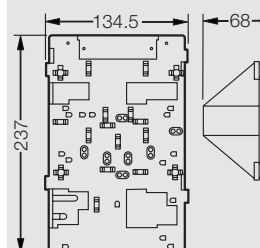
Type	Application	Fixing method	Order No.
Size 5	for wall mounting	snapped on	GHG 610 1953 R0128
Size 5	for trellis mounting	snapped on	GHG 610 1953 R0128
Size 5	for pipe mounting	snapped on	GHG 610 1953 R0132

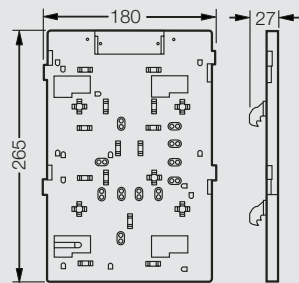
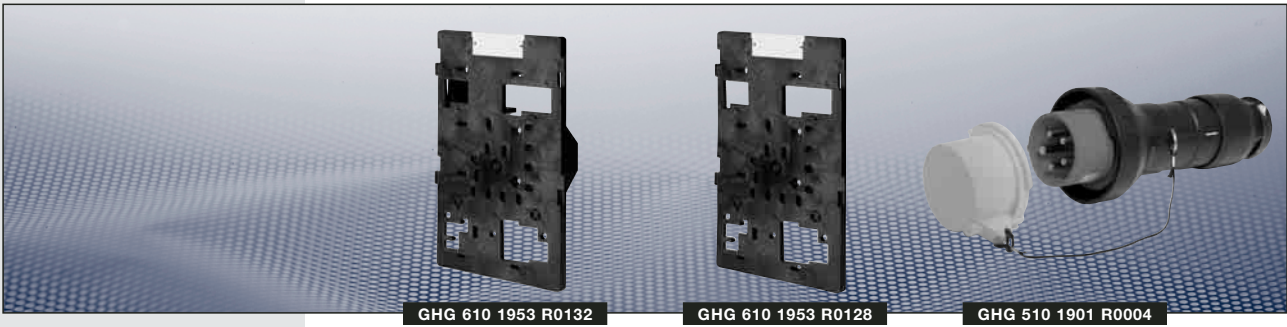
Mounting with drillings of old wall sockets type (GHG 532)

Type	Application	Fixing method	Order No.
Size 5	for wall mounting	snapped on GHG 52 4/5-pole	GHG 610 1953 R0153

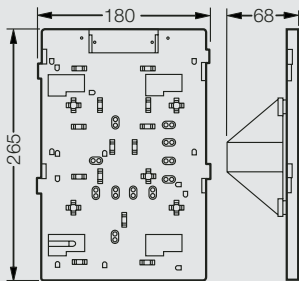
Plug cap for plugs 32 A

Type	Order No.
Plug 32 A 3-pole/4-pole	GHG 510 1901 R0004
Plug 32 A 5-pole	GHG 510 1901 R0005
Transformer plug 32 A 4-pole	GHG 530 1935 R0002
Transformer plug 32 A 5-pole	GHG 530 1935 R0005

Mounting plate size 4
for trellis mountingMounting plate size 4
for pipe mounting



Mounting plate size 5
for wall- and trellis mounting



Mounting plate size 5
for pipe mounting

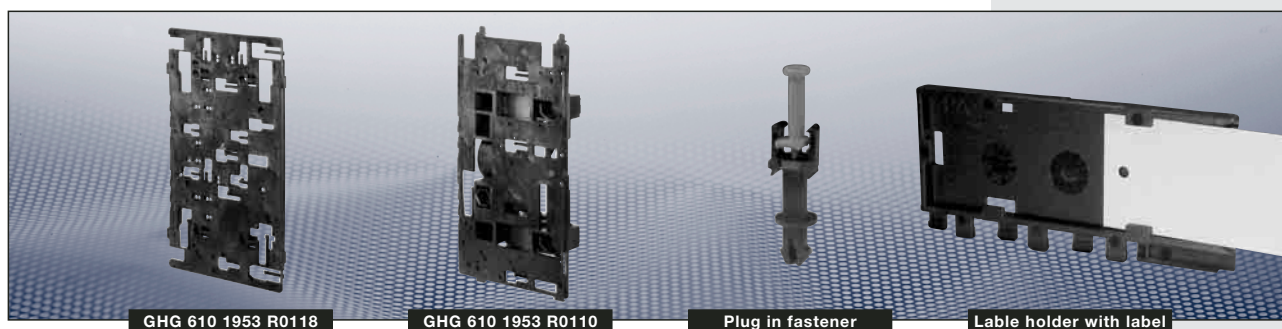
Plug cap for plug 63 A	
Type	Order No.
Plug 63 A 4-pole	GHG 510 1901 R0006
Plug 63 A 5-pole	GHG 510 1901 R0006

Plug cap for plug 125 A	
Type	Order No.
Plug 125 A 4-pole	GHG 510 1901 R0007
Plug 125 A 5-pole	GHG 510 1901 R0007

Plug cap for plugs and sockets 7-, 21-pole	
Type	Order No.
Plug 7-pole	GHG 540 1935 R0002
Plug 21-pole	GHG 530 1935 R0008

Mounting plates for plugs and sockets 7-, 21-pole			
Type	Application	Fixing method	Order No.
Size 5	for wall mounting	snapped on	GHG 610 1953 R0128
Size 5	for trellis mounting	snapped on	GHG 610 1953 R0128
Size 5	for pipe mounting	snapped on	GHG 610 1953 R0132

Accessories for plugs and sockets 7-, 21-pole	
Type	Order No.
Socket bushes1 set = 7 pcs.	GHG 590 1301 R0102
Plug ins 1 set = 7 pcs.	GHG 590 1302 R0102
Crimping tool for sockets and pins	GHG 590 1902 R0001
Dismanteling tool for sockets and pins	GHG 590 1903 R0001



Mounting plates for repair sockets interlocked type 16 A

Type	Application	Fixing method	Order No.
Size 4	for wall mounting	snapped on	GHG 610 1953 R0126
Size 4	for trellis mounting	snapped on	GHG 610 1953 R0126
Size 4	for pipe mounting	snapped on	GHG 610 1953 R0130

Mounting plates for repair sockets non-interlocked type 16 A

Type	Application	Fixing method	Order No.
Size 5	for wall mounting	snapped on	GHG 610 1953 R0128
Size 5	for trellis mounting	snapped on	GHG 610 1953 R0128
Size 5	for pipe mounting	snapped on	GHG 610 1953 R0132

Mounting plates for repair sockets interlocked type 32 A

Type	Application	Fixing method	Order No.
Size 5	for wall mounting	snapped on	GHG 610 1953 R0128
Size 5	for trellis mounting	snapped on	GHG 610 1953 R0128
Size 5	for pipe mounting	snapped on	GHG 610 1953 R0132

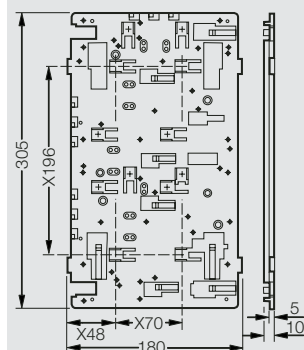
Mounting plates for repair sockets interlocked type 32 A

Type	Application	Fixing method	Order No.
Size 3	for wall mounting	screwed on	GHG 610 1953 R0118
Size 3	for trellis mounting	screwed on	GHG 610 1953 R0118
Size 3	for pipe mounting	screwed on	GHG 610 1953 R0110

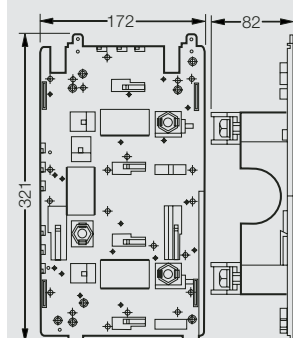
Ordering details

Type	OU	Order No.
Accessories for mounting plates		
Label holder with type labels (blank)		
for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Type lable for lable holder and mounting plates size 4 and size 5	10	GHG 610 1953 R0011
Blind plug for unused fixing points of mounting plates size 4 and size 5	10	GHG 610 1953 R0134
Plug-in fastener for CEAG modules with 5.5 mm and 11 mm fixing elements 1 set = 4 pcs.	10	GHG 610 1953 R0041
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	GHG 610 1953 R0020

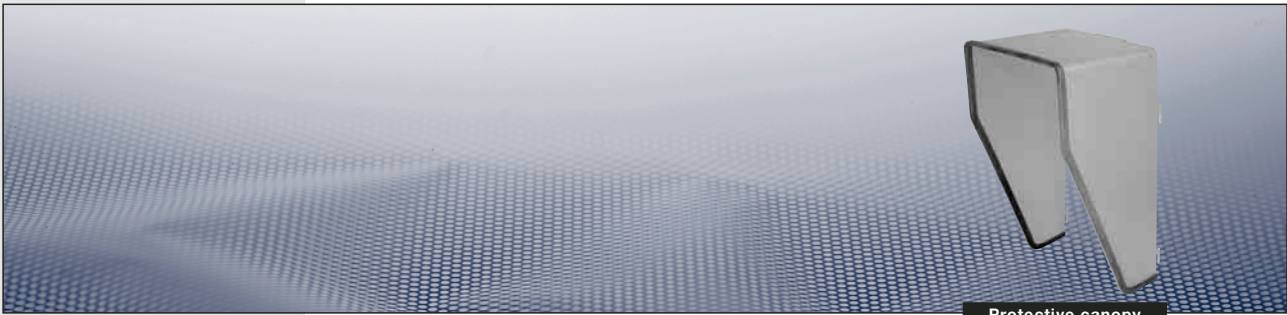
Please pay attention to that only order units (OU) according to the ordering details can be delivered.



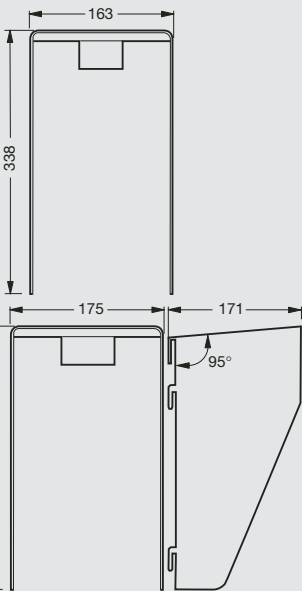
Mounting plates size 3 vertically
for wall- and trellis mounting



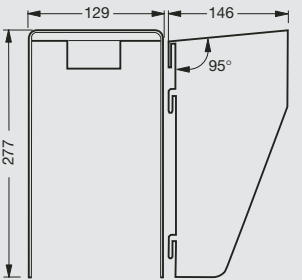
Mounting plate size 3 vertically
for pipe mounting



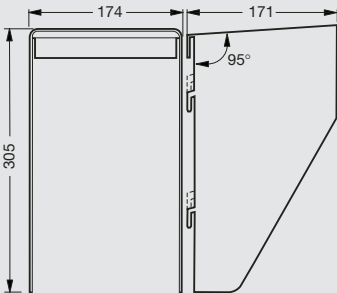
Protective canopy



Protective canopy size 3 and size 3A



Protective canopy size 4



Protective canopy size 5

Dimensions in mm

Ordering details		
Type	Application	Order No.
Protective canopy for mounting plate		
Size 3	for pipe mounting plates size 3 vertically	GHG 610 1955 R0104
Size 3A	for wall/trellis mounted plates size 3 vertically	GHG 610 1955 R0105
Size 4	for mounting plate size 4	GHG 610 1955 R0107
Size 5	for mounting plate size 5	GHG 610 1955 R0108

E x - J U N C T I O N B O X

Plastic version for Zone 1

The robust junction boxes made of plastic and light alloy are featured by their friendly mounting and installation capability and their design. They are fitted with pillar terminals for cable of up to 6 mm². The practical orientated housing form allows for a problem-free access to the connection terminals for installation.

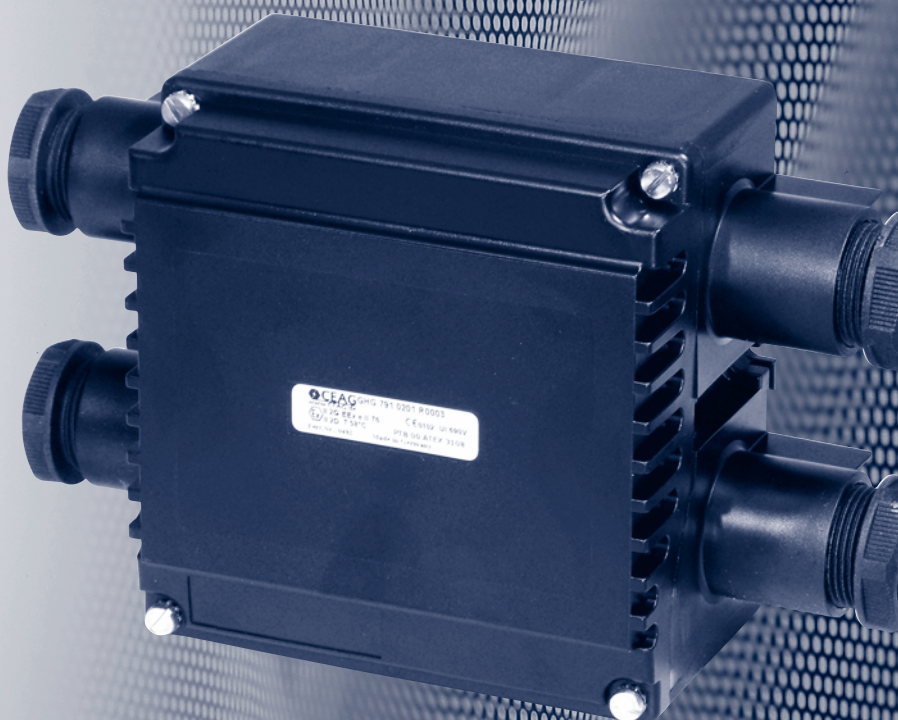
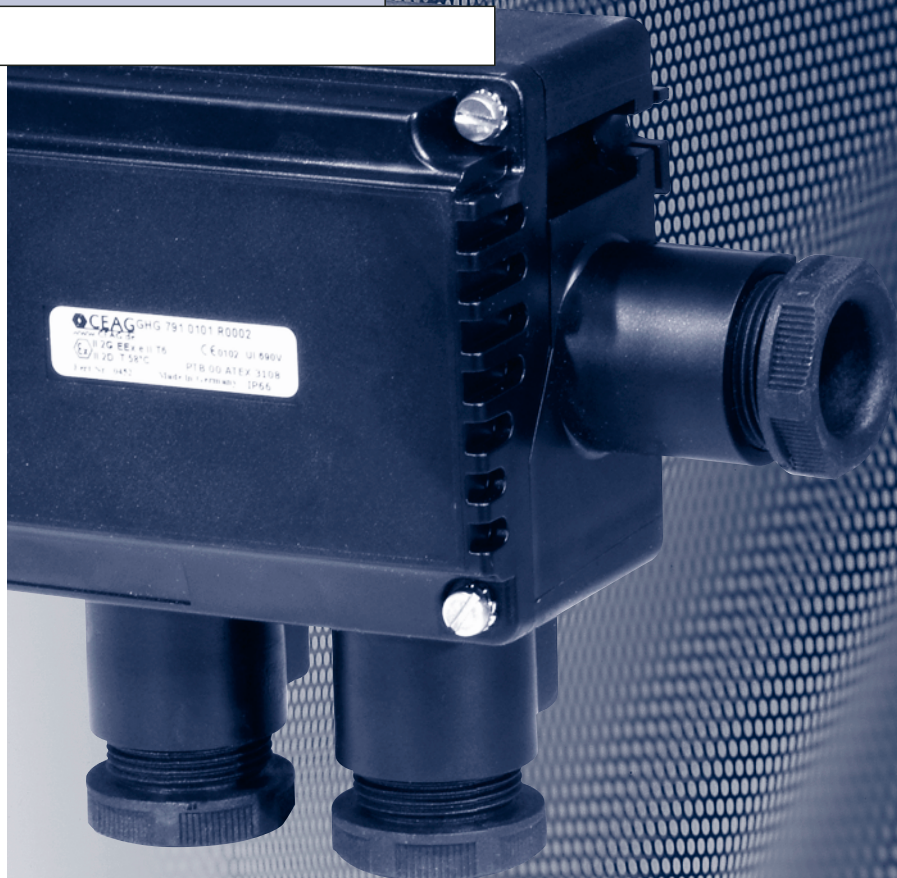
With the CEAG mounting system, the plastic junction boxes are economical in their use for mounting on walls, trellis and pipes. With wire and cable entries in the sizes M25 or M32 for Ø8 – 17 mm or Ø12 – 21 mm respectively, all requirements for the modern day installation technology are fulfilled. For cable with armouring there are junction boxes available with internal metal clamps or light alloy versions allowing for screw joints. For the wire and cable entries that are not used there are certified blanking plugs supplied with the junction box.

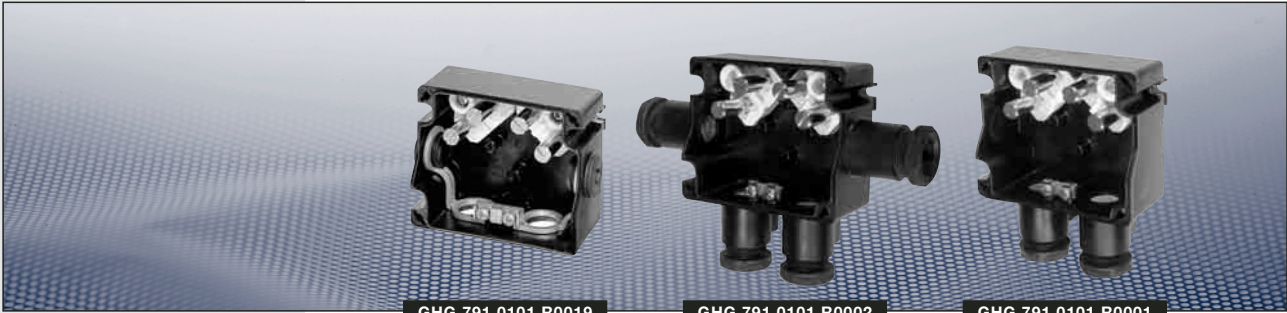
To enable a high chemical resistance of the light alloy junction boxes, these have been given an impact resistant plastic powder coating.

The cover screws and all other external metal parts are made of stainless steel (AISI 316L).

International approvals

- Decisive cost reduction with the CEAG mounting system
- Free accessible connection terminals
- Safety standard IP 66
- Version for metal screw joints available





GHG 791 0101 R0019

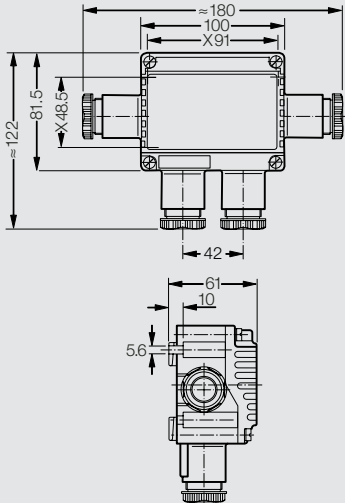
GHG 791 0101 R0002

GHG 791 0101 R0001

E X - J U N C T I O N B O X

| 791 01 up to 6 terminal |

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
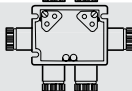

Type 791 01

Technical data

Type 791 01 up to 6 terminal

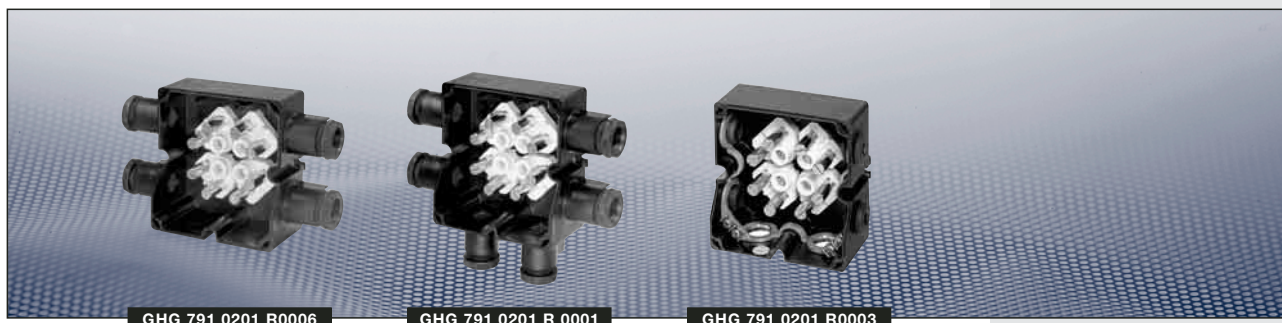
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 58°C
Type of protection	EEx e II T6 EEx ia IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3108
Rated voltage	690 V
Rated current	depends on terminal cross section
Degree of protection to EN 60529	IP 66
Enclosure material	polyamide
Terminal cross section per clamp	max. 4 x 4 mm²/PE 4 x 2.5 mm² (multi-wire) max. 2 x 6 mm²/PE 4 x 4 mm² (solid-wire) * or 2 x 6 mm² + 1 x 2.5 mm²
Weight	approx. 0.3 kg

Ordering details type 791 01

Design	Cable entry	No. of terminals	Order No.
	2 x M25 for cable Ø 8-17 mm	4 x Ex-e 1 x PE	GHG 791 0101 R0001
	4 x M25 for cable Ø 8-17 mm incl. 2 x blanking plug M25	4 x Ex-e 1 x PE	GHG 791 0101 R0002
	internal earth plate for 4 x M20 metal cable glands incl. 2 x threaded plugs M20	4 x Ex-e 1 x PE	GHG 791 0101 R0019

Other applications available on request.

Fixing material and accessories see page 5.110 pp.



EX - JUNCTION BOX

| 791 02 up to 6 terminal |

Technical data

Type 791 01/791 02 up to 6 terminal

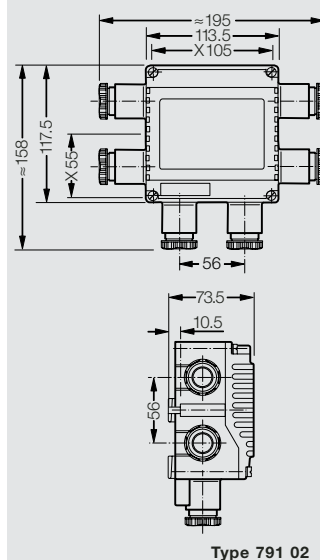
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 58°C
Type of protection	EEx e II T6 EEx ia IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3108
Rated voltage	690 V
Rated current	depends on terminal cross section
Degree of protection to EN 60529	IP 66
Enclosure material	polyamide
Terminal cross section per clamp	max. 4 x 4 mm ² max. 2 x 6 mm ² *
	*or 2 x 6 mm ² + 1 x 2.5 mm ²
Weight	approx. 0.5 kg

Ordering details type 791 02

Design	Cable entry	No. of terminals	Order No.
	4 x M25 for cable Ø 8-17 mm incl. 2 x blanking plug M25	6 x Ex-e 2 x PE	GHG 791 0201 R0006
	4 x M32 for cable Ø 12-21 mm incl. 2 x blanking plug M32	6 x Ex-e 2 x PE	GHG 791 0201 R0007
	6 x M25 for cable Ø 8-17 mm incl. 4 x blanking plug M25	6 x Ex-e 2 x PE	GHG 791 0201 R0001
	6 x M32 for cable Ø 12-21 mm incl. 4 x blanking plug M32	6 x Ex-e 2 x PE	GHG 791 0201 R0002
	internal earth plate for 6 x M20 metal cable glands incl. 4 x threaded plugs M20	8 x Ex-e 1 x PE	GHG 791 0201 R0003

Other applications available on request.

Fixing material and accessories see page 5.110 pp.



Type 791 02

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EX - BRANCHING BOXES

Light metal design for Zone 1

The sturdy CEAG branching boxes made of light metal are used to distribute and conduct electricity in areas of Zone 1 and Zone 2 at no risk of explosion. Optionally, mantle terminals with a terminal range of 6mm² are available for these branching boxes.

Four M20 threaded holes allow variable equipment with various ducts for cables and lines.

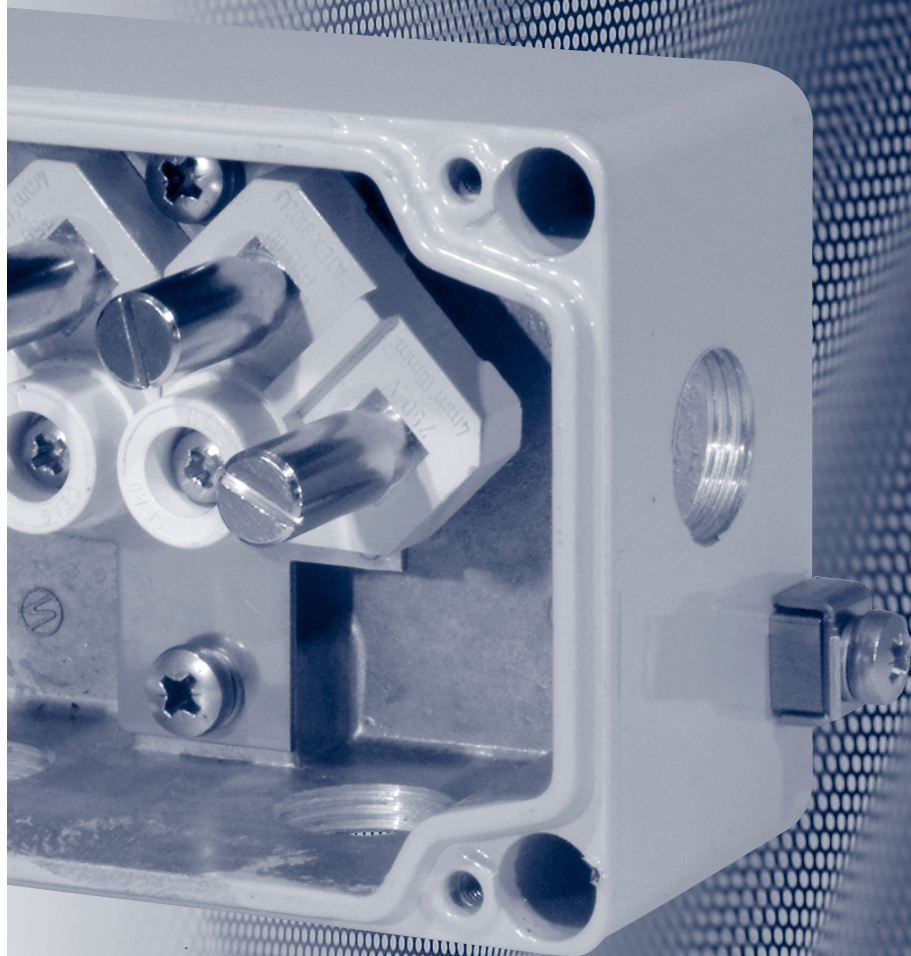
Drilled holes, cable and line ducts, through which no lines are conducted, should be closed with certified threaded stoppers.

High chemical resistance of the housing is ensured by the use of impact-resistant plastic powder coating.

Covered screws and all outside and inside metallic parts are made of stainless steel (AISI 316L).

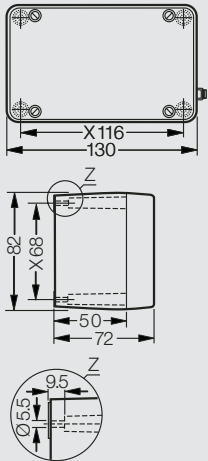
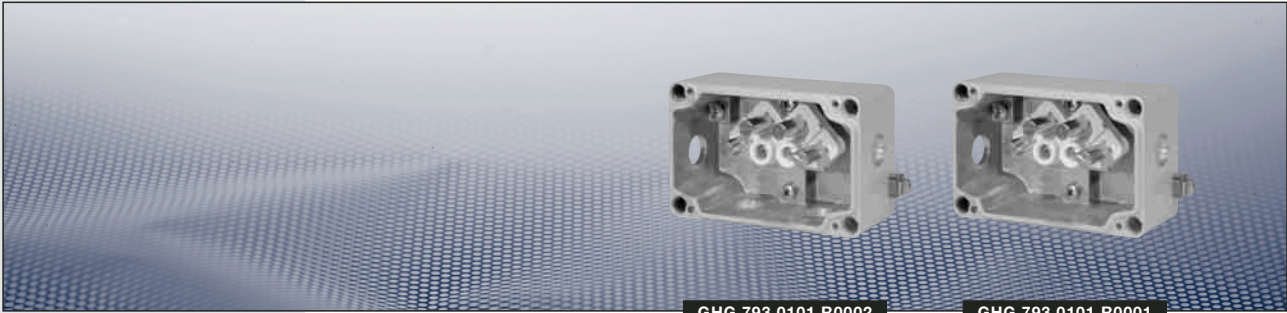
The light metal branching box has an outside earthing connection.

Internationally approved.



Mechanical, chemical and thermal resistance

Impact-resistant plastic powder coating



Type 793

EX - BRANCHING BOXES

793 01 up to 4 terminal

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Technical data

Type 793 01 up to 4 terminal

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx e II T6 EEx ia IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3108
Rated voltage	690 V
Rated current	depends on terminal cross section
Degree of protection to EN 60529	IP 66
Enclosure material	Alloy-silicium diecasting (AlSi)
Terminal cross section	up to 4 x 4 mm ² /PE 4 x 2,5 mm ² (multi-wire) up to 2 x 6 mm ² /PE 4 x 4 mm ² (solid-wire) * or 2 x 6 mm ² + 1 x 2.5 mm ²
Weight	approx. 0.8 kg

Ordering details type 793 01

Mounted with pillar terminal 4 x 4 mm² + PE-terminal 2 x 4 mm² acc. techn. data

Design	Cable entry	No. of terminals	Order No.
	2 x M20 drilling	4 x Ex-e 1 x PE	GHG 793 0101 R0001
	4 x M20 drilling incl. 2 x threaded plug M20	4 x Ex-e 1 x PE	GHG 793 0101 R0002

Other types on request.

Fixing material and accessories see page 5.110 pp.

UNIVERSAL TERMINAL BOXES

Ex-e/Ex-i Technology
plastic version measuring and controlling for Zone 1

The terminal boxes were designed for measuring and controlling utilization in the Ex-e and Ex-i technology.

They are used as a link between the main cable to the control room and the branch cables into the field. In addition to this, they may also be used for the direct connection of actuators and sensors.

The new terminal boxes for instrumentation installations are available in 5 sizes, ranging from 6 to max. 60 connection terminals.

The optional interior coating protects your data cable connections against external radiation fields. The choice between screw and tension spring (screwless) terminals for single and multi-wire conductors makes it possible for engineers to select the type of connection most suitable for the particular application.

The CEAG installation system provides an economical way of mounting the terminal boxes on walls, trellis work and pipes. The terminal boxes are suited for the use of single or multiple cable glands.

With CEAG terminal boxes it is possible to apply separate potentials such as screen-grid leads or PE/PA conductors to the plug-in PE rails. The snap-out terminal rails allow a problem-free feeding-in of cables.

The well-proven clip-in flanges in moulded plastic or metal design allow multiple application possibilities. As a result of the optimized design, a large drilling surface was created. This can be fitted with a sufficient number of moulded plastic glands or an equal number of metal glands.

International approvals

Decisive cost saving
with the CEAG installation system
Safety standard IP 66
Free accessible connection terminals
Clip-in flange technique
Snap-out terminal rails
Internal coating
for EMC-Protection on request



To make it easier for you to be able to choose a terminal or junction box, you will find in table-form all the basic data that is required below. Using the table below you can choose and configure your terminal boxes.

The maximum number of terminals derives from the rated current of the terminal. If the load per terminal lies below the rated current, then the maximum number of terminals for the terminal rail can be used.

Using the maximum drill surface and the interference diameter of the wire and cable entries tables plus the number of terminals you require, you can choose the right terminal box for your application.

The terminal boxes can also be equipped with (when requested) brass flanges and external earthing connectors.

OVERVIEW TERMINAL BOXES

Plastic version for Zone 1

5.75

Maximum number of terminals acc. to certification							
Type	Ø in mm²						
	2,5	4	6	10	16	25	35
GHG 791 01	6	6	–	–	–	–	–
GHG 791 02	12	10	7	–	–	–	–
GHG 731 11	16	14	10	8	8	–	–
GHG 731 12	24	24	18	18	14	–	–
GHG 721 00	26	22	17	13	11	–	–
GHG 721 10	48	40	30	24	20	–	–
GHG 744 01	40	33	25	20	17	17	–
GHG 745 02	2 x 41	2 x 34	2 x 26	2 x 20	17	17	14
GHG 746 03	2 x 94	2 x 78	2 x 59	2 x 47	40	40	32
GHG 749 04	2 x 148	2 x 124	2 x 94	2 x 75	63	63	51

Terminal rails	
Type	Rail Length
GHG 791 01	40 mm
GHG 791 02	95 mm
GHG 731 11	107 mm
GHG 731 12	169 mm
GHG 721 00	140 mm
GHG 721 10	262 mm
GHG 744 01	230 mm
GHG 745 02	2 x 235 mm
GHG 746 03	2 x 510 mm
GHG 749 04	2 x 795 mm

Dimensions			
Type	Width	x Height	x Depth
GHG 791 01	100 mm	x 81 mm	x 61 mm
GHG 791 02	113 mm	x 117 mm	x 73 mm
GHG 731 11	120 mm	x 140 mm	x 95 mm
GHG 731 12	182 mm	x 140 mm	x 95 mm
GHG 721 00	165 mm	x 165 mm	x 131 mm
GHG 721 10	285 mm	x 165 mm	x 143 mm
GHG 744 01	271 mm	x 134 mm	x 136 mm
GHG 745 02	271 mm	x 271 mm	x 136 mm
GHG 746 03	544 mm	x 271 mm	x 136 mm
GHG 749 04	817 mm	x 271 mm	x 136 mm

Space required for wire and cable entries		
Type	Interference diameter	
	Plastic	Metal
M12	Ø 19 mm	Ø 21 mm
M16	Ø 25 mm	Ø 21 mm
M20	Ø 31 mm	Ø 26,5 mm
M25	Ø 37 mm	Ø 33 mm
M32	Ø 46 mm	Ø 45,1 mm
M40	Ø 56 mm	Ø 53 mm
M50	Ø 68 mm	Ø 60,5 mm
M63	Ø 84 mm	Ø 80 mm

max. drill surface side Y		
Type	Width x Depth	
GHG 791 01	80 mm	x 45 mm
GHG 791 02	93 mm	x 57 mm
GHG 731 11	95 mm	x 75 mm
GHG 731 12	144 mm	x 75 mm
GHG 721 00	132 mm	x 91 mm
GHG 721 10	252 mm	x 95 mm
GHG 744 01	238 mm	x 134 mm
GHG 745 02	238 mm	x 134 mm
GHG 746 03	(2x) 238 mm	x 134 mm
GHG 749 04	(3x) 238 mm	x 134 mm
Flange 1	70,5 mm	x 48,5 mm
Flange 2	204 mm	x 72,5 mm



COOPER Crouse-Hinds

COOPER CROUSE-HINDS GMBH

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GHG 791 0101 R0003

GHG 791 0101 R0005

Ex - e / Ex - i TERMINAL BOX

| 791 01 up to 6 terminals |

Technical data

Type 791 01 up to 6 terminal

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 58°C
Type of protection	EEx e II T6 EEx ia IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3108
Rated voltage	690 V
Rated current	up to 30 A
Degree of protection to EN 60529	IP 66
Enclosure material	polyamide
Terminal cross section	up to 4 mm ²
Weight	approx. 0.3 kg

Ordering details type 791 01

assembled with screw terminals 2 x 2.5 mm² + PE/PA-terminal 2 x 4 mm²

Design	Cable entry	Terminals	Order No.
Ex-e	1 x M25 for cable Ø 8-17 mm	6 x Ex-e	GHG 791 0101 R0003
	1 x M25 for 2 cable Ø 4.5-7 mm	4 x PE/PA	
	1 x blanking plug for Ø 4.5-7 mm		
Ex-i	1 x M25 for cable Ø 8-17 mm	6 x Ex-i	GHG 791 0101 R0004
	1 x M25 for 2 cable Ø 4.5-7 mm	4 x PE/PA	
	1 x blanking plug for Ø 4.5-7 mm		
Ex-e	1 x M25 for cable Ø 8-17 mm	6 x Ex-e	GHG 791 0101 R0005
	2 x M12 for cable Ø 4-7 mm	4 x PE/PA	
	1 x blanking plug for M12		
Ex-i	1 x M25 for cable Ø 8-17 mm	6 x Ex-i	GHG 791 0101 R0006
	1 x M12 for cable Ø 4-7 mm	4 x PE/PA	
	1 x blanking plug for M12		

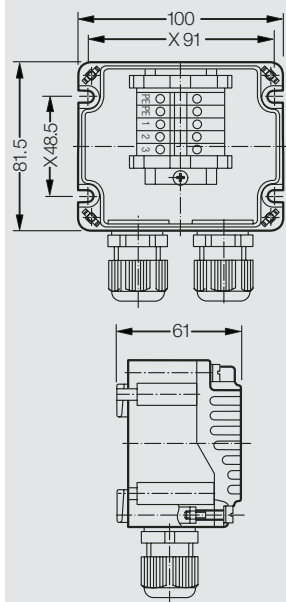
Ordering details type 791 01

assembled with screwless 2 x 2.5 mm² + PE/PA-terminal 2 x 4 mm²*

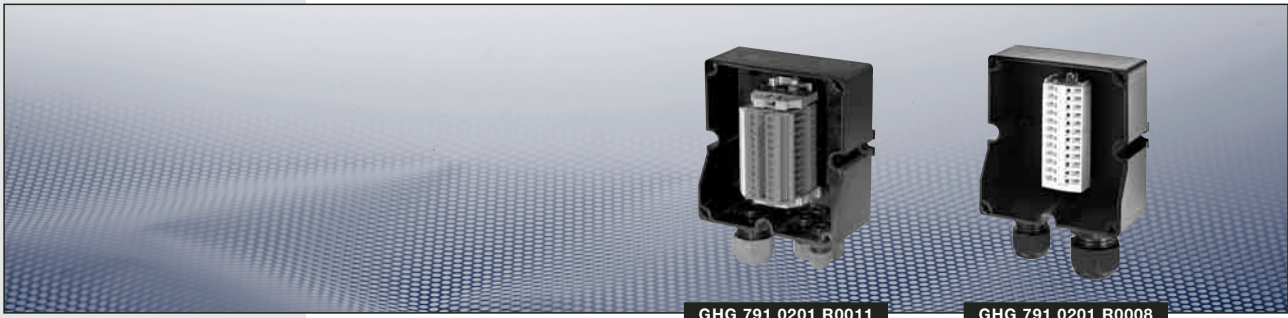
Design	Cable entry	Terminals	Order No.
Ex-i	1 x M25 for cable Ø 8-17 mm	6 x Ex-i	GHG 791 0101 R0008
	1 x M25 for 2 cable Ø 4.5-7 mm	1 x PE/PA	
	1 x blanking plug for Ø 4.5-7 mm		
Ex-e	1 x M25 for cable Ø 8-17 mm	6 x Ex-e	GHG 791 0101 R0009
	2 x M12 for cable Ø 4-7 mm	1 x PE/PA	
	1 x blanking plug for M12		
Ex-i	1 x M25 for cable Ø 8-17 mm	6 x Ex-i	GHG 791 0101 R0010
	1 x M12 for cable Ø 4-7 mm	1 x PE/PA	
	1 x blanking plug for M12		

* PE terminal (screw terminal) | Other types on request.

Fixing material and accessories see page 5.110 pp.



Type 791 01



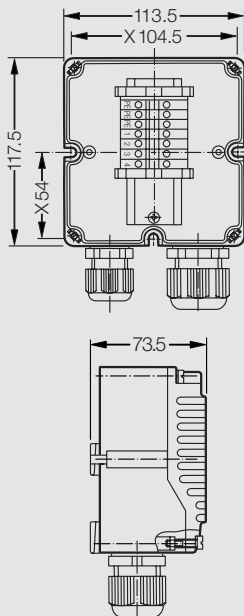
GHG 791 0201 R0011

GHG 791 0201 R0008

Ex - e / Ex - i T E R M I N A L B O X

| 791 02 up to 12 terminals |

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Type 791 02

Technical data

Type 791 02 up to 12 terminal

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 58°C
Type of protection	EEx e II T6 EEx e ia IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3108
Rated voltage	690 V
Rated current	up to 39 A
Degree of protection to EN 60529	IP 66
Enclosure material	plastic
Terminal cross section	up to 6 mm ²
Weight	approx. 0.5 kg

Ordering details type 791 02

assembled with screw terminals 2 x 2.5 mm² + PE/PA-terminal 2 x 2.5 mm²

Design	Cable entry	Terminals	Order No.
Ex-e	1 x M25 for cable Ø 8-17 mm 1 x M32 for 4 cable Ø 4.5-7 mm 2 x blanking plug for Ø 4.5-7 mm	12 x Ex-e 4 x PE/PA	GHG 791 0201 R0008
Ex-i	1 x M25 for cable Ø 8-17 mm 1 x M32 for 4 cable Ø 4.5-7 mm 2 x blanking plug for Ø 4.5-7 mm	12 x Ex-i 4 x PE/PA	GHG 791 0201 R0009
Ex-e	1 x M25 for cable Ø 8-17 mm 4 x M12 for cable Ø 4-7 mm 2 x blanking plug for M12	12 x Ex-e 4 x PE/PA	GHG 791 0201 R0010
Ex-i	1 x M25 for cable Ø 8-17 mm 4 x M12 for cable Ø 4-7 mm 2 x blanking plug for M12	12 x Ex-i 4 x PE/PA	GHG 791 0201 R0011

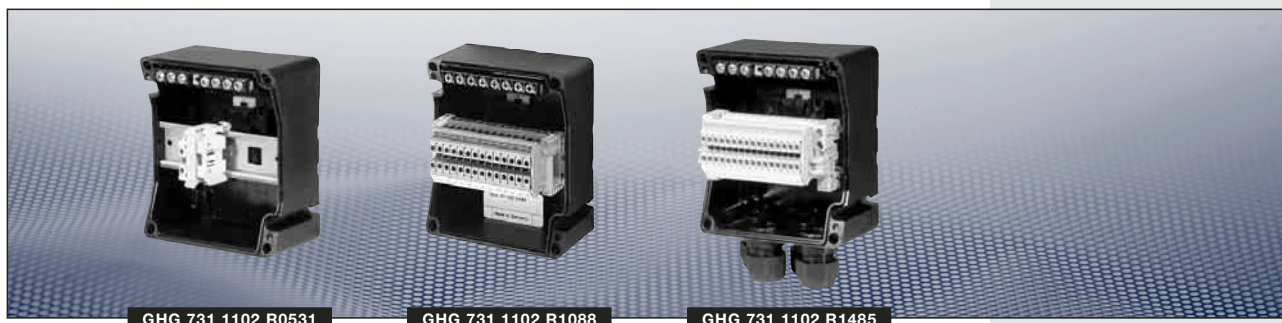
Ordering details type 791 02

assembled with screwless 2 x 2.5 mm² + PE/PA-terminal 2 x 2.5 mm²*

Design	Cable entry	Terminals	Order No.
Ex-i	1 x M25 for cable Ø 8-17 mm 1 x M32 for 4 cable Ø 4.5-7 mm 1 x blanking plug for Ø 4-7 mm	12 x Ex-i 4 x PE/PA	GHG 791 0201 R0013
Ex-e	1 x M25 for cable Ø 8-17 mm 4 x M12 for cable Ø 4-7 mm 2 x blanking plug for M12	12 x Ex-e 4 x PE/PA	GHG 791 0201 R0014
Ex-i	1 x M25 for cable Ø 8-17 mm 4 x M12 for cable Ø 4-7 mm 2 x blanking plug for M12	12 x Ex-i 4 x PE/PA	GHG 791 0201 R0015

* PE terminal (screw terminal) | Other types on request.

Fixing material and accessories see page 5.110 pp.



Ex - e / Ex - i TERMINAL BOX

| 731 11 up to 16 terminals |

Technical data

Type 731 11 up to 16 terminal

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*
Type of protection	EEx e II T6 EEx ia IIC T6 EEx e [ia] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	690 V
Rated current	depends on terminal mounting
Degree of protection to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Terminal cross section	up to 16 mm ²
Weight	0.8 kg

* applied for

Ordering details type 731 11

assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 2.5 mm²

Design	Cable entry	Terminals	Order No.
Ex-e	without drilling	1 x Ex-e*/UK 3 N/7 x PE	GHG 731 1102 R0531
Ex-e	without drilling	14 x Ex-e*/UK 5 N/7 x PE	GHG 731 1102 R1088
Ex-e	4 x M25	16 x Ex-e*/UK 3 N/7 x PE	GHG 731 1102 R1485

* according to type examination certificate individual extensible

Maximum number of drillings and cable glands

Type	Side of entries	M12	M16	M20	M25	M32	M40	M50
731 11	down/up	15	8	6	4	2	2	1

Maximum number of terminals

acc. to certification

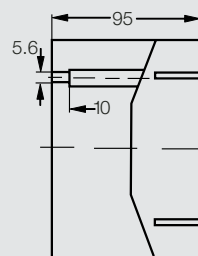
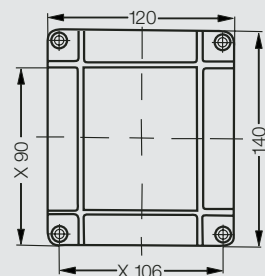
Type	Terminal cross section	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	Terminal rail
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731 11	16	14	10	8	8	107 mm
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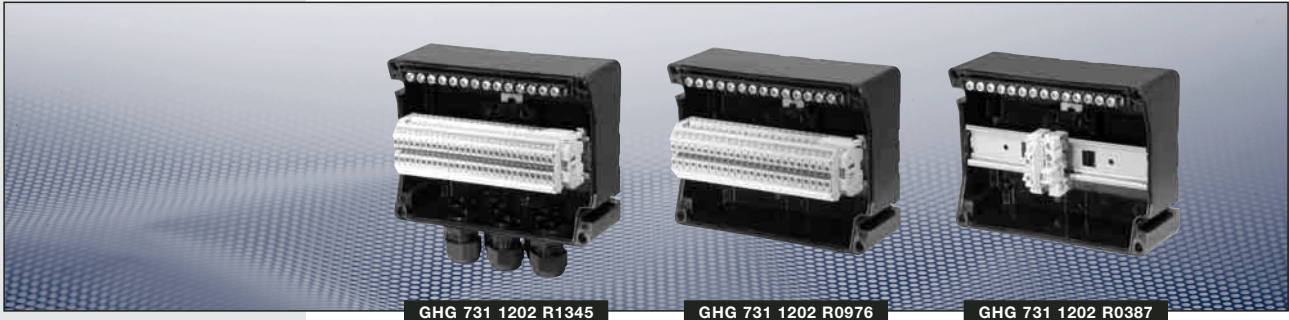
length of assembling

Other types on request.

Fixing material and accessories see page 5.110 pp.



Type 731 11



GHG 731 1202 R1345

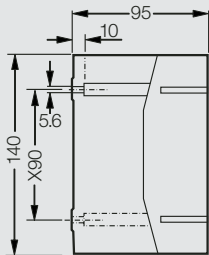
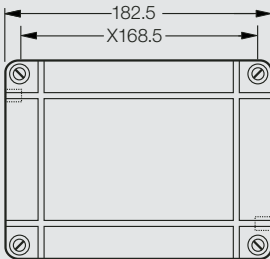
GHG 731 1202 R0976

GHG 731 1202 R0387

Ex - e / Ex - i T E R M I N A L B O X

| 731 12 up to 24 terminals |

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Type 731 12

Technical data

Type 731 12 up to 24 terminal

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*
Type of protection	EEx e II T6 EEx ia IIC T6 EEx e [ia] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	690 V
Rated current	depends on terminal mounting
Degree of protection to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Terminal cross section	up to 16 mm ²
Weight	approx. 1.08 kg

* applied for

Ordering details type 731 12

assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 2.5 mm²

Design	Cable entry	Terminals	Order No.
Ex-e	without drilling	1 x Ex-e ¹⁾ /UK 3 N/14 x PE	GHG 731 1202 R0387
Ex-e	without drilling	24 x Ex-e/UK 5 N/14 x PE	GHG 731 1202 R0976
Ex-e	6 x M25	28 x Ex-e/UK 3 N/14 x PE	GHG 731 1202 R1345

¹⁾ according to type examination certificate individual extensible

Maximum number of drillings and cable glands

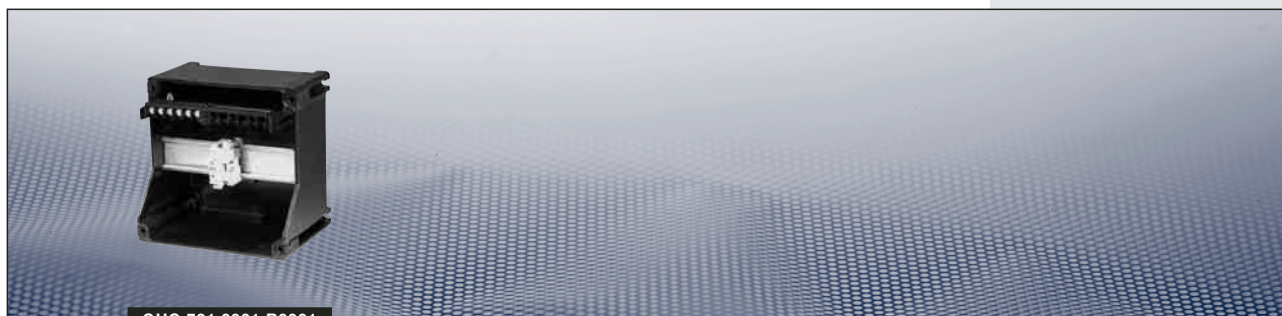
Type	Side of entries	M12	M16	M20	M25	M32	M40	M50
731 12	down/up	24	17	10	6	3	3	2

Maximum number of terminals acc. to certification

Type	Terminal cross section	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	Terminal rail length of assembling
731 12		24	24	18	18	14	169 mm

Other types on request.

Fixing material and accessories see page 5.110 pp.



GHG 721 0001 R0001

Ex - e / Ex - i T E R M I N A L B O X

| 721 00 up to 26 terminals |

Technical data

Type 721 00 up to 26 terminal

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx e II T6 EEx ia IIC T6 EEx e [ia] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	690 V
Rated current	depends on terminal mounting
Degree of protection to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Terminal cross section	up to 16 mm²
Weight	approx. 1.1 kg

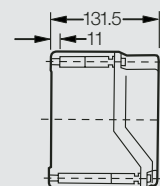
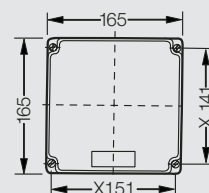
Maximum number of drillings and cable glands für type 721 00

Side of entries	M12	M16	M20	M25	M32	M40	M50	M63
down	35	20	12	11	6	4	2	2
Flange plastic	11	6	4	3	2	1	1	–
Flange metal	–	–	3	2	1	–	–	–

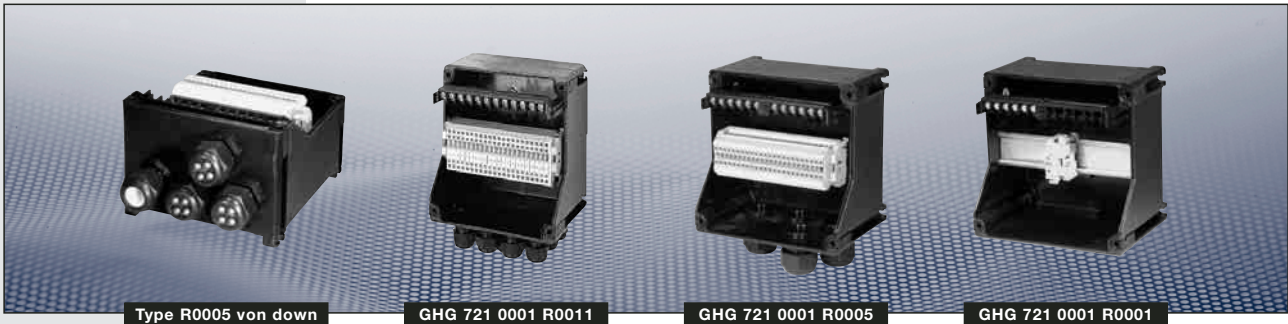
**Maximum number of terminals
acc. to certification**

Type	Terminal	2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	Terminal
	cross section						rail

721 00	26	22	17	13	11	140 mm	length of assembling
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Type 721 00



Type R0005 von down

GHG 721 0001 R0011

GHG 721 0001 R0005

GHG 721 0001 R0001

Ex - e / Ex - i T E R M I N A L B O X

5.81

| 721 00 up to 26 terminals |

**Ordering details type 721 00
assembled with screw terminals 2 x 4 mm² + PE-rail 2.5 mm²**

Design	Cable entry	No. of terminals	Order No.
Ex-e	without drilling	1 x Ex-e ¹⁾ /6 x PE/PA	GHG 721 0001 R0001

¹⁾ according to type examination certificate individual extensible

**Ordering details type 721 00
assembled with screw terminals 2 x 2.5 mm² + PE/PA-terminal 2.5 mm²**

Design	Cable entry	No. of terminals	Order No.
Ex-e	1 x M32 for cable Ø 12-21 mm	24 x Ex-e	GHG 721 0001 R0005
	3 x M32 for 4 cable Ø 4.5-7 mm	12 x PE/PA	
Ex-i	1 x M32 for cable Ø 12-21 mm	24 x Ex-i	GHG 721 0001 R0006
	3 x M32 for 4 cable Ø 4.5-7 mm	12 x PE/PA	
Ex-e	1 x M32 for cable Ø 12-21 mm	24 x Ex-e	GHG 721 0001 R0007
	12 x M20 for cable Ø 5.5-13 mm	12 x PE/PA	
Ex-i	1 x M32 for cable Ø 12-21 mm	24 x Ex-i	GHG 721 0001 R0008
	12 x M20 for cable Ø 5.5-13 mm	12 x PE/PA	

**Ordering details type 721 00
assembled with screwless 2 x 2.5 mm² + PE/PA-rail 2.5 mm²***

Design	Cable entry	No. of terminals	Order No.
Ex-i	1 x M32 for cable Ø 12-21 mm	24 x Ex-i	GHG 721 0001 R0010
	3 x M32 for 4 cable Ø 4.5-7 mm	12 x PE/PA	
Ex-e	1 x M32 for cable Ø 12-21 mm	24 x Ex-e	GHG 721 0001 R0011
	12 x M20 for cable Ø 5.5-13 mm	12 x PE/PA	
Ex-i	1 x M32 for cable Ø 12-21 mm	24 x Ex-i	GHG 721 0001 R0012
	12 x M20 for cable Ø 5.5-13 mm	12 x PE/PA	

*screwed on

Other types on request

Fixing material and accessories see page 5.110 pp.

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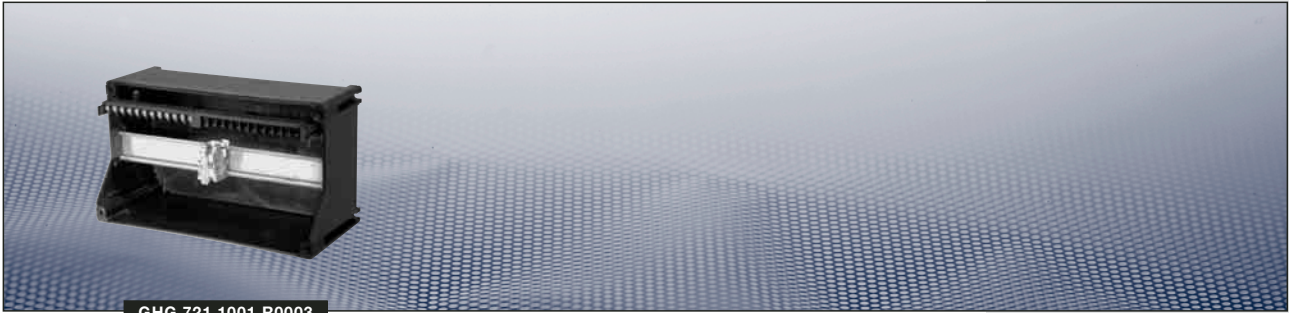
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GHG 721 1001 R0003

Ex - e / Ex - i
 TERMINAL BOX

| 721 10 up to 48 terminals |

Technical data

Type 721 10 up to 48 terminal

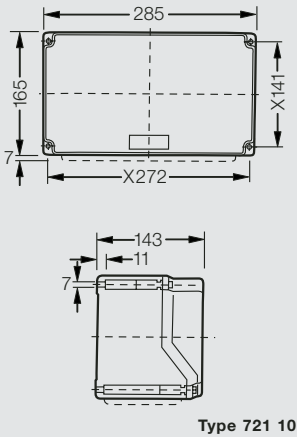
Marking to 94/9/EC	Ⓔ II 2 G Ⓔ II 2 D T80 °C
Type of protection	EEx e II T6 EEx ia IIC T6 EEx e [ia] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	690 V
Rated current	depends on terminal mounting
Degree of protection to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Terminal cross section	up to 35 mm²
Weight	approx. 1.7 kg

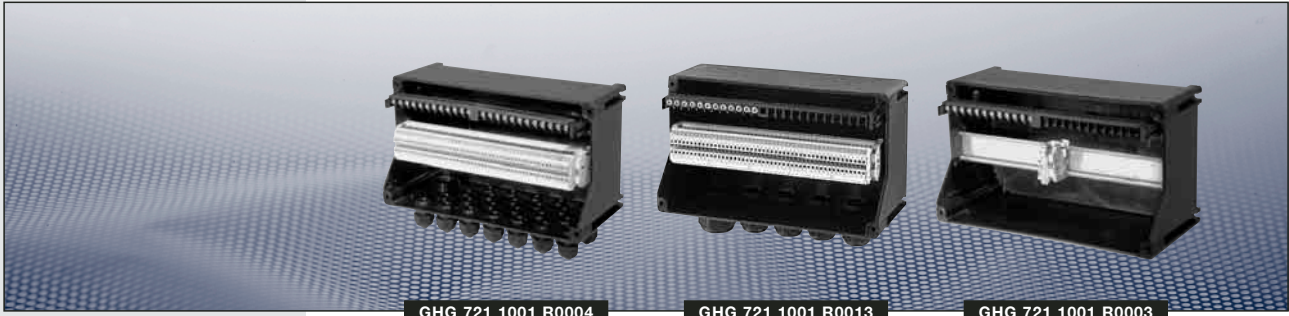
Maximum number of drillings and cable glands für type 721 10

Side of entries	M12	M16	M20	M25	M32	M40	M50	M63
down	75	42	32	21	11	8	4	3
Flange plastic	46	25	20	11	8	4	3	2
Flange metal	–	–	12	9	5	3	3	2

**Maximum number of terminals
acc. to certification**

Type	Terminal cross section	2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	Terminal rail
721 10		48	40	30	24	20	262 mm length of assembling





Ex - e / Ex - i T E R M I N A L B O X

| 721 10 up to 48 terminals |

5.83

**Ordering details type 721 10
assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 2.5 mm²**

Design	Cable entry	No. of terminals	Order No.
Ex-e	without drilling	1 x Ex-e ¹⁾ /24 x PE	GHG 721 1001 R0003

¹⁾ according to type examination certificate individual extensible

**Ordering details type 721 10
assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 2.5 mm²**

Design	Cable entry	No. of terminals	Order No.
Ex-i	1 x M40 for cable Ø 16-28 mm	48 x Ex-i	GHG 721 1001 R0013
	6 x M32 for 4 cable Ø 4.5-7 mm	24 x PE/PA	
Ex-e	1 x M40 for cable Ø 16-28 mm	48 x Ex-e	GHG 721 1001 R0004
	24 x M20 for cable Ø 5.5-13 mm	24 x PE/PA	
Ex-i	1 x M40 for cable Ø 16-28 mm	48 x Ex-i	GHG 721 1001 R0015
	24 x M20 for cable Ø 5.5-13 mm	24 x PE/PA	

**Ordering details type 721 10
assembled with screwless 2 x 2.5 mm² + PE/PA-rail 2.5 mm²***

Design	Cable entry	No. of terminals	Order No.
Ex-i	1 x M40 for cable Ø 16-28 mm	48 x Ex-i	GHG 721 1001 R0017
	6 x M32 for 4 cable Ø 4.5-7 mm	24 x PE/PA	
Ex-e	1 x M40 for cable Ø 16-28 mm	48 x Ex-e	GHG 721 1001 R0018
	24 x M20 for cable Ø 5.5-13 mm	24 x PE/PA	
Ex-i	1 x M40 for cable Ø 16-28 mm	48 x Ex-i	GHG 721 1001 R0019
	24 x M20 for cable Ø 5.5-13 mm	24 x PE/PA	

*screwed on

Other types on request

Fixing material and accessories see page 5.110 pp.

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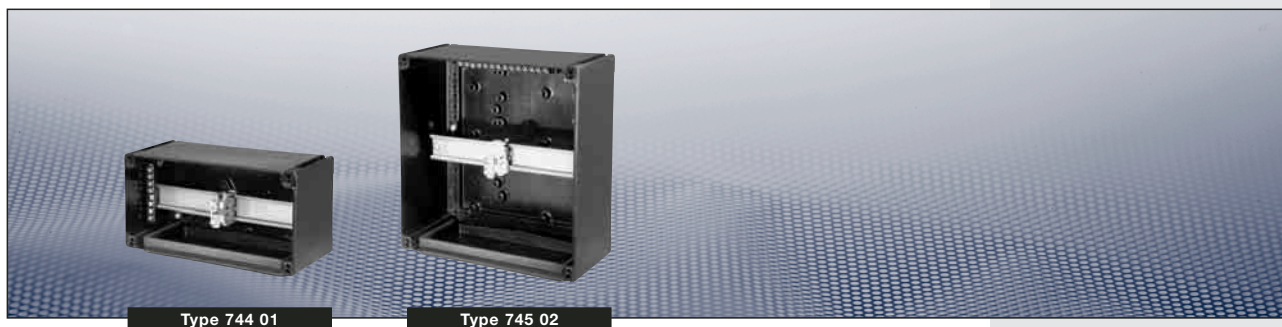
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Type 744 01

Type 745 02

Ex - e / Ex - i TERMINAL BOX

| 744 01/745 02 up to 82 terminals |

Technical data

Type 744 01/745 02 up to 82 terminal

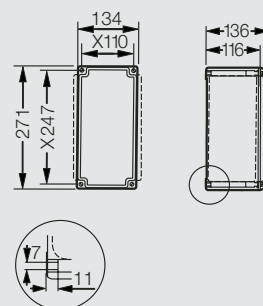
Marking to 94/9/EC	Ex II 2 G Ex II D T 80 °C
Type of protection	EEx e II T6 EEx ia IIC T6 EEx e [ia] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	690 V
Rated current	depends on terminal mounting
Degree of protection to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Terminal cross section	744 01 max. 25 mm² 745 02 max. 70 mm²
Weight	744 01 approx. 1.5 kg 745 02 approx. 2.5 kg

Maximum number of drillings and cable glands for type 744 01 and 745 02

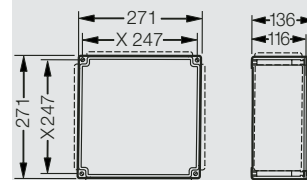
Side of entries	M12	M16	M20	M25	M32	M40	M50	M63
down	60	36	26	18	10	7	4	3
Flange plastic	46	25	20	11	8	4	3	2
Flange metal	–	–	11	9	5	3	3	2

Maximum number of terminals acc. to certification

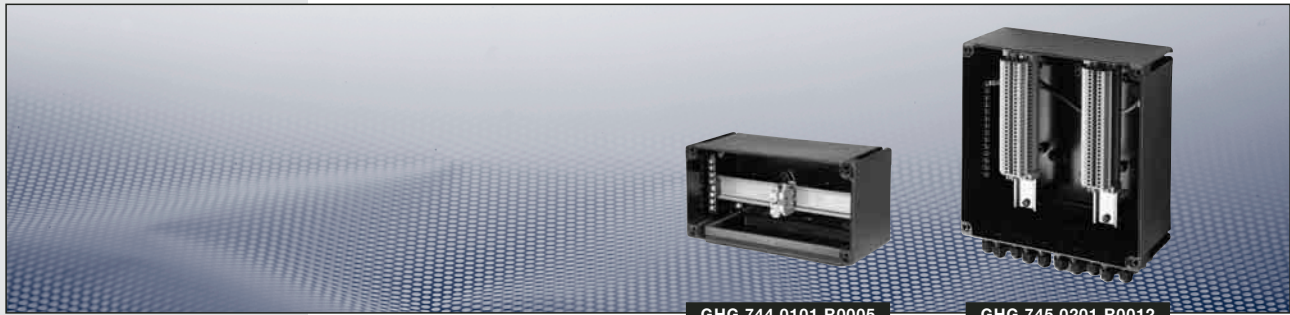
Terminal cross section								Terminal rail
Type	2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	25 mm²	35 mm²	
744 01	40	33	25	20	17	15	–	1 x 230 mm l. of assembly
745 02	2 x 41	2 x 34	2 x 26	2 x 20	17	17	14	2 x 235 mm l. of assembly



Type 744 01



Type 745 02



GHG 744 0101 R0005

GHG 745 0201 R0012

Ex - e / Ex - i T E R M I N A L B O X

| 744 01/745 02 up to 82 terminals |

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**Ordering details type 744 01
assembled with screw terminals 2 x 4 mm² + PE-rail 4 mm²**

Design	Cable entry	No. of terminals	Order No.
Ex-e	1 x plastic flange down without drilling	1 x Ex-e ¹⁾ 7 x PE	GHG 744 0101 R0005

**Ordering details type 745 02
assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 4 mm²**

Design	Cable entry	No. of terminals	Order No.
Ex-e	1 x plastic flange down without drilling	1 x Ex-e ¹⁾ 14 x PE	GHG 745 0201 R0004

¹⁾ according to type examination certificate individual extensible

**Ordering details type 745 02
assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 4 mm²**

Design	Cable entry	No. of terminals	Order No.
Ex-i	1 x M50 for cable Ø 21-35 mm 8 x M32 for 4 cable Ø 4.5-7 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0012
Ex-e	1 x M50 for cable Ø 21-35 mm 30 x M16 for cable Ø 5.5-10 mm	60 x Ex-e 27 x PE/PA	GHG 745 0201 R0013
Ex-i	1 x M50 for cable Ø 21-35 mm 30 x M16 for cable Ø 5.5-10 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0014
Ex-e	1 x M50 for cable Ø 21-35 mm 24 x M20 for cable Ø 5.5-13 mm	60 x Ex-e 27 x PE/PA	GHG 745 0201 R0015
Ex-i	1 x M50 for cable Ø 21-35 mm 24 x M20 for cable Ø 5.5-13 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0021

**Ordering details type 745 02
assembled with screwless terminals 2 x 2.5 mm² + PE/PA-rail 4 mm²***

Design	Cable entry	No. of terminal	Order No.
Ex-i	1 x M50 for cable Ø 21-35 mm 8 x M32 for 4 cable Ø 4.5-7 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0016
Ex-e	1 x M50 for cable Ø 21-35 mm 30 x M16 for cable Ø 5.5-10 mm	60 x Ex-e 27 x PE/PA	GHG 745 0201 R0017
Ex-i	1 x M50 for cable Ø 21-35 mm 30 x M16 for cable Ø 5.5-10 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0018
Ex-e	1 x M50 for cable Ø 21-35 mm 24 x M20 for cable Ø 5.5-13 mm	60 x Ex-e 27 x PE/PA	GHG 745 0201 R0020
Ex-i	1 x M50 for cable Ø 21-35 mm 24 x M20 for cable Ø 5.5-13 mm	60 x Ex-i 27 x PE/PA	GHG 745 0201 R0022

*screwed on | Other types on request.

Fixing material and accessories see page 5.110 pp.

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Type 746 03

Type 749 04

Ex - e / Ex - i TERMINAL BOX

| 746 03/749 04 up to 296 terminals |

Technical data

Type 746 03/749 04 up to 296 terminal

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C
Type of protection	EEx e II T6 EEx ia IIC T6 EEx e [ia] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	690 V
Rated current	depends on terminal mounting
Degree of protection to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Terminal cross section	746 03 max. 240 mm ² 749 04 max. 240 mm ²
Weight	746 03 approx. 4.2 kg 749 04 approx. 5.8 kg

Maximum number of drillings and cable glands for type 746 03

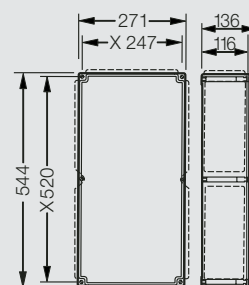
Side of entries	M12	M16	M20	M25	M32	M40	M50	M63
down	120	72	52	36	20	14	8	6
Flange plastic	46	25	20	11	8	4	3	2
Flange metal	–	–	11	9	5	3	3	2

Maximum number of drillings and cable glands for type 749 04

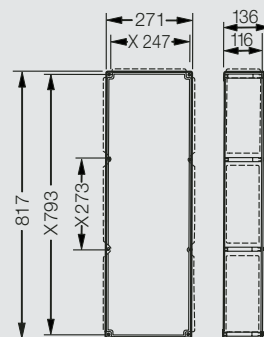
Side of entries	M12	M16	M20	M25	M32	M40	M50	M63
down	180	108	78	54	30	21	12	9
Flange plastic	46	25	20	11	8	4	3	2
Flange metal	–	–	11	9	5	3	3	2

Maximum number of terminals acc. to certification

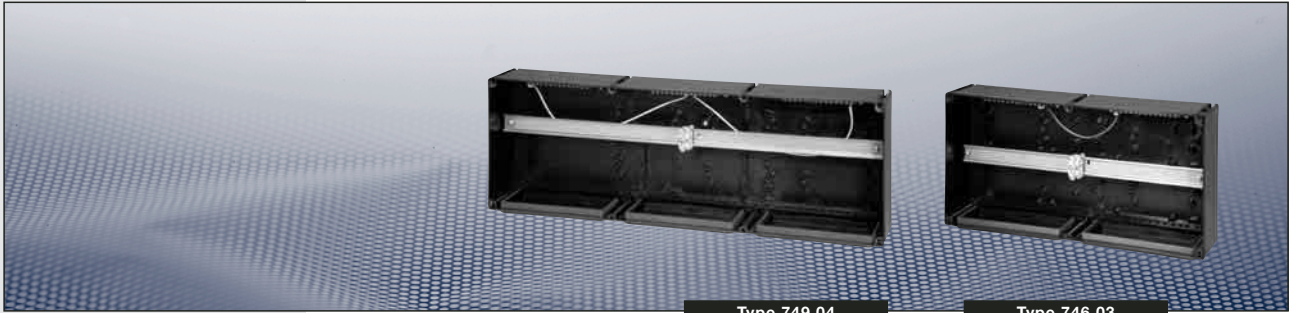
Type	Terminal cross section						Terminal rail
	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²
746 03	2 x 94	2 x 78	2 x 59	2 x 47	40	40	32
							2 x 510 mm l. of assembly
749 04	2 x 148	2 x 124	2 x 94	2 x 75	63	63	51
							2 x 795 mm l. of assembly



Type 746 03



Type 749 04



Type 749 04

Type 746 03

Ex - e / Ex - i T E R M I N A L B O X

| 746 03/749 04 up to 296 terminals |

5.87

Ordering details type 746 03

assembled with screw terminals 2 x 4 mm² + PE-rail 4 mm²

Design	Cable entry	No. of terminals	Order No.
Ex-e	2 x plastic flange down without drilling	1 x Ex-e ¹⁾ 2 x 14 x PE	GHG 746 0301 R0002

Ordering details type 749 04

assembled with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²

Design	Cable entry	No. of terminals	Order No.
Ex-e	3 x plastic flange down without drilling	1 x Ex-e ¹⁾ 3 x 14 x PE	GHG 749 0401 R0001

¹⁾ according to type examination certificate individual extensible
 Other types on request.

Fixing material and accessories see page 5.110 pp.

EX - TERMINAL BOXES

Light alloy metal design for Zone 1

Description

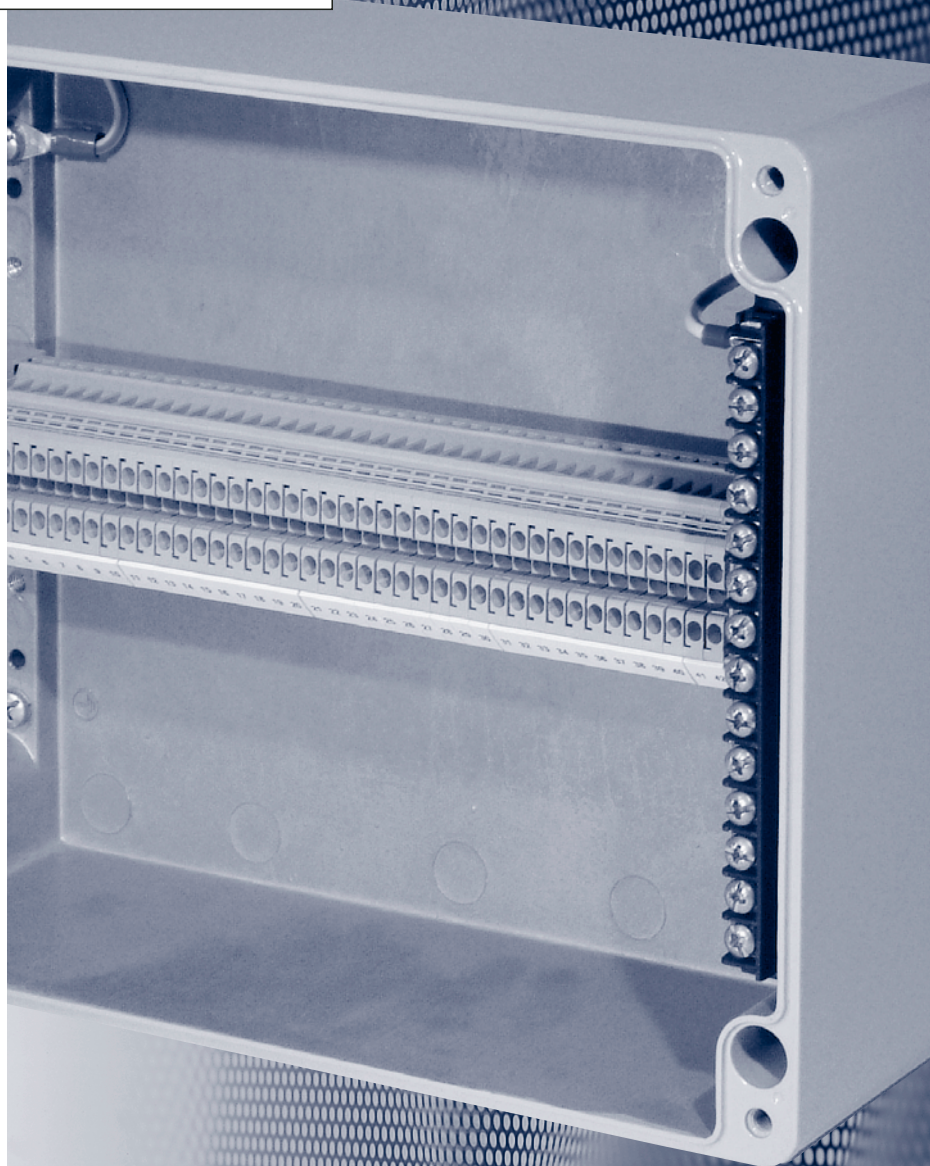
The new sturdy CEAG terminal boxes made of a light alloy metal are used to distribute and conduct electricity in hazardous explosive areas of the Zones 1, 2, 21 and 22. Optionally, all of the modular terminals up to 35 mm² pursuant to EN 50 019 are available in these terminal boxes.

Variable equipment with various cable and line ducts pursuant to customer specification can be realised with the terminal boxes made of light alloy metal.

Drilled holes, cable and line ducts, through which no lines are conducted, should be closed with certified threaded stoppers. High chemical resistance of the housing is ensured by the use of impact-resistant plastic powder coating. Covered screws and all outside and inside metallic parts are made of stainless steel.

The terminal boxes made of light metal have an outside earthing connection.

Internationally approved.



Mechanical, chemical and thermal resistance

Plastic powder coating

Can be equipped individually, Impact-resistant

To make the choice of the right terminal boxes or branching boxes for your application, the tables on this page contain the basic data. You can use these tables to identify and configure your terminal boxes.

In the table of the maximum number of terminals, the information is based on the rated current of the terminal concerned. If the current per terminal is below the rated

current, the number can be interpreted on the maximum length of the terminal strip that can be equipped.

On the basis of the maximum drilled and the faulty circuit diameter of the cable and line duct, you can select the relevant terminal box by means of the number of ducts that you need.

OVERVIEW OF TERMINAL BOXES

| Light metal design for Zone 1 |

5.89

Maximum number of terminal pursuant to prototype test

Type	Terminal cross-section in mm²						
	2,5	4	6	10	16	25	35
GHG 793 0101	11	12	13	–	–	–	–
GHG 723 0001	15	17	18	18	–	–	–
GHG 723 1001	22	25	27	26	18	15	15
GHG 723 2001	23	26	28	28	23	22	22

Terminal rail

Type	assembly length
GHG 793 0101	46 mm
GHG 723 0001	185 mm
GHG 723 1001	2 x 242 mm
GHG 723 2001	2 x 362 mm

Dimensions

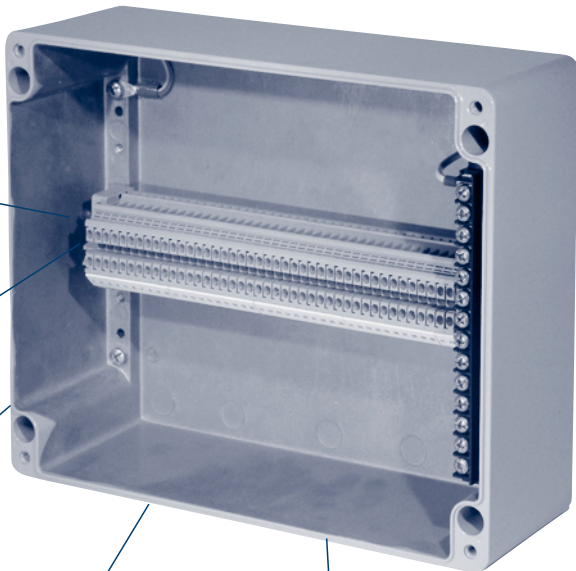
Type	Width	x	Height	x	Depth
GHG 793 0101	130 mm	x	82 mm	x	72 mm
GHG 723 0001	220 mm	x	120 mm	x	80 mm
GHG 723 1001	280 mm	x	230 mm	x	111 mm
GHG 723 2001	400 mm	x	230 mm	x	111 mm

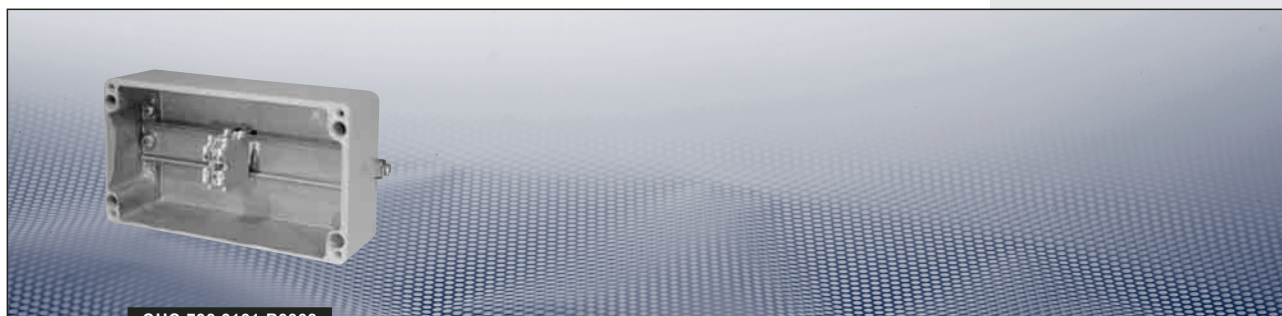
Space required for cable and cable ducts

Type	Faulty circuit diameter	
	Plastic	Metal
M12	Ø 19 mm	Ø 21 mm
M16	Ø 25 mm	Ø 21 mm
M20	Ø 31 mm	Ø 26.5 mm
M25	Ø 37 mm	Ø 33 mm
M32	Ø 46 mm	Ø 45.1 mm
M40	Ø 56 mm	Ø 53 mm
M50	Ø 68 mm	Ø 60.5 mm
M63	Ø 84 mm	Ø 80 mm

max. drilled surface

Type	Width	x	Depth
GHG 793 0101	80 mm	x	45 mm
GHG 723 0001	180 mm	x	53 mm
GHG 723 1001	232 mm	x	83 mm
GHG 723 2001	352 mm	x	80 mm





GHG 793 0101 R0003

Ex - e / Ex - i TERMINAL BOXES

| 793 01 up to 11 terminals |

Technical data

Type 793 01 up to 11 terminals

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*
Type of protection	EEx e II T6 EEx ia IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3108
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP 66
Enclosure material	alloy-silizium diecasting (AlSi)
Terminal cross section	up to 6 mm ²
Weight	approx. 0.67 kg

*applied for

Ordering details type 793 01

Mounted with screw terminals 2 x 2.5 mm² + PE-terminal 2 x 4 mm²

Type	Cable entry	No. of terminals	Order No.
Ex-e	without drilling	1 x Ex-e*/1 x PE	GHG 793 0101 R0003

* acc. to type examination certificate individuel openended

Max. number drillings and cable entries from down

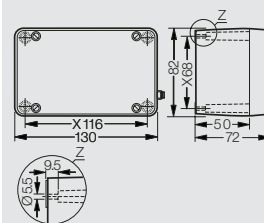
Terminal box	M16	M20	M25	M32	M40	M50	M63
793 01	5	2	2	1	—	—	—

Max. number of terminals

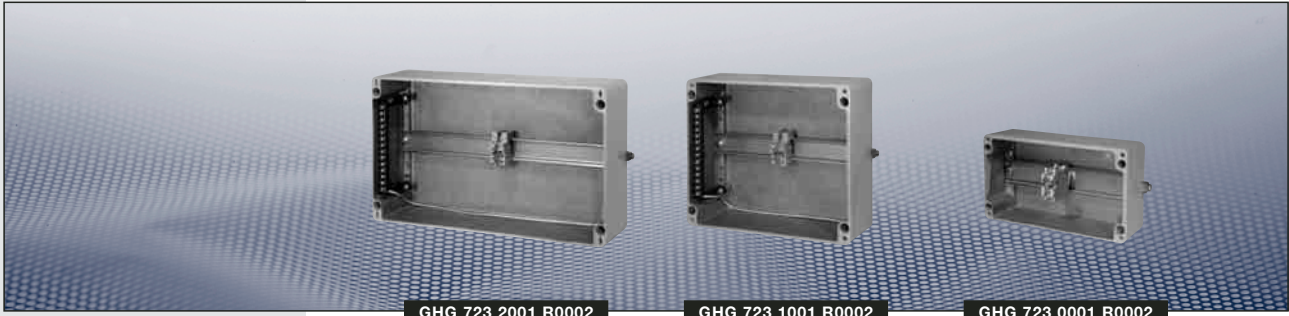
acc. to type examination certification

Terminal box	Terminal cross section			Terminal rail
	2.5 mm ²	4 mm ²	6 mm ²	
793 01	11	12	13	100 mm mounting length

Fixing material and accessories see page 5.110 pp.



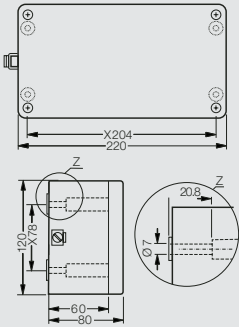
Type 793 01



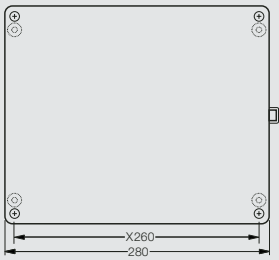
GHG 723 2001 R0002

GHG 723 1001 R0002

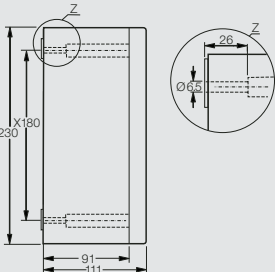
GHG 723 0001 R0002



Type 723 00



Type 723 10



Type 723 20

Dimensions in mm

Ex - e / Ex - i T E R M I N A L B O X

| 723 00/723 10/723 20 to 43 terminals |

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Technical data

Type 723 00/723 10/ 723 20 up to 27/ up to ... terminal

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*
Type of protection	EEx e II T6 EEx ia IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP 66
Enclosure material	alloy-silizium diecasting
Terminal cross section	723 00 max. 35 mm ² 723 10 max. 50 mm ² 723 20 max. 95 mm ²
Weight	723 00 approx. 1.41 kg 723 10 approx. 3.84 kg 723 20 approx. 4.87 kg

*applied for

Ordering details type 723 00

Mounted with screw terminals 2 x 2.5 mm² + PE-terminal 4 mm²

Design	Cable entry	No. of terminals	Order No.
Ex-e	without drilling	1 x Ex-e ¹⁾ /1 x PE	GHG 723 0001 R0002

Ordering details type 723 10

Mounted with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²

Design	Cable entry	No. of terminals	Order No.
Ex-e	without drilling	1 x Ex-e ¹⁾ /14 x PE	GHG 723 1001 R0002

Ordering details type 723 20

Mounted with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²

Design	Cable entry	No. of terminals	Order No.
Ex-e	without drilling	1 x Ex-e ¹⁾ /14 x PE	GHG 723 2001 R0002

¹⁾ acc. to type examination certificate individuel extensible

Max. number of drillings and cable entries from down

Terminal box	M16	M20	M25	M32	M40	M50
723 00	8	4	3	—	—	—
723 10	22	10	7	4	3	2
723 20	30	18	10	6	5	4

Max. number of terminals

acc. to type examination certificate

Type	Terminal cross section							Terminal-rail
	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	25 mm ²	35 mm ²	
723 00	15	17	18	18	14	24	27	1 x 185 mm
723 10	22	25	27	26	22	36	41	2 x 242 mm
723 20	23	26	29	28	23	38	43	2 x 362 mm



Crouse-Hinds

COOPER CROUSE-HINDS GMBH

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EX - TERMINAL BOXES

Light metal design, explosion-proof for Zone 1

Series C30 and C31 explosion-protected terminal boxes made of light metal are used to distribute and conduct electricity in areas of Zone 1, 2, 21 and 22 at no risk of explosion. Optionally, they are equipped with a assembly plate with pillar terminals or with terminals on an assembly plate with a terminal strip for individual equipment. The connection cross-section can vary by up to 6 mm² or up to 10 mm².

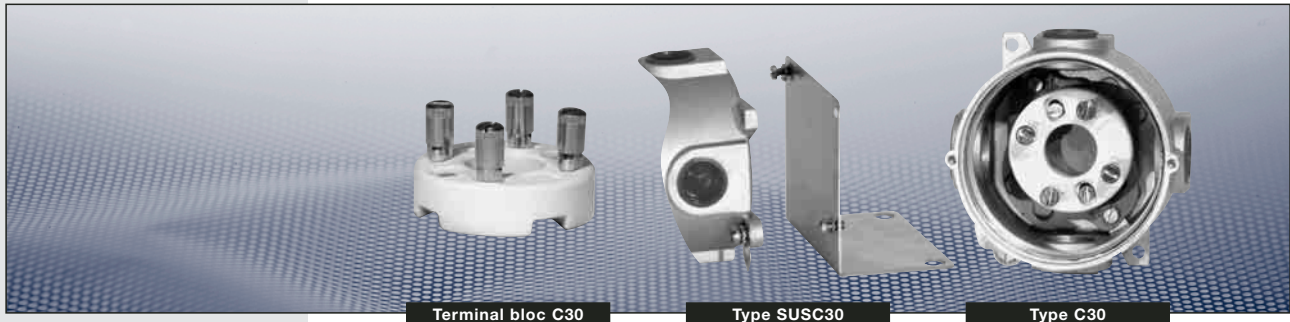
A high "IP degree of protection" allows universal use in areas at risk of explosion. Optionally, the cables can be introduced into the terminal boxes via conduits or explosion-proof screw connections. Drilled holes through which no cables are conducted should be closed with certified threaded stoppers.

The light metal terminal boxes have an outside earthing connection.

Internationally approved.

High mechanical, chemical and thermal resistance
High degree of protection IP 66





Terminal bloc C30

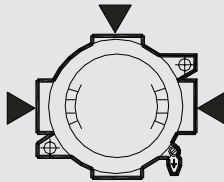
Type SUSC30

Type C30

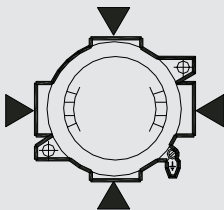
Ex - d T E R M I N A L B O X

| C30 |

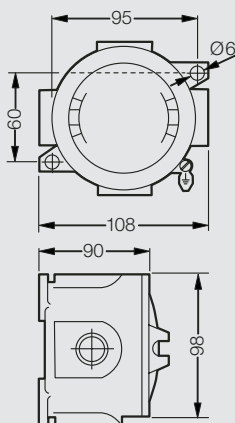
5.93



Type C30 T



► Thread
Type C30 X



Technical data

Type C30

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T85 °C
Type of protection	EEx d IIC T6
EC-Type Examination Certificate	LOM 02 ATEX 2037 X
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP 66
Enclosure material	Light metal
Inside diameter	Ø 78 mm
Insert length terminal rail	up to 45 mm
Terminal cross section	up to 6 mm²
Weight empty	approx. 0.80 kg

Ordering details type C30

Typ	Thread	No. of terminals	Order No.
C30 T1	3 x 1/2" NPT	–	NOR 000 001 151 181
C30 T2	3 x 3/4" NPT	–	NOR 000 001 151 199
C30 X1	4 x 1/2" NPT	–	NOR 000 001 151 205
C30 X2	4 x 3/4" NPT	–	NOR 000 001 151 214

Ordering details built-in components type C30

Typ	Description	No. of terminals	Order No.
BC 30	Mounting plate with pillar terminals 4 x 4 mm²	4 x Ex-e*	NOR 000 001 151 222
PBPD 30	Terminal rail DIN 46877	Mounting rail	NOR 000 000 115 314
PC 30	Mounting plate without terminals	–	NOR 000 000 115 302

* 4 x 4 mm² multi-wire or 2 x 6 mm² solid

Ordering details mounting angel for housing fixing type C30

Design	Order No.
SUSC 30	NOR 000 000 115 311

Fixing material and accessories see page 5.110 pp.

1

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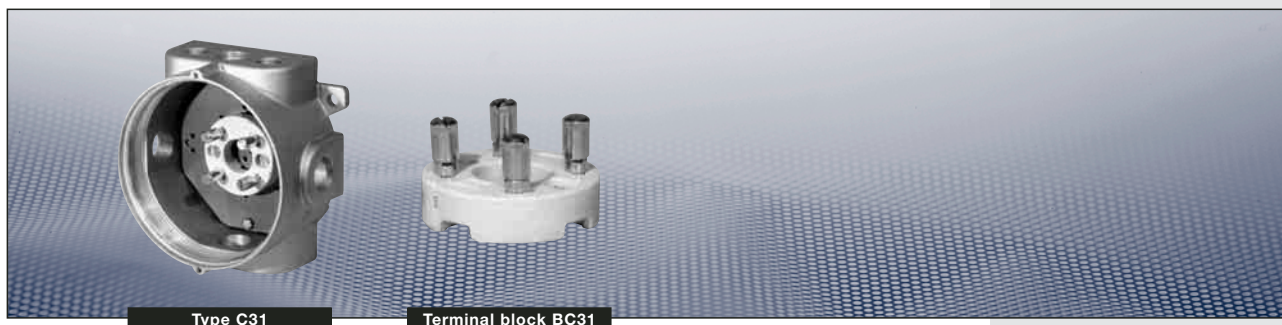
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9



Type C31

Terminal block BC31

EX - d T E R M I N A L B O X E S

| C 31 |

Technical data

Type C31

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T85 °C
Type of protection	EEx d IIC T6
EC-Type Examination Certificate	LOM 02 ATEX 2037 X
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP 67
Enclosure material	Light metal
Inside diameter	Ø 120 mm
Insert length terminal rail	up to 82 mm
Terminal cross section	up to 10 mm²
Weight empty	approx. 1.30 kg

Ordering details type C31

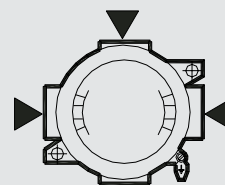
Type	Thread	No. of terminals	Order No.
C31 T1	3 x 1/2" NPT	–	NOR 000 111 150 001
C31 T2	3 x 3/4" NPT	–	NOR 000 111 150 002
C31 T3	3 x 1" NPT	–	NOR 000 111 150 003
C31 X1	4 x 1/2" NPT	–	NOR 000 111 150 004
C31 X2	4 x 3/4" NPT	–	NOR 000 111 150 005
C31 X3	4 x 1" NPT	–	NOR 000 111 150 006

Ordering details built-in components type C31

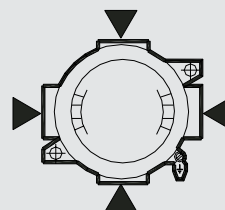
Type	Cable entry	No. of terminals	Order No.
BC31	Mounting plate with pillar terminals	4 x 4 mm² *	NOR 000 111 150 009
P C31	Mounting plate without terminals	–	NOR 000 000 115 306
PBPD 31	Terminal rail DIN 46877	–	NOR 000 000 115 015

* 4 x 4 mm² multi-wire or 2 x 6 mm² solid

Fixing material and accessories see page 5.110 pp.

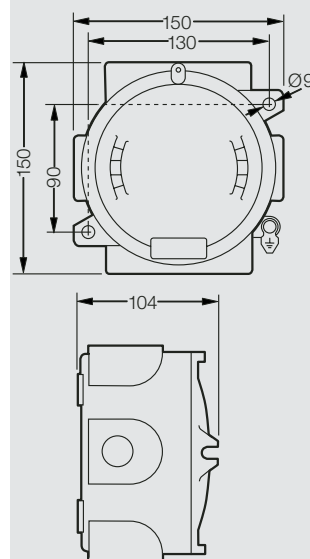


Type C31 T



Type C31 X

Thread



EX - TERMINAL BOXES

Stainless steel version for Zone 1

The new explosion-protected terminal box made of stainless steel (V4A, AISI 316 L) with ground surfaces was developed for instrumentation and control installations using the Ex-e and Ex-i technologies.

They act as a link between the main cable to the control room and the branch cables into the field. In addition to this, they may also be used for the direct connection of actuators and sensors. Here the metal cable glands also allow electromagnetically compatible connection methods.

The robust design of the stainless steel terminal boxes provides a high degree of safety for offshore applications and in places where particularly adverse chemical, mechanical and climatic operating conditions prevail within the hazardous area.

Two terminal box series in 5 and 7 sizes are available for accommodating up to 60 terminals. The choice between screw and tension-spring (screwless) terminals for single and multi-wire conductors makes it possible for the installation engineers to select the type of connection that is most suitable for the respective application. Two separate PE rails are available for the separate connection of PE/PA and screened cables. Due to the optimized design, there is a large drilling area for fitting a large number of metal glands. Unused entry holes must be sealed safely with certified blanking plugs. As an alternative, a screw-on metal flange can be used for a wide variety of applications.

International approvals

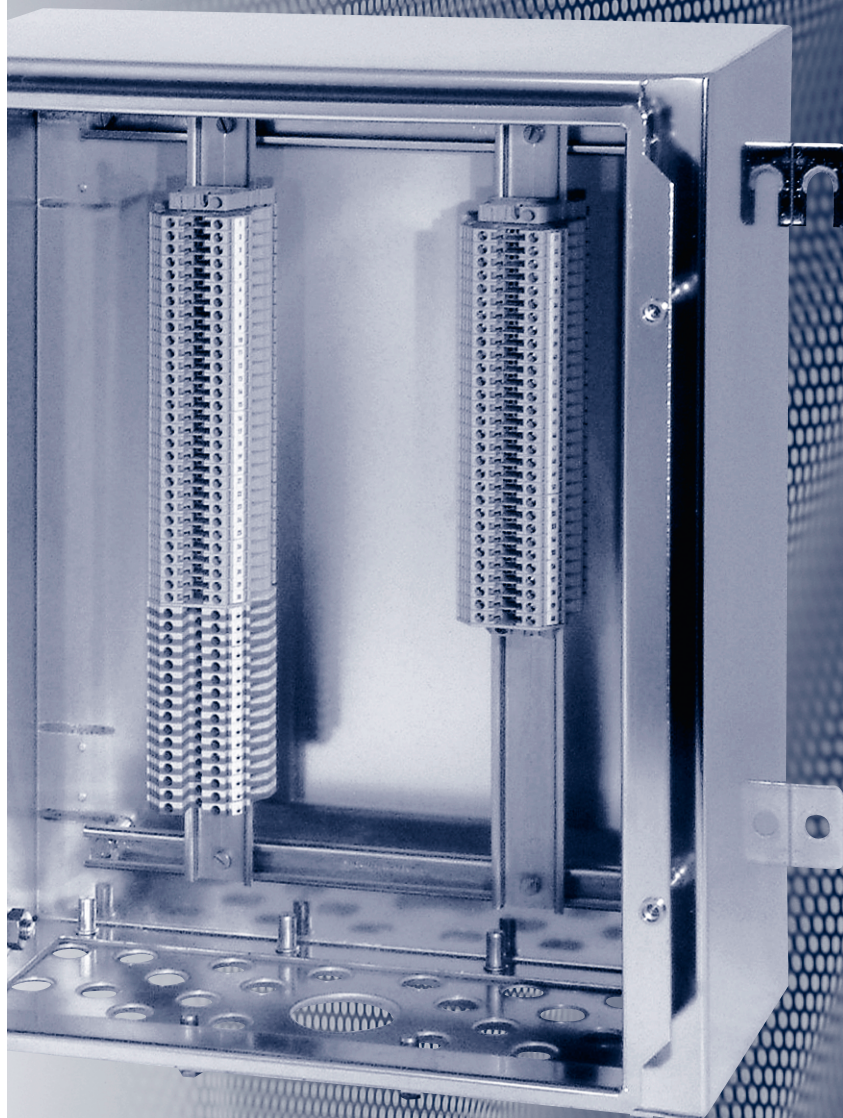
**Stainless steel AISI 316,
with ground surface**

**Highly resistant
silicone seals**

Metal flanges available on request

Safety standard IP 66

PE/PA rails



To make the choice of the right terminal boxes or branching boxes for your application, the tables on this page contain the basic data. You can use these tables to identify and configure your terminal boxes.

In the table of the maximum number of terminals, the information is based on the rated current of the terminal concerned. If the current per terminal is below the rated current, the number can be interpreted on the maximum

length of the terminal strip that can be equipped.

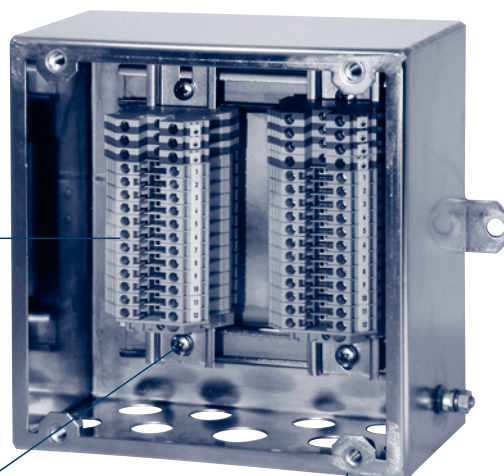
On the basis of the maximum drilled and the faulty circuit diameter of the cable and line duct, you can select the relevant terminal box by means of the number of ducts that you need.

OVERVIEW OF TERMINAL BOXES

Stainless steel for Zone 1

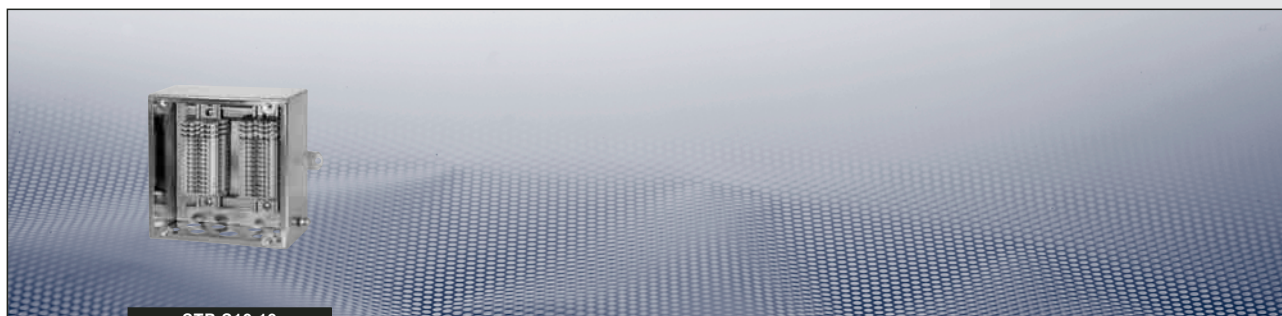
5.97

Max. number of drillings acc. to EC-type examination							
Type	Terminal cross section in mm ²						
	2,5	4	6	10	16	25	35
STB S12 12	6	–	–	–	–	–	–
STB S15 15	7	8	8	7	–	–	–
STB S19 19	9	10	11	10	–	–	–
STB S16 38	10	11	12	12	10	–	–
STB S25 40	13	14	16	15	13	–	–
NXT 221 51	10	11	12	10	–	–	–
NXT 262 61	13	15	16	16	–	–	–
NXT 262 62	15	17	19	19	–	–	–
NXT 303 02	17	19	20	20	16	–	–
NXT 453 82	19	22	24	23	19	–	–
GHG 744 21	40	33	25	20	17	17	–
GHG 745 22	2 x 41	2 x 34	2 x 36	2 x 20	17	17	14
GHG 746 23	2 x 94	2 x 78	2 x 59	2 x 47	40	40	32
GHG 749 24	2 x 148	2 x 124	2 x 94	2 x 75	63	63	51



Terminal rail	
Type	assembly length
STB S12 12	1 x 54 mm
STB S15 15	1 x 82 mm
STB S19 19	1 x 122 mm
STB S16 38	1 x 292 mm
STB S25 40	3 x 172 mm vertical
NXT 221 51	1 x 129 mm
NXT 262 61	2 x 160 mm
NXT 262 62	2 x 160 mm
NXT 303 02	2 x 206 mm
NXT 453 82	3 x 358 mm vertical
GHG 744 21	1 x 230 mm
GHG 745 22	2 x 235 mm
GHG 746 23	2 x 510 mm
GHG 749 24	2 x 795 mm

Dimensions					
Type	Width	x	Height	x	Depth
STB S12 12	120 mm	x	120 mm	x	80 mm
STB S15 15	150 mm	x	150 mm	x	90 mm
STB S19 19	190 mm	x	190 mm	x	100 mm
STB S16 38	380 mm	x	160 mm	x	120 mm
STB S25 40	250 mm	x	400 mm	x	130 mm
NXT 221 51	152 mm	x	229 mm	x	130 mm
NXT 262 61	260 mm	x	260 mm	x	160 mm
NXT 262 62	260 mm	x	260 mm	x	205 mm
NXT 303 02	306 mm	x	306 mm	x	205 mm
NXT 453 82	382 mm	x	458 mm	x	205 mm
GHG 744 01	312 mm	x	175 mm	x	135 mm
GHG 745 02	312 mm	x	312 mm	x	135 mm
GHG 746 03	627 mm	x	312 mm	x	135 mm
GHG 749 04	941 mm	x	312 mm	x	135 mm



STB S19 19

Ex - e / Ex - i TERMINAL BOX

| STB S |

Technical data

Type STB S

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C/95 °C
Type of protection	EEx e ia II/IIC T6/T5
EC-Type Examination Certificate	PTB 04 ATEX 1015
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP 66
Enclosure material	Stainless steel AISI 316 L (1.4404)
Terminal cross section	up to 16 mm ²
Weight empty	STB S12 12 approx. 1.4 kg STB S15 15 approx. 1.9 kg STB S19 19 approx. 3.0 kg STB S16 38 approx. 3.7 kg STB S25 40 approx. 5.4 kg

Max. number of drillings and cable entries from down

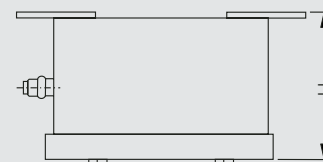
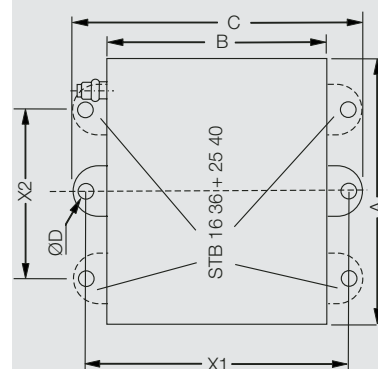
Terminal box	M16	M20	M25	M32	M40	M50	M63
STB S12 12	5	3	2	1	–	–	–
STB S15 15	8	5	3	2	1	–	–
STB S19 19	13	8	5	3	2	2	–
STB S16 38	36	21	16	9	6	4	3
STB S25 40	48	27	16	11	7	5	4

Max. number of drillings acc. to type examination certificate

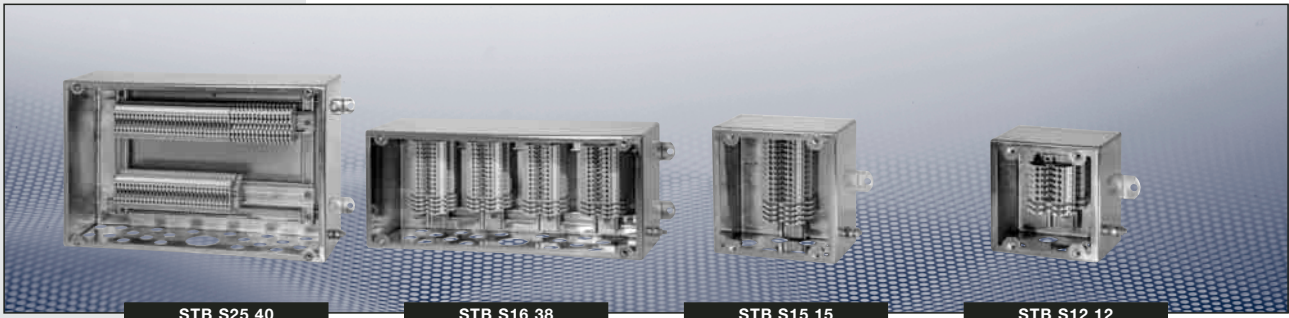
Type	Terminal cross section					Terminal rail	
	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²		
STB S12 12	6	–	–	–	–	54 mm length of assembly	
STB S15 15	7	8	8	7	–	82 mm length of assembly	
STB S19 19	9	10	11	10	–	2 x 122 mm length of assembly	
STB S16 38	10	11	12	12	10	292 mm length of assembly	
STB S25 40	13	14	16	15	13	3 x 172 mm l. of assembly	

Dimensions drawing (Dimensions in mm)

Terminal box	Dim. A	Dim. B	Dim. C	Dim. H	Ø D	Fixing	
						X1	X2
STB S12 12	120	120	159	80	6	145	–
STB S15 15	150	150	189	90	6	175	–
STB S19 19	190	190	229	100	6	215	–
STB S16 38	380	160	419	120	8	405	80
STB S25 40	400	250	439	130	8	425	150



Type STBS



Ex - e / Ex - i T E R M I N A L B O X

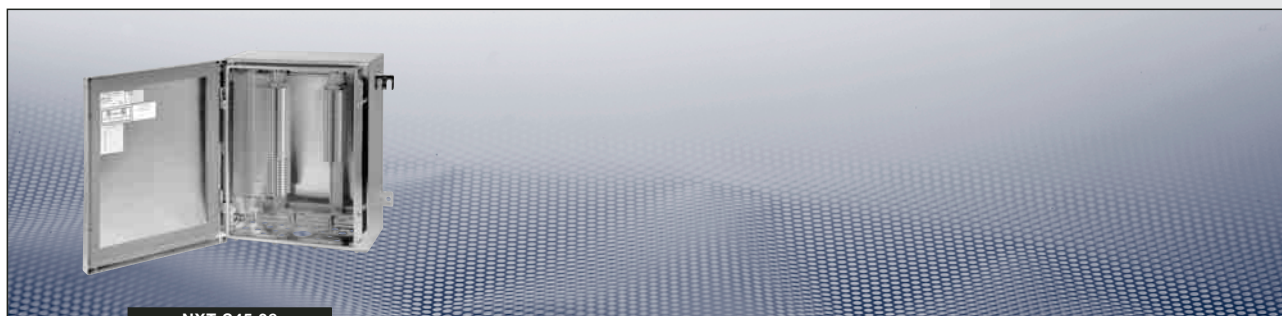
5.99

| STB S up to 60 terminals |

Ordering details type STB S
Mounted with screw terminals 2 x 2.5 mm² + PE-terminal 2 x 4 mm²

Type	Drillings	No. of terminals	Order No.
STB S12 12	3 x Ø 16.5 mm 1 x Ø 21.0 mm	6 x Ex-e 6 x PE	STB 100 0000 R0001
STB S15 15	6 x Ø 16.5 mm 1 x Ø 26.0 mm	12 x Ex-e 7 x PE	STB 200 0000 R0001
STB S19 19	12 x Ø 16.5 mm 1 x Ø 26.0 mm	24 x Ex-e 13 x PE	STB 300 0000 R0001
STB S16 38	24 x Ø 16.5 mm 1 x Ø 41.0 mm	48 x Ex-e 25 x PE	STB 500 0000 R0001
STB S25 40	30 x Ø 16.5 mm 1 x Ø 51.0 mm	60 x Ex-e 31 x PE	STB 600 0000 R0001

Other versions available on request.



NXT S45 38

Ex - e / Ex - i T E R M I N A L B O X

| N X T S u p t o 6 0 t e r m i n a l s |

Technical data

Type NXT S

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C/95 °C
Type of protection	EEx e ia II/IIC T6/T5
EC-Type Examination Certificate	PTB 04 ATEX 1015
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP 66
Enclosure material	Stainless steel AISI 316 L (1.4404)
Terminal cross section	up to 35 mm ²
Weight empty	NXT S221513 approx. 3.25 kg NXT S262616 approx. 5.50 kg NXT S262620 approx. 5.50 kg NXT S303020 approx. 7.00 kg NXT S453820 approx. 9.75 kg

Max. number of drillings and cable entries from down with flange

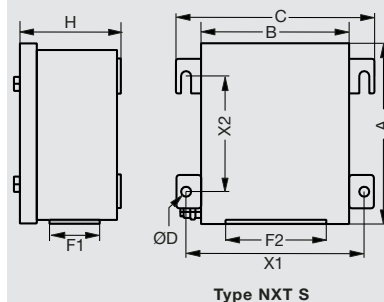
Terminal box	M16	M20	M25	M32	M40	M50	M63
NXT S221513	6	3	2	1	–	–	–
NXT S262616	20	10	6	3	3	2	–
NXT S262620	33	15	12	6	5	3	–
NXT S303020	32	18	15	8	6	3	–
NXT S453820	44	24	20	10	8	4	–

Max. number of terminals acc. to type examination certificate

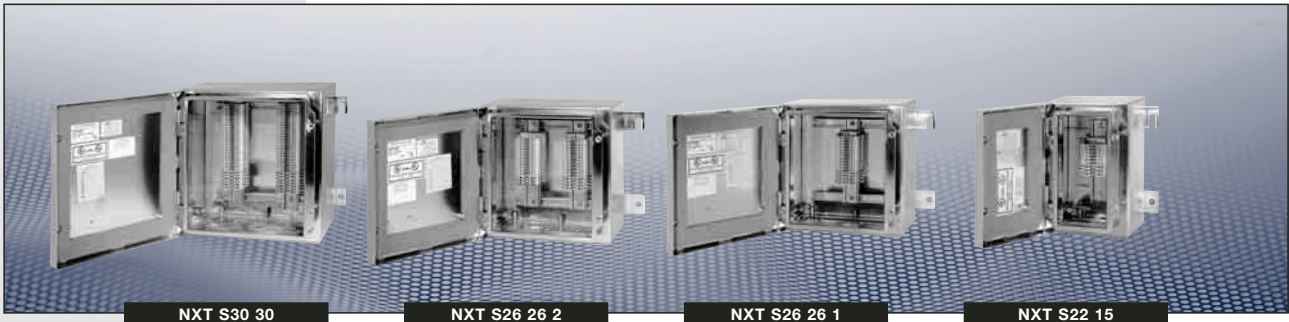
Type	Terminal cross section					Terminal-rail
	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²	
NXT S221513	10	11	12	10	–	54 mm length of assembly
NXT S262616	13	15	16	16	–	82 mm length of assembly
NXT S262620	15	17	19	19	–	122 mm length of assembly
NXT S303020	17	19	20	20	16	292 mm length of assembly
NXT S453820	19	22	24	23	19	3 x 172 mm l. of assembly

Dimensions drawing (Dimensions in mm)

Terminal box	Dim. A	Dim. B	Dim. C	Dim. H	Ø D	Fixing		Flange	
						X1	X2	F1	F2
NXT S221513	229	152	233	130	11	208	152	58	108
NXT S262616	260	260	341	160	11	316	170	80	214
NXT S262620	260	260	341	205	11	316	170	124	214
NXT S303020	306	306	386	205	11	361	203	124	261
NXT S453820	458	382	472	205	11	437	305	124	337



Type NXT S



Ex - e / Ex - i T E R M I N A L B O X

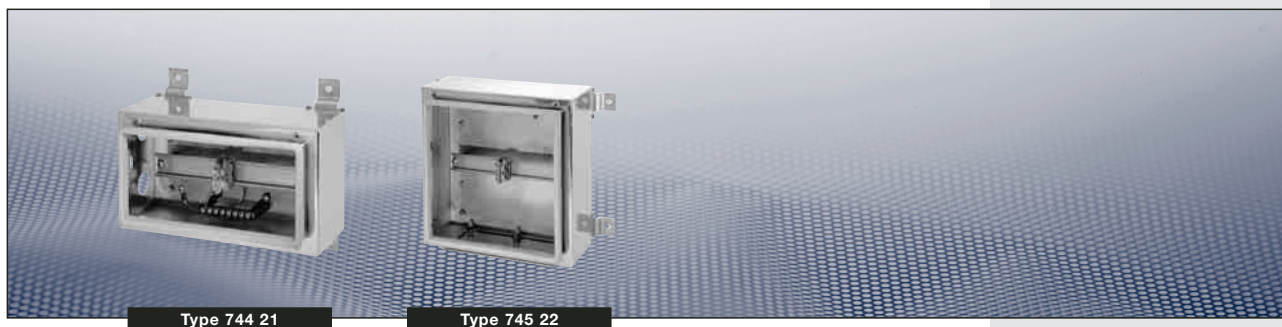
5.101

| NXT S up to 60 terminals |

Ordering details type NXT S
Mounted with screw terminals 2 x 2.5 mm² + PE-terminal 4 mm²

Type	Drillings	No. of terminals	Order No.
NXT S22 15	4 x M20 with flange	6 x Ex-e 6 x PE	NXT S22 1513 R0001
NXT S26 26	6 x M16 + 1 x M25 with flange	12 x Ex-e 7 x PE	NXT S26 2616 R0001
NXT S26 26	12 x M16 + 1 x M32 with flange	24 x Ex-e 13 x PE	NXT S26 2620 R0001
NXT S30 30	24 x M16 + 1 x M40 with flange	48 x Ex-e 25 x PE	NXT S30 3020 R0001
NXT S45 38	30 x M16 + 1 x M50 with flange	60 x Ex-e 31 x PE	NXT S45 3820 R0001

Other versions available on request.



Type 744 21

Type 745 22

5.102

Ex - e / Ex - i T E R M I N A L B O X

| 744 21/745 22/746 23/749 24 up to 296 terminals |

Technical data

Type 744 21/745 22/746 23/749 24 up to 296 terminal

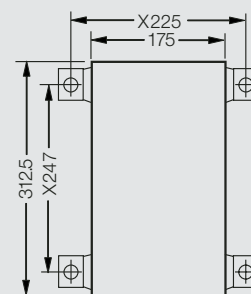
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 80 °C
Type of protection	EEx e II T6 EEx ia IIC T6 EEx e [ia] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP 66
Enclosure material	Stainless steel AISI 316 L (1.4404)
Terminal cross section	744 21 max. 16 mm² 745 22 max. 70 mm² 746 23/749 24 max. 240 mm²
Weight empty	744 21 approx. 3.5 kg 745 22 approx. 7.5 kg 746 23 approx. 11.5 kg 749 24 approx. 16.5 kg

Max. number of drillings and cable entries from down

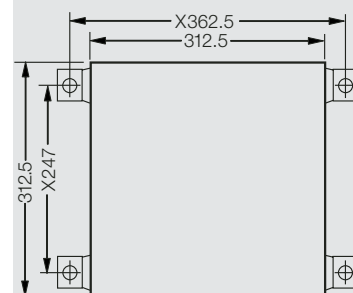
Terminal box	M16	M20	M25	M32	M40	M50	M63
744 21/745 22	37	23	15	9	5	3	2
744 21/745 22 with flange	29	17	12	7	4	2	–
746 23	71	46	30	18	10	6	4
746 23 with flange	58	34	24	14	8	4	–
749 24	108	69	45	27	15	9	6
749 24 with flange	87	51	36	21	12	6	–

**Max. number of terminals
acc. to type examination certificate**

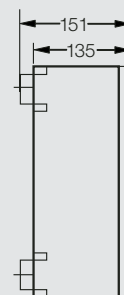
Terminal- box	Terminal cross section							Terminal- rail
	2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	25 mm²	35 mm²	
744 21	1 x 40	1 x 33	1 x 25	1 x 20	1 x 17	1 x 17	–	1 x 230 mm l. of assembly
745 22	2 x 41	2 x 34	1 x 26	2 x 20	1 x 17	1 x 17	1 x 14	2 x 230 mm l. of assembly
746 23	2 x 94	2 x 78	1 x 59	2 x 47	1 x 40	1 x 40	1 x 32	2 x 510 mm l. of assembly
749 24	2 x 148	2 x 124	1 x 94	2 x 75	1 x 63	1 x 63	1 x 51	2 x 795 mm l. of assembly

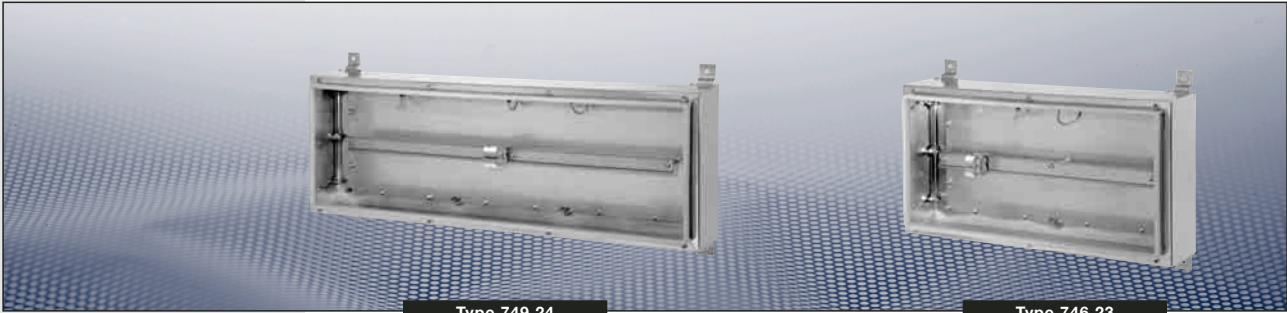


Type 744 21



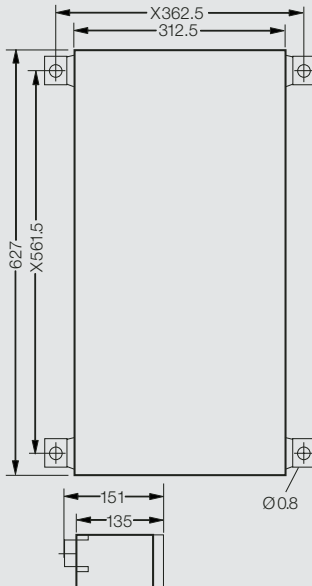
Type 745 22



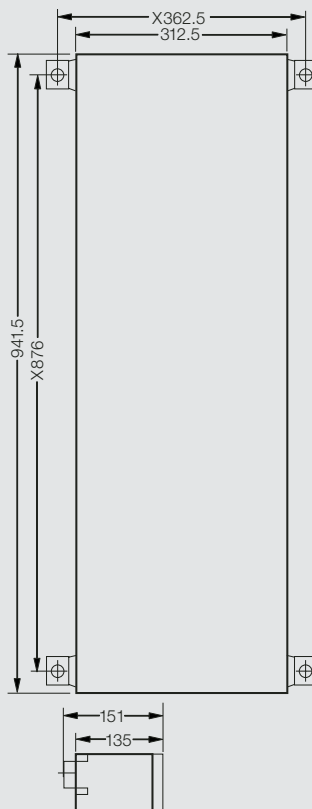


Type 749 24

Type 746 23



Type 746 23



Type 749 24

Dimensions in mm

Ex - e / Ex - i T E R M I N A L B O X

744 21/745 22/746 23/749 24 up to 296 terminals

5.103

Ordering details terminal boxes 744 21

Mounted with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²

Type	Cable entry	No. of terminals	Order No.
Ex-e	1 x Stainless steel down without drilling	1 x Ex-e* 7 x PE	GHG 744 2101 R0001

Ordering details terminal boxes 745 22

Mounted with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²

Type	Cable entry	No. of terminals	Order No.
Ex-e	1 x Stainless steel down without drilling	1 x Ex-e* 14 x PE	GHG 745 2201 R0001

Ordering details terminal boxes 746 23

Mounted with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²

Type	Cable entry	No. of terminals	Order No.
Ex-e	2 x Stainless steel down without drilling	1 x Ex-e* 2 x 14 x PE	GHG 746 2301 R0001

Ordering details terminal boxes 749 24

Mounted with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²

Type	Cable entry	No. of terminals	Order No.
EX-e	3 x Stainless steel down without drilling	1 x Ex-e* 3 x 14 x PE	GHG 749 2401 R0001

* acc. to type examination certificate individuel extensible

Other versions available on request.

EX - CONNECTION AND JUNCTION BOX

**up to 240 mm²
Plastic version for Zone 1**

The CEAG connection and junction boxes are for example used in Zones 1, 2, 21 and 22 as junction boxes for the connection of pumps, heating, motordrives etc. in hazardous explosion endangered areas.

The connection and junction boxes are fitted with certified terminals accommodating for 240 mm² according to EN 50 019. For larger terminal cross sections, versions with terminal bolts are also used.

A special version with terminal rails accommodating for 240 mm² and a double cable end box enables the connection of larger terminal cross sections. The cable to be connected is put through the front side and is laid into the double cable terminal box where it is then connected to the terminal bolts on the copper rail.

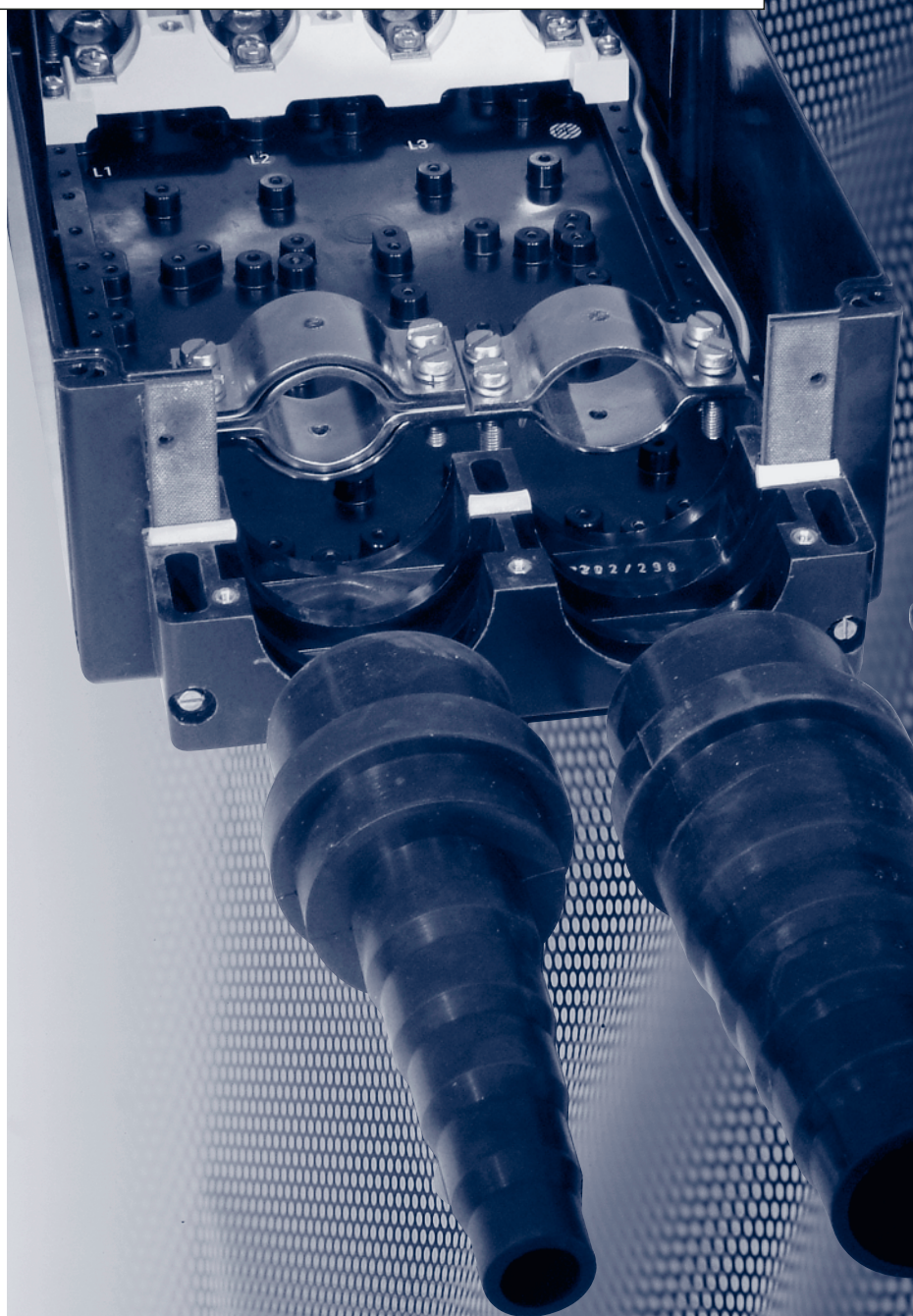
The terminal boxes are fitted with trumpet shaped cable glands or strain reliefs for a flexible cable outing.

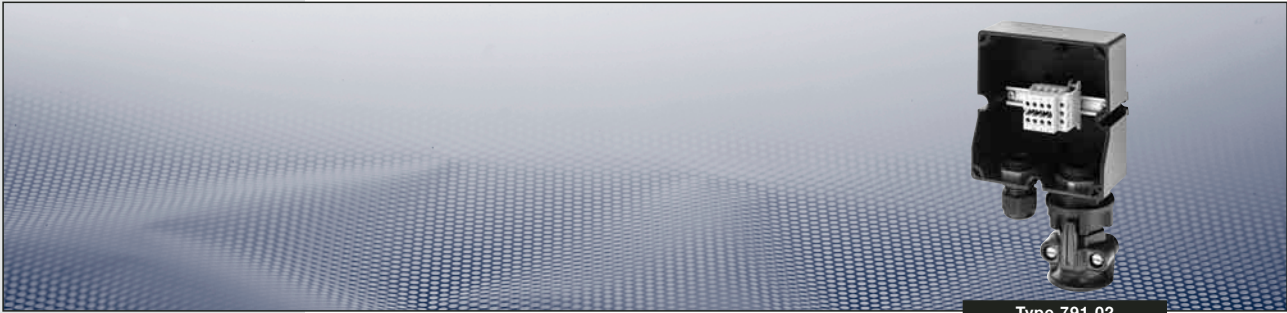
International approvals

Decisive cost reduction with the CEAG mounting system using junction boxes accommodating for 70 mm²

With four cables, connections of up to 240 mm² possible

Mechanical, chemical and thermal durability



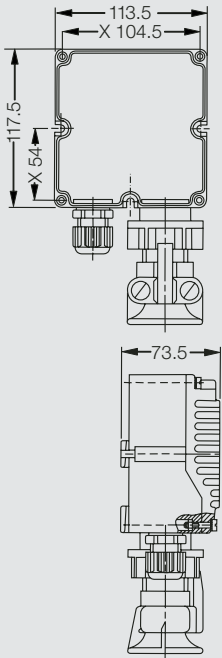


Type 791 02

EX-INTERMEDIATE MOTOR TERMINAL BOXES 4 MM²

| 791 02 |

5.105



Type 791 02

Technical data

Type 791 02

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 58 °C
Type of protection	EEx e II T6
EC-Type Examination Certificate	PTB 00 ATEX 3108
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP 66
Enclosure material	Plastic
Terminal cross section	up to 4 mm ²
Weight empty	approx. 0.7 kg

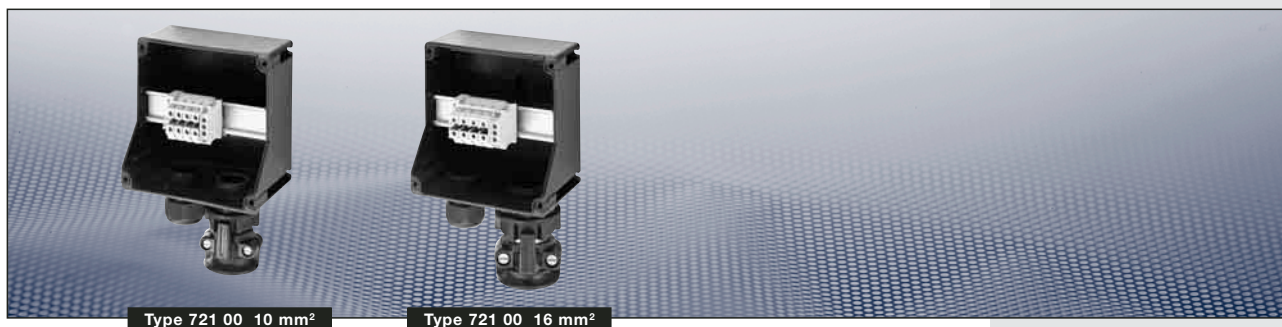
Ordering details type 791 02

Mounted with screw terminals 2 x 4 mm² + 1 x PE-terminal 2 x 4 mm²

Design	Cable entry	No. of terminals	Order No.
Ex-e	1 x M25 for cable Ø 8-17 mm	4 x Ex-e	GHG 791 0201 R0016
	1 x M32 trumpet-shaped gland	1 x PE	

Other versions for cable Ø 15 - 20 mm available on request.

Fixing material and accessories see page 5.110 pp.



5.106

EX-INTERMEDIATE MOTOR TERMINAL BOXES 10 mm²/16 mm²

| 721 00 |

Technical data

Type 721 00

Marking to 94/9/EC	Ⓔ II 2 G Ⓔ II 2 D T 80 °C
Type of protection	EEx e II T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Terminal cross section	721 00 max. 10 mm ² 721 10 max. 16 mm ²
Weight	721 00 approx. 1.0 kg 721 10 approx. 1.1 kg

Ordering details type 721 00

Mounted with screw terminals 2 x 10 mm² + 1 x PE-terminal 2 x 10 mm²

Type	Cable entry	No. of terminals	Order No.
Ex-e	1 x M40 for cable Ø 16-28 mm	4 x Ex-e	GHG 721 0001 R0013
	1 x M40 trumpet-shaped gland for cable Ø 19-27 mm	1 x PE	

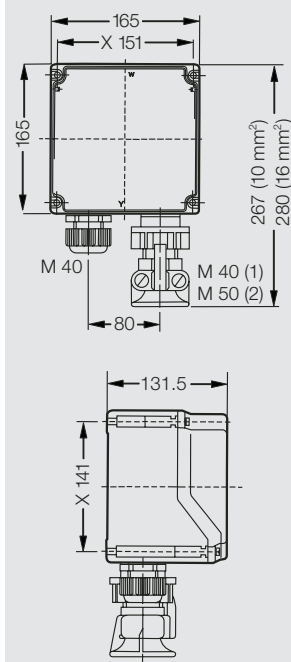
Ordering details type 721 00

Mounted with screw terminals 2 x 16 mm² + 1 x PE-terminal 2 x 16 mm²

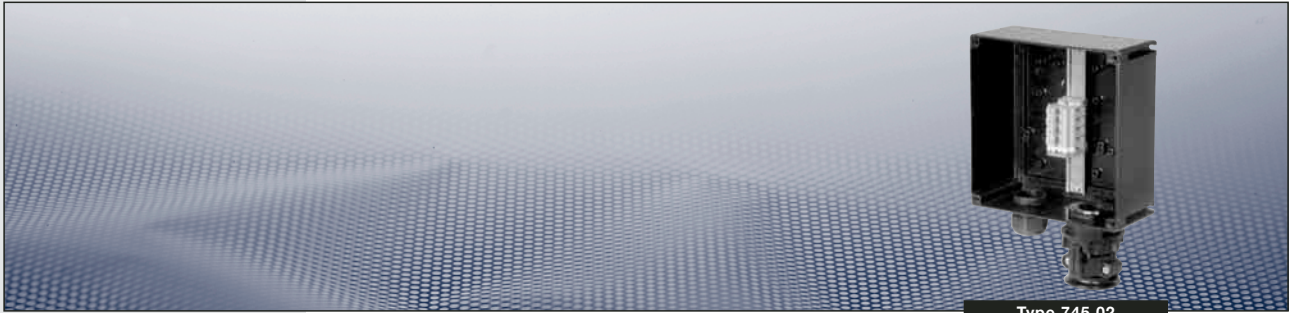
Type	Cable entry	No. of terminals	Order No.
Ex-e	1 x M50 for cable Ø 21-35 mm	4 x Ex-e	GHG 721 0001 R0014
	1 x M50 trumpet-shaped gland for cable Ø 26-34 mm	1 x PE	

Other versions available on request

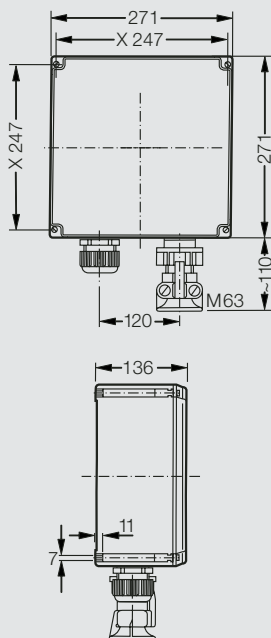
Fixing material and accessories see page 5.110 pp.



Type 721 00



Type 745 02



Type 745 02

EX-INTERMEDIATE MOTOR TERMINAL BOXES 35 mm²/70 mm²

| 745 02 |

5.107

Technical data

Type 745 02

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 80 °C
Type of protection	EEx e II T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Terminal cross section	up to 35 mm ² or max. 70 mm ²
Weight	745 0201 R0002 approx. 3.0 kg 745 0201 R0003 approx. 3.2 kg

Ordering details type 745 02

Mounted with screw terminals 2 x 35 mm² + 1 x PE-terminal 2 x 35 mm²

Type	Cable entry	No. of terminals	Order No.
Ex-e	1 x M50 for cable Ø 21-35 mm	4 x Ex-e	GHG 745 0201 R0002
	1 x M63 trumpet-shaped gland for cable Ø 35-46 mm	1 x PE	

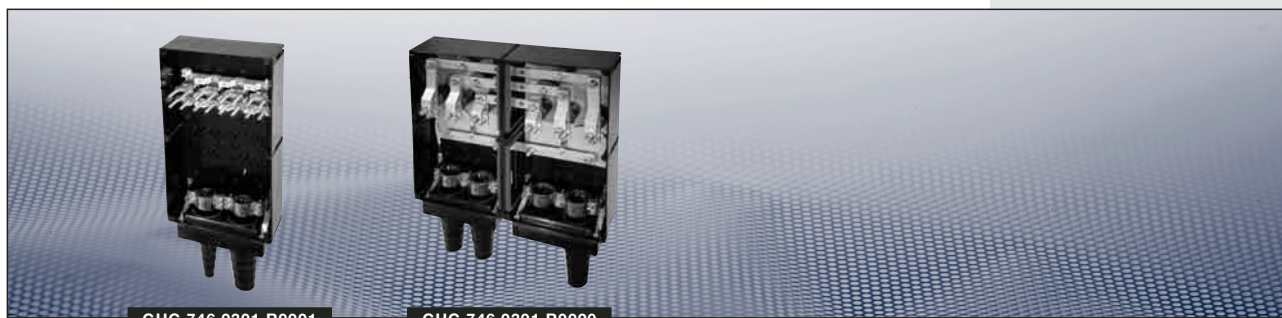
Ordering details type 745 02

Mounted with screw terminals 2 x 50/70 mm² + 1 x PE-terminal 2 x 50/70 mm²

Type	Cable entry	No. of terminals	Order No.
Ex-e	1 x M50 for cable Ø 21-35 mm	4 x Ex-e	GHG 745 0201 R0003
	1 x M63 trumpet-shaped gland for cable Ø 35-46 mm	1 x PE	

Other versions available on request.

Fixing material and accessories see page 5.110 pp.



GHG 746 0301 R0001

GHG 746 0301 R0020

EX-INTERMEDIATE MOTOR TERMINAL BOXES 185 mm²/240 mm²

| 746 03 |

Technical data

Type 746 03

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx e II T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of EN 60529	IP 54
Cable entry	via double cable pothead
Enclosure material	Glass-fibre reinforced polyester
Terminal cross section	up to 180 mm ² or max. 240 mm ²
Weight	746 0301 R0001 approx. 6.3 kg 746 0301 R0008 approx. 16.5 kg

Ordering details type 746 03

Assembled with bold clamp 2 x 185 mm² + PE-bold clamp 2 x 185 mm²

Type	Cable entry	No. of terminals	Order No.
Ex-e	Double cable pothead	3 x Ex-e	GHG 746 0301 R0001
	1 x Entry sleeve 21-45 mm	1 x PE	
	1 x Entry sleeve 46-72 mm		

Ordering details type 746 03

Assembled with bold clamp 240 mm² + PE-bold clamp 240 mm²

Type	Cable entry	No. of terminals	Order No.
Ex-e	Double cable pothead	6 x Ex-e	GHG 746 0301 R0008
	2 x Entry sleeve 46-72 mm	2 x PE	

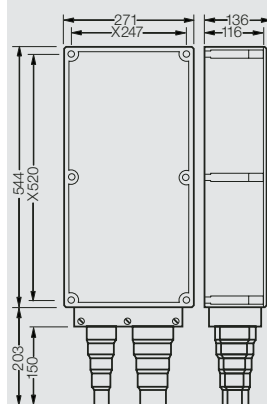
Ordering details type 746 03

Assembled with bold clamp 240 mm² + PE-bold clamp 240 mm²

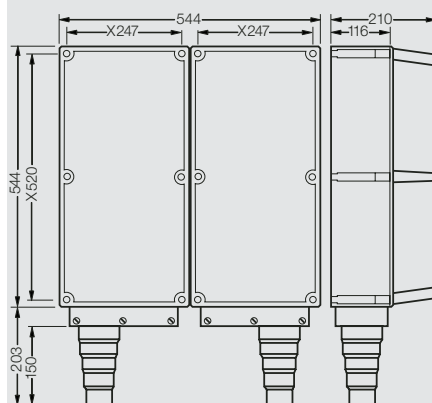
Type	Cable entry	No. of terminals	Order No.
Ex-e	Double cable pothead	12 x Ex-e	GHG 746 0301 R0020
	1 x Entry sleeve 21-45 mm	4 x PE	
	2 x Entry sleeve 46-72 mm		

Other versions available on request.

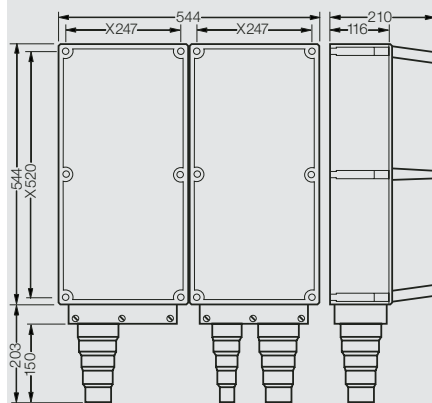
Fixing material and accessories see page 5.110 pp.



GHG 746 0301 R0001



GHG 746 0301 R0008



GHG 746 0301 R0020

Dimensions in mm

FIXING MATERIALS AND ACCESSORIES

Distribution and junction boxes

The CEAG mounting plates are the innovative answer to the customer requested ability for mounting apparatus without having to use tools.

In close cooperation with our customers, this intelligent and innovative solution for the mounting of a variety of terminal boxes and appliances onto trellis, piping and walls was developed.

The clip-on mounting system in connection with the CEAG explosion-protected distribution and terminal boxes renders a decisive cost reduction.

No "hot work permits" are needed!

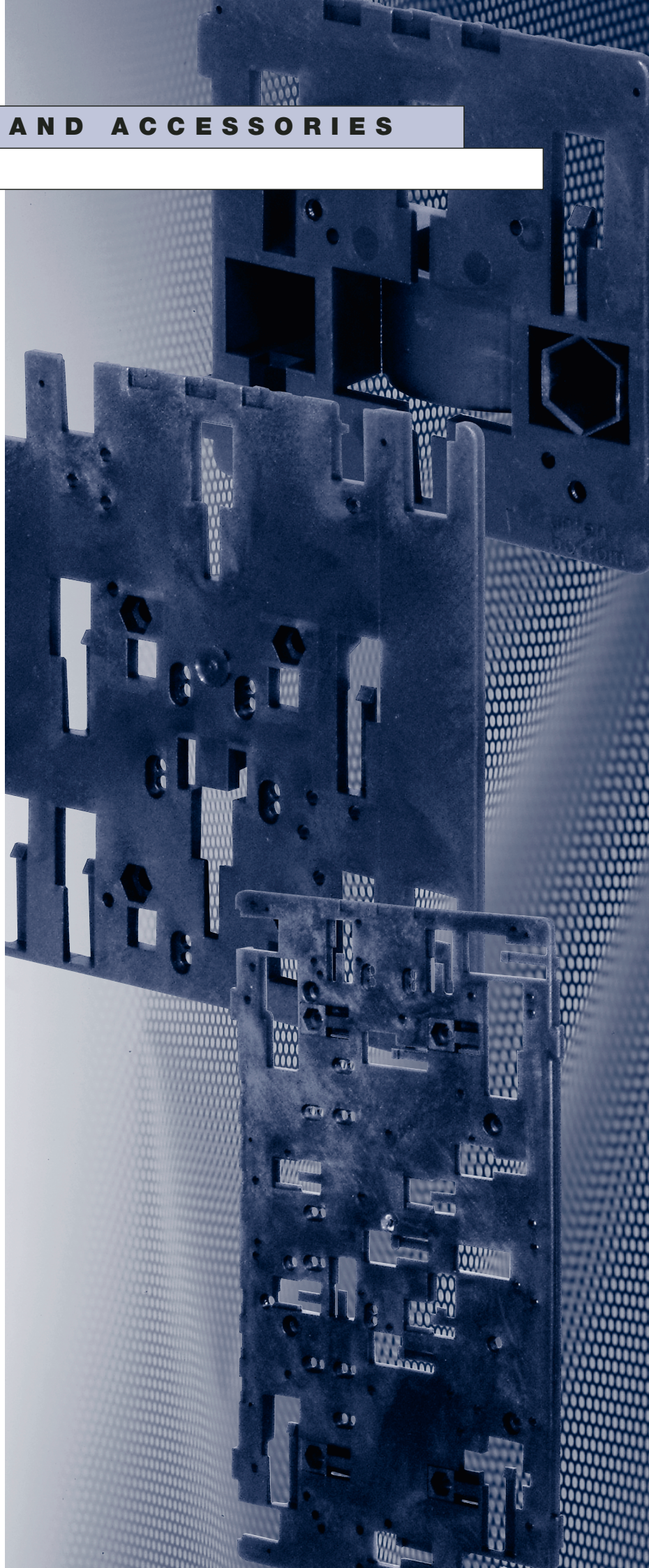
Optional clip-on protection canopies made of stainless steel offer protection against aggressive environmental influences, direct sunlight and rain.

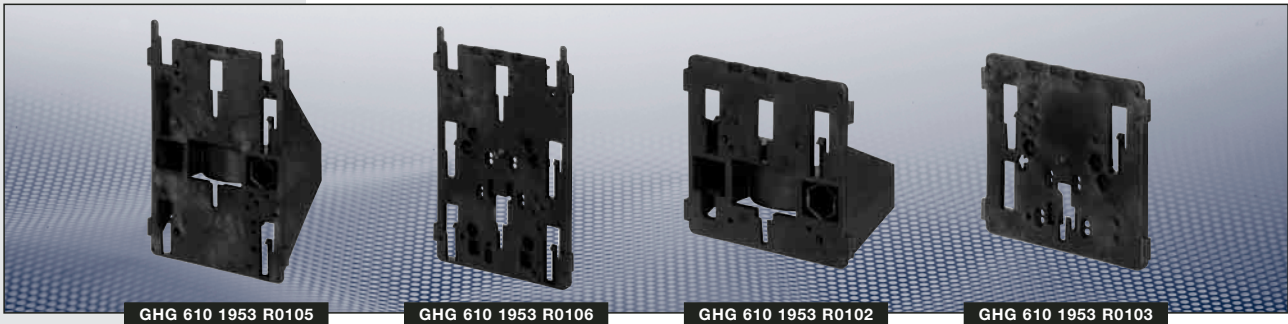
**Decisive cost reduction –
just clip-it-on**

**Quick appliance mounting with
clip-on technology –
no "hot work permit" needed**

**Easy installation of the mounting plates
on walls, trellis and pipes**

**Universal use as appliance holder –
just clip-it-on**





GHG 610 1953 R0105

GHG 610 1953 R0106

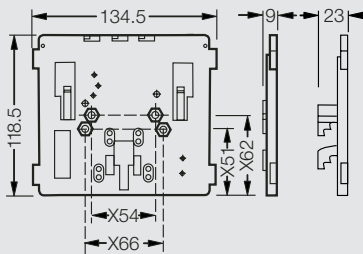
GHG 610 1953 R0102

GHG 610 1953 R0103

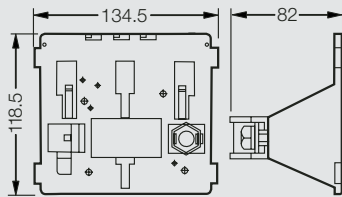
FITTING MATERIALS AND ACCESSORIES

| Mounting plate |

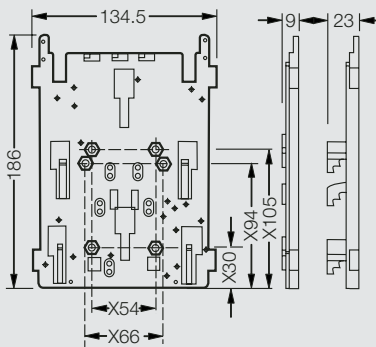
5.111



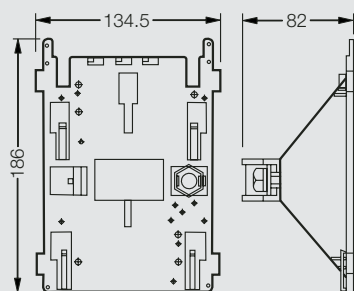
Size 1 for wall- and trellis mounting



Size 1 for pipe mounting



Size 2 for wall- and trellis mounting



Size 2 for pipe mounting

Dimensions in mm

Mounting plate for junction box 791 01

Type	Application	Fixing method	Order No.
Size 1	Wall mounting	screwless mounting	GHG 610 1953 R0101
Size 1	Trellis mounting	screwless mounting	GHG 610 1953 R0103
Size 1	Pipe mounting	screwless mounting	GHG 610 1953 R0102

Mounting plate for junction box 791 02

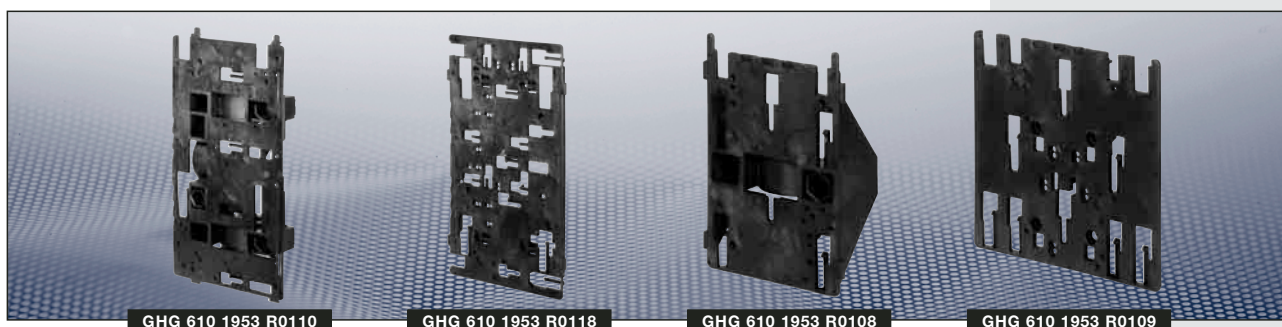
Type	Application	Fixing method	Order No.
Size 2	Wall mounting	screwless mounting	GHG 610 1953 R0104
Size 2	Trellis mounting	screwless mounting	GHG 610 1953 R0106
Size 2	Pipe mounting	screwless mounting	GHG 610 1953 R0105

Mounting plate for terminal box 791 01

Type	Application	Fixing method	Order No.
Size 1	Wall mounting	screwless mounting	GHG 610 1953 R0101
Size 1	Trellis mounting	screwless mounting	GHG 610 1953 R0103
Size 1	Pipe mounting	screwless mounting	GHG 610 1953 R0102

Mounting plate for terminal box 791 02

Type	Application	Fixing method	Order No.
Size 2	Wall mounting	screwless mounting	GHG 610 1953 R0104
Size 2	Trellis mounting	screwless mounting	GHG 610 1953 R0106
Size 2	Pipe mounting	screwless mounting	GHG 610 1953 R0105



5.112

FITTING MATERIALS AND ACCESSORIES

| Mounting plates |

Mounting plate for terminal box 721 00

Type	Application	Fixing method	Order No.
Size 2A	Wall mounting	screwless mounting	GHG 610 1953 R0107
Size 2A	Trellis mounting	screwless mounting	GHG 610 1953 R0109
Size 2A	Pipe mounting	screwless mounting	GHG 610 1953 R0108

Mounting plate for terminal box 721 10

Type	Application	Fixing method	Order No.
Size 3	Wall mounting	screwless mounting	GHG 610 1953 R0118
Size 3	Trellis mounting	screwless mounting	GHG 610 1953 R0118
Size 3	Pipe mounting	screwable mounting	GHG 610 1953 R0110

Mounting plate for terminal box 731 11

Type	Application	Fixing method	Order No.
Size 2	Wall mounting	screwable mounting	GHG 610 1953 R0104
Size 2	Trellis mounting	screwable mounting	GHG 610 1953 R0106
Size 2	Pipe mounting	screwable mounting	GHG 610 1953 R0105

Mounting plate for terminal box 731 12

Type	Application	Fixing method	Order No.
Size 2A	Wall mounting	screwable mounting	GHG 610 1953 R0107
Size 2A	Trellis mounting	screwable mounting	GHG 610 1953 R0109
Size 2A	Pipe mounting	screwable mounting	GHG 610 1953 R0108

Mounting plate for terminal box 744 01

Type	Application	Fixing method	Order No.
Size 3	Wall mounting	screwable mounting	GHG 610 1953 R0118
Size 3	Trellis mounting	screwable mounting	GHG 610 1953 R0118
Size 3	Pipe mounting	screwable mounting	GHG 610 1953 R0110

Mounting plate for terminal box 745 02

Type	Application	Fixing method	Order No.
Size 3	Pipe mounting	screwable mounting on 2 plates	GHG 610 1953 R0110

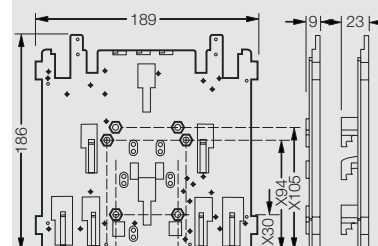
Mounting plate for terminal box 746 03

Type	Application	Fixing method	Order No.
Size 3	Pipe mounting	screwable mounting on 2 plates	GHG 610 1953 R0110

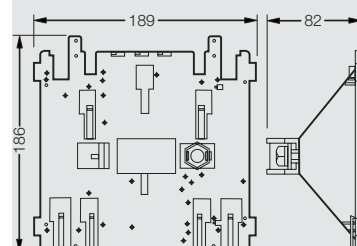
Mounting plate for terminal box 749 04

Type	Application	Fixing method	Order No.
Size 3	Pipe mounting	screwable mounting on 2 plates	GHG 610 1953 R0110

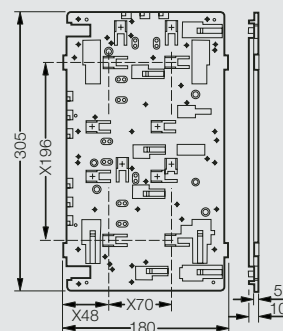
Mounting plates size 4 and 5 see page 5.64.



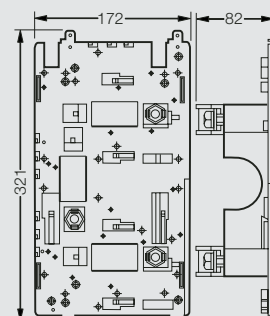
Size 2A for wall- and trellis mounting



Size 2A for pipe mounting

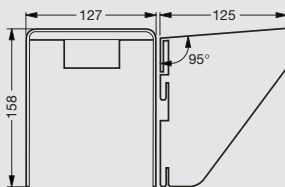
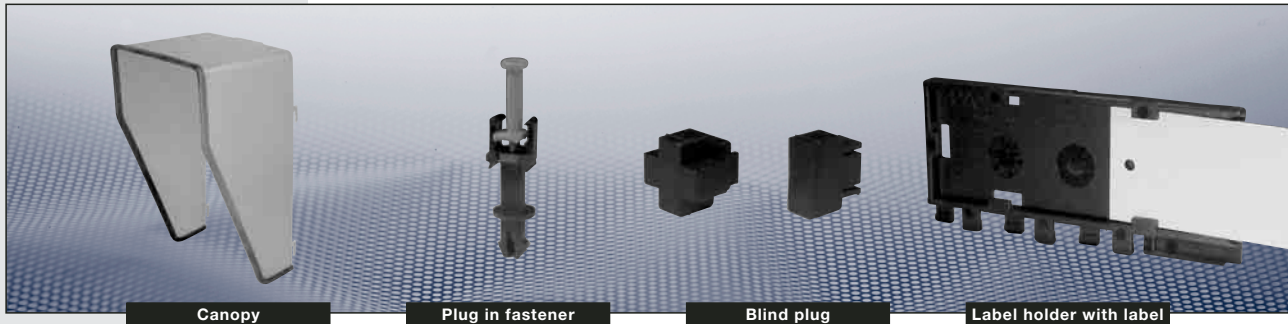


Size 3 for wall- and trellis mounting

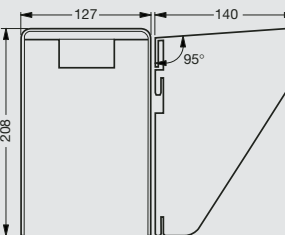


Size 3 for pipe mounting

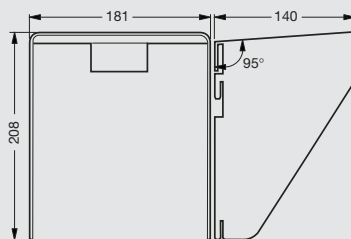
Dimensions in mm



Canopy Size 1



Canopy Size 2



Canopy Size 2A

Dimensions in mm

FITTING MATERIALS AND ACCESSORIES

5.113

Accessories for moun. plate | Protective canopy for moun. plates |

Ordering details

Type	OU	Order No.
Accessories for mounting plate		
Label holder with type label (blank) for mounting plates size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Type label for label holder and mounting plates size 4 and size 5	10	GHG 610 1953 R0011
Blind plug for unused fixing points of mounting plates size 4 and size 5	10	GHG 610 1953 R0134
Plug-in fastener for CEAG modules with 5.5 mm and 11 mm fixing elements 1 set = 4 pcs.	10	GHG 610 1953 R0041
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	GHG 610 1953 R0020

The order No. will show 1 pcs.

Please pay attention to that only order units (OU) according to the ordering details can be delivered

Ordering details

Type	Application	Order No.
Protective canopy for mounting plate		
Size 1	for mounting plate size 1	GHG 610 1955 R0101
Size 2	for mounting plate size 2	GHG 610 1955 R0102
Size 2A	for mounting plate size 2A	GHG 610 1955 R0103
Size 3	for mounting plates pipe fixing size 3 vertically	GHG 610 1955 R0104
Size 3A	for mounting plates wall/trellis fixing size 3 vertically	GHG 610 1955 R0105
Size 3B	for mounting plates pipe fixing size 3 horizontal	GHG 610 1955 R0106
Size 4	for mounting plate size 4	GHG 610 1955 R0107
Size 5	for mounting plate size 5	GHG 610 1955 R0108

EX - C A B L E G L A N D S

Plastic version for Zone 1

Cable glands with metric screw-in threads are now standard and replace the PG cable glands that were normally used.

The PG cable glands are still available as spare parts and for the upgrading of already installed apparatus.

The new CEAG plastic cable glands are in accordance with EN 50 019 and can be used in Ex-e/Ex-i housings in hazardous explosive areas of the Zones 1 and 2.

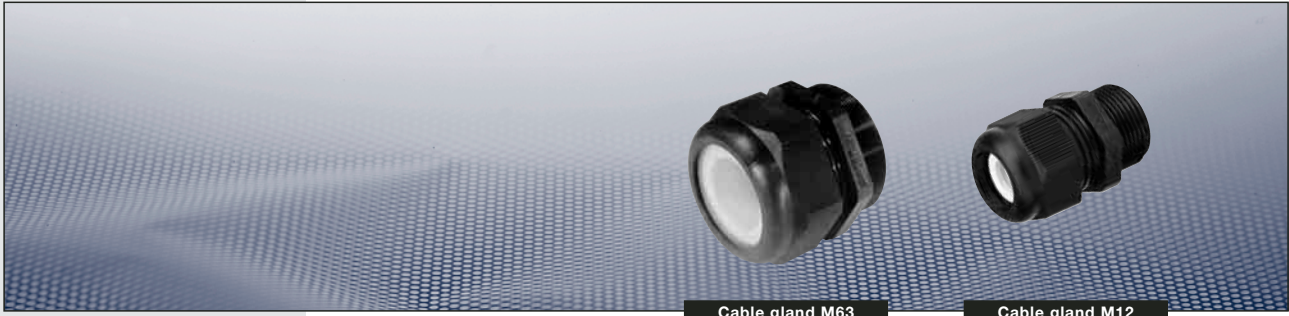
Optional and not used cable glands must be closed with certified blanking plugs. The blanking plugs allow for a flexible and cost effective utilization of the explosion-protected appliances. Changes and upgrades can be then easily carried out at a later date.

The outstanding feature of the CEAG cable glands is the large cable connection area. A high IP safety standard is achieved with the integrated sealing lip on the screw-in cable entries. The good mechanical and handling features are achieved by using a modified Polyamide material and a grippy tooling area.

International approvals

- Large cable connection area
- Hand tightening – only a low torque needed
- Safety standard IP 66
- Optimized grippy tooling area
- Trapezoid thread, for a secure hold





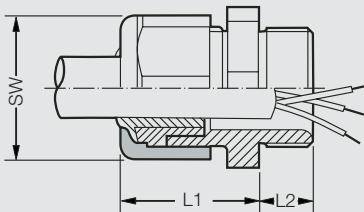
Cable gland M63

Cable gland M12

E X - C A B L E G L A N D S

| Plastic | Ex-e Design |

5.115



Cable gland

Technical data

Ex-e cable gland

Marking to 94/9/EC	Ex II 2 G Ex II 2 D IP 66
Type of protection	EEx e II
EC-Type Examination Certificate	M12-M16 PTB 99 ATEX 3101 X M20-M63 PTB 99 ATEX 3128 X
Degree of EN 60529	IP 66
Material	Polyamide

Ordering details Ex-e cable glands with screw-in thread acc. to DIN 46319

Thread	Cable Ø mm	SW mm	L1 mm	L2 mm	Weight approx. kg	OU	Order No.
M12 x 1.5	4 - 7	15	19.3	8	0.003	20	GHG 960 1955 R 0001
M16 x 1.5	5.5 - 10	20	23.0	8	0.006	20	GHG 960 1955 R 0002
M20 x 1.5	5.5 - 13	24	25.0	8	0.009	20	GHG 960 1955 R 0003
M25 x 1.5	8 - 17	29	29.5	8	0.017	20	GHG 960 1955 R 0004
M32 x 1.5	12 - 21	36	35.5	10	0.026	20	GHG 960 1955 R 0005

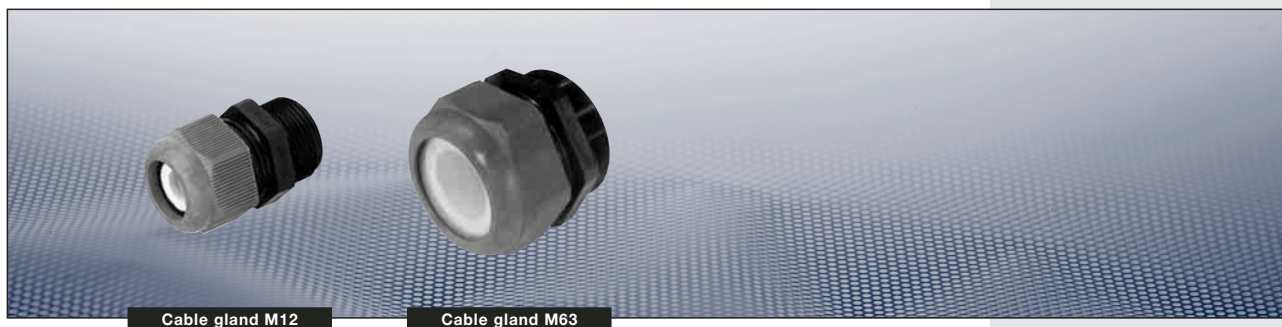
Ordering details Ex-e cable glands with long screw-in thread

Thread	Cable Ø mm	SW mm	L1 mm	L2 mm	Weight approx. kg	OU	Order No.
M12 x 1.5	4 - 7	15	19.3	12	0.003	20	GHG 960 1955 R 0021
M16 x 1.5	5.5 - 10	20	23.0	12	0.007	20	GHG 960 1955 R 0022
M20 x 1.5	5.5 - 13	24	25.0	13	0.010	20	GHG 960 1955 R 0023
M25 x 1.5	8 - 17	29	29.5	13	0.018	20	GHG 960 1955 R 0024
M32 x 1.5	12 - 21	36	35.5	15	0.029	20	GHG 960 1955 R 0025
M40 x 1.5	17 - 28	46	39.5	15	0.046	10	GHG 960 1955 R 0026
M50 x 1.5	22 - 35	55	44.0	16	0.073	10	GHG 960 1955 R 0027
M63 x 1.5	27 - 48	68	47.0	16	0.116	5	GHG 960 1955 R 0028

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs.

Please pay attention to that only order units (OU) according to the ordering details can be delivered



Cable gland M12

Cable gland M63

5.116

E X - C A B L E G L A N D S

| Ex-i Design | Plastic |

Technical data

Ex-i cable gland

Marking to 94/9/EC	Ex II 2 G Ex II 2 D IP 66
Type of protection	EEx e II
EC-Type Examination Certificate	M12-M16 PTB 99 ATEX 3101 X M20-M63 PTB 99 ATEX 3128 X
Degree of EN 60529	IP 66
Material	Polyamide

Ordering details Ex-i cable glands with screw-in thread acc. to DIN 46319

Thread	Cable Ø mm	SW mm	L1 mm	L2 mm	Weight approx. kg	OU	Order No.
M12 x 1.5	4 - 7	15	19.3	8	0.003	20	GHG 960 1955 R0101
M16 x 1.5	5.5 - 10	20	23.0	8	0.006	20	GHG 960 1955 R0102
M20 x 1.5	5.5 - 13	24	25.0	8	0.009	20	GHG 960 1955 R0103
M25 x 1.5	8 - 17	29	29.5	8	0.017	20	GHG 960 1955 R0104
M32 x 1.5	12 - 21	36	35.5	10	0.026	20	GHG 960 1955 R0105

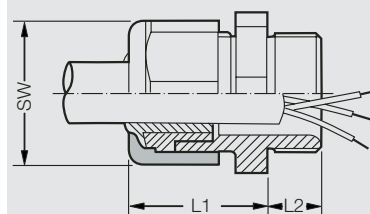
Ordering details Ex-i cable glands with long screw-in thread

Thread	Cable Ø mm	SW mm	L1 mm	L2 mm	Weight approx. kg	OU	Order No.
M12 x 1.5	4 - 7	15	19.3	12	0.003	20	GHG 960 1955 R0121
M16 x 1.5	5.5 - 10	20	23.0	12	0.007	20	GHG 960 1955 R0122
M20 x 1.5	5.5 - 13	24	25.0	13	0.010	20	GHG 960 1955 R0123
M25 x 1.5	8 - 17	29	29.5	13	0.018	20	GHG 960 1955 R0124
M32 x 1.5	12 - 21	36	35.5	15	0.029	20	GHG 960 1955 R0125
M40 x 1.5	17 - 28	46	39.5	15	0.046	10	GHG 960 1955 R0126
M50 x 1.5	22 - 35	55	44.0	16	0.073	10	GHG 960 1955 R0127
M63 x 1.5	27 - 48	68	47.0	16	0.116	5	GHG 960 1955 R0128

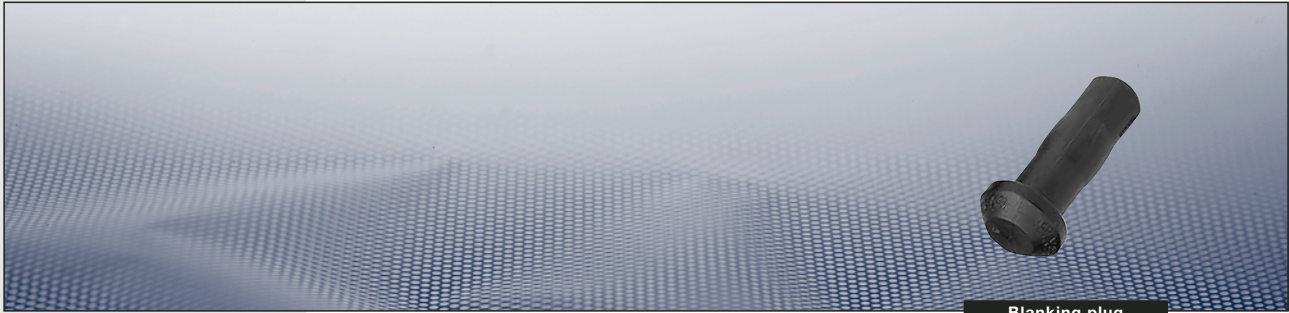
Cable glands with PG-thread are available on request.

The order No. will show 1 pcs.

Please pay attention to that only order units (OU) according to the ordering details can be delivered



Cable gland

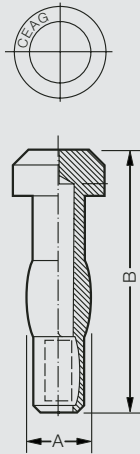


Blanking plug

EX - C A B L E G L A N D S

5.117

Blanking plug



Blanking plug

Technical data

Blanking plug

Marking to 94/9/EC |

Type of protection EEx e II

EC-Type Examination Certificate Blanking plug M12-M16: PTB 99 ATEX 3101 X

Blanking plug M20-M63: PTB 99 ATEX 3128 X

Degree of EN 60529 IP 66

Material Polyamide

Ordering details blanking plug

for cable entry	Ø A mm	Length B mm	Weight approx. kg	OU	Order No.
M12	6.0	30.3	0.001	20	GHG 960 1944 R0101
M16	7.0	33.0	0.001	20	GHG 960 1944 R0102
M20	8.5	34.5	0.002	20	GHG 960 1944 R0103
M25	11.0	36.0	0.003	20	GHG 960 1944 R0104
M32	14.0	39.5	0.005	20	GHG 960 1944 R0105
M40	20.0	42.0	0.018	10	GHG 960 1944 R0106
M50	26.0	44.0	0.033	10	GHG 960 1944 R0107
M63	34.0	45.0	0.108	5	GHG 960 1944 R0108

The order No. will show 1 pcs.

Please pay attention to that only order units (OU) according to the ordering details can be delivered

1

2

3

4

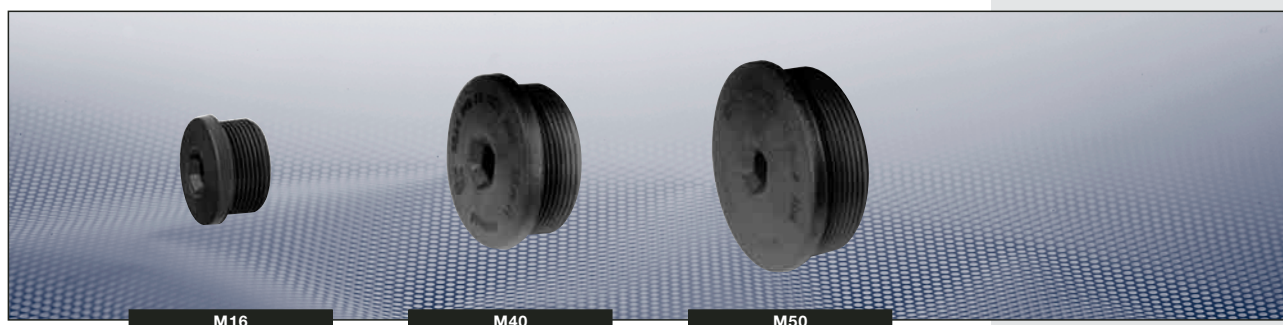
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8

9



5.118

E X - C A B L E G L A N D S

| Screw plug |

Technical data

Screw plug

Marking to 94/9/EC	Ex II 2 G Ex II 2 D IP 66
Type of protection	EEx e II
EC-Type Examination Certificate	M12-M50: PTB 98 ATEX 3130 M63: PTB 03 ATEX 1058
Degree of EN 60529	IP 66
Material	Polyamide

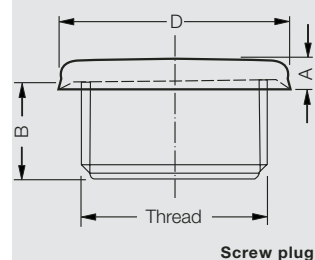
Ordering details screw plug

Thread	Ø D mm	Length A mm	Length B mm	Weight approx. kg	OU	Order No.
M16 x 1.5	21.5	4.0	12	0.002	20	GHG 960 1952 R0111
M20 x 1.5	25.5	4.0	13	0.004	20	GHG 960 1952 R0112
M25 x 1.5	30.5	4.0	13	0.007	20	GHG 960 1952 R0113
M32 x 1.5	37.5	5.5	15	0.013	10	GHG 960 1952 R0114
M40 x 1.5	45.5	5.5	15	0.020	10	GHG 960 1952 R0115
M50 x 1.5	55.5	5.5	16	0.030	5	GHG 960 1952 R0116
M63 x 1.5	85	6.5	16	0.040	5	GHG 960 1952 R0117

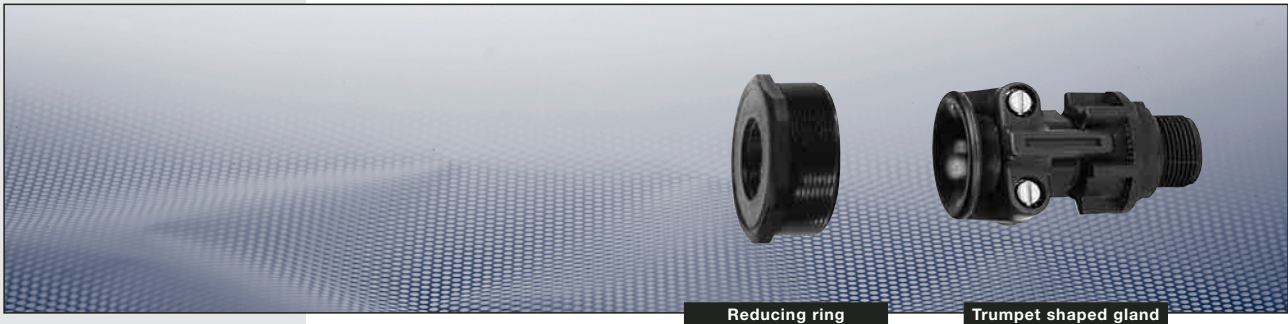
Screw plugs with PG-thread are available on request.

The order No. will show 1 pcs.

Please pay attention to that only order units (OU) according to the ordering details can be delivered



Screw plug



Reducing ring

Trumpet shaped gland

EX - C A B L E G L A N D S

5.119

| Trumpet shaped cable gland | Reducing ring |

Technical data

Trumpet shaped gland/reducing ring

Marking to 94/9/EC	Ex II 2 G Ex II 2 D IP 66
Type of protection	EEx e II
EC-Type Examination Certificate	Trumpet shaped cable gland: PTB 00 ATEX 3121 Reducing ring: PTB 99 ATEX 3128 X
Degree of protection EN 60529	Trumpetshaped cable gland: IP 66 Reducing ring: IP 66
Material	Polyamide

Ordering details trumpet shaped cable gland

Thread	Ø D mm	L 1 mm	L 2 mm	SW mm	Weight approx. kg	OU	Order No.
M20 x 1.5	47	64	15	26	0.057	10	GHG 960 1949 R0111
M25 x 1.5	51	65	15	32	0.070	10	GHG 960 1949 R0112
M32 x 1.5	68	80	15	41	0.140	10	GHG 960 1949 R0113
M40 x 1.5	81	86	15	50	0.194	10	GHG 960 1949 R0114
M50 x 1.5	96	95	16	60	0.333	1	GHG 960 1949 R0115
M63 x 1.5	107	105	16	75	0.742	1	GHG 960 1949 R0116

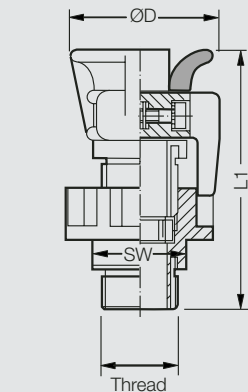
Ordering details reducing ring

Thread 1	Thread 2	L 1 mm	L 2 mm	L 3 mm	SW mm	Weight approx. kg	OU	Order No.
M20 x 1.5	M16 x 1.5	12	8	8	24	0.014	20	GHG 960 1946 R0071
M25 x 1.5	M20 x 1.5	14	8	8	29	0.016	20	GHG 960 1946 R0072
M32 x 1.5	M20 x 1.5	16	10	6	36	0.017	20	GHG 960 1946 R0056
M32 x 1.5	M25 x 1.5	16	10	10	36	0.016	20	GHG 960 1946 R0074
M40 x 1.5	M25 x 1.5	16	10	8	46	0.023	10	GHG 960 1946 R0059
M40 x 1.5	M32 x 1.5	16	10	10	46	0.021	10	GHG 960 1946 R0077
M50 x 1.5	M32 x 1.5	18	12	10	55	0.036	10	GHG 960 1946 R0062
M50 x 1.5	M40 x 1.5	18	12	10	68	0.032	10	GHG 960 1946 R0080
M63 x 1.5	M40 x 1.5	18	12	10	68	0.040	5	GHG 960 1946 R0065
M63 x 1.5	M50 x 1.5	18	12	12	68	0.030	5	GHG 960 1946 R0083

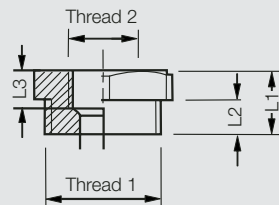
Trumpet shaped glands and reducing rings are available on request.

The order No. will show 1 pcs.

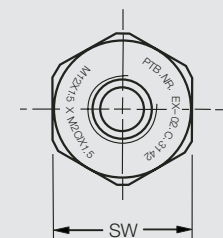
Please pay attention to that only order units (OU) according to the ordering details can be delivered

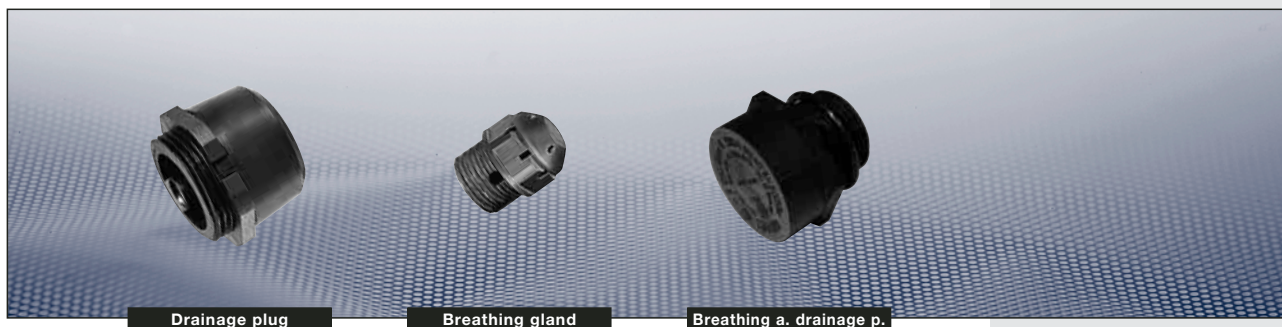


Trumpet shaped cable gland



Reducing ring





Drainage plug

Breathing gland

Breathing a. drainage p.

5.120

E X - C A B L E G L A N D S

| Drainage plug and breathing gland |

Technical data

Drainage and breathing gland

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*
Type of protection	EEx e II
EC-Type Examination Certificate	Drainage plug: PTB 01 ATEX 1128 X* Breathing gland: PTB 01 ATEX 1018 Breathing and drainage plug: SIRA 99 ATEX 3050 U
Degree of EN 60529	Drainage plug: IP 55 Breathing gland: IP 54 Breathing and drainage plug: IP 66
Material	Drainage plug: Polyamide

*applied for

Ordering details drainage plug

Thread	SW mm	L 1 mm	L 2 mm	Weight approx. kg	OU	Order No.
M25 x 1.5	30	19	4.5	0.011	20	GHG 960 1927 R0105

Drainage plug with PG-thread available on request

Ordering details breathing gland

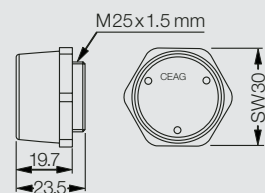
Thread	SW mm	L 1 mm	L 2 mm	Weight approx. kg	OU	Order No.
M25 x 1.5	34.9	17	15	0.340	20	GHG 960 1954 R0004

Ordering details breathing and drainage plug

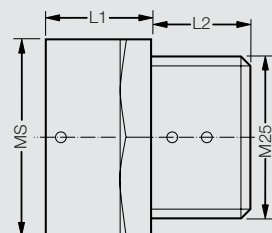
Thread	Weight approx. kg	OU	Order No.
M25 x 1.5	0.340	20	GHG 960 1954 R0002

The order No. will show 1 pcs.

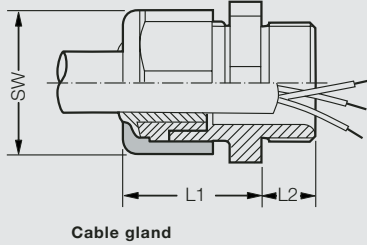
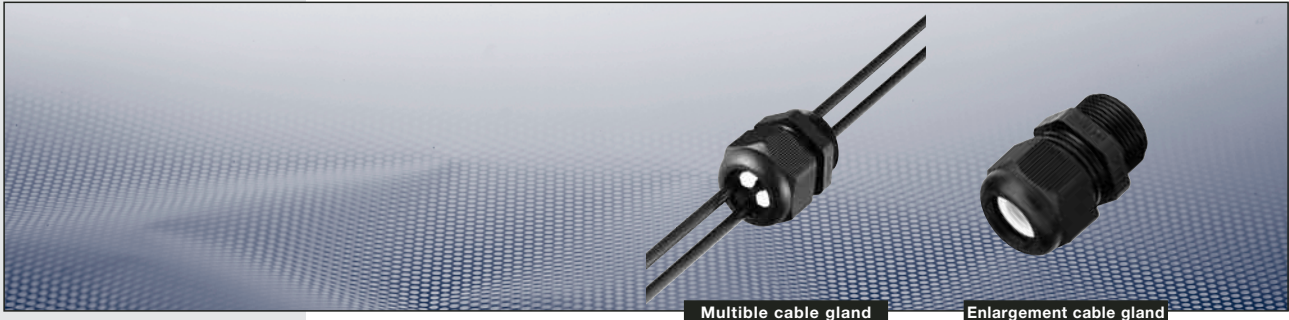
Please pay attention to that only order units (OU) according to the ordering details can be delivered



Breathing gland



Drainage plug



E X - C A B L E G L A N D S

5.121

| Enlargement- and multiple cable gland |

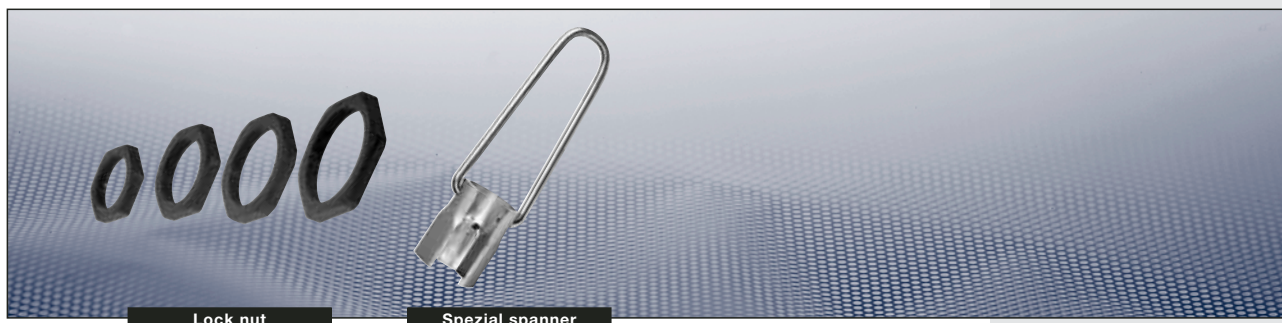
Technical data	
Enlargement- and multiple cable gland	
Marking to 94/9/EC	Ex II 2 G Ex II 2 D IP 66
Type of protection	EEx e II
EC-Type Examination Certificate	M12-M16: PTB 99 ATEX 3101 X M20-M63: PTB 99 ATEX 3128 X
Degree of EN 60529	IP 66
Material	Polyamide

Ordering details enlargement cable glands							
Thread	Cable Ø mm	SW mm	L 1 mm	L 2 mm	Weight approx. kg	OU	Order No.
M16/M20	5,5 - 13	24	25.0	12	0.010	20	GHG 960 1956 R0002
M20/M25	8 - 17	29	29.5	13	0.018	20	GHG 960 1956 R0003
M25/M32	12 - 21	36	35.5	13	0.029	20	GHG 960 1956 R0004
M32/M40	16 - 28	46	39.5	15	0.046	10	GHG 960 1956 R0005
M40/M50	21 - 35	55	44.0	15	0.073	10	GHG 960 1956 R0006
M50/M63	27 - 48	68	47.0	16	0.116	5	GHG 960 1956 R0007

Ordering details multiple cable glands							
Thread	Cable Ø mm	SW mm	L 1 mm	L 2 mm	Weight approx. kg	OU	Order No.
M25 x 1.5	2 x 4.5 - 7	29	29.5	8	0.340	20	GHG 960 1955 R0054
M32 x 1.5	4 x 4.5 - 7	36	35.5	10	0.540	20	GHG 960 1955 R0055

The order No. will show 1 pcs.

Please pay attention to that only order units (OU) according to the ordering details can be delivered



Lock nut

Spezial spanner

5.122

EX - C A B L E G L A N D S

| Special spanner | Gaskets | Lock nuts |

Ordering details

Lock nut for cable glands

Type	SW	Thickness mm	Weight approx. g	OU	Order No.
M12 x 1.5	17	5	9	10	GHG 960 1941 R0031
M16 x 1.5	22	5	14	10	GHG 960 1941 R0032
M20 x 1.5	26	6	22	10	GHG 960 1941 R0033
M25 x 1.5	32	6	32	10	GHG 960 1941 R0034
M32 x 1.5	41	7	59	10	GHG 960 1941 R0035
M40 x 1.5	50	7	79	5	GHG 960 1941 R0036
M50 x 1.5	60	8	98	5	GHG 960 1941 R0037
M63 x 1.5	75	8	150	5	GHG 960 1941 R0038

Ordering details Gaskets for glands

Type	Ø D mm	L mm	Weight approx. g	OU	Order No.
M12 x 1.5	18	1,2	0.0003	10	221 249
M16 x 1.5	22	1,2	0.0004	10	221 649
M20 x 1.5	24	1,2	0.0003	10	222 049
M25 x 1.5	30	1,5	0.0006	10	222 549
M32 x 1.5	42	1,5	0.0014	10	223 249
M40 x 1.5	52	1,5	0.0022	10	224 049
M50 x 1.5	63	1,5	0.0028	10	225 049
M63 x 1.5	77	2,0	0.0049	10	226 349

Ordering details special spanner for fastening
of cable glands

Type	Size	SW mm	Weight approx. kg	Order No.
Set 1	M12	15		
	M16	20		
	M20	24		
	M25	29		
	M32	36		
	M40	46	0.825	GHG 960 1951 R0001
Set 2	M50	55		
	M63	68	0.905	GHG 960 1951 R0002

For fastening of cable glands screw caps with mounted cable

The order No. will show 1 pcs.

Please pay attention to that only order units (OU) according to the ordering details can be delivered

E X - C A B L E G L A N D S

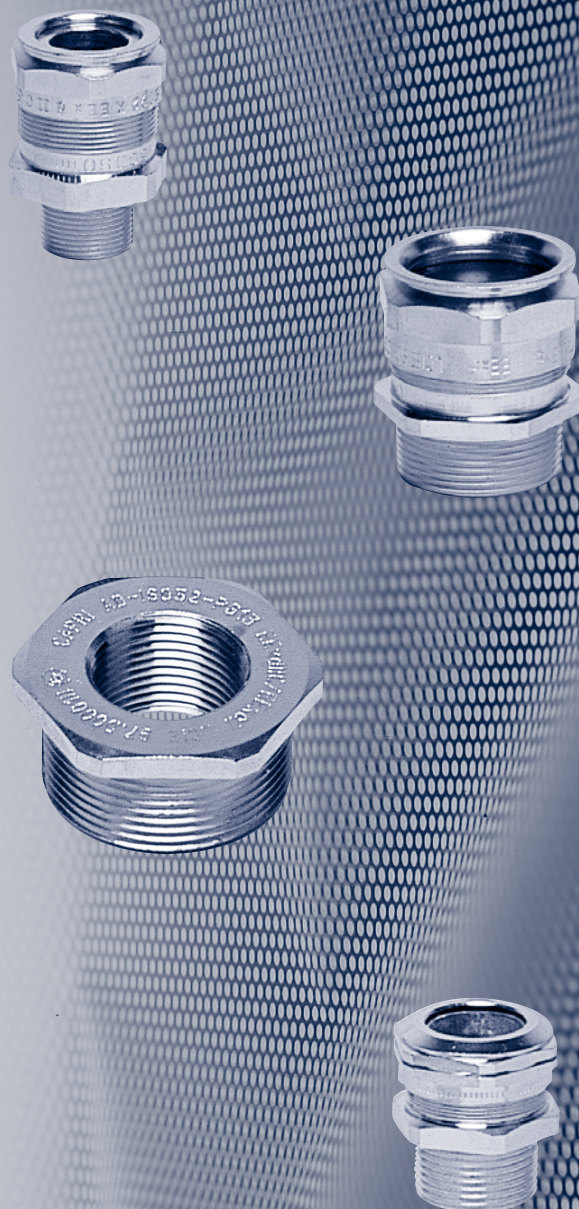
Metal design for Zone 1

For introducing cables or lines into metal housings, explosion-protected housing or, if reinforced cables have to be introduced, metal cable glands are used. Metal glands are designed for use in areas of Zone 1 and Zone 2 at no risk of explosion and for cables with and without reinforcement. Depending on the area of use, these cable entries are certified with the type of protection EEx-d or EEx-e pursuant to En 50 018 or EN 50 019. For special applications, the cable and line ducts are available in high-quality stainless steel 3162, natural brass, marine bronze or anodised AV4PB.

In the case of systems or housings manufactured according to the NEC (National Electrical Code), the line or the connecting cable must be introduced via conduits, mounting fittings, etc. with NPT threads. Optional holes, or those that are not used, must be closed with a screw connection certified for this purpose.

Special versions are available for different applications. For explosion-proof housing up to 2000 cm³ screw connections of Type ADE can be used. Cable entries for housing > 2000 cm³ are available with the PS/PA series on request page 5.138.

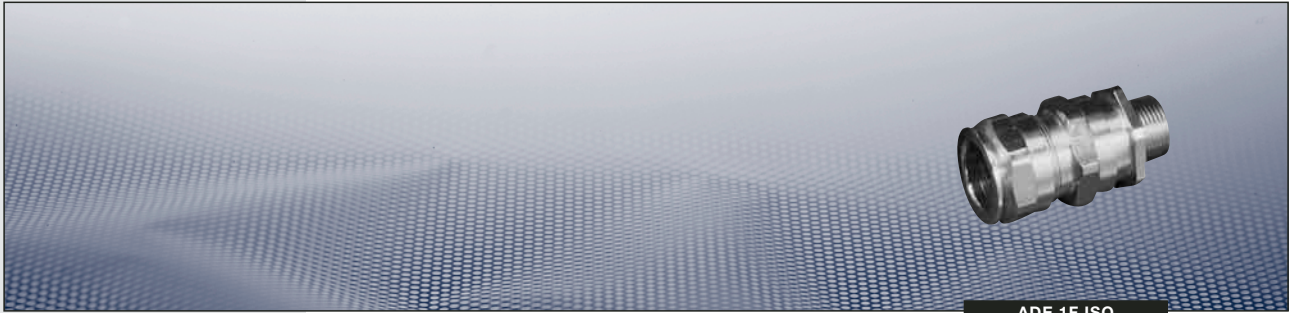
Internationally approved.



Mechanical, chemical and thermal resistance

Explosion-protected designs

High-quality alloy

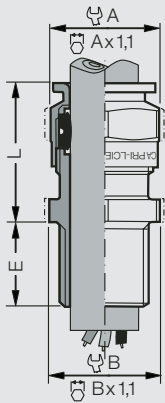


ADE 1F ISO

EX - C A B L E G L A N D S

5.125

| Cable glands type ADE 1F ISO |



For unarmoured cables
Type ADE 1F

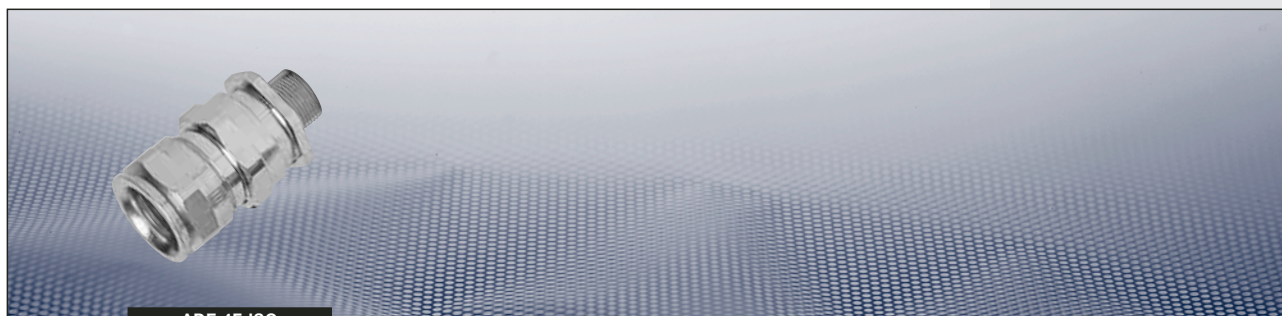
Technical data

Marking to 94/9/EC	Ex II 2 G Ex II 2 D
Type of protection	EEx e II EEx d IIC (IIC ≤ 2000 cm³)
EC-Type Examination Certificate	LCIE 97 ATEX 6008 X
Degree of protection to EN 60529	IP 68 (10 bar)
Enclosure material	brass, nickel-plated

Ordering details type ADE 1F for unarmoured cables

Thread	Type	Cable Ø	A	B	L	E	Weight approx. kg	Order No.
		mm	mm	mm	mm	mm		
M12 x 1.5	4	4.0 - 8	15	15	20	15	0.020	816 404
M16 x 1.5	4	4.0 - 8.5	15	19	20	15	0.025	816 594
M16 x 1.5	5	6.0 - 12	19	19	22	15	0.030	816 504
M20 x 1.5	4	4.0 - 8.5	15	24	20	15	0.056	816 674
M20 x 1.5	5	6.0 - 12	19	24	22	15	0.038	816 694
M20 x 1.5	6	8.5 - 16	24	24	25	15	0.045	816 604
M25 x 1.5	5	6.0 - 12	19	30	22	15	0.088	816 774
M25 x 1.5	6	8.5 - 16	24	30	25	15	0.055	816 794
M25 x 1.5	7	12 - 20.5	30	30	27	15	0.070	816 704
M32 x 1.5	7	12 - 21	30	36	27	15	0.100	816 894
M32 x 1.5	8	16 - 27.5	41	41	34	15	0.150	816 804
M40 x 1.5	8	16 - 27.5	41	44	34	15	0.175	816 994
M40 x 1.5	9	21 - 34	48	48	36	15	0.210	816 904
M50 x 1.5	9	21 - 34	48	55	36	16	0.245	817 094
M50 x 1.5	10	27 - 41	55	55	39	16	0.285	817 004
M63 x 1.5	11	33 - 48	64	67	41	17	0.400	817 294
M63 x 1.5	12	40 - 56	72	72	43	17	0.490	817 204
M75 x 1.5	12	40 - 56	72	80	43	18	0.560	817 394
M75 x 1.5	13	47 - 65	85	85	49	18	0.735	817 304
M80 x 1.5	13	47 - 65	85	85	49	20	0.885	817 494
M80 x 1.5	14	54 - 73	95	95	56	20	1.060	817 404
M90 x 1.5	14	54 - 74	95	95	56	22	1.300	817 594
M90 x 1.5	15	63 - 82	110	110	61	22	1.665	817 504
M100 x 1.5	15	63 - 83	110	110	61	22	1.850	817 694
M100 x 1.5	16	72 - 92	120	120	62	22	2.160	817 604

Other design and materials on request.



ADE 4F ISO

5.126

EX - C A B L E G L A N D S

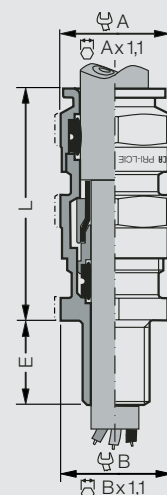
| Cable glands type ADE 4F ISO |

Technical data

Marking to 94/9/EC	Ex II 2 G Ex II 2 D
Type of protection	EEx e II EEx d IIC (IIC ≤ 2000 cm³)
EC-Type Examination Certificate	LCIE 97 ATEX 6008 X
Degree of protection to EN 60529	IP 68 (10 bar)
Enclosure material	brass, nickel-plated

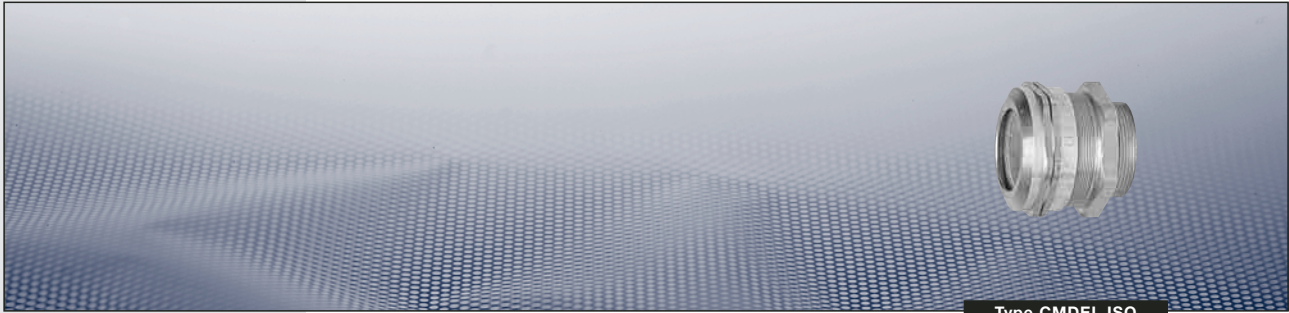
Ordering details type ADE 4F ISO for armoured cables

Thread	Type	Cable Ø outside mm	Cable Ø inside mm	Armouring up to mm	⌀A mm	⌀B mm	L mm	E mm	Weight approx. kg	Order No.
M12 x 1.5	5	6.0 - 12	4.0 - 8	0.9	19	19	36	15	0.048	846 404
M16 x 1.5	5	6.0 - 12	4.0 - 8.5	0.9	19	19	36	15	0.057	846 594
M16 x 1.5	6	8.5 - 16	6.0 - 12	1.25	19	24	36	15	0.078	846 504
M20 x 1.5	5	6.0 - 12	4.0 - 8.5	0.9	19	24	36	15	0.080	846 674
M20 x 1.5	6	8.5 - 16	6.0 - 12	1.25	24	24	42	15	0.090	846 694
M20 x 1.5	7	12 - 21	8.5 - 15.5	1.25	30	30	46	15	0.123	846 604
M25 x 1.5	6	8.5 - 16	6.0 - 12	1.25	24	30	42	15	0.122	846 774
M25 x 1.5	7	12 - 21	8.5 - 16	1.25	30	30	46	15	0.170	846 794
M25 x 1.5	8	16 - 27.5	12 - 20.5	1.6	41	41	56	15	0.270	846 704
M32 x 1.5	8	16 - 27.5	12 - 21	1.25	41	41	56	15	0.310	846 894
M32 x 1.5	9	21 - 34	16 - 27.5	1.6	48	48	63	15	0.400	846 804
M40 x 1.5	9	21 - 34	16 - 27.5	2.0	48	48	63	15	0.445	846 994
M40 x 1.5	10	27 - 41	21 - 34	2.0	55	55	68	15	0.540	846 904
M50 x 1.5	10	27 - 41	21 - 34	2.0	55	55	68	16	0.600	847 094
M50 x 1.5	11	33 - 48	27 - 41	2.5	64	64	74	16	0.735	847 004
M63 x 1.5	12	40 - 56	33 - 48	2.5	72	72	77	17	0.996	847 294
M63 x 1.5	13	47 - 65	40 - 56	2.5	85	85	85	17	1.480	847 204
M75 x 1.5	13	47 - 65	40 - 56	2.5	85	85	85	18	1.590	847 394
M75 x 1.5	14	54 - 74	47 - 65	2.5	95	95	92	18	2.305	847 304
M80 x 1.5	14	54 - 74	47 - 65	3.15	95	95	92	20	2.270	847 494
M80 x 1.5	15	63 - 83	54 - 73	3.15	110	110	104	20	3.150	847 404
M90 x 1.5	15	63 - 83	54 - 74	3.15	110	110	104	22	3.175	847 594
M90 x 1.5	16	72 - 93	63 - 82	3.15	120	120	108	22	3.675	847 504
M90 x 1.5	15	85 - 107	63 - 82	3.15	135	120	108	22	3.675	847 574



for armoured cables
Type ADE 4F

Other design and materials on request.

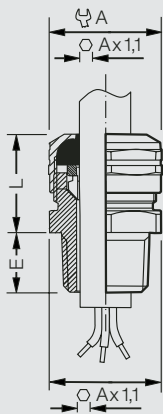


Type CMDEL ISO

EX - C A B L E G L A N D S

5.127

| Cable glands type CMDEL ISO |



For unarmoured cables
Type CMDEL ISO

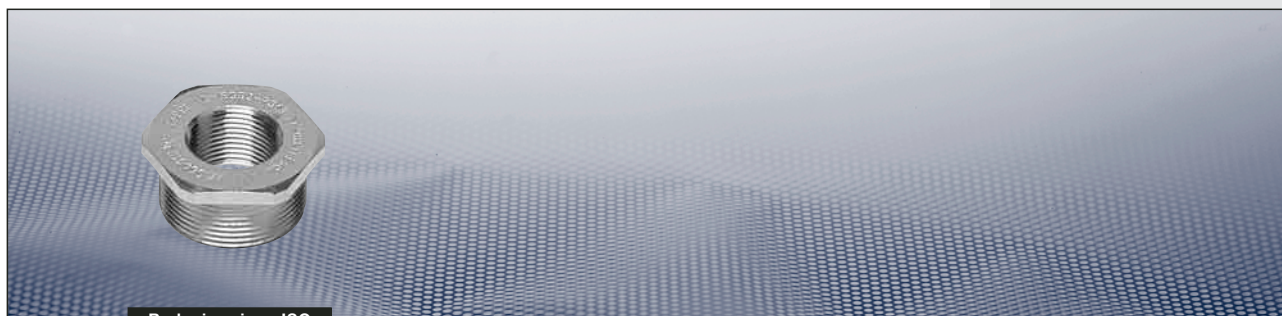
Technical data

Marking to 94/9/EC	Ex II 2 G Ex II 2 D
Type of protection	EEx e IIC
EC-Type Examination Certificate	LCIE 97 ATEX 6005 X
Degree of protection to EN 60529	IP 68 (10 bar)
Enclosure material	brass, nickel-plated

Ordering details type CMDEL ISO for unarmoured cables

Thread	CableØ mm	A mm	L mm	E mm	Weight approx. kg	Order No.
M10 x 1.5	1.5 - 5.0	15	17	7	0.017	221 004
M12 x 1.5	4.0 - 8.0	18	17	7	0.021	221 204
M16 x 1.5	7.0 - 11	22	20	8	0.036	221 604
M20 x 1.5	8.0 - 13	24	20	8	0.043	222 004
M25 x 1.5	13.0 - 18	30	24	9	0.071	222 504
M32 x 1.5	17.5 - 25	41	28	10	0.143	223 204
M40 x 1.5	24.5 - 33.5	52	38	11	0.263	224 004
M50 x 1.5	33.0 - 43	63	42	12	0.386	225 004
M63 x 1.5	43.0 - 55	77	47	13	0.583	226 304

Other design and materials on request



Reducing rings ISO

5.128

E X - C A B L E G L A N D S

| Reducing rings ISO |

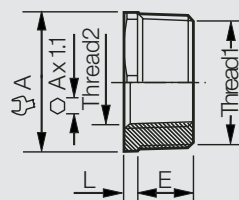
Technical data

Marking to 94/9/EC	Ex II 2 G Ex II 2 D
Type of protection	EEx e II EEx d IIC
EC-Type Examination Certificate	LCIE 98 ATEX 0001 U
Degree of protection to EN 60529	IP 66 (optional IP 68)
Enclosure material	brass, nickel-plated

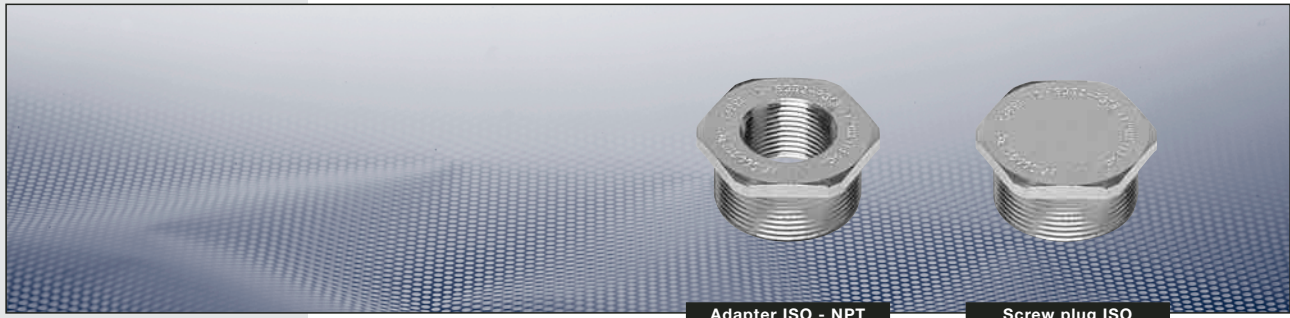
Ordering details reducing rings ISO for metric thread

Thread 1	Thread 2	A mm	L mm	E mm	Weight approx. kg	Order No.
M16 x 1.5	M12 x 1.5	18	2.8	15	0.022	745 834
M20 x 1.5	M12 x 1.5	23	3.0	15	0.022	745 844
M20 x 1.5	M16 x 1.5	23	3.0	15	0.030	740 024
M25 x 1.5	M16 x 1.5	28	3.0	15	0.030	740 034
M25 x 1.5	M20 x 1.5	28	3.0	15	0.083	740 294
M32 x 1.5	M20 x 1.5	36	3.5	15	0.056	740 304
M32 x 1.5	M25 x 1.5	36	3.5	15	0.133	740 564
M40 x 1.5	M25 x 1.5	44	4.0	15	0.084	740 574
M40 x 1.5	M32 x 1.5	44	4.0	15	0.084	740 834
M50 x 1.5	M32 x 1.5	54	5.0	16	0.142	740 844
M50 x 1.5	M40 x 1.5	54	5.0	16	0.146	741 104
M63 x 1.5	M40 x 1.5	67	5.5	17	0.222	741 114
M63 x 1.5	M50 x 1.5	67	5.5	17	0.250	741 374
M75 x 1.5	M32 x 1.5	80	6.0	18	0.295	740 864
M75 x 1.5	M40 x 1.5	80	6.0	18	0.315	741 124
M75 x 1.5	M50 x 1.5	80	6.0	18	0.325	741 384
M75 x 1.5	M63 x 1.5	80	6.0	18	0.325	741 644
M90 x 1.5	M63 x 1.5	95	8.0	22	0.410	745 854
M90 x 1.5	M75 x 1.5	95	8.0	22	0.405	745 864
M100 x 1.5	M75 x 1.5	110	10.0	22	0.630	745 874
M100 x 1.5	M90 x 1.5	120	10.0	22	0.610	745 914
M110 x 1.5	M90 x 1.5	120	11.0	22	0.680	745 924
M110 x 1.5	M100 x 1.5	120	11.0	22	0.680	745 934

Other design and materials on request



Reducing rings ISO



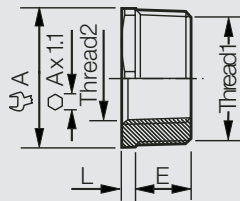
Adapter ISO - NPT

Screw plug ISO

EX - C A B L E G L A N D S

5.129

| Screw plug ISO | Adapter ISO - NPT |



Adapter ISO-NPT

Technical data

Marking to 94/9/EC	Ex II 2 G Ex II 2 D
Type of protection	EEx e II EEx d IIC
EC-Type Examination Certificate	LCIE 98 ATEX 0001 U
Degree of protection to EN 60529	IP 68 with gasket
Enclosure material	brass, nickel-plated

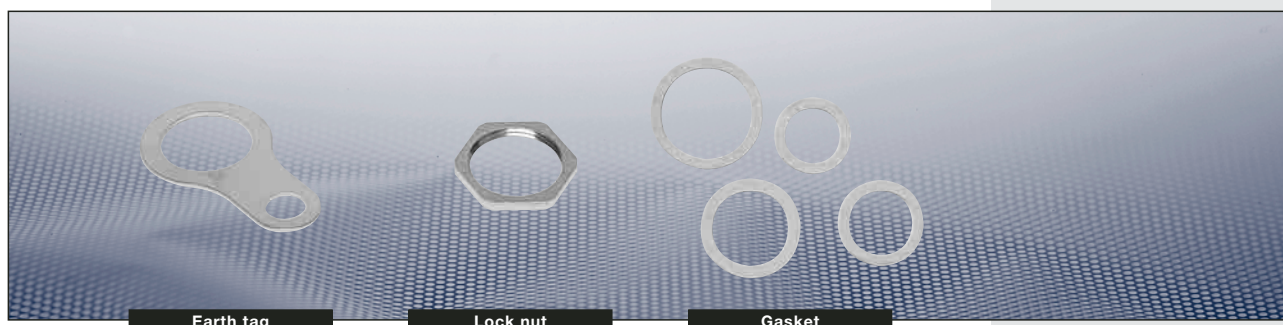
Ordering details screw plug with ISO thread

Thread	mm	L	E	Weight	Order No.
M	mm	mm	mm	approx. kg	
M12 x 1.5	14	2.8	15	0.011	190 124
M16 x 1.5	18	3.0	15	0.019	190 164
M20 x 1.5	23	3.0	15	0.025	190 204
M25 x 1.5	28	3.5	15	0.040	190 254
M32 x 1.5	36	4.0	15	0.065	190 324
M40 x 1.5	44	4.0	15	0.093	190 404
M50 x 1.5	54	5.0	16	0.152	190 504
M63 x 1.5	67	5.5	17	0.258	190 634

Ordering details adapter with ISO screw-in thread

Thread 1	Thread 2	A	L	E	Ø D	Weight	Order No.
		mm	mm	mm	mm	approx. kg	
M20 x 1.5	1/2 " NPT	24	18	15	15.5	0.044	744 704
M20 x 1.5	3/4 " NPT	30	18.5	15	15.5	0.064	744 964
M25 x 1.5	3/4 " NPT	30	18.5	15	20.3	0.065	744 974
M25 x 1.5	1 " NPT	38	22.5	15	20.3	0.118	745 234
M32 x 1.5	1 " NPT	38	22.5	15	27.3	0.118	745 244
M32 x 1.5	1 " 1/4 NPT	48	22.5	15	27.3	0.176	745 504
M40 x 1.5	1 " 1/4 NPT	48	22.5	15	35.3	0.173	745 514
M40 x 1.5	1 " 1/2 NPT	52	22.5	15	35.3	0.169	745 774
M50 x 1.5	2 " NPT	64	22.5	16	45.2	0.228	746 044
M63 x 1.5	2 " NPT	67	22.5	17	53.6	0.350	746 054
M63 x 1.5	2 " 1/2 NPT	77	31	17	57.8	0.426	746 314

Other design and materials on request



Earth tag

Lock nut

Gasket

5.130

E X - C A B L E G L A N D S

| Accessories for cable glands ISO |

Ordering details earth tags for cable glands

Thread	Anschluss					Weight approx. kg	OU	Order No.
	A	B	ØC	ØD	E			
M12 x 1.5	48.75	30	6.75	24.5	13	0.008	10	567 024
M16 x 1.5	48.75	30	6.75	24.5	13	0.008	10	567 034
M20 x 1.5	53.8	33	7	28.6	13	0.008	10	567 054
M25 x 1.5	61.5	36	10.5	34	17	0.011	10	567 074
M32 x 1.5	73	41	12.2	42	22	0.015	10	567 094
M40 x 1.5	86.5	44.5	13.5	54	30	0.025	10	567 124
M50 x 1.5	111.5	58	13.5	67	40	0.041	10	567 154
M63 x 1.5	125.5	67	13.5	77	40	0.044	10	567 184

Other sizes and thread versions available on request.

Ordering details lock nuts

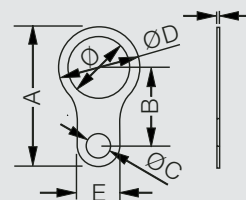
Thread	mm	L mm	Weight approx. kg	OU	Order No.
M12 x 1.5	14	2.8	0.002	10	221 294
M16 x 1.5	18	2.8	0.002	10	221 694
M20 x 1.5	23	3.0	0.004	10	222 094
M25 x 1.5	28	3.0	0.005	10	222 594
M32 x 1.5	36	3.5	0.010	10	223 294
M40 x 1.5	44	4.0	0.015	10	224 094
M50 x 1.5	54	5.0	0.025	10	225 094
M63 x 1.5	70	6.0	0.058	10	226 394

Other sizes and thread versions available on request.

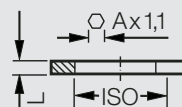
Ordering details gaskets for cable glands

Thread	Ø D mm	L mm	Weight approx. kg	OU	Order No.
M12 x 1.5	18	1.2	0.0003	10	221 249
M16 x 1.5	22	1.2	0.0004	10	221 649
M20 x 1.5	24	1.2	0.0003	10	222 049
M25 x 1.5	30	1.5	0.0006	10	222 549
M32 x 1.5	42	1.5	0.0014	10	223 249
M40 x 1.5	52	1.5	0.0022	10	224 049
M50 x 1.5	63	1.5	0.0028	10	225 049
M63 x 1.5	77	2.0	0.0049	10	226 349

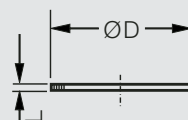
Other sizes, thread versions and enlarged temperature range available on request.



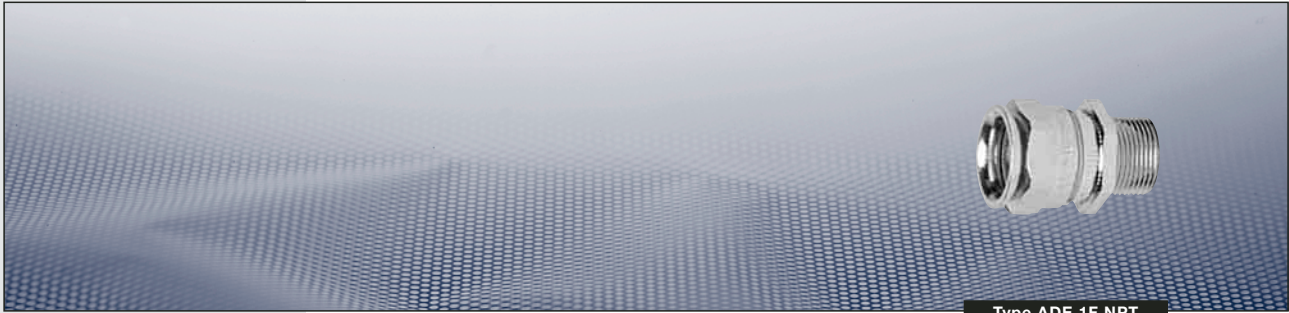
Earth tag



Lock nut



Gaskets

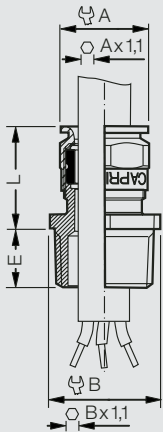


Type ADE 1F NPT

EX - C A B L E G L A N D S

5.131

| Cable glands type ADE 1F NPT |



Type ADE 1F NPT

Technical data

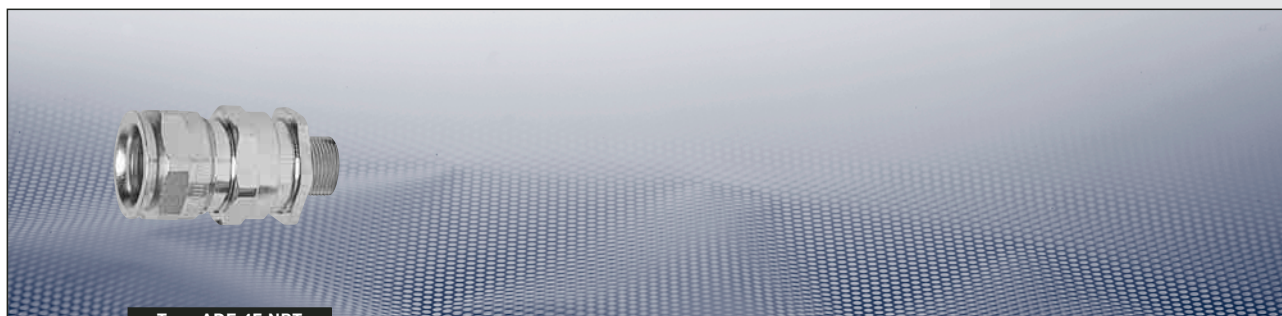
Marking to 94/9/EC	Ex II 2 G Ex II 2 D
Type of protection	EEx e II EEx d IIC (IIC ≤ 2000 cm³)
EC-Type Examination Certificate	LCIE 97 ATEX 6008 X
Degree of protection to EN 60529	IP 68 (10 bar)
Enclosure material	brass, nickel-plated

Ordering details type ADE 1F NPT for unarmoured cables

Thread	Type	Cable Ø mm	A mm	B mm	L mm	E mm	Weight approx. kg 1 pcs.	Order No.
1/4"	4	4.0 - 8	15	15	20	12	0.020	818 404
3/8"	4	4.0 - 8.5	15	19	20	12	0.025	818 594
3/8"	5	6.0 - 12	19	19	22	12	0.030	818 504
1/2"	4	4.0 - 8.5	15	24	20	16	0.062	818 674
1/2"	5	6.0 - 12	19	24	22	16	0.040	818 694
1/2"	6	8.5 - 15.5	24	24	25	16	0.045	818 604
3/4"	5	6.0 - 12	19	30	22	16	0.097	818 774
3/4"	6	8.5 - 16	24	30	25	16	0.055	818 794
3/4"	7	12 - 20.5	30	30	27	16	0.070	818 704
1"	7	12 - 21	30	36	27	20	0.110	818 894
1"	8	16 - 26	41	41	34	20	0.160	818 804
1 1/4"	8	16 - 27.5	41	44	34	20	0.180	818 994
1 1/4"	9	21 - 34	48	48	36	20	0.220	818 904
1 1/2"	9	21 - 34	48	51	36	20	0.260	819 094
1 1/2"	10	27 - 41	55	55	39	20	0.300	819 004
2"	11	33 - 48	64	64	41	20	0.420	819 294
2"	12	40 - 53	72	72	43	20	0.510	819 204
2 1/2"	12	40 - 56	72	80	43	28	0.600	819 494
2 1/2"	13	47 - 62.5	85	85	49	28	0.800	819 404
3"	14	54 - 74	95	95	56	30	1.400	819 594
3"	15	63 - 78	110	110	61	30	1.700	819 504
3 1/2"	15	63 - 83	110	110	61	32	1.900	819 694
3 1/2"	16	72 - 92	120	120	62	32	2.300	819 604

Other design and materials on request.

Cable glands for flameproof enclosures > 2000 cm³ see page 5.138



Type ADE 4F NPT

5.132

E X - C A B L E G L A N D S

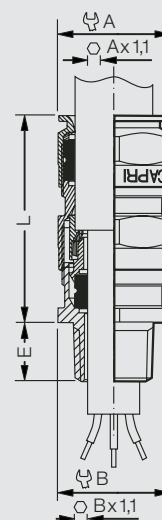
| Cable glands type ADE 4F NPT |

Technical data

Marking to 94/9/EC	Ex II 2 G Ex II 2 D
Type of protection	EEx e II EEx d IIC (IIC ≤ 2000 cm³)
EC-Type Examination Certificate	LCIE 97 ATEX 6008 X
Degree of protection to EN 60529	IP 68 (10 bar)
Enclosure material	brass, nickel-plated

Ordering details type ADE 4F NPT for amoured cables

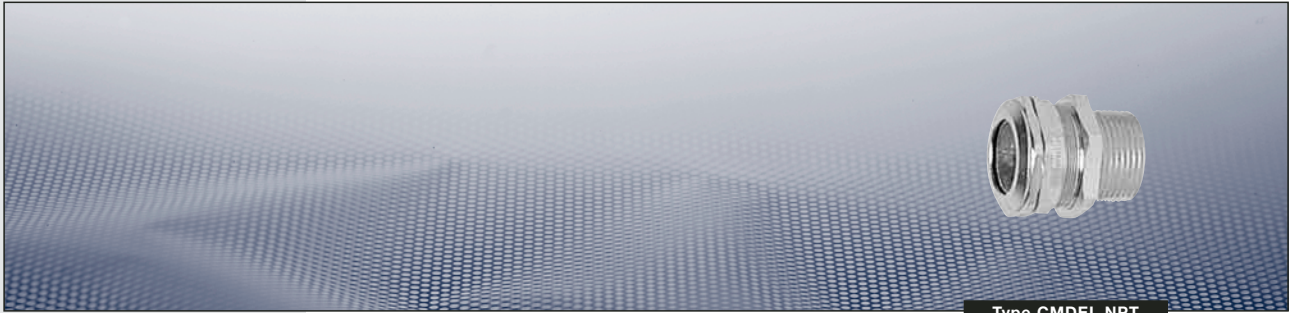
Thread	Type	Cable Ø outside mm	Cable Ø inside mm	Armierung bis mm	⌀A mm	⌀B mm	L mm	E mm	Weight approx. kg	Order No. 1 pcs.
1/4"	5	6.0 - 12	4.0 - 8	0.9	19	19	36	12	0.048	848 404
3/8"	5	6.0 - 12	4.0 - 8.5	0.9	19	19	36	12	0.057	848 594
3/8"	6	8.5 - 16	6.0 - 12	1.25	24	24	42	12	0.075	848 504
1/2"	5	6.0 - 12	4.0 - 8.5	0.9	19	24	36	16	0.095	848 674
1/2"	6	8.5 - 16	6.0 - 12	1.25	24	24	42	16	0.090	848 694
1/2"	7	12 - 21	8.5 - 15.5	1.25	30	30	46	16	0.120	848 604
3/4"	6	8.5 - 16	6.0 - 12	1.25	24	30	42	16	0.136	848 774
3/4"	7	12 - 21	8.5 - 16	1.25	30	30	46	16	0.170	848 794
3/4"	8	16 - 27.5	12 - 20.5	1.6	41	41	56	16	0.270	848 704
1"	8	16 - 27.5	12 - 21	1.25	41	41	46	20	0.310	848 894
1"	9	21 - 34	16 - 26	1.6	48	48	63	20	0.400	848 804
1 1/4"	9	21 - 34	16 - 27.5	2.0	48	48	63	20	0.445	848 994
1 1/4"	10	27 - 41	21 - 34	2.0	55	55	68	20	0.540	848 904
1 1/2"	10	27 - 41	21 - 34	2.0	55	55	68	20	0.600	849 094
1 1/2"	11	33 - 48	27 - 41	2.5	64	64	74	20	0.800	849 004
2"	12	40 - 56	33 - 48	2.5	72	72	77	20	1.000	849 294
2"	13	47 - 65	40 - 53	2.5	85	85	85	20	1.500	849 204
2 1/2"	13	47 - 65	40 - 56	2.2	85	85	85	28	1.700	849 494
2 1/2"	14	54 - 74	47 - 62.5	2.5	95	95	92	28	2.400	849 404
3"	15	63 - 83	54 - 74	3.15	110	110	104	30	3.300	849 594
3"	16	72 - 93	63 - 78	3.15	120	120	108	30	3.800	849 504



Type ADE 4F NPT

Other design and materials on request.

Cable glands for flameproof enclosures > 2000 cm³ see page 5.138

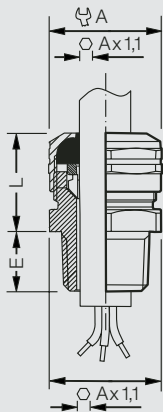


Type CMDEL NPT

EX - C A B L E G L A N D S

5.133

| Cable glands type CMDEL NPT |



Type CMDEL NPT

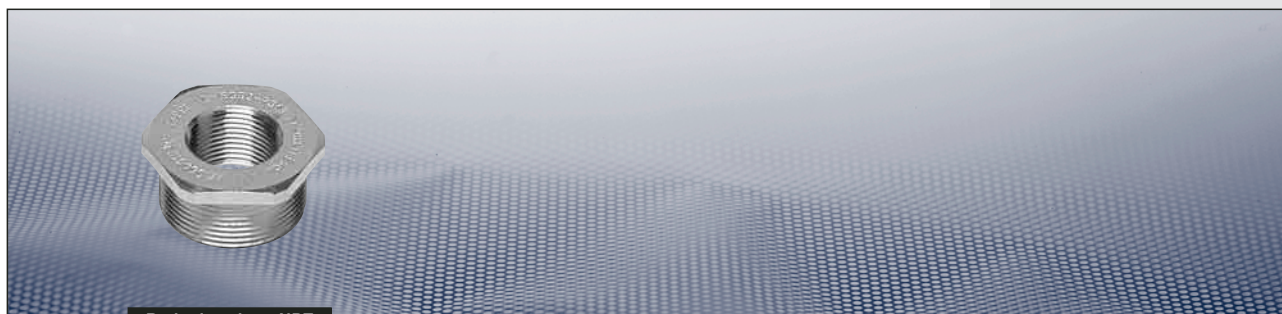
Technical data

Marking to 94/9/EC	Ex II 2 G Ex II 2 D
Type of protection	EEx e IIC
EC-Type Examination Certificate	LCIE 97 ATEX 6005 X
Degree of protection to EN 60529	IP 66 (optional IP 68)
Enclosure material	brass, nickel-plated

Ordering details type CMDEL NPT for unarmoured cables

Thread	CableØ mm	A mm	L mm	E mm	Weight approx. kg 1 pcs.	Order No.
1/2"	7.5 - 13	24	20	16	0.045	183 134
3/4"	12.5 - 18	30	24	16	0.022	183 144
1"	17.5 - 25	41	28	20	0.034	183 154
1 1/4"	24.5 - 33.5	52	38	20	0.041	183 164
1 1/2"	24.5 - 33.5	52	38	20	0.042	183 174
2"	33 - 43	63	42	20	0.046	183 184
2 1/2"	42.5 - 55	77	47	28	0.066	183 194

Other design and materials on request.



Reducing rings NPT

5.134

EX - C A B L E G L A N D S

| Reducing rings NPT |

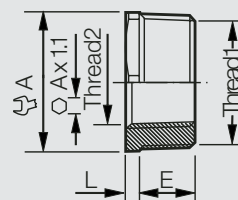
Technical data

Marking to 94/9/EC	Ex II 2 G Ex II 2 D
Type of protection	EEx e II EEx d IIC
EC-Type Examination Certificate	LCIE 98 ATEX 0001 U
Degree of protection to EN 60529	IP 66 (optional IP 68)
Enclosure material	brass, nickel-plated

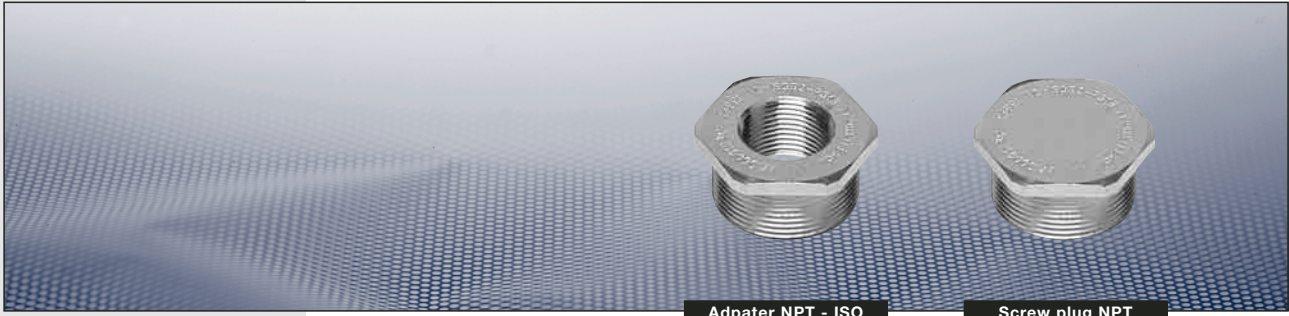
Ordering details reducing rings NPT

Thread 1	Thread 2	A mm	L mm	E mm	Order No. 1 pcs.
3/8"	1/4"	18	2.8	12	745 574
1/2"	2/4"	22	3.0	16	745 584
1/2"	3/8"	22	3.0	16	745 594
3/4"	3/8"	28	3.0	16	745 604
3/4"	1/2"	28	3.0	16	744 884
1"	1/2"	36	3.5	20	744 894
1"	3/4"	36	3.5	20	745 154
1"1/4	3/4"	44	4.0	20	745 164
1"1/4	1"	44	4.0	20	745 424
1"1/2	1"	50	5.0	20	745 434
1"1/2	1"1/4	50	5.0	20	745 694
2"	1"	64	5.5	20	745 444
2"	1"1/4	64	5.5	20	745 704
2"	1"1/2	64	5.5	20	745 964
2"1/2	1"1/2	75	6.0	28	745 974
2"1/2	2"	75	6.0	28	746 234
3"	2"	90	8.0	30	746 244
3"	2"1/2	90	8.0	30	746 504
3"1/2	2"1/2	110	10.0	32	745 654
3"1/2	3"	110	10.0	32	745 664
4"	3"	120	11.0	32	746 834
4"	3"1/2	120	11.0	32	745 734

Other design and materials on request



Reducing rings ISO



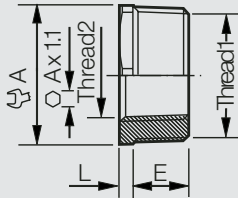
Adapter NPT - ISO

Screw plug NPT

EX - C A B L E G L A N D S

| Screw plug NPT | Adapter NPT - ISO |

5.135



Adapter ISO-NPT

Technical data

Marking to 94/9/EC	Ex II 2 G Ex II 2 D
Type of protection	EEx e II EEx d IIC
EC-Type Examination Certificate	LCIE 98 ATEX 0001 U
Degree of protection to EN 60529	IP 68 with gasket
Enclosure material	brass, nickel-plated

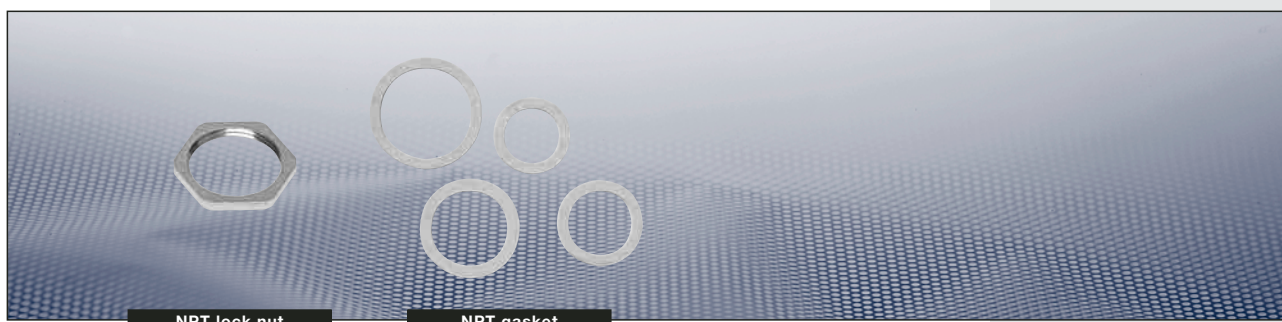
Ordering details screw plug with NPT thread

Thread	mm	L mm	E mm	Weight approx. kg	Order No. 1 pcs.
1/4 "	14	2.8	12	0.011	190 194
3/8 "	18	2.8	12	0.018	190 294
1/2 "	22	3.0	16	0.032	190 394
3/4 "	28	3.0	16	0.043	190 494
1 "	36	3.5	20	0.078	190 594
1 " 1/4	44	4.0	20	0.116	190 694
1 " 1/2	50	5.0	20	0.157	190 794
2 "	64	5.5	20	0.253	190 894
2 " 1/2	75	6.0	28	0.310	190 994
3 "	90	8.0	30	0.360	191 094
3 " 1/2	110	10.0	32	0.420	191 194
4 "	120	11.0	32	0.495	191 294

Ordering details Adapter mit NPT screw-in thread

Thread 1	Thread 2	A mm	L mm	E mm	Ø D mm	Weight approx. kg	Order No. 1 pcs.
1/2 " NPT	M20 x 1.5	23	18.5	16	15.0	0.045	740 454
1/2 " NPT	M25 x 1.5	28	19.0	16	15.0	0.058	740 714
3/4 " NPT	M25 x 1.5	28	19.0	16	20.1	0.060	740 724
3/4 " NPT	M32 x 1.5	36	19.0	16	20.1	0.089	740 984
1 " NPT	M32 x 1.5	36	19.0	20	26.0	0.101	740 994
1 " NPT	M40 x 1.5	44	19.0	20	26.0	0.129	741 254
1 " 1/4NPT	M40 x 1.5	44	19.0	20	34.8	0.131	741 264
1 " 1/4NPT	M50 x 1.5	54	20.0	20	34.8	0.175	741 524
1 " 1/2NPT	M50 x 1.5	54	20.0	20	40.8	0.177	741 534
1 " 1/2NPT	M63 x 1.5	67	21.0	20	40.8	0.242	741 794
2 " NPT	M63 x 1.5	67	21.0	20	52.4	0.249	741 804

Other design and materials on request



NPT lock nut

NPT gasket

EX - C A B L E G L A N D S

| Accessories for cable glands NPT |

Ordering details NPT lock nut for cable glands

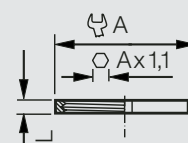
Thread	⌀ A mm	L mm	OU	Order No.
1/4"	16	2.8	10	280 104
3/8"	20	2.8	10	280 114
1/2"	24	3.5	10	280 124
3/4"	30	3.5	10	280 134
1"	37	4.5	10	280 144
1 1/4"	47	4.5	10	280 154
1 1/2"	52	5.0	10	280 164
2"	64	5.5	10	280 174
2 1/2"	77	6.5	10	280 184
3"	95	8.0	10	280 194
3 1/2"	110	10.0	10	280 204
4"	120	11.0	10	280 214

Other sizes and thread versions available on request.

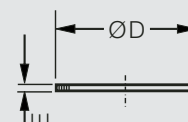
Ordering details NPT gaskets for cable glands

Thread	Ø D mm	E mm	OU	Order No.
1/4"	20	1.5	10	229 014
3/8"	22	1.5	10	229 038
1/2"	27	1.5	10	229 012
3/4"	33	1.5	10	229 034
1"	41	1.5	10	229 010
1 1/4"	52	1.5	10	229 114
1 1/2"	57	1.5	10	229 112
2"	71	2.0	10	229 020
2 1/2"	85	2.0	10	229 212
3"	104	2.0	10	229 300
3 1/2"	120	2.0	10	229 312

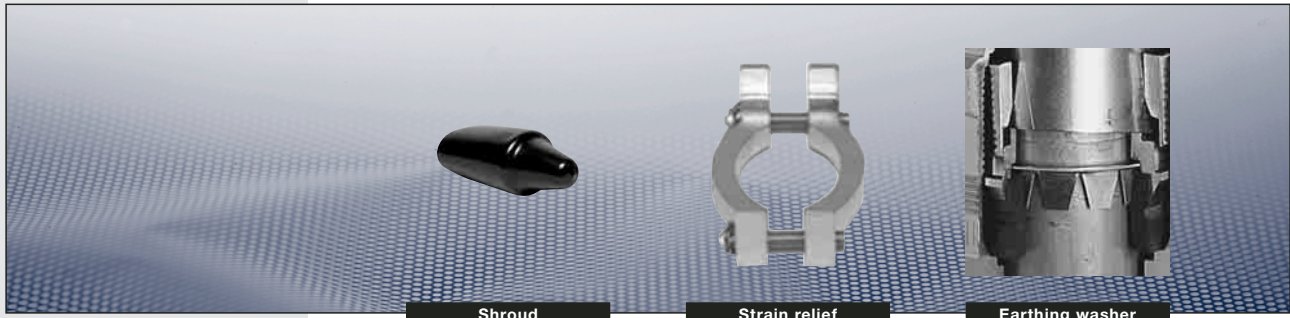
Other sizes, thread versions and enlarged temperature range available on request.



NPT lock nut



NPT lock nut



Shroud

Strain relief

Earthing washer

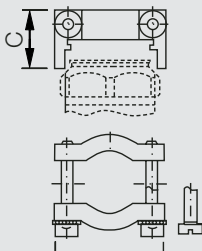
E X - C A B L E G L A N D S

| Accessories for cable glands type ADE |

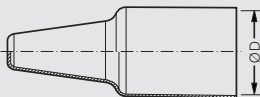
5.137



Earthing washer



Strain relief



Shroud

Ordering details earthing washer for lead sheath cables

ADE Type	Cable Ø mm	Weight approx. kg	OU	Order No.
5	4.0 - 7.5	0.025	10	560 530
6	6.0 - 11	0.030	10	560 630
7	9.0 - 15	0.060	10	560 730
8	12 - 20	0.090	10	560 830
9	16 - 26.5	0.150	10	560 930
10	21 - 32.5	0.280	10	561 030
11	28 - 39.5	0.380	10	561 130
12	33 - 46.5	0.580	10	561 230
13	40 - 54.5	0.730	10	561 330

Ordering details for strain relief for type ADE

ADE Type	Cable Ø mm	B	C	Weight approx. kg	Order No.
5	8.0 - 12.0	22	5	0.035	810 534
6	6.0 - 11	27.5	6	0.075	810 634
7	9.0 - 15	33.5	8	0.140	810 734
8	12 - 20	45	8	0.220	810 834
9	16 - 26.5	52	9.5	0.061	810 934
10	21 - 32.5	59	9.5	0.069	811 034
11	28 - 39.5	69	12	0.130	811 134
12	33 - 46.5	78	12	0.160	811 234
13	40 - 54.5	92	10	0.370	811 334

Ordering details shrouds for cable glands

ADE Type	Ø D mm	Weight approx. kg	OU	Order No.
5	20	0.014	10	506 050
6	25	0.022	10	506 060
7	31	0.034	10	506 070
8	43	0.041	10	506 080
9	50	0.046	10	506 090
10	57	0.073	10	506 100
11	67	0.077	10	506 110
12	75	0.118	10	506 120
13	89	0.135	10	506 130

Other designs available on request.

1

2

3

4

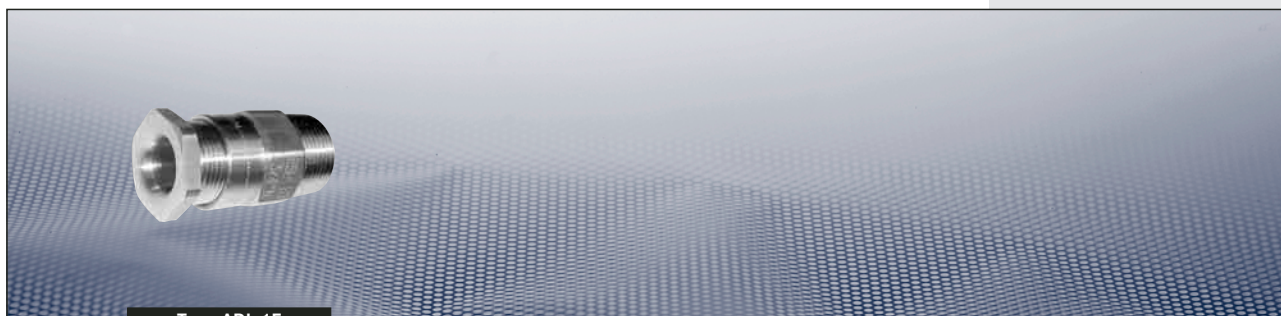
5

6

7

8

9



Type ADL 1F

5.138

EX - C A B L E G L A N D S

| ADL 1F | ISO | METRIC |

Technical data cable gland for non armoured cable-Ex

Application	Suitable for non armoured cable entries, in equipment for explosives atmospheres
Marking to ATEX 94/9/CE	Ex II 2 G EEx d IIC ¹⁾ , EEx e II, EEx i IIC, EEx p II Ex II 2 D IP 68
Permissible ambient temperature	-40 °C to +100 °C
EC-Type Examination Certificate	LCIE 97 ATEX 6006 X
Degree of protection to EN 60529	IP 68-10 bar
Enclosure material	Natural brass for metallic parts and satoprene for gasket
Thread	ISO acc. ISO 965/1, ISO 965/2 (m) y EN 60423

Ordering details cable gland for non-armoured cable-Ex

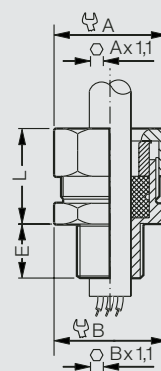
Thread	Type	Supp. Code ³⁾	Cable ²⁾ Ø outside mm	Dimensions ²⁾ A L ⁴⁾ E mm mm mm	Weight approx. kg	Order No.
ISO20 x 1.5	ADL 1F ISO20 N05B2	A	6 - 10	28 59 16	0,094	NOR 000 222 260 852
ISO20 x 1.5	ADL 1F ISO20 N05B1	A	9 - 14	28 59 16	0,093	NOR 000 222 260 860
ISO25 x 1.5	ADL 1F ISO25 N05B2	A	6 - 10	28 59 16	0,098	NOR 000 222 260 878
ISO25 x 1.5	ADL 1F ISO25 N05B1	A	9 - 14	28 59 16	0,096	NOR 000 002 260 886
ISO25 x 1.5	ADL 1F ISO25 N06B4	A	14 - 18	32 60 18	0,117	NOR 000 222 260 927
ISO25 x 1.5	ADL 1F ISO25 N06B5	A	16 - 19	32 60 18	0,108	NOR 000 112 260 590
ISO32 x 1.5	ADL 1F ISO32 N07B3	A	20 - 23	40 73 18	0,217	NOR 000 112 260 623
ISO32 x 1.5	ADL 1F ISO32 N08B1	A	20 - 27,5	52 83 18	0,357	NOR 000 112 260 657

¹⁾ Without limitation of volume

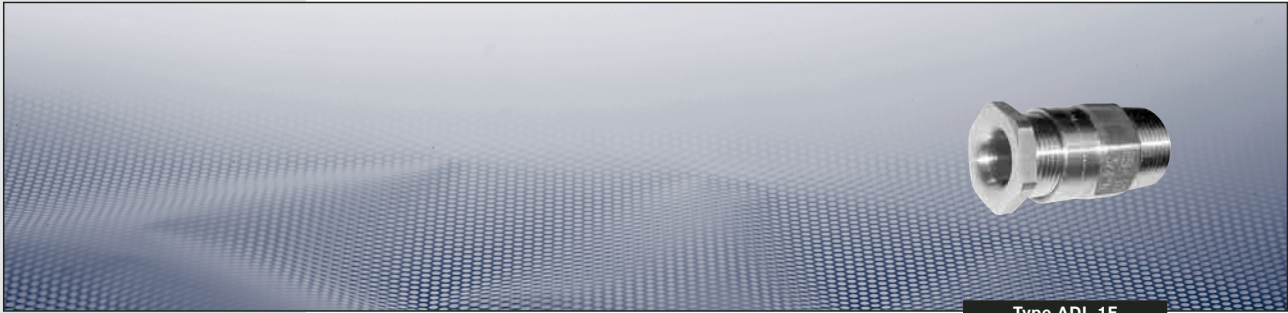
²⁾ All dimensions in mm

³⁾ Check disposability => Codes; A = Stock except sales; B = on request

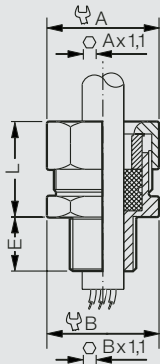
⁴⁾ Dimensions with max. cable



Type



Type ADL 1F



Type

EX - C A B L E G L A N D S

5.139

| ADL 1F | NPT | ISO 7/1 CONIC |

Technical data cable gland for non armoured cable-Ex

Application	Suitable for non armoured cable entries, in equipment for explosives atmospheres
Marking to ATEX 94/9/CE	Ex II 2 G EEx d IIC ¹⁾ , EEx e II, EEx i IIC, EEx p II Ex II 2 D IP 68
Permissible ambient temperature	-40 °C to +100 °C
EC-Type Examination Certificate	LCIE 97 ATEX 6006 X
Degree of protection to EN 60529	IP 68-10 bar
Enclosure material	Natural brass for metallic parts and satoprene for gasket
Thread	NPT acc. NFE 03601 and conic acc. ISO 7/1

Ordering details cable gland for non-armoured cable-Ex

Thread	Type	Supp. Code ⁴⁾	Cable ³⁾ Ø outside mm	Dimensions ³⁾ A mm	L ⁵⁾ mm	E mm	Weight approx. kg	Order No.
NPT 1/2"	ADL 1F NPT 1/2" N05B2	A	6 - 10	28	59	16	0,100	NOR 000 222 260 753
NPT 1/2"	ADL 1F NPT 1/2" N05B1	A	9 - 14	28	59	16	0,099	NOR 000 222 260 761
NPT 3/4"	ADL 1F NPT 3/4" N05B2	A	6 - 10	28	59	16	0,107	NOR 000 222 260 779
NPT 3/4"	ADL 1F NPT 3/4" N05B1	A	9 - 14	28	59	16	0,105	NOR 000 222 260 787
NPT 3/4"	ADL 1F NPT 3/4" N06B4	A	14 - 18	32	60	16	0,123	NOR 000 222 260 894
NPT 3/4"	ADL 1F NPT 3/4" N06B5	A	16 - 19	32	60	16	0,115	NOR 000 002 260 890
NPT 1"	ADL 1F NPT 1" N07B3	A	20 - 23	40	73	21	0,235	NOR 000 112 260 607
1" ISO 7/1	ADL 1F 1"ISO7-1 N07B3	A	20 - 23	40	73	19	0,230	NOR 000 002 260 915
NPT 1"	ADL 1F NPT 1" N08B1	B	20 - 26	52	83	21	0,380	NOR 000 112 260 631
1" ISO 7/1	ADL 1F 1"ISO7-1 N08B1	B	20 - 26	52	83	19	0,375	NOR 000 002 260 923

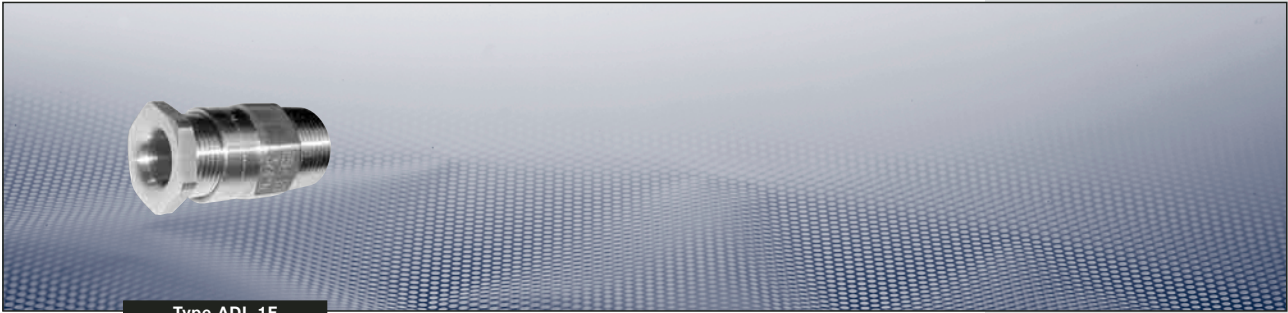
¹⁾ Without limitation of volume

²⁾ The threaded up to 3/4" NPT compatible with ISO 7/1 conic

³⁾ All dimensions in mm

⁴⁾ Check disposability => Codes; A = Stock except sales; B = on request

⁵⁾ Dimensions with max. cable



Type ADL 1F

5.140

EX - C A B L E G L A N D S

| ADL 1F-Pg |

Technical data cable gland for non armoured cable-Ex

Application	Suitable for non armoured cable entries, in equipment for explosives atmospheres
Marking to ATEX 94/9/CE	<div>II 2 G EEx d IIC¹⁾, EEx e II, EEx i IIC, EEx p II</div> <div>II 2 D IP 68</div>
Permissible ambient temperature	-40 °C to +100 °C
EC-Type Examination Certificate	LCIE 97 ATEX 6006 X
Degree of protection to EN 60529	IP 68-10 bar
Enclosure material	Natural brass for metallic parts and satoprene for gasket
Thread	Pg acc. UTE C 68-312

Ordering details cable gland for non-armoured cable-Ex

Thread	Type	Supp. Code ³⁾	Cable ²⁾ Ø outside mm	Figure	Dimensions ²⁾				Weight approx.	Order No.
					ΨA	L ⁴⁾	E	mm kg		
PG 13.5	ADL 1F PG13.5 N05B2	B	6 - 10	1	28	59	16	0,098		NOR 000 222 260 810
PG 13.5	ADL 1F PG13.5 N05B1	A	9 - 14	1	28	59	16	0,096		NOR 000 222 260 828
PG 16	ADL 1F PG16 N05B2	B	6 - 10	1	28	59	16	0,107		NOR 000 222 260 836
PG 16	ADL 1F PG16 N05B1	B	9 - 14	1	28	59	16	0,105		NOR 000 222 260 844
PG 21	ADL 1F PG21 N06B4	B	14 - 18	2	32	60	21	0,147		NOR 000 222 260 919

¹⁾ Without limitation of volume

²⁾ All dimensions in mm

³⁾ Check disposability => Codes; A = Stock except sales; B = on request

⁴⁾ Dimensions with max. cable

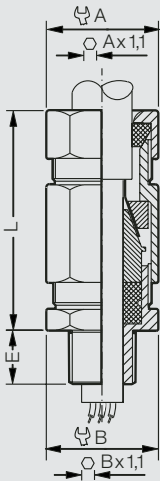


Figure 1

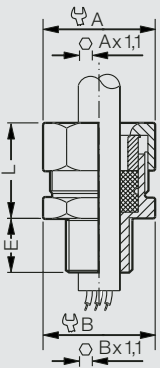
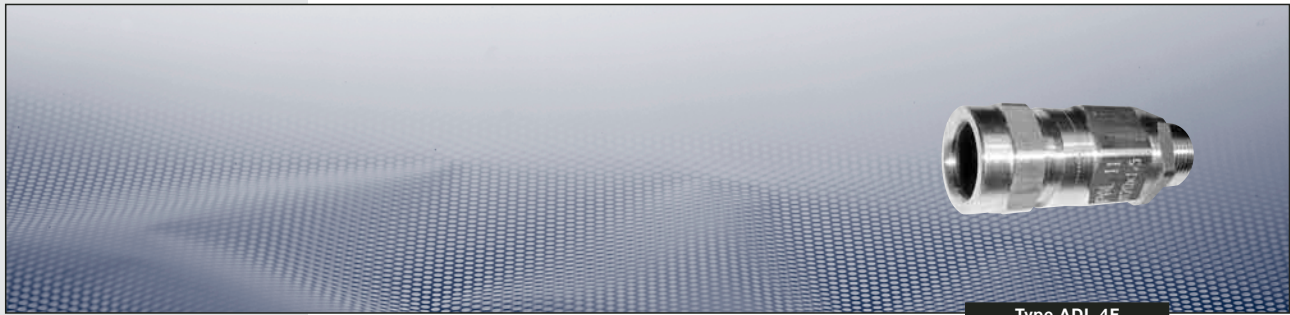


Figure 2



Type ADL 4F

EX - C A B L E G L A N D S

5.141

| ADL 4F | ISO | Metric |

Technical data cable gland for armoured cable-Ex

Application	Suitable for braided, taped or armoured cable entries, in equipment for explosives atmospheres
Marking to ATEX 94/9/CE	Ex II 2 G EEx d IIC ¹⁾ , EEx e II, EEx i IIC, EEx p II Ex II 2 D IP 68
Permissible ambient temperature	-40 °C to +100 °C
EC-Type Examination Certificate	LCIE 97 ATEX 6006 X
Degree of protection to EN 60529	IP 68-10 bar
Enclosure material	Natural brass for metallic parts and satoprene for gasket
Thread	ISO acc. ISO 965/1, ISO 965/2 (m) and EN 60423

Ordering details cable gland for armoured cable-Ex

Thread	Type	Supp. Cable ²⁾	Code ³⁾	Ø Ext.	Ø Int.	Armoured	Code
ISO20 x 1.5	ADL 4F ISO20 N05B2	A	10 - 15	6 - 10	0.15 - 1.25		NOR 000 222 260 547
ISO20 x 1.5	ADL 4F ISO20 N05B1	A	13 - 18	9 - 14	0.15 - 1.25		NOR 000 222 260 555
ISO25 x 1.5	ADL 4F ISO25 N05B2	A	10 - 15	6 - 10	0.15 - 1.25		NOR 000 222 260 563
ISO25 x 1.5	ADL 4F ISO25 N05B1	A	13 - 18	9 - 14	0.15 - 1.25		NOR 000 222 260 571
ISO25 x 1.5	ADL 4F ISO25 N06B4	A	18 - 22	14 - 18	0.15 - 1.25		NOR 000 222 260 638
ISO25 x 1.5	ADL 4F ISO25 N06B5	A	19 - 23	16 - 19	0.15 - 1.25		NOR 000 112 260 409
ISO32 x 1.5	ADL 4F ISO32 N06B4	B	18 - 22	14 - 18	0.15 - 1.25		NOR 000 222 260 646
ISO32 x 1.5	ADL 4F ISO32 N07B3	A	18 - 27.5	20 - 23	0.15 - 1.6		NOR 000 112 260 433
ISO32 x 1.5	ADL 4F ISO32 N08B1	A	23 - 33.5	20 - 27.5	0.15 - 2		NOR 000 112 260 467
ISO50 x 1.5	ADL 4F ISO50 N09B1	A	29 - 40.5	25 - 33	0.2 - 2		NOR 000 112 260 706
ISO50 x 1.5	ADL 4F ISO50 N10B2	A	35 - 48	30 - 39	0.5 - 2.5		NOR 000 112 260 722
ISO60 x 1.5	ADL 4F ISO60 N10B1	A	41 - 53	37 - 45	0.5 - 2.5		NOR 000 112 260 748
ISO60 x 1.5	ADL 4F ISO60 N10B3	A	50 - 56.5	44 - 49.5	0.5 - 2.5		NOR 000 112 260 764
Thread	Type	Figure	Dimensions				Weight approx. kg
			⌀A	⌀B	L	E	
ISO20 x 1.5	ADL 4F ISO20 N05B2	1	28	—	59	16	0.152
ISO20 x 1.5	ADL 4F ISO20 N05B1	1	28	—	59	16	0.150
ISO25 x 1.5	ADL 4F ISO25 N05B2	1	28	—	59	16	0.155
ISO25 x 1.5	ADL 4F ISO25 N05B1	1	28	—	59	16	0.153
ISO25 x 1.5	ADL 4F ISO25 N06B4	1	32	—	60	18	0.184
ISO25 x 1.5	ADL 4F ISO25 N06B5	1	32	—	60	18	0.173
ISO32 x 1.5	ADL 4F ISO32 N06B4	2	32	36	63.5	15	0.228
ISO32 x 1.5	ADL 4F ISO32 N07B3	1	40	—	73	18	0.370
ISO32 x 1.5	ADL 4F ISO32 N08B1	1	52	—	83	18	0.690
ISO50 x 1.5	ADL 4F ISO50 N09B1	1	57	—	87	18	0.900
ISO50 x 1.5	ADL 4F ISO50 N10B2	1	72	—	100	18	1.255
ISO60 x 1.5	ADL 4F ISO60 N10B1	1	72	—	100	18	1.165
ISO60 x 1.5	ADL 4F ISO60 N10B3	1	72	—	100	18	1.120

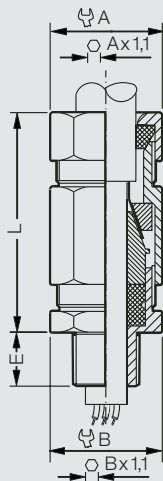


Figure 1

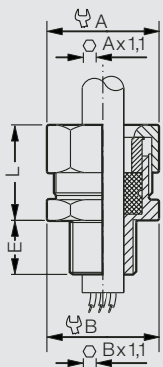


Figure 2

¹⁾ Without limitation of volume

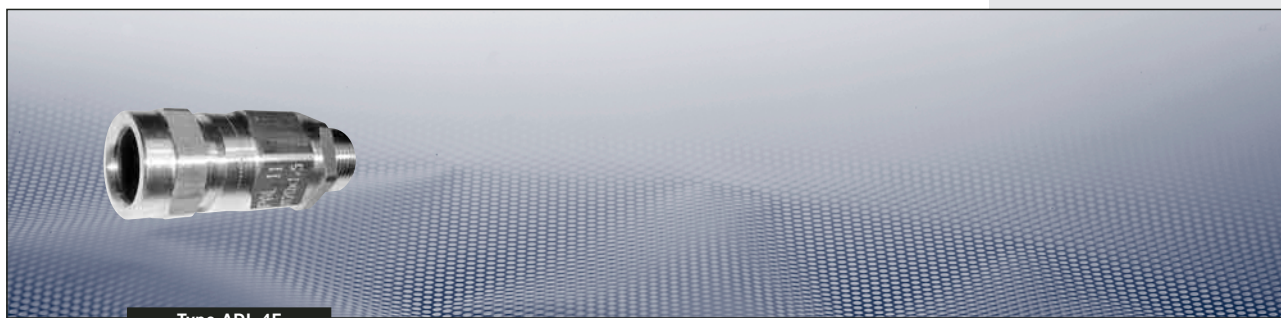
²⁾ All dimensions in mm

³⁾ Check disposability => Codes;

A = Stock except sales;

B = on request

⁴⁾ Dimensions with max. cable



Type ADL 4F

5.142

E X - C A B L E G L A N D S

| ADL 4F-NPT |

Technical data cable gland for armoured cable-Ex

Application	Suitable for braided, taped or armoured cable entries, in equipment for explosives atmospheres
Marking to ATEX 94/9/CE	⊕ II 2 G EEx d IIC ¹⁾ , EEx e II, EEx i IIC, EEx p II ⊕ II 2 D IP 68
Permissible ambient temperature	-40 °C to +100 °C
EC-Type Examination Certificate	LCIE 97 ATEX 6006 X
Degree of protection to EN 60529	IP 68-10 bar
Enclosure material	Natural brass for metallic parts and satoprene for gasket
Thread	NPT acc. NFE 03601

Ordering details cable gland for armoured cable-Ex

Thread	Type	Supp. Cable ²⁾	Code ³⁾	Ø Ext.	Ø Int.	Armoured	Code
NPT 1/2"	ADL 4F NPT 1/2" N05B2	A	10 - 15	6 - 10	0.15 - 1.25		NOR 000 222 260 422
NPT 1/2"	ADL 4F NPT 1/2" N05B1	A	13 - 18	9 - 14	0.15 - 1.25		NOR 000 222 260 430
NPT 3/4"	ADL 4F NPT 3/4" N05B2	A	10 - 15	6 - 10	0.15 - 1.25		NOR 000 222 260 464
NPT 3/4"	ADL 4F NPT 3/4" N05B1	A	13 - 18	9 - 14	0.15 - 1.25		NOR 000 222 260 472
NPT 3/4"	ADL 4F NPT 3/4" N06B4	A	18 - 22	14 - 18	0.15 - 1.25		NOR 000 002 260 589
NPT 3/4"	ADL 4F NPT 3/4" N06B5	A	19 - 23	16 - 19	0.15 - 1.25		NOR 000 222 260 733
NPT 1"	ADL 4F NPT 1" N06B4	A	13 - 18	9 - 14	0.15 - 1.25		NOR 000 112 260 612
NPT 1"	ADL 4F NPT 1" N06B5	A	19 - 23	16 - 19	0.15 - 1.25		NOR 000 112 260 392
NPT 1"	ADL 4F NPT 1" N07B3	A	18 - 27.5	20 - 23	0.15 - 1.6		NOR 000 112 260 417
NPT 1"	ADL 4F NPT 1" N08B1	A	23 - 33.5	20 - 26	0.15 - 2		NOR 000 112 260 441
NPT 1 1/4"	ADL 4F NPT 1 1/4" N07B3	A	18 - 27.5	20 - 23	0.15 - 1.6		NOR 000 112 260 425
NPT 1 1/4"	ADL 4F NPT 1 1/4" N08B1	A	23 - 33.5	20 - 26	0.15 - 2		NOR 000 112 260 459
NPT 1 1/2"	ADL 4F NPT 1 1/2" N09B1	A	29 - 40.5	25 - 33	0.2 - 2		NOR 000 112 260 780
NPT 1 1/2"	ADL 4F NPT 1 1/2" N10B2	A	35 - 48	30 - 39	0.2 - 2.5		NOR 000 112 260 798
NPT 2"	ADL 4F NPT 2" N10B1	A	41 - 53	37 - 45	0.2 - 2.5		NOR 000 112 260 805
NPT 2"	ADL 4F NPT 2" N10B3	A	50 - 56.5	44 - 49.5	0.2 - 2.5		NOR 000 112 260 813

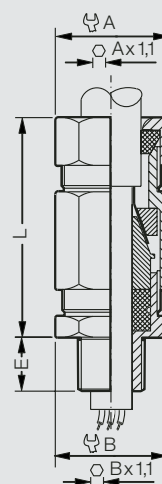


Figure 1

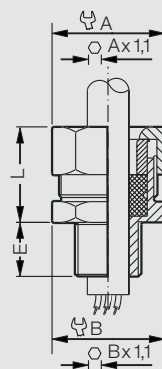
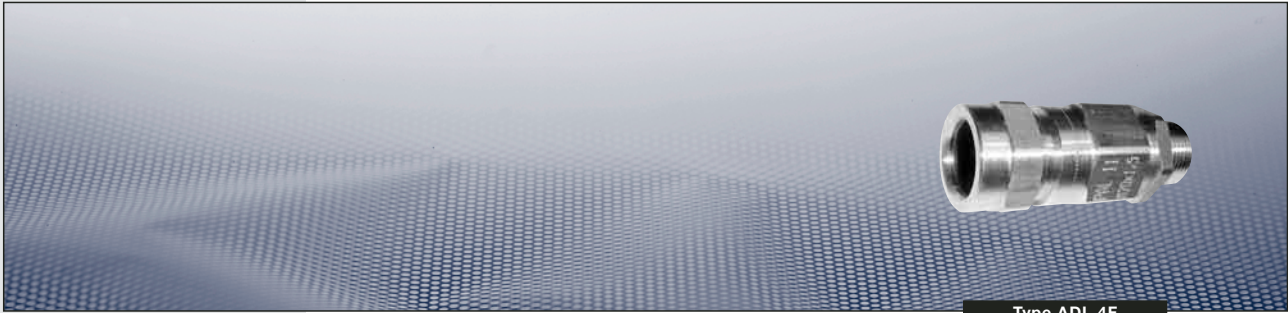


Figure 2



Type ADL 4F

EX - C A B L E G L A N D S

5.143

ADL 4F-NPT

Ordering details cable gland for armoured cable-Ex								
Thread	Type	Figure	Dimensions ³⁾				Weight approx. kg	
			⌀A	⌀B	L ⁵⁾	E		
NPT 1/2"	ADL 4F NPT 1/2" N05B2	1	28	—	59	16	0.158	
NPT 1/2"	ADL 4F NPT 1/2" N05B1	1	28	—	59	16	0.156	
NPT 3/4"	ADL 4F NPT 3/4" N05B2	1	28	—	59	16	0.165	
NPT 3/4"	ADL 4F NPT 3/4" N05B1	1	28	—	59	16	0.163	
NPT 3/4"	ADL 4F NPT 3/4" N06B4	1	32	—	60	16	0.190	
NPT 3/4"	ADL 4F NPT 3/4" N06B5	1	32	—	60	16	0.180	
NPT 1"	ADL 4F NPT 1" N06B4	2	32	38	67.5	20	0.267	
NPT 1"	ADL 4F NPT 1" N06B5	2	32	38	67.5	20	0.257	
NPT 1"	ADL 4F NPT 1" N07B3	1	40	—	73	21	0.390	
NPT 1"	ADL 4F NPT 1" N08B1	1	52	—	83	21	0.712	
NPT 1 1/4"	ADL 4F NPT 1 1/4" N07B3	2	40	44	83.5	20	0.520	
NPT 1 1/4"	ADL 4F NPT 1 1/4" N08B1	2	52	—	83	21	0.730	
NPT 1 1/2"	ADL 4F NPT 1 1/2" N09B1	1	57	—	87	21	0.904	
NPT 1 1/2"	ADL 4F NPT 1 1/2" N10B2	1	72	—	100	18	1.255	
NPT 2"	ADL 4F NPT 2" N10B1	1	72	—	100	25	1.190	
NPT 2"	ADL 4F NPT 2" N10B3	1	72	—	100	25	1.140	

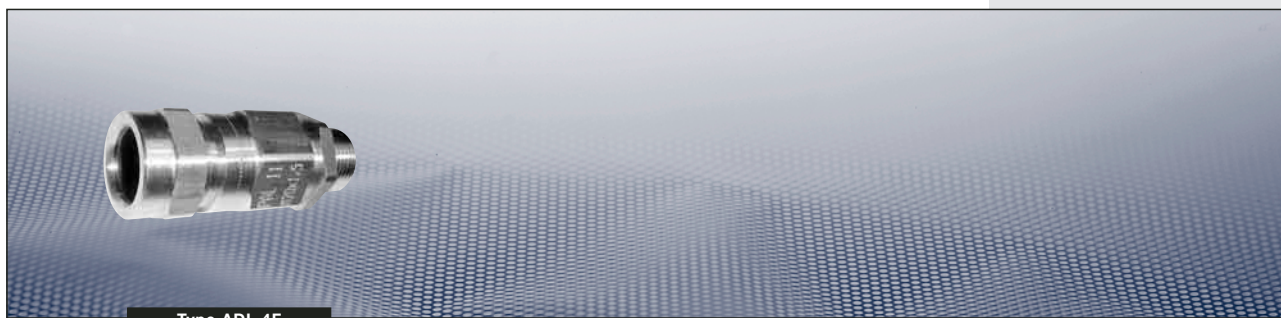
¹⁾ Without limitation of volume

²⁾ The threaded up to 3/4" NPT compatible with ISO 7/1 conic

³⁾ All dimensions in mm

⁴⁾ Check disposability => Codes; A = Stock except sales; B = on request

⁵⁾ Dimensions with max. cable



Type ADL 4F

5.144

E X - C A B L E G L A N D S

| ADL 4F - ISO - CONIC |

Technical data cable gland for armoured cable-Ex

Application	Suitable for braided, taped or armoured cable entries, in equipment for explosives atmospheres
Marking to ATEX 94/9/CE	Ex II 2 G EEx d IIC ¹⁾ , EEx e II, EEx i IIC, EEx p II Ex II 2 D IP 68
Permissible ambient temperature	-40 °C to +100 °C
EC-Type Examination Certificate	LCIE 97 ATEX 6006 X
Degree of protection to EN 60529	IP 68-10 bar
Enclosure material	Natural brass for metallic parts and satoprene for gasket
Thread	Conic acc. ISO 7/1

Ordering details cable gland for armoured cable-Ex

Thread	Type	Supp. Cable ²⁾	Code
		Code ³⁾ Ø Ext. Ø Int. Armoured	
1" ISO 7/1	ADL 4F 1"ISO7-1 N05B4	B 18 - 22 14 - 18 0.15 - 1.25	NOR 000 222 260 620
1" ISO 7/1	ADL 4F 1"ISO7-1 N06B5	B 19 - 23 16 - 19 0.15 - 1.25	NOR 000 112 260 037
1" ISO 7/1	ADL 4F 1"ISO7-1 N07B3	A 18 - 27.5 20 - 23 0.15 - 1.6	NOR 000 002 260 741
1" ISO 7/1	ADL 4F 1"ISO7-1 N08B1	A 23 - 33.5 20 - 26 0.15 - 2	NOR 000 002 260 824
1 1/4" ISO 7/1	ADL 4F 1 1/4"ISO7-1 N08B1	B 23 - 33.5 20 - 27.5 0.15 - 2	NOR 000 112 260 053
1 1/2" ISO 7/1	ADL 4F 1 1/2"ISO7-1 N09B1	A 29 - 40.5 25 - 33 0.2 - 2	NOR 000 002 260 759
1 1/2" ISO 7/1	ADL 4F 1 1/2"ISO7-1 N10B2	A 35 - 48 30 - 39 0.5 - 2.5	NOR 000 002 260 767
2" ISO 7/1	ADL 4F 2"ISO7-1 N10B1	A 41 - 53 37 - 45 0.5 - 2.5	NOR 000 002 260 791
2" ISO 7/1	ADL 4F 2"ISO7-1 N10B3	B 50 - 56.5 44 - 49.5 0.5 - 2.5	NOR 000 002 260 808

Thread	Type	Figure	Dimensions ³⁾	Weight approx. kg
			⌀A ⌀B L ⁵⁾ E	
1" ISO 7/1	ADL 4F 1"ISO7-1 N05B4	2	32 36 67.5 19	0.265
1" ISO 7/1	ADL 4F 1"ISO7-1 N06B5	2	32 36 67.5 19	0.255
1" ISO 7/1	ADL 4F 1"ISO7-1 N07B3	1	40 - 73 19	0.385
1" ISO 7/1	ADL 4F 1"ISO7-1 N08B1	1	52 - 83 19	0.708
1 1/4" ISO 7/1	ADL 4F 1 1/4"ISO7-1 N08B1	2	52 - 83 21.5	0.803
1 1/2" ISO 7/1	ADL 4F 1 1/2"ISO7-1 N09B1	1	57 - 87 21.5	0.803
1 1/2" ISO 7/1	ADL 4F 1 1/2"ISO7-1 N10B2	1	72 - 100 21.5	1.282
2" ISO 7/1	ADL 4F 2"ISO7-1 N10B1	1	72 - 100 26	1.210
2" ISO 7/1	ADL 4F 2"ISO7-1 N10B3	1	72 - 100 26	1.162

¹⁾ Without limitation of volume

²⁾ All dimensions in mm

³⁾ Check disposability => Codes; A = Stock except sales; B = on request

⁴⁾ Dimensions with max. cable

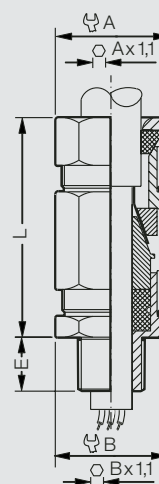


Figure 1

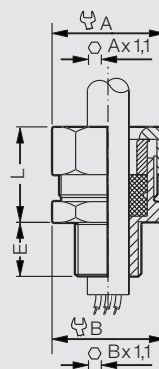
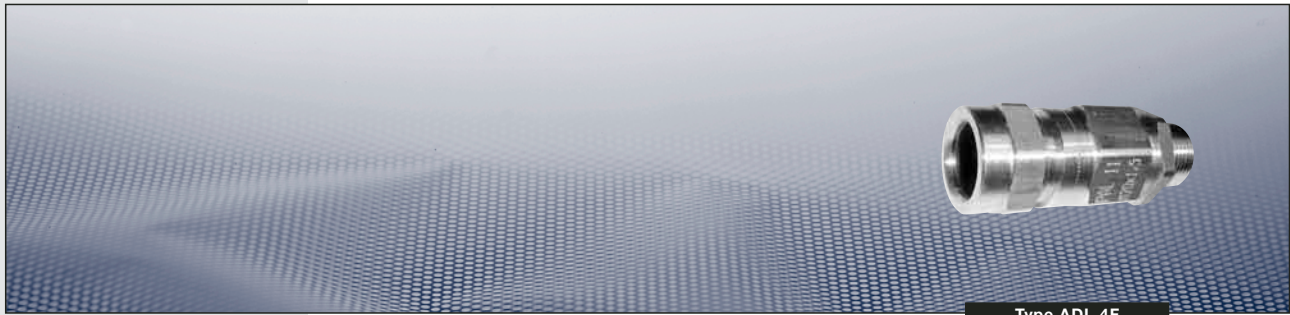


Figure 2



Type ADL 4F

EX - C A B L E G L A N D S

5.145

| ADL 4F-Pg |

Technical data cable gland for armoured cable-Ex

Application	Suitable for non armoured cable entries, in equipment for explosives atmospheres
Marking to ATEX 94/9/CE	Ex II 2 G EEx d IIC ¹⁾ , EEx e II, EEx i IIC, EEx p II Ex II 2 D IP 68
Permissible ambient temperature	-40 °C to +100 °C
EC-Type Examination Certificate	LCIE 97 ATEX 6006 X
Degree of protection to EN 60529	IP 68-10 bar
Enclosure material	Natural brass for metallic parts and satoprene for gasket
Thread	Pg acc. UTE C 68-312

Ordering details cable gland for armoured cable-Ex

Thread	Type	Supp. Code ³⁾	Cable ²⁾ Ø Ext.	Ø Int.	Armoured	Code
PG 11	ADL 4F PG11 N05B1	B	13 - 18	9 - 14	0.15 - 1.25	NOR 000 222 260 373
PG 13.5	ADL 4F PG13.5 N05B2	A	10 - 15	6 - 10	0.15 - 1.25	NOR 000 222 260 399
PG 13.5	ADL 4F PG13.5 N05B1	A	13 - 18	9 - 14	0.15 - 1.25	NOR 000 222 260 513
PG 16	ADL 4F PG16 N05B2	B	10 - 15	6 - 10	0.15 - 1.25	NOR 000 222 260 521
PG 16	ADL 4F PG16 N05B1	A	13 - 18	9 - 14	0.15 - 1.25	NOR 000 222 260 539
PG 21	ADL 4F PG21 N06B4	B	18 - 22	14 - 18	0.15 - 1.25	NOR 000 222 260 604
PG 21	ADL 4F PG21 N06B5	A	19 - 23	16 - 19	0.15 - 1.25	NOR 000 112 260 152
PG 29	ADL 4F PG29 N07B3	B	18 - 27.5	20 - 23	0.15 - 1.6	NOR 000 112 260 160
PG 29	ADL 4F PG29 N08B1	B	23 - 33.5	20 - 27.5	0.15 - 2	NOR 000 112 260 178
PG 36	ADL 4F PG36 N09B1	A	29 - 40.5	25 - 33	0.2 - 2	NOR 000 112 260 714

Thread	Type	Figure	Dimensions ³⁾				Weight approx. kg
			⌀A	⌀B	L ⁵⁾	E	
PG 11	ADL 4F PG11 N05B1	1	28	—	59	16	0.147
PG 13.5	ADL 4F PG13.5 N05B2	1	28	—	59	16	0.156
PG 13.5	ADL 4F PG13.5 N05B1	1	28	—	59	16	0.154
PG 16	ADL 4F PG16 N05B2	1	28	—	59	16	0.165
PG 16	ADL 4F PG16 N05B1	1	28	—	59	16	0.163
PG 21	ADL 4F PG21 N06B4	2	32	—	60	21	0.215
PG 21	ADL 4F PG21 N06B5	2	32	—	60	21	0.203
PG 29	ADL 4F PG29 N07B3	2	40	—	73	21	0.428
PG 29	ADL 4F PG29 N08B1	2	52	—	83	21	0.740
PG 36	ADL 4F PG36 N09B1	1	57	—	87	21	0.892

¹⁾ Without limitation of volume

²⁾ All dimensions in mm

³⁾ Check disposability => Codes; A = Stock except sales; B = on request

⁴⁾ Dimensions with max. cable

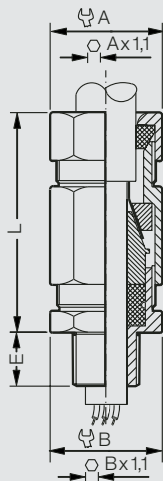


Figure 1

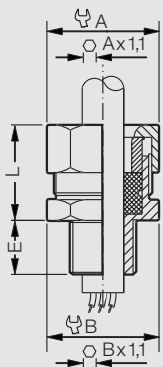


Figure 2

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EX - CONTROL UNITS AND CONTROL STATION

MATERIAL SELECTION	6.2
EX-CONTROL STATIONS - MOULDED PLASTIC	6.4
EX-CONTROL STATIONS - LIGHT ALLOY	6.18
EX-CONTROL STATIONS - STAINLESS STEEL	6.24
EX-CONTROL STATIONS FOR INDIVIDUAL CONTROLS - MOULDED PLASTIC	6.30
EX-CONTROL STATIONS FOR INDIVIDUAL CONTROLS - LIGHT ALLOY	6.34
EX-CONTROL STATIONS FOR INDIVIDUAL CONTROLS - STAINLESS STEEL	6.36
EX-CONTROL STATIONS - MOULDED PLASTIC	6.38
EX-CONTROL STATIONS - LIGHT ALLOY	6.44
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BUILT-IN COMPONENTS FOR INDIVIDUAL CONTROLS	6.53
EX-CONTROL AND SIGNAL UNITS FOR PANEL MOUNTING	6.86
FIXING MATERIALS AND ACCESSORIES - CONTROL UNITS AND CONTROL STATIONS	6.106
EX-CONTROL SWITCHES WITH AND WITHOUT MEASURING INSTRUMENTS	6.116
EX-CONTROL SWITCHES - LIGHT ALLOY	6.122
FIXING MATERIALS AND ACCESSORIES - CONTROL STATIONS AND SELECTION SWITCHES	6.128

DO YOU REALLY HAVE THE TIME TO INSTALL CONVENTIONAL CONTROL STATIONS?

(INSTEAD OF WASTING TIME: JUMP AT IT AS OF PAGE 6.38)



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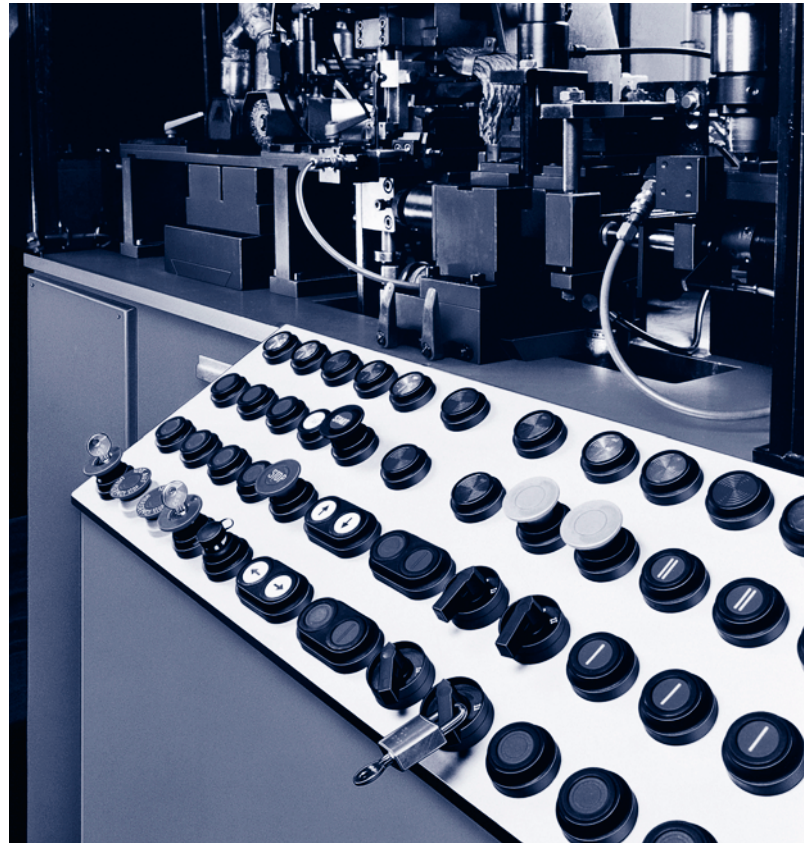
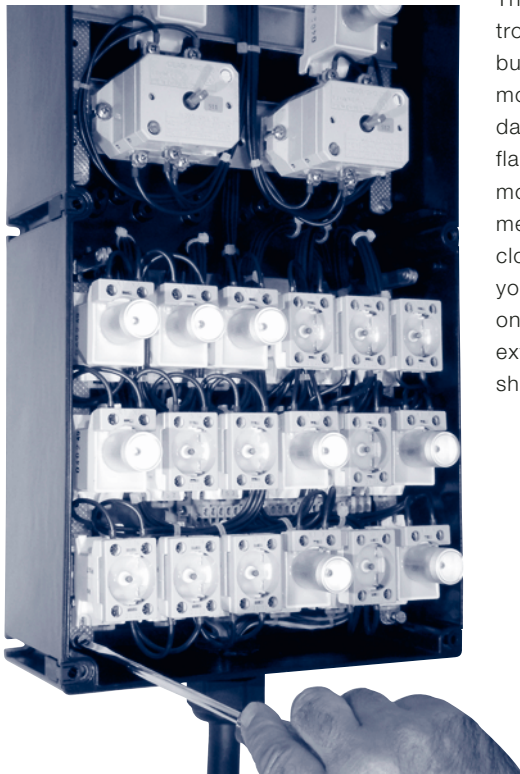
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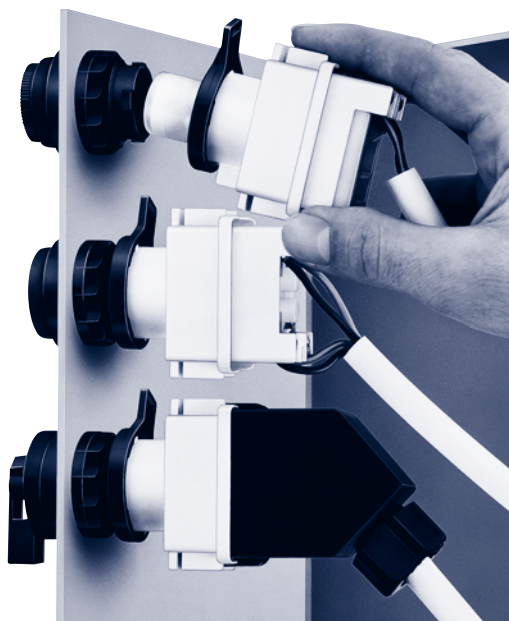
Material selection

At the heart of every electrical system is the control station. Even under the most adverse conditions, CEAG control stations can be used and operated reliably. The enclosures consist of impact-resistant thermoplastic, glass-fibre-reinforced polyester, light alloy or stainless steel. The robust materials, thermoplastic and polyester, fulfil the specification for surface resistance $< 10^9 \Omega$ required by EN 50014. The well-tried enclosure materials have proven their high resistance to chemicals in indoor and outdoor installations – especially in the chemical and off-shore industries. All metal parts are made of stainless steel.



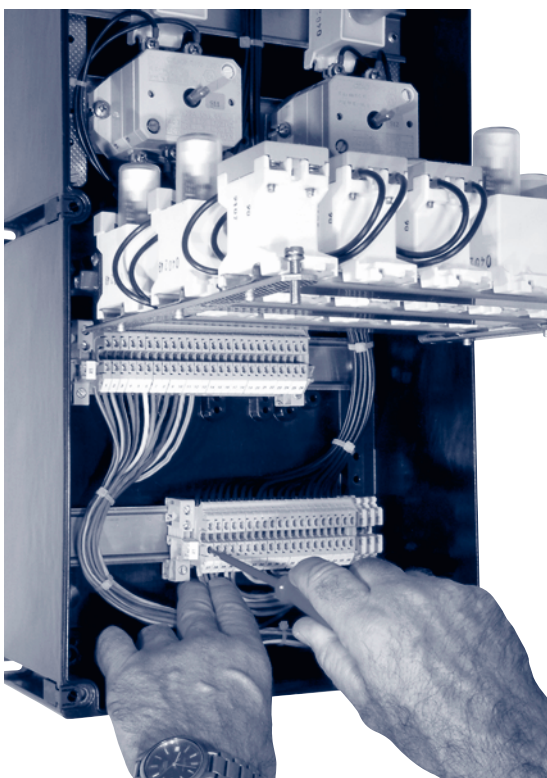
Combination of moulded plastic enclosures

The modular design of the GHG 44x control-station series lets you combine distribution modules with screwless snap-on mounting-logically and at low cost. Standard sizes enable enclosure mounting via flanged joints. The screwless snap-on mounting system also allows the attachment of plastic or brass flanges on the enclosures. This mounting technique also lets you quickly and easily retrofit cable entries on the flanges. System modifications and extensions can thus be implemented in short time and with little effort.



Panel mounting

CEAG control and indicating elements can be integrated in panels with a wall thickness of up to 5 mm. The CEAG components for panel mounting, such as signal lamps, pushbuttons and switches, can be instantly plugged into the control and indicating elements on the panel via a bayonet fitting. The single-wire installation is



clear and simple. All panel-mounted apparatus can be retrofitted for cable connection with a slip-on strain relief and protective cap and is then completely certified. Planning and procurement of panel-mounted apparatus with different cable lengths is a thing of the past.

Installation technology

CEAG control stations have a well thought out design concept. The flameproof built-in components, such as signal lamps, pushbuttons and switches, are snap-on mounted to a rail moulded in the enclosure. They can be snapped out of the enclosure to facilitate cable-entry feeding. Notches in the mounting rails define the position of the built-in components and prevent them from being twisted out of place. Low-cut side walls allow a quick and optimised cable connection. CEAG control stations feature standard M25 moulded-plastic cable entries with an 8 to 17 mm clamping diameter. Alternatively, metal screws and flanges can be used for mounting. The metal flanges enable external earthing. The CEAG control stations are installed using pre-wired connection terminals. The wired built-in components are snap-on mounted on a stainless-steel fold-out mounting frame. To connect the control and indicating elements, the mounting frame is folded out, the cables are quickly and easily fed into enclosure and attached logically to the terminals.

EX - CONTROL STATIONS

**Moulded plastic
Version for Zone 1**

Even under the most adverse conditions, CEAG control stations can be used and operated reliably. The enclosures consist of low-temperature impact-resistant thermo-plastic which fulfils the requirements of EN 50014 and provides a high resistance to chemicals. The well thought out design with low side walls allows optimum cable connection. Quick fixing allows up to three CEAG built-in components, such as signal lamps, pushbuttons and switches, to be snapped on a rail in the enclosure. They can be snapped out of the enclosure to facilitate cable-entry feeding. Notches in the mounting rails prevent the built-in components from being twisted out of place. Wall mounting can be carried out via easily accessible fixing apertures when the enclosure cover is sealed. CEAG mounting plates offer a time-saving fixing technique. CEAG control stations feature standard M25 moulded-plastic cable entries with an 8 to 17 mm clamping diameter. Coupling pieces link enclosures to each other and prevent them from being twisted out of place. Alternatively, metal screws and flanges can be used for mounting – the metal flanges also enable external earthing.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.

- Flat side walls
- Quick fixing of all built-in components
- High chemical resistance
- Different enclosures can be combined





Type 411 83

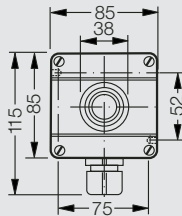
Type 411 82

Type 411 81

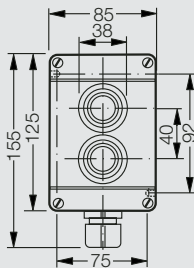
EX - CONTROL STATIONS

| Type 411 81 | Type 411 82 | Type 411 83 |

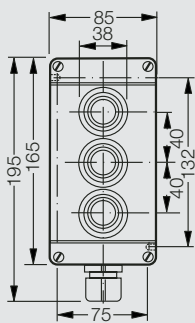
6.5



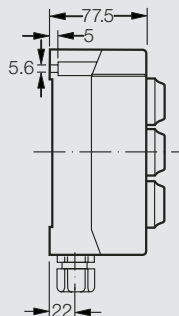
Type 411 81



Type 411 82



Type 411 83



Dimensions in mm

Technical data

Control stations type 411 81 | type 411 82 | type 411 83

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 48 °C*
Type of protection	EEx e II T6 EEx e ib IIC T6 EEx ed IIC T6 EEx ed ib IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3117
Rated voltage	up to 690 V
Rated current	max. 16 A
Version with gold contact points	max. 0.4 A
Degree of protection acc. to EN 60529	IP 66 (list version) IP 65 with measuring instrument AM45, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	see built-in components
Cable entry	1 x M25 (Ø 8 - 17 mm)
Weight	approx. 0.25 kg (empty weight) type 411 81 approx. 0.35 kg (empty weight) type 411 82 approx. 0.45 kg (empty weight) type 411 83

* Not all II D variants available at date of publication.

For ordering details, please see page 6.6 (type 411 81), page 6.7 (type 411 82), page 6.8 (type 411 83)
Cables can be fed into the entry from above or below by turning the enclosure base upside down.

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Type 411 81...01

Type 411 81...12

Type 411 81...18

Type 411 81...04

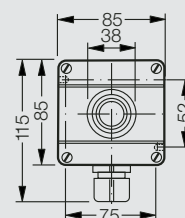
6.6

EX - CONTROL STATIONS

| Type 411 81 |

Ordering details type 411 81 with 1 built-in component

Version	Built-in components	Weight approx.	Order No.
	1 x pushbutton DRT 1 NO + 1 NC label: "0, I, START, STOP"	0.40 kg	GHG 411 8100 R0001
	1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"	0.45 kg	GHG 411 8100 R0002
	1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop" with key unlocking	0.50 kg	GHG 411 8101 R0012
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	0.45 kg	GHG 411 8100 R0009
	1 x key-operated switch 2 NO SW 5 "engaging-engaging-engaging" label: "I 0 II"	0.52 kg	GHG 411 8100 R0018
	1 x control switch SCT 1 change-over SW 6 "engaging-engaging" label: HAND – AUTO	0.45 kg	GHG 411 8100 R0003
	label: "0 – I"	0.45 kg	GHG 411 8100 R0004
	label: "I – II"	0.45 kg	GHG 411 8100 R0005
	1 x control switch SCT 2 NO SW 5 "engaging-engaging-engaging" label: HAND – 0 – AUTO	0.45 kg	GHG 411 8100 R0006
	label: "I 0 II"	0.45 kg	GHG 411 8100 R0007
	label: "Local Remote Auto"	0.45 kg	GHG 411 8100 R0008



Type 411 81

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.



Type 411 82...18

Type 411 82...17

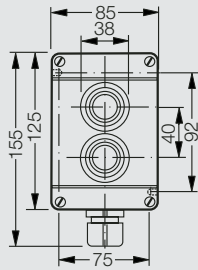
Type 411 82...03

Type 411 82...01

EX - CONTROL STATIONS

| Type 411 82 |

6.7



Type 411 82

Ordering details type 411 82 with 2 built-in components

Version	Built-in components	Weight approx.	Order No.
	2 x pushbutton DRT 1 NO + 1 NC each label: "0, I, START, STOP"	0.54 kg	GHG 411 8200 R0001
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	0.65 kg	GHG 411 8200 R0003
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"	0.57 kg	GHG 411 8200 R0016
	1 x control switch SCT 1 change-over SW 6 "engaging-engaging" label: "0 - I" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"	0.57 kg	GHG 411 8200 R0017
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x key-operated switch 2 NO SW 5 "engaging-engaging-engaging" label: "I 0 II"	0.65 kg	GHG 411 8200 R0018

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.

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Type 411 83...01

Type 411 83...03

Type 411 83...23

Type 411 83...04

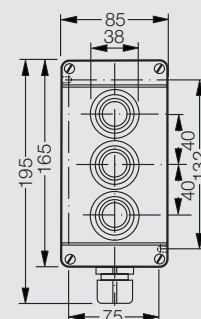
6.8

EX - CONTROL STATIONS

| Type 411 83 |

Ordering details type 411 83 with 3 built-in components

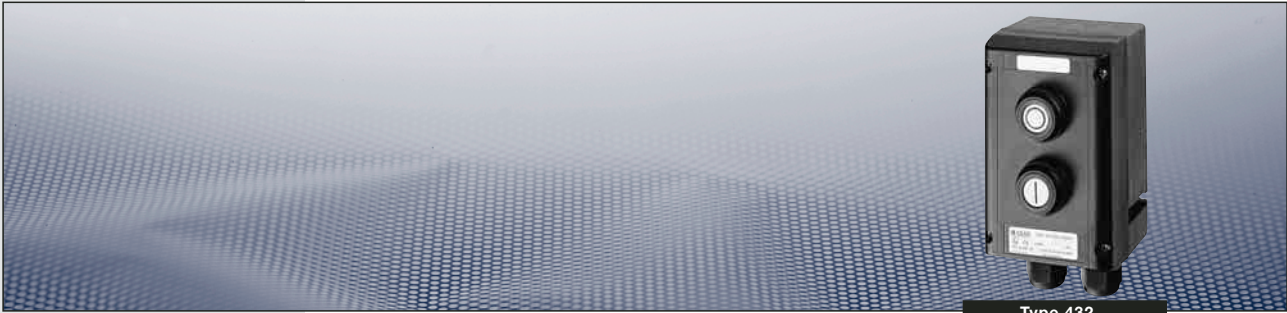
Version	Built-in components	Weight approx.	Order No.
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x pushbutton DRT 1 NO + 1 NC each label: "0, I, START, STOP"</p>	0.76 kg	GHG 411 8300 R0001
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"</p>	0.80 kg	GHG 411 8300 R0003
<p>1—⊗—2</p>	<p>1 x measuring instrument AM72 CT connection n/1A Scale 0 – 100%/150% 1 x control switch SCT 1 NO + 1 NC SW 8 "engaging-engaging-spring" label: "0 – I"</p>	0.92 kg	GHG 411 8300 R0023
<p>X1—⊗—X2</p>	<p>1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x control switch SCT 1 change-over SW 6 "engaging-engaging" label: "HAND - AUTO"</p>	0.80 kg	GHG 411 8300 R0004



Type 411 83

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.

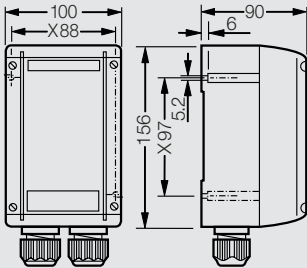


Type 432...

EX - CONTROL STATIONS

| Type 432 |

6.9



Type 432

Technical data

Control stations type 432 with 2 built-in components

Marking to 94/9/EC	Ⓔ II 2 G Ⓔ II 2 D T48 °C
Type of protection	EEx e II T6 EEx e ib IIC T6 EEx ed IIC T6 EEx ed ib IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3117
Rated voltage	up to 690 V with control switch GHG 23 to 500 V
Rated current	max. 16 A with control switch GHG 23 max. 10 A
Rated switching capacity	control switch GHG 23 AC-11: 230 V/10 A 500 V/6 A DC-11: 24 V/ 2 A 230 V/0.4 A
Version with gold contact points	max. 0.4 A
Degree of protection acc. to EN 60529	IP 66 (list version) IP 65 with measuring instrument AM45, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	see built-in components
Cable entry	2 x M25 (Ø 8 - 17 mm) incl. 1 x blanking-plug
Weight	approx. 0.47 kg (empty weight)

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Type 432...01

Type 432...02

Type 432...03

Type 432...05

EX - CONTROL STATIONS

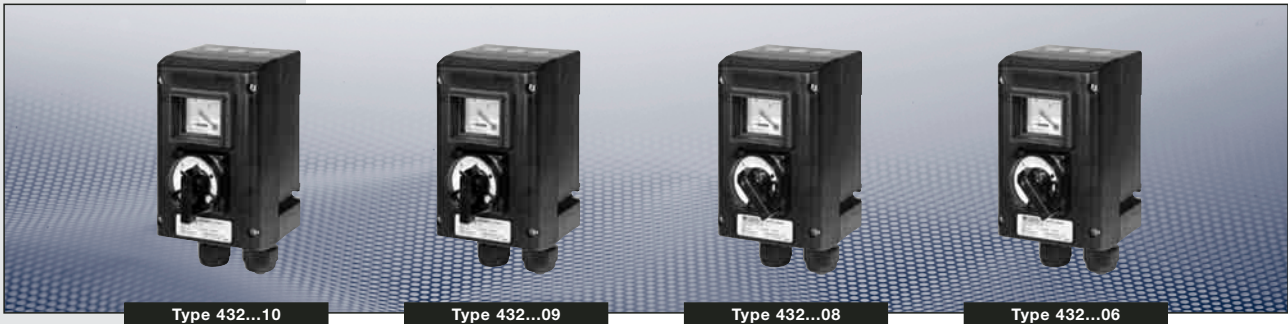
| Type 432 |

Ordering details type 432 with 2 built-in components

Version	Built-in components	Weight approx.	Order No.
	2 x pushbutton DRT 1 NO + 1 NC each label: "0, I, START, STOP"	0.85 kg	GHG 432 0011 R0001
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	0.90 kg	GHG 432 0011 R0002
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"		
	1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"	0.85 kg	GHG 432 0011 R0003
	1 x measuring instrument AM45 CT connection n/1A Scale 0 – 100%/150% 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	0.95 kg	GHG 432 0011 R0005

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.



Type 432...10

Type 432...09

Type 432...08

Type 432...06

EX - CONTROL STATIONS

6.11

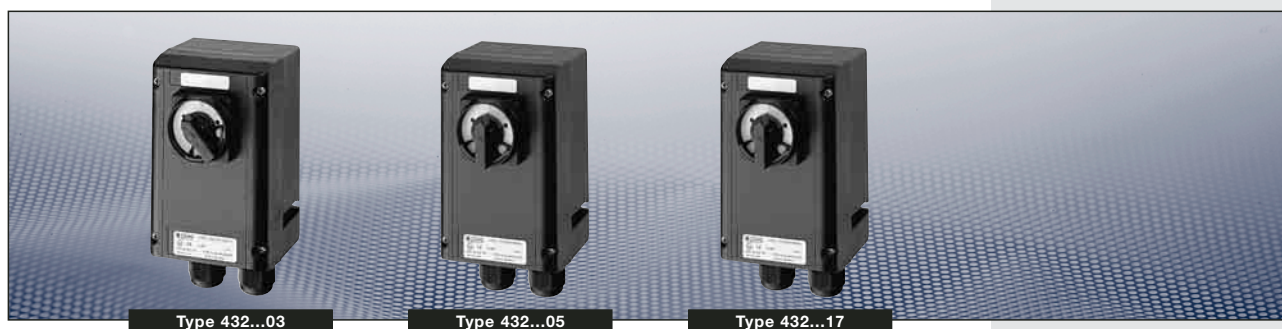
| Type 432 |

Ordering details type 432 with 2 built-in components

Version	Built-in components	Weight approx.	Order No.
	1 x measuring instrument AM45 CT connection n/1A Scale 0 – 100%/150% 1 x control switch GHG 23 1 change-over SW 6 “spring return-engaging” label: “0 – I”	1.35 kg	GHG 432 0011 R0006
	1 x measuring instrument AM45 CT connection n/1A Scale 0 – 100%/150% 1 x control switch GHG 23 2 NO SW 5 “engaging-engaging-engaging” label: “I 0 II”	1.35 kg	GHG 432 0011 R0008
	1 x measuring instrument AM45 CT connection n/1A Scale 0 – 100%/150% 1 x control switch GHG 23 1 NO + 1 NC SW 8 “engaging-engaging-spring” label: “0 – I”	1.35 kg	GHG 432 0011 R0009
	1 x measuring instrument AM45 CT connection n/1A Scale 0 – 100%/150% 1 x control switch GHG 23 2 NO + 1 NC SW 5 “engaging-engaging-engaging” label: “I II III”	1.35 kg	GHG 432 0011 R0010

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.



Type 432...03

Type 432...05

Type 432...17

6.12

EX - CONTROL STATIONS

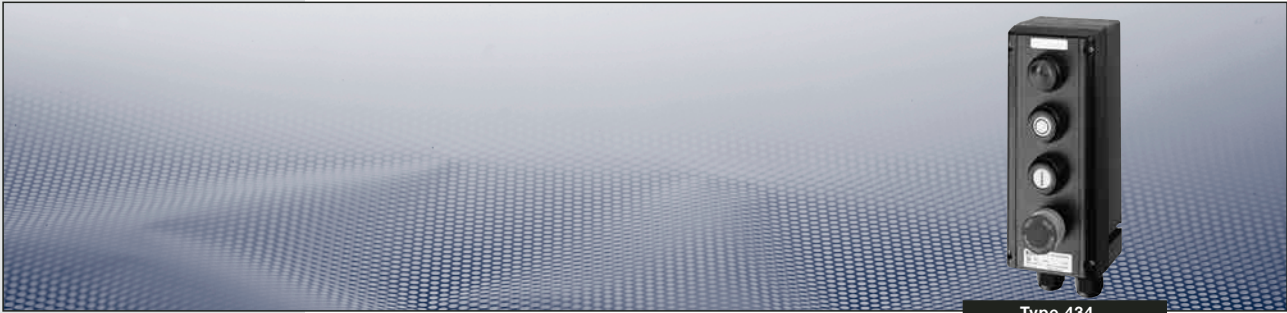
| Type 432 |

Ordering details type 432 with 1 control switch GHG 23

Version	Built-in components	Weight approx.	Order No.
	1 x control switch GHG 23		
	1 change-over		
	SW 6 "engaging-engaging"		
	label: "HAND - AUTO"	0.70 kg	GHG 432 0001 R0003
	1 x control switch GHG 23		
	2 NO		
	SW 5 "engaging-engaging-engaging"		
	label: "HAND 0 AUTO"	0.70 kg	GHG 432 0001 R0005
	1 x control switch GHG 23		
	1 NO + 1 NC		
	SW 8 "engaging-engaging-spring return"		
	label: "0 - I"	0.70 kg	GHG 432 0001 R0012
	1 x control switch GHG 23		
	2 change-over		
	SW 6 "engaging-engaging"		
	label: "I - II"	0.70 kg	GHG 432 0001 R0015
	1 x control switch GHG 23		
	2 NO + 1 NC		
	SW 5 "engaging-engaging-engaging"		
	label: "I II III"	0.86 kg	GHG 432 0001 R0017
	1 x control switch GHG 23		
	2 NO + 1 NC		
	SW 8 "engaging-engaging-spring return"		
	label: "0 - I"	0.86 kg	GHG 432 0001 R0018
	1 x control switch GHG 23		
	2 NO + 1 NC		
	SW 8 "engaging-engaging-spring return"		
	label: "AUS-Betrieb-EIN"	0.86 kg	GHG 432 0001 R0019
	1 x control switch GHG 23		
	2 NO + 1 NC		
	SW 8 "engaging-engaging-spring return"		
	label: "0 IN START"	0.86 kg	GHG 432 0001 R0020

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.

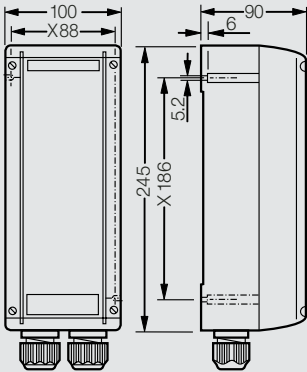


Type 434...

EX - CONTROL STATIONS

6.13

| Type 434 |



Type 434

Technical data

Control stations type 434 with 4 built-in components

Marking to 94/9/EC	Ⓔ II 2 G Ⓔ II 2 D T48 °C
Type of protection	EEx e II T6 / EEx e ib IIC T6 EEx ed IIC T6 / EEx ed ib IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3117
Rated voltage	up to 690 V with control switch GHG 23 to 500 V
Rated current	max. 16 A with control switch GHG 23 max. 10 A
Rated switching capacity	control switch GHG 23 AC-11: 230 V/10 A 500 V/6 A DC-11: 24 V/ 2 A 230 V/0.4 A
Version with gold contact points	max. 0.4 A
Degree of protection acc. to EN 60529	IP 66 (list version) IP 65 with measuring instrument AM45, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	see built-in components
Cable entry	2 x M25 (Ø 8 - 17 mm) incl. 1 x blanking-plug
Weight	approx. 0.70 kg empty weight



Type 434...02


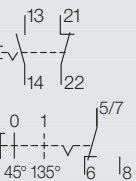

Type 434...10

Type 434...11

EX - CONTROL STATIONS

| Type 434 |

Ordering details type 434 with 4 built-in components

Version	Built-in components	Weight approx.	Order No.
1 	1 x measuring AM72 CT connection n/1A Scale 0 –100%/150% 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"	1.40 kg	GHG 434 0111 R0002
	1 x measuring AM72 CT connection n/1A Scale 0 –100%/150% 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop" 1 x control switch GHG 23 1 change-over SW 6 "engaging-engaging" label: "0 – I"	1.55 kg	GHG 434 0111 R0010
1 	1 x measuring AM72 CT connection n/1A Scale 0 –100%/150% 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop" 1 x control switch GHG 23 1 NO + 1 NC SW 8 "engaging-engaging-spring return" label: "0 – I"	1.55 kg	GHG 434 0111 R0011

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.



Type 434...09

Type 434...05

Type 434...04

EX - CONTROL STATIONS

6.15

| Type 434 |

Ordering details type 434 with 4 built-in components

Version	Built-in components	Weight approx.	Order No.
<div>X1—⊗—X2</div> <div><div><div>13</div><div>14</div></div><div><div>21</div><div>22</div></div></div> <div>E—</div> <div><div>13</div><div>14</div></div> <div><div>21</div><div>22</div></div>	<div>1 x signal lamp SIL</div> <div>20-250 V AC/DC</div> <div>coloured lens cover: "white, red, green, yellow"</div> <div>2 x pushbutton DRT</div> <div>1 NO + 1 NC</div> <div>label: "0, I, START, STOP"</div> <div>1 x mushroom-head pushbutton SGT</div> <div>1 NO + 1 NC</div> <div>"Emergency stop"</div>	1.45 kg	GHG 434 1111 R0004
<div>X1—⊗—X2</div> <div><div><div>13</div><div>14</div></div><div><div>21</div><div>22</div></div></div> <div>I E—</div> <div><div>13</div><div>14</div></div> <div><div>21</div><div>22</div></div>	<div>2 x signal lamp SIL</div> <div>20-250 V AC/DC</div> <div>coloured lens cover: "white, red, green, yellow"</div> <div>2 x double pushbutton DDT</div> <div>1 NO + 1 NC</div> <div>label: "0, I, START, STOP"</div>	1.45 kg	GHG 434 1111 R0005
<div>X1—⊗—X2</div> <div><div><div>13</div><div>14</div></div><div><div>21</div><div>22</div></div></div> <div>I E—</div> <div><div>13</div><div>14</div></div> <div><div>21</div><div>22</div></div>	<div>1 x signal lamp SIL</div> <div>20-250 V AC/DC</div> <div>coloured lens cover: "white, red, green, yellow"</div> <div>1 x double pushbutton DDT</div> <div>1 NO + 1 NC</div> <div>label: "0, I, START, STOP"</div> <div>1 x mushroom-head pushbutton SGT</div> <div>1 NO + 1 NC</div> <div>"Emergency stop"</div>		
<div><div><div>13</div><div>14</div></div><div><div>23</div><div>24</div></div></div> <div>I 0 II</div> <div><div>13</div><div>14</div></div> <div><div>23</div><div>24</div></div>	<div>1 x key-operated switch</div> <div>2 NO</div> <div>SW 5 "engaging-engaging-engaging"</div> <div>label: "I 0 II"</div>	1.55 kg	GHG 434 1111 R0009

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Customised versions on request – please see pages 6.30 to 6.86.
For fixing materials and accessories, please see page 6.106 pp.

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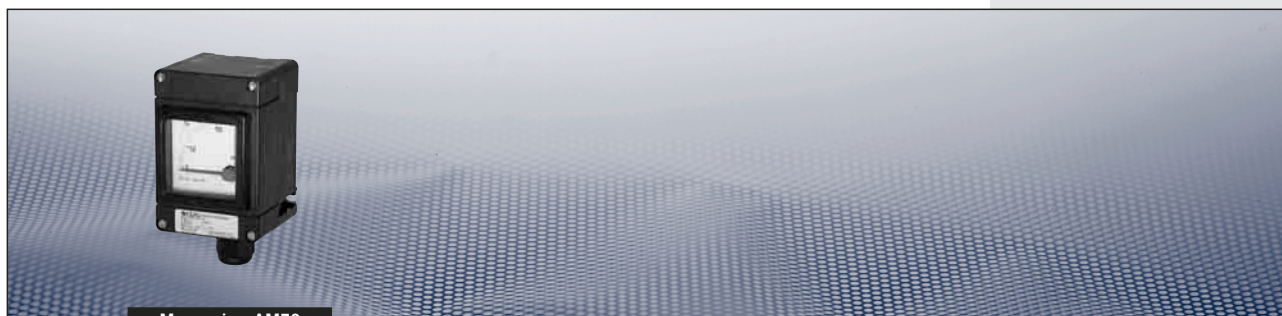
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Measuring AM72

6.16

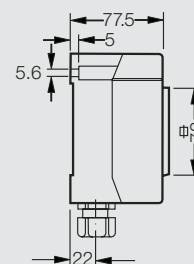
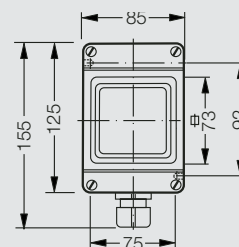
EX - CONTROL STATIONS

| Measuring instrument AM 72 |

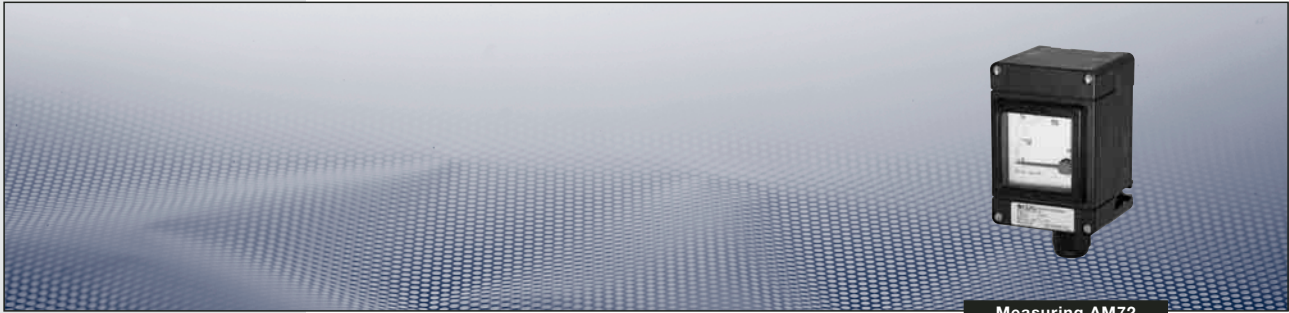
Technical data

Measuring instrument AM 72, type 411 82

Marking to 94/9/EC	$\langle \text{Ex} \rangle$ II 2 G $\langle \text{Ex} \rangle$ II 2 D T 48°C	
Type of protection	EEx e II T6 / EEx e ib IIC T6	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
Degree of protection acc. to EN 60529	IP 66	
Movement	Moving iron EEx e	Moving coil EEx ib IIC
Accuracy	Class 2.5	Class 1.5
Overload range	10-fold - 25 sec.	10-fold - 5 sec.
	25-fold - 4 sec.	
	50-fold - 1 sec.	
	indicated 1:1.5	
Measuring ranges	n / 1A	0 - 20 mA
	0 - 25 A direct	4 - 20 mA
Li:	-	max. 0.1 mH
Ci:	-	max. 0.1 nF
Ui:	-	max. 30 V
Ii:	-	max. 150 mA
Connection terminals	2 x 1.5 - 4 mm ²	
Cable entry	1 x M25 (Ø 8 - 17 mm)	
Weight	approx. 0.70 kg	



Measuring instrument AM 72



Measuring AM72

EX - CONTROL STATIONS

6.17

Measuring instrument AM 72

Ordering details measuring instrument AM 72, type 411 82

Version direct measurement with 1 x cable entry M25

Version	Weight	Order No.
0 - 1 / 1.5 A	0.70 kg	GHG 411 8281 R0002
0 - 2.5 / 3.75 A	0.70 kg	GHG 411 8281 R0003
0 - 5 / 7.5 A	0.70 kg	GHG 411 8281 R0004
0 - 10 / 15 A	0.70 kg	GHG 411 8281 R0005
0 - 16 / 24 A	0.70 kg	GHG 411 8281 R0007
0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	0.80 kg	GHG 411 8285 R0033
4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	0.80 kg	GHG 411 8286 R0035

Version CT connection n/1A mit 1 x cable entry M25

Measuring range	Weight	Order no.
0 - 1 / 1.5 A	0.70 kg	GHG 411 8282 R0002
0 - 2.5 / 3.75 A	0.70 kg	GHG 411 8282 R0003
0 - 5 / 7.5 A	0.70 kg	GHG 411 8282 R0004
0 - 10 / 15 A	0.70 kg	GHG 411 8282 R0005
0 - 15 / 22,5 A	0.70 kg	GHG 411 8282 R0007
0 - 20 / 30 A	0.70 kg	GHG 411 8282 R0008
0 - 30 / 45 A	0.70 kg	GHG 411 8282 R0009
0 - 40 / 60 A	0.70 kg	GHG 411 8282 R0010
0 - 50 / 75 A	0.70 kg	GHG 411 8282 R0011
0 - 60 / 90 A	0.70 kg	GHG 411 8282 R0012
0 - 75 / 112.5 A	0.70 kg	GHG 411 8282 R0013
0 - 100 / 150 A	0.70 kg	GHG 411 8282 R0014
0 - 100% / 150%	0.70 kg	GHG 411 8282 R0001

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.

EX - CONTROL STATIONS

Light alloy Version for Zone 1

Light-alloy explosion-protected control stations are designed to be equipped with up to four components. These control stations are made of high-quality cast aluminium-silicon (AlSi). A robust plastic powder coating according to RAL 7031 protects the CEAG control stations against aggressive atmospheres and chemicals. Cover screws as well as all internal and external metal parts are made of stainless steel. CEAG flameproof built-in components, such as signal lamps, pushbuttons and switches, provide snap-on mounting on rails screwed into the enclosures. To facilitate insertion of cables into the entries, the built-in components can be snapped out of the enclosures. Notches in the mounting rails define the position of the built-in components and prevent them from being twisted out of place.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.

High mechanical, chemical and thermal resistance
Individual configuration
Impact-resistant plastic powder coating





Type 413 85

Type 413 84

EX - CONTROL STATIONS

| Type 413 84 | Type 413 85 |

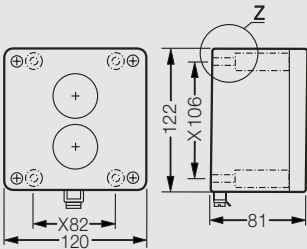
6.19

Technical data

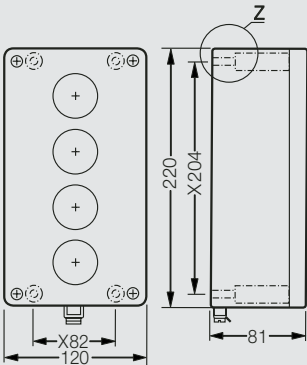
Control stations type 413 84 | type 413 85 for up to 4 built-in components

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*
Type of protection	EEx e II T6 / EEx e ib IIC T6 EEx ed IIC T6 / EEx ed ib IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3117
Rated voltage	up to 690 V with control switch GHG 23 to 500 V
Rated current	max. 16 A with control switch GHG 23 max. 10 A
Rated switching capacity	control switch GHG 23
	AC-11: 230 V/10 A 500 V/6 A
	DC-11: 24 V/ 2 A 230 V/0.4 A
Version with gold contact points	max. 0.4 A
Degree of protection acc. to EN 60529	IP 66 (list version)
	IP 65 with measuring instrument AM45, double pushbutton
PE-Connection terminals	2 x 4 mm²
Connection terminals	see built-in components
Cable entry	1 x M20 threaded entry
Weight	approx. 0.85 kg empty weight type 413 84
	approx. 1.45 kg empty weight type 413 85

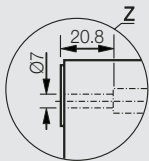
*applied for



Type 413 84

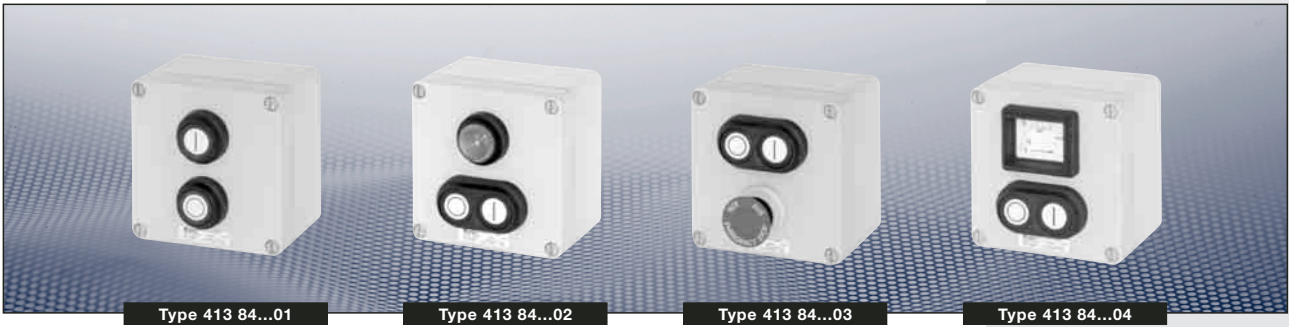


Type 413 85



Dimensions in mm





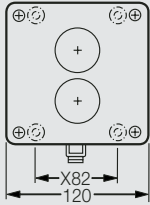
6.20

EX - CONTROL STATIONS

| Type 413 84 |

Ordering details type 413 84 with 2 built-in components

Version	Built-in components	Weight approx.	Order No.
	2 x pushbutton DRT 1 NO + 1 NC each label: "0, I, START, STOP"	1.25 kg	GHG 413 8400 R0001
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow"		
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	1.30 kg	GHG 413 8400 R0002
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"		
	1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"	1.30 kg	GHG 413 8400 R0003
	1 x measuring instrument AM45 CT connection n/1A Scale 0 -100%/150%		
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	1.35 kg	GHG 413 8400 R0004



Type 413 84

Customised versions on request – please see pages 6.30 to 6.86.
For fixing materials and accessories, please see page 6.106 pp.

x = fixing dimensions
Dimensions in mm



Type 413 85...03

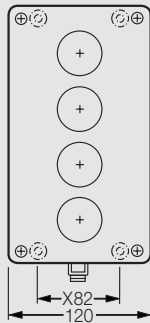
Type 413 85...02

Type 413 85...01

EX - CONTROL STATIONS

6.21

| Type 413 85 |



Type 413 85

Ordering details type 413 85 with 4 built-in components

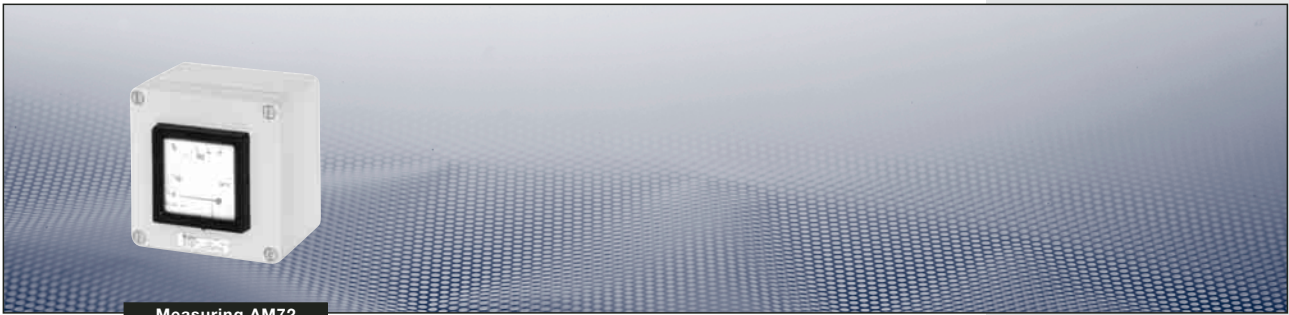
Version	Built-in components	Weight approx.	Order No.
$X1 \text{---} \otimes \text{---} X2$ 	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x pushbutton DRT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"	2.10 kg	GHG 413 8500 R0001
$X1 \text{---} \otimes \text{---} X2$ 	2 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	2.10 kg	GHG 413 8500 R0002
$X1 \text{---} \otimes \text{---} X2$ 	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" label: "I 0 II" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop" 1 x key-operated switch 2 NO SW 5 "engaging-engaging-engaging" label: "I 0 II"	2.20 kg	GHG 413 8500 R0003

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.

x = fixing dimensions

Dimensions in mm



Measuring AM72

EX - CONTROL STATIONS

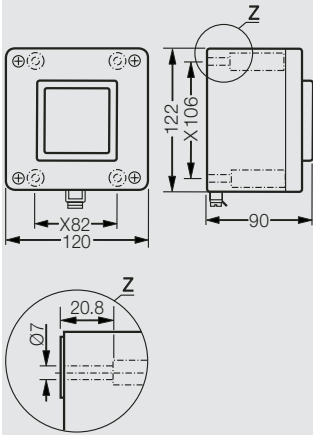
Measuring instrument AM 72

Technical data

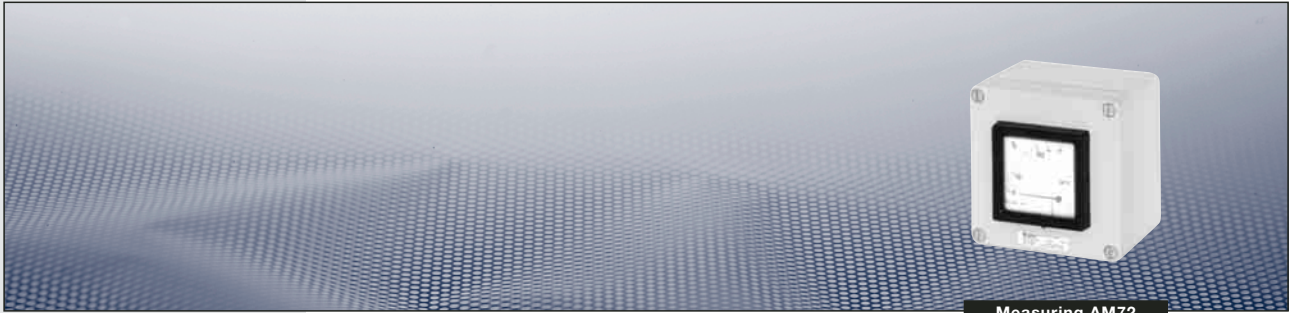
Measuring instrument AM 72 type 413 84

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*	
Type of protection	EEx e II T6 / EEx e ib IIC T6	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
Degree of protection acc. to EN 60529	IP 66	
Movement	Moving iron EEx e	Moving coil EEx ib IIC
Accuracy	Class 2.5	Class 1.5
Overload range	10-fold - 25 sec.	10-fold - 5 sec.
	25-fold - 4 sec.	
	50-fold - 1 sec.	
	indicated 1:1.5	
Measuring range	n / 1A	0 - 20 mA
	0 - 25 A direct	4 - 20 mA
Li	–	max. 0.1 mH
Ci	–	max. 0.1 nF
Ui	–	max. 30 V
Ii:	–	max. 150 mA
Terminal	2 x 1.5 - 4 mm ²	
Cable entry	1 x M20 threaded entry	
Weight	approx. 1.25 kg	

*applied for



Type 413 84



Measuring AM72

EX - CONTROL STATIONS

6.23

| Measuring instrument AM72 |

Ordering details type 413 84 with measuring AM72

Version direct measurement with 1 x threaded entry M20

Measuring range	Weight approx.	Order No.
0 - 1 / 1.5 A	1.25 kg	GHG 413 8481 R0002
0 - 2.5 / 3.75 A	1.25 kg	GHG 413 8481 R0003
0 - 5 / 7.5 A	1.25 kg	GHG 413 8481 R0004
0 - 10 / 15 A	1.25 kg	GHG 413 8481 R0005
0 - 16 / 24 A	1.25 kg	GHG 413 8481 R0007
0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	1.35 kg	GHG 413 8481 R0033
4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	1.35 kg	GHG 413 8481 R0035

Version CT connection n/1A with 1 x threaded entry M20

Measuring range	Weight approx.	Order No.
0 - 1 / 1.5 A	1.25 kg	GHG 413 8482 R0002
0 - 2.5 / 3.75 A	1.25 kg	GHG 413 8482 R0003
0 - 5 / 7.5 A	1.25 kg	GHG 413 8482 R0004
0 - 10 / 15 A	1.25 kg	GHG 413 8482 R0005
0 - 15 / 22.5 A	1.25 kg	GHG 413 8482 R0007
0 - 20 / 30 A	1.25 kg	GHG 413 8482 R0008
0 - 30 / 45 A	1.25 kg	GHG 413 8482 R0009
0 - 40 / 60 A	1.25 kg	GHG 413 8482 R0010
0 - 50 / 75 A	1.25 kg	GHG 413 8482 R0011
0 - 60 / 90 A	1.25 kg	GHG 413 8482 R0012
0 - 75 / 112.5 A	1.25 kg	GHG 413 8482 R0013
0 - 100 / 150 A	1.25 kg	GHG 413 8482 R0014
0 - 100% / 150%	1.25 kg	GHG 413 8482 R0033

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.

EX - CONTROL STATION

Stainless steel
Version for Zone 1

CEAG explosion-protected control stations made of high-grade 316L stainless steel are designed to accommodate up to four built-in components. These stainless-steel control stations with electro-polished surfaces offer protection for applications in the off-shore industry and at sites with especially severe mechanical, chemical and climatic conditions.

CEAG flameproof built-in components, such as signal lamps, pushbuttons and switches, provide snap-on mounting on rails screwed into the enclosures. To facilitate insertion of cables into the entries, the built-in components can be snapped out of the enclosures. Notches in the mounting rails define the position of the built-in components and prevent them from being twisted out of place.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.

High mechanical, chemical and thermal resistance

Individual configuration

Clean-room applications





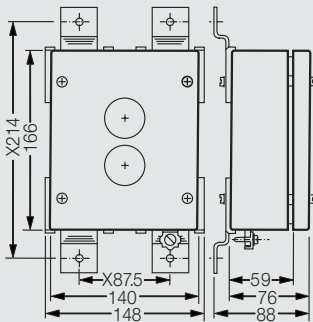
Housing GHG 414 82

Housing GHG 414 81

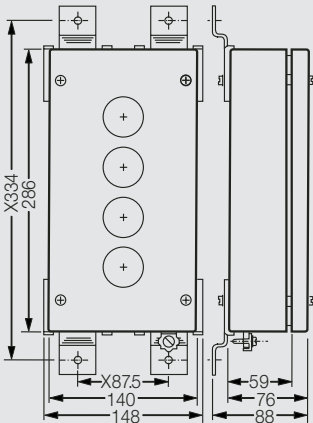
EX - CONTROL STATIONS

| Type 414 81 | Type 414 82 |

6.25



Type 414 81



Type 414 82

Technical data

Control stations type 414 81 | type 414 82 for up to 4 built-in components

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*
Type of protection	EEx e II T6 / EEx e ib IIC T6 EEx ed IIC T6 / EEx ed ib IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3117
Rated voltage	up to 690 V with control switch GHG 23 to 500 V
Rated current	max. 16 A with control switch GHG 23 max. 10 A
Rated switching capacity	control switch GHG 23
	AC 11: 230 V/10 A 500 V/6 A
	DC 11: 24 V/ 2 A 230 V/0.4 A
Version with gold contact points	max. 0.4 A
Degree of protection acc. to EN 60529	IP 66 (list version)
	IP 65 with measuring instrument AM45, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	see built-in components
Cable entry	1 x threaded entry Ø 21 mm
Weight	approx. 1.40 kg empty weight type 414 81
	approx. 2.10 kg empty weight type 414 82

*applied for

x = fixing dimensions

Dimensions in mm

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Type 414 81...01

Type 414 81...02

Type 414 81...03

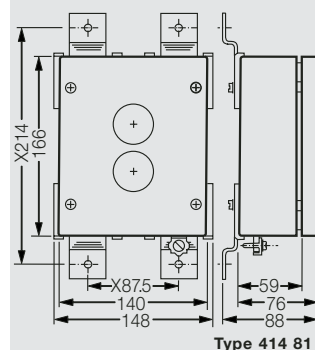
Type 414 81...04

EX - CONTROL STATIONS

| Type 414 81 |

Ordering details type 414 81 with 2 built-in components

Version	Built-in components	Weight approx.	Order No.
	2 x pushbutton DRT 1 NO + 1 NC each label: "0, I, START, STOP"	1.80 kg	GHG 414 8100 R0001
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	1.85 kg	GHG 414 8100 R0002
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"	1.85 kg	GHG 414 8100 R0003
	1 x measuring instrument AM45 CT connection n/1A Scale 0 -100%/150% 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	1.85 kg	GHG 414 8100 R0004



Type 414 81

Customised versions on request – please see pages 6.30 to 6.86.

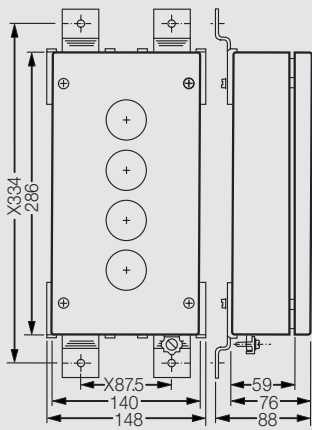
For fixing materials and accessories, please see page 6.106 pp.



EX - C O N T R O L S T A T I O N S

6.27

■ Type 414 82 ■



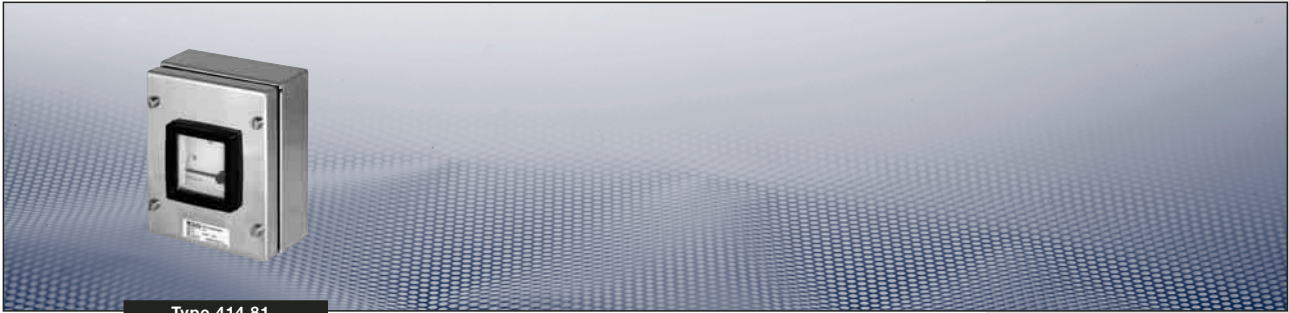
Type 414 82

Ordering details type 414 82 with 4 built-in components

Version	Built-in components	Weight approx.	Order No.
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x pushbutton DRT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"	2.80 kg	GHG 414 8200 R0001
	2 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 2 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	2.80 kg	GHG 414 8200 R0002
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: "white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "Emergency stop"		
	1 x key-operated switch 2 NO SW 5 "engaging-engaging-engaging" label: "I 0 II"	2.90 kg	GHG 414 8200 R0003

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.



Type 414 81..

EX - CONTROL STATIONS

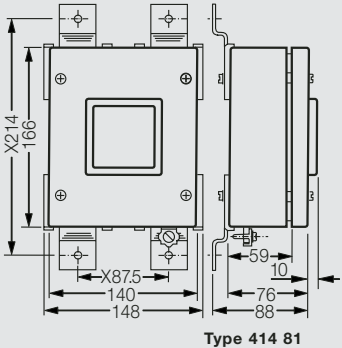
| Type 414 81 |

Technical data

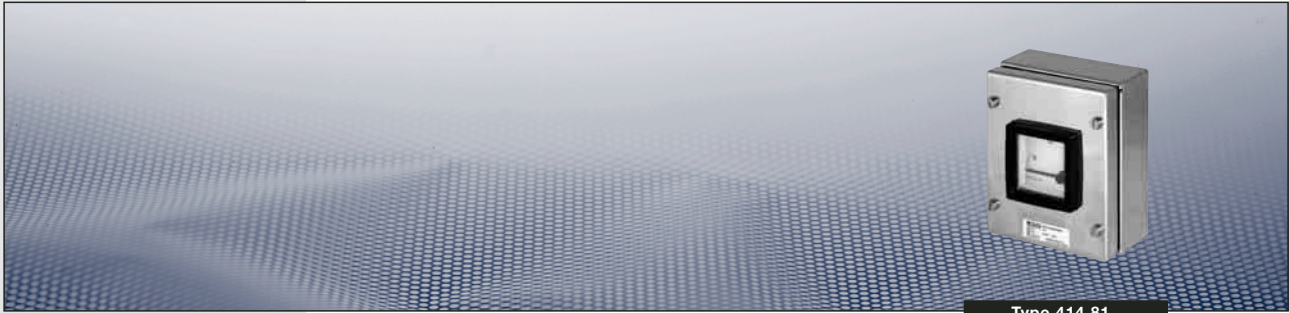
Measuring AM72 type 414 81

Marking to 94/9/EC	<div> <div>II 2 G</div> <div>II 2 D*</div> </div>	
Type of protection	EEx e II T6 / EEx e ib IIC T6	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
Degree of protection acc. to EN 60529	IP 66	
Movement	Moving iron EEx e	Moving coil EEx ib IIC
Accuracy	Class 2.5	Class 1.5
Overload range	10-fold - 25 sec.	10-fold - 5 sec.
	25-fold - 4 sec.	
	50-fold - 1 sec.	
	indicated 1:1.5	
Measuring range	n / 1A	0 - 20 mA
	0 - 25 A direct	4 - 20 mA
Li	–	max. 0.1 mH
Ci	–	max. 0.1 nF
Ui	–	max. 30 V
Ii	–	max. 150 mA
Terminal	2 x 1.5 - 4 mm ²	
Cable entry	1 x threaded entry Ø 21 mm	
Weight	approx. 1.25 kg	

*applied for



Type 414 81



Type 414 81..

EX - CONTROL STATIONS

6.29

| Type 414 81 |

Ordering details type 414 81 with measuring AM72

Version direct measurement with 1 x threaded entry Ø 21 mm

Measuring range	Weight	Order No.
0 - 1 / 1.5 A	1.25 kg	GHG 414 8181 R0002
0 - 2.5 / 3.75 A	1.25 kg	GHG 414 8181 R0003
0 - 5 / 7.5 A	1.25 kg	GHG 414 8181 R0004
0 - 10 / 15 A	1.25 kg	GHG 414 8181 R0005
0 - 16 / 24 A	1.25 kg	GHG 414 8181 R0007
0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	1.35 kg	GHG 414 8181 R0033
4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	1.35 kg	GHG 414 8181 R0035

Version CT connection n/1A with 1 x threaded entry Ø 21 mm

Measuring range	Weight	Order no.
0 - 1 / 1.5 A	1.25 kg	GHG 414 8182 R0002
0 - 2.5 / 3.75 A	1.25 kg	GHG 414 8182 R0003
0 - 5 / 7.5 A	1.25 kg	GHG 414 8182 R0004
0 - 10 / 15 A	1.25 kg	GHG 414 8182 R0005
0 - 15 / 22.5 A	1.25 kg	GHG 414 8182 R0007
0 - 20 / 30 A	1.25 kg	GHG 414 8182 R0008
0 - 30 / 45 A	1.25 kg	GHG 414 8182 R0009
0 - 40 / 60 A	1.25 kg	GHG 414 8182 R0010
0 - 50 / 75 A	1.25 kg	GHG 414 8182 R0011
0 - 60 / 90 A	1.25 kg	GHG 414 8182 R0012
0 - 75 / 112.5 A	1.25 kg	GHG 414 8182 R0013
0 - 100 / 150 A	1.25 kg	GHG 414 8182 R0014
0 - 100% / 150%	1.25 kg	GHG 414 8182 R0033

Customised versions on request – please see pages 6.30 to 6.86.

For fixing materials and accessories, please see page 6.106 pp.

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EX - CONTROL STATIONS

For individual design
Moulded-plastic version for Zone 1

CEAG control stations can be combined according to customers' specifications. Quick fixing allows up to three CEAG built-in components, such as signal lamps, pushbuttons and switches, to be snapped on a rail in the enclosure. The enclosures consist of low-temperature impact-resistant thermoplastic which fulfils the requirements of EN 50014 and provides a high resistance to chemicals. The well thought out design with low side walls allows optimum cable connection. The components can be snapped out of the enclosure to facilitate cable-entry feeding. Notches in the mounting rails prevent the built-in components from being twisted out of place.

CEAG's optional mounting plates offer a time-saving fixing technique. Coupling pieces link enclosures to each other and prevent them from being twisted out of place. Alternatively, metal screws and flanges can be used for mounting – the metal flanges also enable external earthing. The built-in components differ in size. The diverse enclosure types allow variable combinations of these components. Example diagrams of the enclosure types show the placement options for the built-in components with numbers or predefined positions.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.

For ordering examples, please see page 6.80 pp.



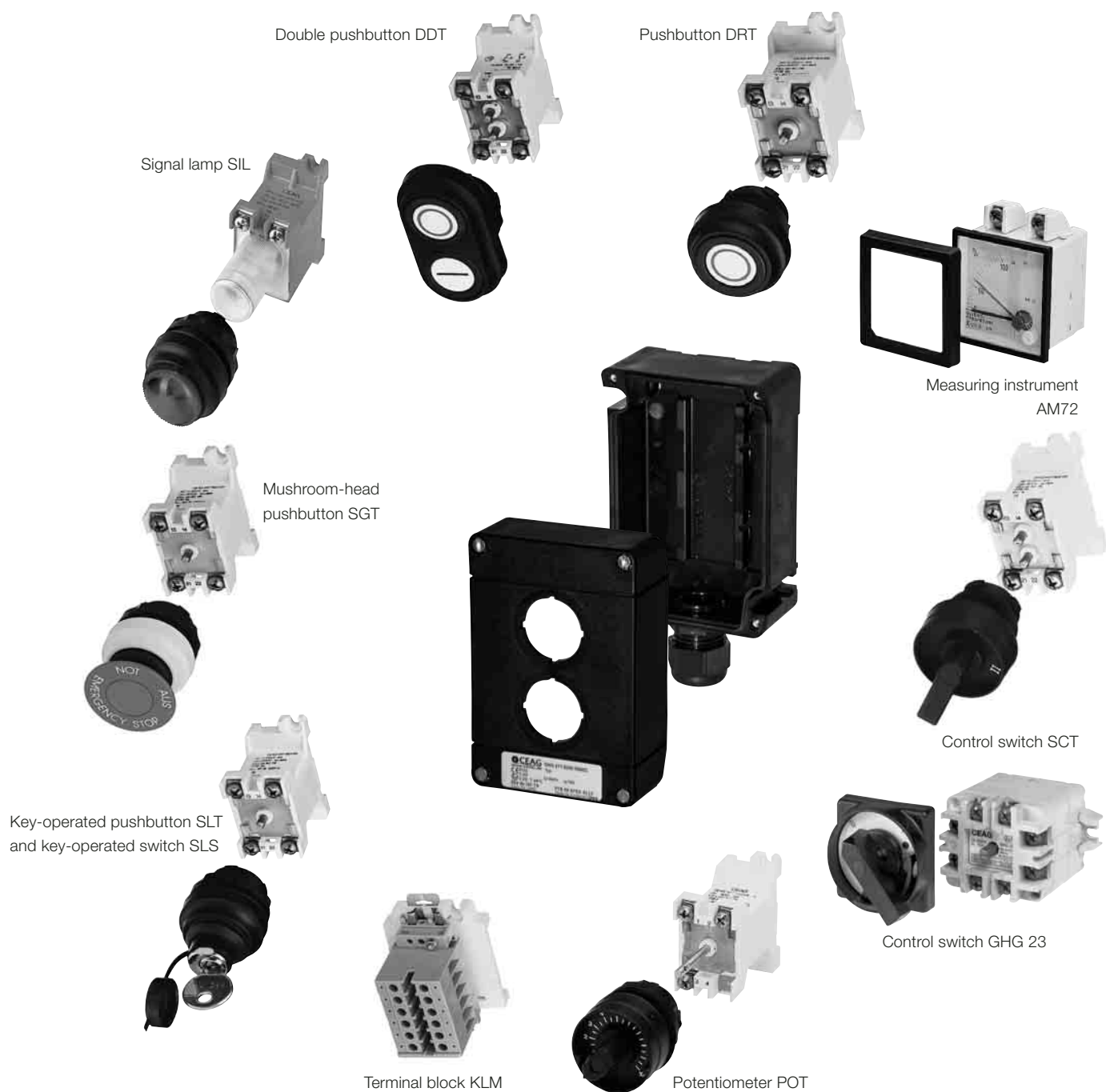
- Flat side walls**
- Quick fixing of all built-in components**
- High chemical resistance**
- Different enclosures can be combined**

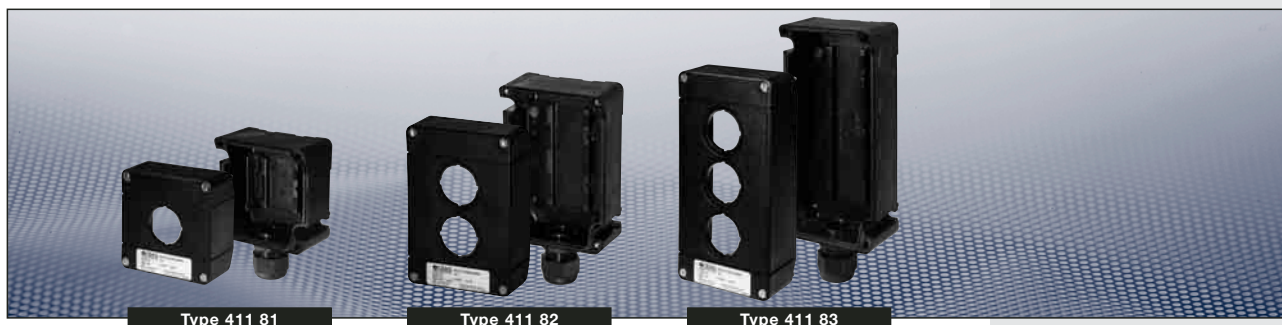
Customised control stations, covered by type examination certificates, can be individually combined from CEAG's numerous built-in components.

A coding system for these components with unique designations can be used for planning, selection and

ordering. The sum of the code numbers designates a complete control station.

For the selection of control units and components, please see page 6.32 pp.





Type 411 81

Type 411 82

Type 411 83

EX - CONTROL STATIONS

| Type 411 83 | Type 411 82 | Type 411 81 |

Technical data

Type 411 81, type 411 82, type 411 83, up to 3 built-in components

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T48 °C
Type of protection	EEx d e ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3117
Rated voltage	up to 690 V
Rated current	max. 16 A
Degree of protection acc. to EN 60529	IP 66 (list version)
	IP 65 with measuring instrument AM45, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	see technical data for built-in components
Cable entry	1 x M25 (Ø 8 - 17 mm)
Empty weight	411 81 ap. 0.25 kg 411 82 ap. 0.35 kg 411 83 ap. 0.45 kg
Mounting arrangement	411 81: 1 mounting area 411 82: 2 mounting areas 411 83: 3 mounting areas

Ordering code:

	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	411 81	(DRT ...)	(ZUB ...)	(KLE ...)
Code	411 82	(DRT ...)	(ZUB ...)	(KLE ...)
Code	411 83	(DRT ...)	(ZUB ...)	(KLE ...)

Built-in components

Component	Code	Component	Code
Pushbutton	DRT	Signal lamp	SIL
Double pushbutton	DDT	Measuring instrument	AM72 ¹⁾
Key-operated pushbutton	SLT	Measuring instrument	AM45
Key switch	SLS	Potentiometer	POT
Control switch	SCT	Terminal block (4 mm ²)	KLM ... B
Mushroom-head pushbutton	SGT	Blanking element	BLV

¹⁾ 2 mounting areas are needed for measuring instrument AM 72.

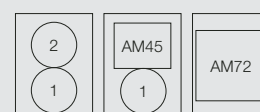
Optional wiring of control units on standard terminals according to customers' specifications.

For components, accessories and cable entries, please see page 6.52.

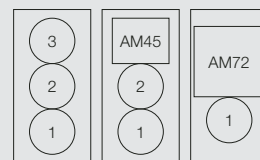
For fixing materials and accessories, please see page 6.106 pp.



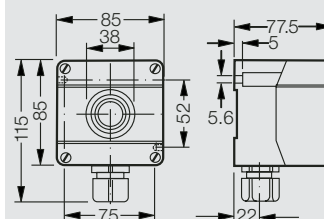
Type 411 81



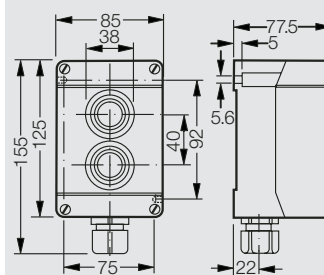
Type 411 82



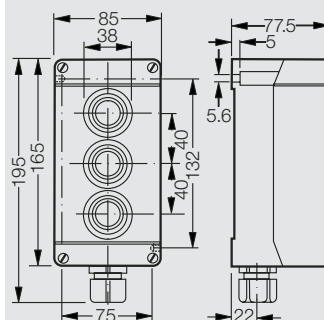
Type 411 83



Type 411 81

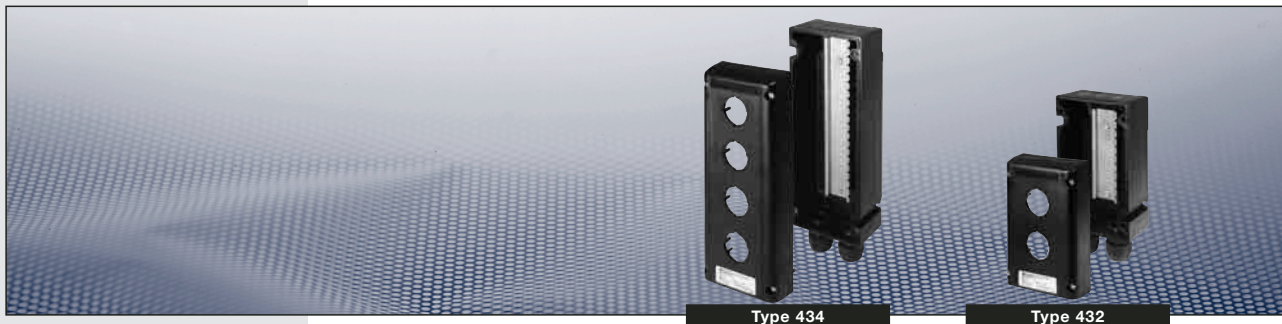


Type 411 82



Type 411 83

Dimensions in mm



Type 434

Type 432

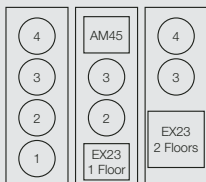
EX - CONTROL STATIONS

| Type 432 | Type 434 |

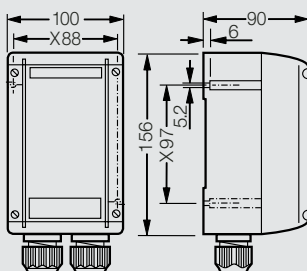
6.33



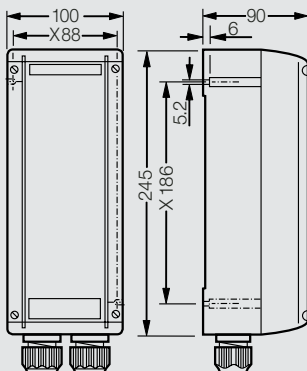
Type 432



Type 434



Type 432



Type 434

x = fixing dimensions

Dimensions in mm

Technical data

Type 432, type 434, up to 4 built-in components

Marking to 94/9/EC:	Ex II 2 G Ex II 2 D T48 °C
Type of protection	EEx d e ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3117
Rated voltage	up to 690 V
Rated current	max. 16 A
Degree of protection acc. to EN 60529	IP 66 (list version)
PE-Connection terminals	2 x 4 mm ²
Connection terminals	see technical data for built-in components
Cable entry	2 x M25 (Ø 8 - 17 mm incl. 1 x blanking plug)
Empty weight	432 approx. 0.47kg 434 approx. 0.70 kg
Mounting arrangement	432 2 mounting areas 434 4 mounting areas

Ordering code:

	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	432	(DRT)	(ZUB)	(KLE)
Code	434	(DRT)	(ZUB)	(KLE)

Built-in components

Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Signal lamp	SIL
Key switch	SLS	Potentiometer	POT
Control switch	SCT	Terminal block (4 mm ²)	KLM
Mushroom-head pushbutton	SGT	Blanking element	BLV
Control switch	GHG 23 ¹⁾		

¹⁾ 2 mounting areas are needed for measuring instrument AM72 and control switch GHG 23.

Optional wiring of control units on standard terminals according to customers' specifications.

For components, accessories and cable entries, please see page 6.52.

For fixing materials and accessories, please see page 6.106 pp.

EX - CONTROL STATION

**For individual control units
Light alloy-version for Zone 1**

Light-alloy explosion-protected control stations can be equipped with up to four components according to customers' specifications. These control stations are made of high-quality cast aluminium-silicon (AlSi). A robust plastic powder coating according to RAL 7031 protects the CEAG control stations against aggressive atmospheres and chemicals. Cover screws as well as all internal and external metal parts are made of stainless steel.

CEAG flameproof built-in components, such as signal lamps, pushbuttons and switches, provide snap-on mounting on rails screwed into the enclosures.

Notches in the mounting rails prevent the built-in components from being twisted out of place.

The components differ in size. The diverse enclosure types allow variable combinations of these components. Example diagrams of the enclosure types show the placement options for the built-in components with numbers or predefined positions.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.

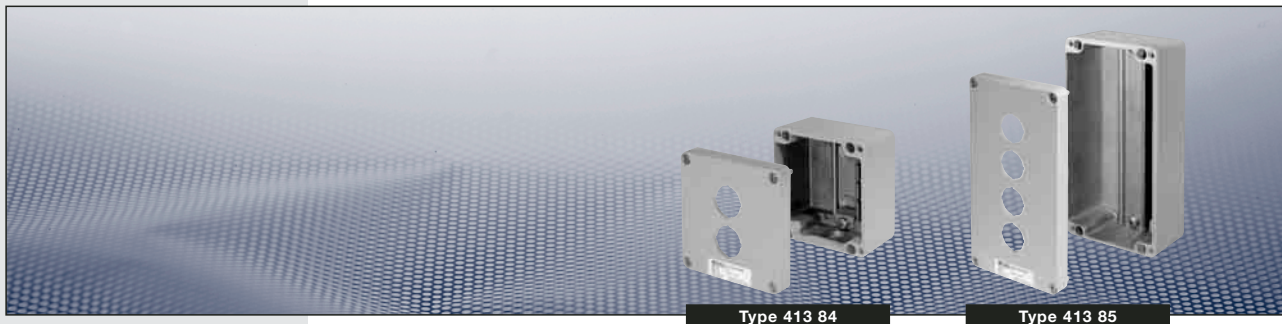
For ordering examples, please see page 6.80 pp.



High mechanical, chemical and thermal resistance

Individual configuration

Impact-resistant plastic powder coating



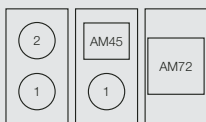
Type 413 84

Type 413 85

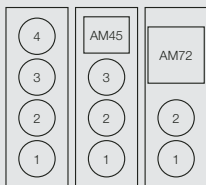
EX - CONTROL STATIONS

| Type 413 84 | Type 413 85 |

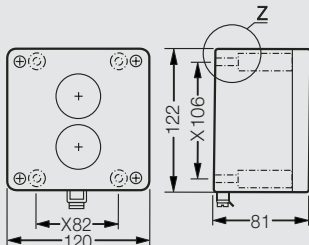
6.35



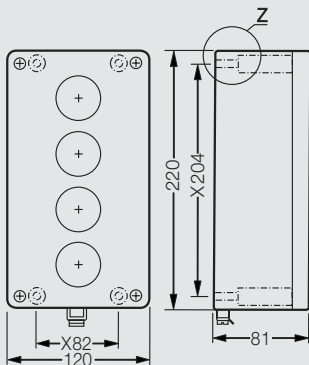
Type 413 84



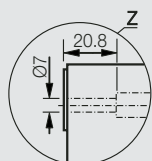
Type 413 85



Type 413 84



Type 413 85



x = fixing dimensions
Dimensions in mm

Technical data

Type 413 84, type 413 85, up to 4 built-in components

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*
Type of protection	EEx de ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3117
Rated voltage	up to 690 V
Rated current	max. 16 A
Degree of protection acc. to EN 60529	IP 66 (list version)
PE-Connection terminals	2 x 4 mm ²
Connection terminals	see technical data for built-in components
Cable entry	1 x threaded entry M20
Empty weight	413 84 approx. 0.85 kg 413 85 approx. 1.40 kg
Mounting arrangement	413 84 2 mounting areas 413 85 4 mounting areas

applied for*

Ordering code:	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	413 84	(DRT ...)	(ZUB ...)	(KLE ...)
Code	413 85	(DRT ...)	(ZUB ...)	(KLE ...)

Built-in components

Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Signal lamp	SIL
Key switch	SLS	Potentiometer	POT
Control switch	SCT	Terminal block (4 mm ²)	KLM .. B
Mushroom-head pushbutton	SGT	Blanking element	BLV
		Control switch	GHG 23 ¹⁾

¹⁾ 2 mounting areas are needed for measuring instrument AM72 and control switch GHG 23.

Optional wiring of control units on standard terminals according to customers' specifications.

For components, accessories and cable entries, please see page 6.52.

For fixing materials and accessories, please see page 6.106 pp.

EX - CONTROL STATION

**For individual control units
Stainless-steel version for Zone 1**

CEAG explosion-protected control stations made of high-grade 316L stainless steel are designed to accommodate up to four built-in components. These stainless-steel control stations with electro-polished surfaces offer protection for applications in the off-shore industry and at sites with especially severe mechanical, chemical and climatic conditions.

CEAG flameproof built-in components, such as signal lamps, pushbuttons and switches, provide snap-on mounting on rails screwed into the enclosures.

Notches in the mounting rails define the position of the built-in components and prevent them from being twisted out of place. The built-in components differ in size. The diverse enclosure types allow variable combinations of these components. Example diagrams of the enclosure types show the placement options for the built-in components with numbers or predefined positions.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.

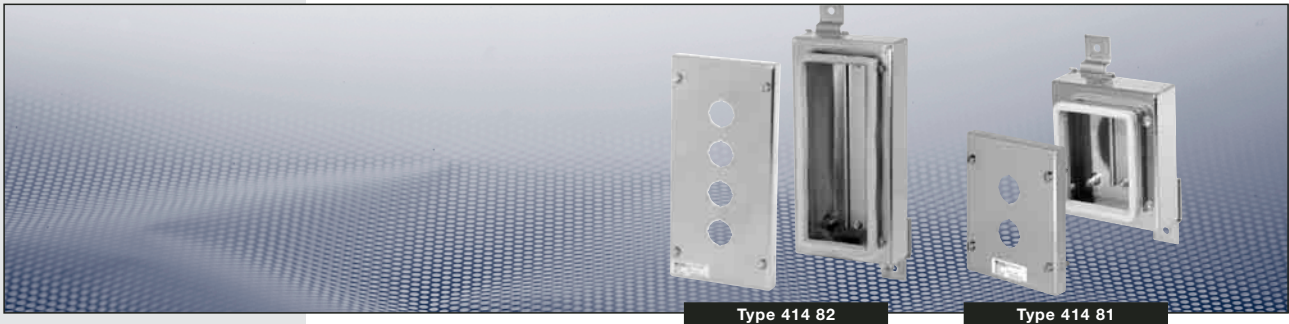
For ordering examples, please see page 6.80 pp.

High mechanical, chemical and thermal resistance

Individual configuration

Clean-room applications





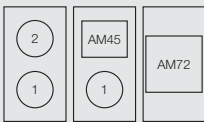
Type 414 82

Type 414 81

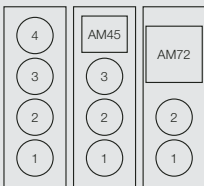
EX - CONTROL STATIONS

| Type 414 81 | Type 414 82 |

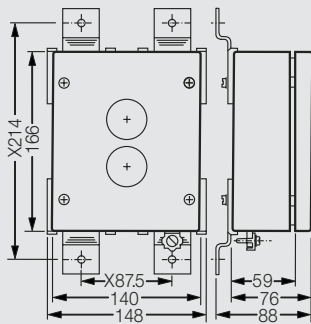
6.37



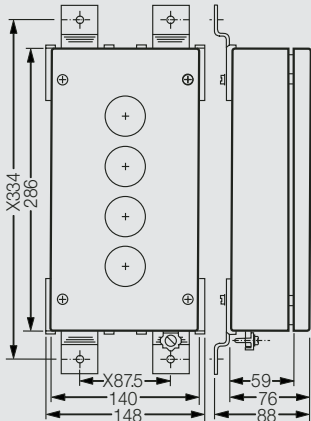
Type 414 81



Type 414 82



Type 414 81



Type 414 82

x = fixing dimensions

Dimensions in mm

Technical data

Type 414 81, type 414 82, to 4 built-in components

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*
Type of protection	EEx de ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3117
Rated voltage	up to 690 V
Rated current	max. 16 A
Degree of protection acc. to EN 60529	IP 66 (list version)
	IP 65 with measuring instrument AM45, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	see technical data for built-in components
Cable entry	1 x drilling Ø 21 mm
Empty weight	414 81 approx. 1.40 kg 414 82 approx. 2.10 kg
Mounting arrangement	414 81 2 mounting areas 414 82 4 mounting areas

*applied for

Ordering code:	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	414 81	(DRT ...)	(ZUB ...)	(GEH ...)
Code	414 82	(DRT ...)	(ZUB ...)	(GEH ...)

Built-in components

Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Signal lamp	SIL
Key switch	SLS	Potentiometer	POT
Control switch	SCT	Terminal block (4 mm ²)	KLM ... B
Mushroom-head pushbutton	SGT	Blanking element	BLV
		Control switch	GHG 23 ¹⁾

¹⁾ 2 mounting areas are needed for measuring instrument AM72 and control switch GHG 23.

Optional wiring of control units on standard terminals according to customers' specifications.

For components, accessories and cable entries, please see page 6.52.

For fixing materials and accessories, please see page 6.106 pp.

EX - CONTROL STATIONS

For individual control units
Moulded-plastic version for Zone 1

CEAG control-stations of the GHG 44x series are made of impact-resistant, glass-fibre-reinforced polyester. The well-tried enclosure materials have proven their high resistance to chemicals in indoor and outdoor installations - especially in the chemical and off-shore industries. All metal parts are made of high-grade stainless steel. The modular design of the GHG 44x control-station series lets you combine distribution modules with screwless snap-on mounting logically and at low cost. The enclosure are joined to each other via flanged joints. System modifications and extensions can thus be implemented in short time and with little effort. The mounting system also allows the attachment of plastic or brass flanges on the enclosures. The CEAG control stations are installed using pre-wired connection terminals. The wired built-in components are snap-on mounted on a stainless-steel fold-out mounting frame. To connect the control and indicating elements, the mounting frame is folded out, the cables are quickly and easily fed into enclosure and attached logically to the terminals. The built-in components differ in size. The diverse enclosure types allow variable combinations of these components. Example diagrams of the enclosure types show the placement options for the built-in components with numbers or predefined positions. Distance between centres 40, 50 or 60 mm. Rectangle = AM72 or GHG 23 or GHG 29 and their positioning. For ordering examples, please see page 6.80 pp.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.



Fold-out mounting frame
for up to 54 snap-on components
Enclosures can be combined –
in a snap
Time-saving connection system

Customised control stations, covered by type examination certificates, can be individually combined from CEAG's numerous built-in components.

A coding system for these components with unique designations can be used for planning, selection and ordering.

The sum of the code numbers designates a complete control station.

For the selection of control units and components, please see the following pages.

6.39

1

2

3

4

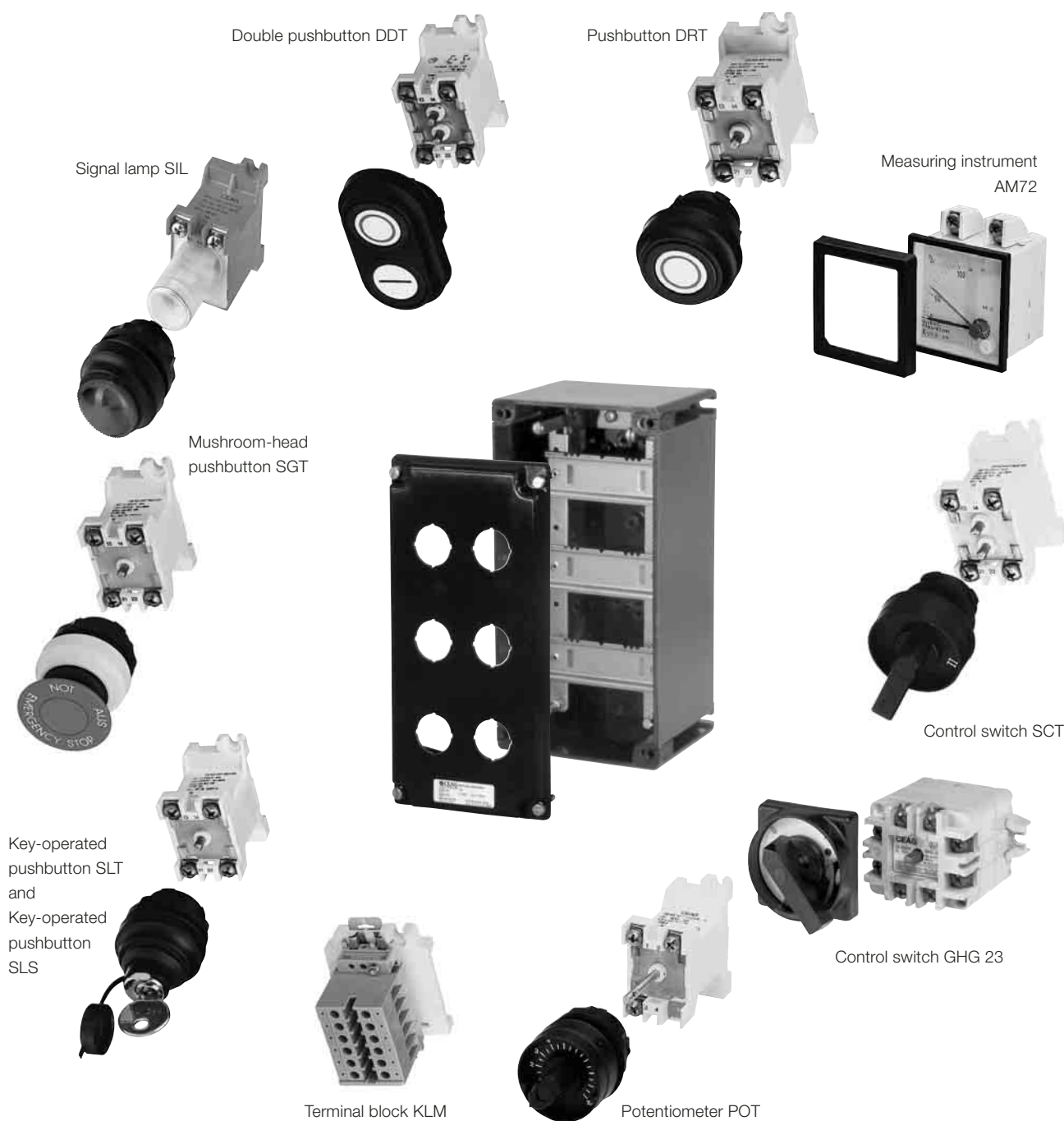
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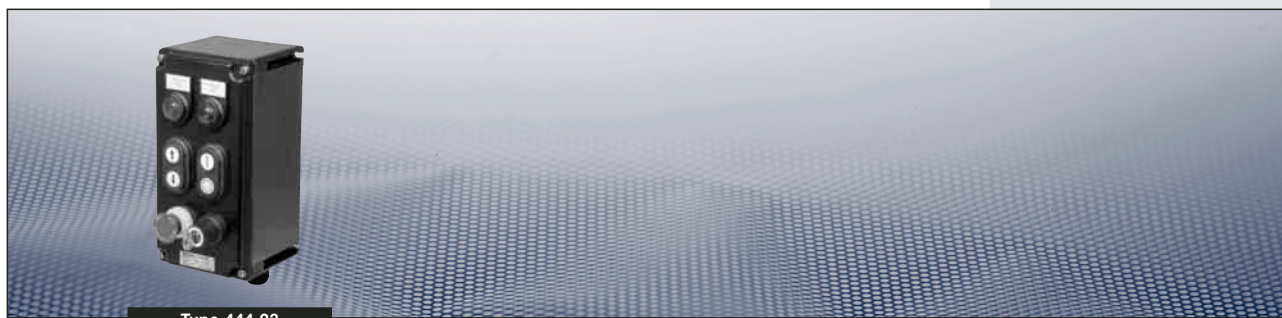
6

7

8

9





Type 444 23

EX - CONTROL STATIONS

| Type 444 23 |

Technical data

Type 444 with up to 6 built-in components

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C*
Type of protection	EEx d e ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	max. 40 A
Degree of protection acc. to EN 60529	IP 66 (list version)
	IP 65 with measuring instrument AM45, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	max. 20 terminal UK3 N
Cable entry	as ordered, acc. to manufacturer's specifications
Empty weight	approx. 1.5 kg (incl. folding mounting framework)
Mounting arrangement	distance 40 = 6 mounting areas distance 50 = 6 mounting areas distance 60 = 6 mounting areas

*depending on configuration

Ordering code:	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	444 23	(DRT ...)	(ZUB ...)	(GEH ...)

Built-in components

Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Blanking element	BLV
Key switch	SLS	Control switch	GHG 23 ¹⁾
Mushroom-head pushbutton	SGT	Control switch	GHG 29 ¹⁾
Control switch	SCT	Terminal (4 mm ²)	KLM ... A ²⁾
Signal lamp	SIL	Terminal block (4 mm ²)	KLM ... B
Potentiometer	POT		

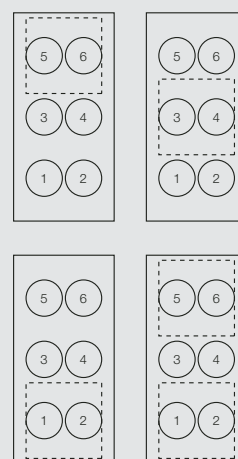
¹⁾ 2 mounting areas are needed for measuring instrument AM72 and control switch GHG 23.

²⁾ Terminal blocks and PE-terminals are attached to terminal rail under the fold-out mounting frame.

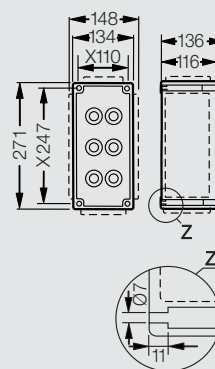
Optional wiring of control units on standard terminals according to customers' specifications.

For components, accessories and cable entries, please see page 6.52.

For fixing materials and accessories, please see page 6.106 pp.



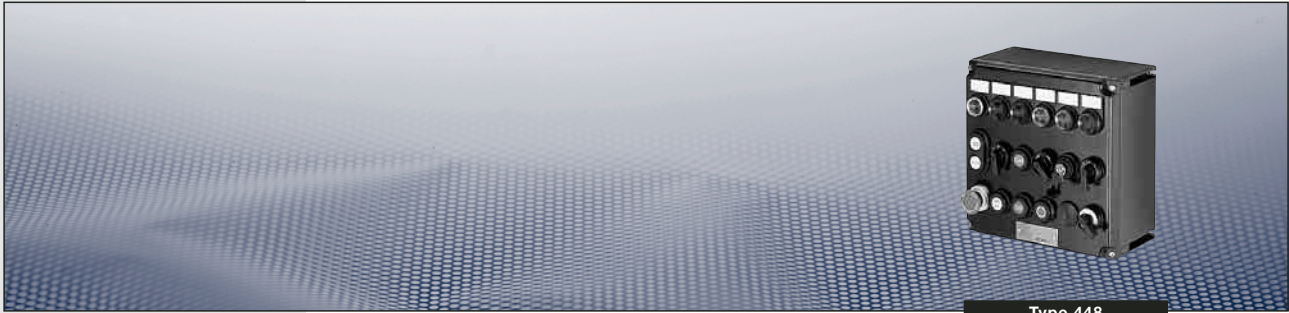
Distance between centres 40, 50 and 60 mm for positioning of built-in components



Type 444 23

x = fixing dimensions

Dimensions in mm

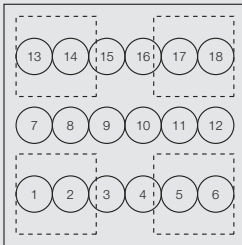


Type 448

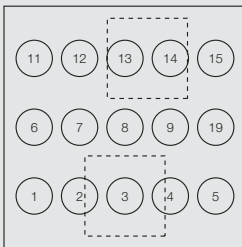
EX - CONTROL STATIONS

| Type 448 23 |

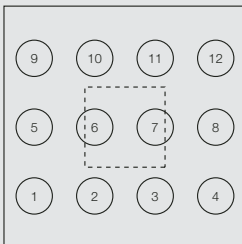
6.41



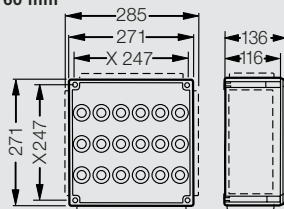
Distance between centres
40 mm



Distance between centres
50 mm



Distance between centres
60 mm



Type 448 23

x = fixing dimensions

Dimensions in mm

Technical data

Type 448 with up to 18 built-in components

Marking to 94/9/EC:	Ex II 2 G Ex II 2 D T80 °C*
Type of protection	EEx d e ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	max. 40 A
Degree of protection acc. to EN 60529	IP 66 (list version)
	IP 65 with measuring instrument AM45, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	max. 30 terminal UK3 N
Cable entry	as ordered, acc. to manufacturer's specifications
Empty weight	approx. 2.5 kg (incl. folding mounting framework)
Mounting arrangement	distance 40 = 18 mounting areas distance 50 = 15 mounting areas distance 60 = 12 mounting areas

*depending on configuration

Ordering code:	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	448 23	(DRT ...)	(ZUB ...)	(GEH ...)

Built-in components

Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Blanking element	BLV
Key switch	SLS	Control switch	GHG 23 ¹⁾
Mushroom-head pushbutton	SGT	Control switch	GHG 29 ¹⁾
Control switch	SCT	Terminal (4 mm ²)	KLM ... A ²⁾
Signal lamp	SIL	Terminal block (4 mm ²)	KLM ... B
Potentiometer	POT		

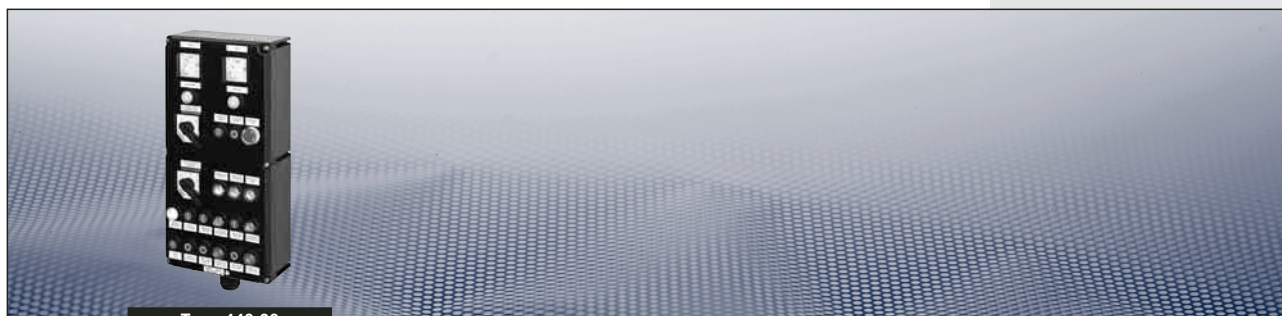
¹⁾ Up to 6 mounting areas are needed for measuring instrument AM72, control switch GHG 23 and GHG 29.

²⁾ Terminal blocks and PE-terminals are attached to terminal rail under the fold-out mounting frame.

Optional wiring of control units on standard terminals according to customers' specifications.

For components, accessories and cable entries, please see page 6.52.

For fixing materials and accessories, please see page 6.106 pp.



Type 449 23

EX - CONTROL STATIONS

| Type 449 23 |

Technical data

Type 449 23, up to 36 built-in components

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C*
Type of protection	EEx d e ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	max. 40 A
Degree of protection acc. to EN 60529	IP 66 (list version) IP 65 with measuring, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	max. 20 terminal UK3 N
Cable entry	as ordered, acc. to manufacturer's specifications
Empty weight	approx. 4.5 kg (incl. folding mounting framework)
Mounting arrangement	distance 40 = 36 mounting areas distance 50 = 30 mounting areas distance 60 = 24 mounting areas

*depending on configuration

Ordering code:	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	449 23	(DRT ...)	(ZUB ...)	(GEH ...)

Built-in components

Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Blanking element	BLV
Key switch	SLS	Control switch	GHG 23 ¹⁾
Mushroom-head pushbutton	SGT	Control switch	GHG 29 ¹⁾
Control switch	SCT	Terminal (4 mm ²)	KLM ... A ²⁾
Signal lamp	SIL	Terminal block (4 mm ²)	KLM ... B
Potentiometer	POT		

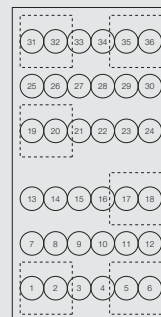
¹⁾ Up to 6 mounting areas are needed for measuring instrument AM72, control switch GHG 23 and GHG 29.

²⁾ Terminal blocks and PE-terminals are attached to terminal rail under the fold-out mounting frame.

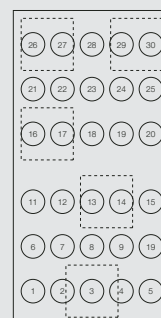
Optional wiring of control units on standard terminals according to customers' specifications.

For components, accessories and cable entries, please see page 6.52.

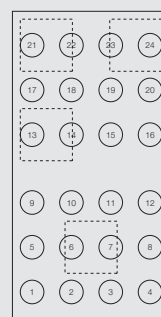
For fixing materials and accessories, please see page 6.106 pp.



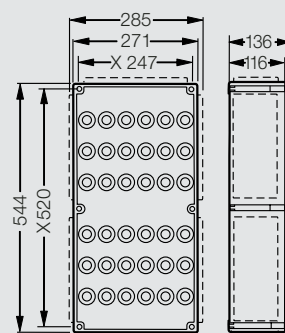
Distance between centres 40 mm



Distance between centres 50 mm

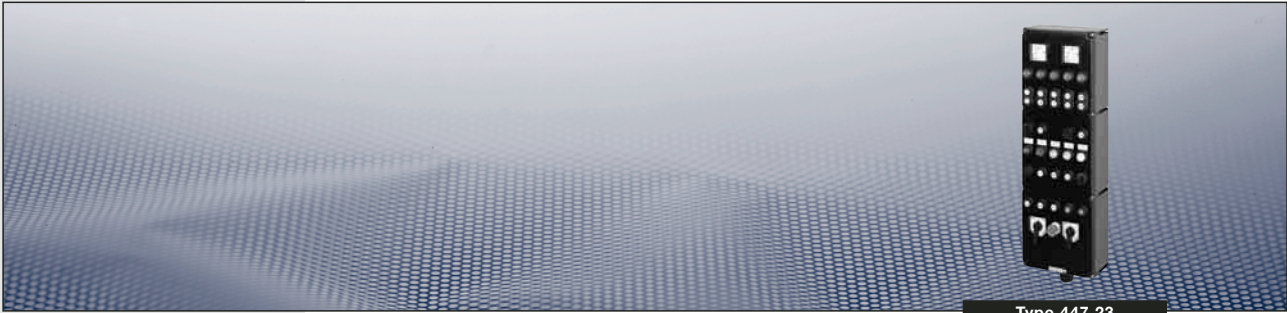


Distance between centres 60 mm

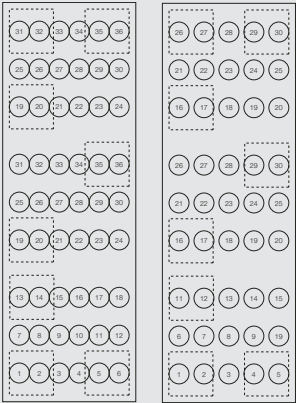


Type 449 23

x = fixing dimensions
Dimensions in mm

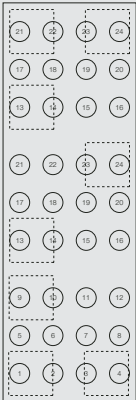


Type 447 23

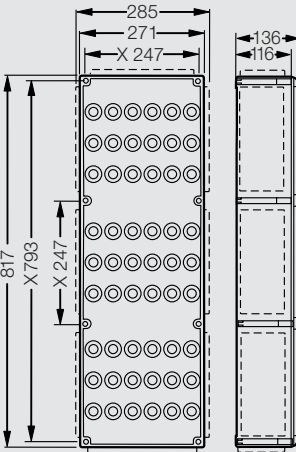


Distance between centres 40 mm

Distance between centres 50 mm



Distance between centres 60 mm



Type 447 23

x = fixing dimensions

Dimensions in mm

EX - CONTROL STATIONS

| Type 447 23 |

6.43

Technical data

Type 447 23, up to 54 built-in components

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C*
Type of protection	EEx de ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	max. 40 A
Degree of protection acc. to EN 60529	IP 66 (list version) IP 65 with measuring, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	max. 90 terminal UK3 N
Cable entry	as ordered, acc. to manufacturer's specifications
Empty weight	approx. 6.5 kg (incl. folding mounting framework)
Mounting arrangement	distance 40 = 54 mounting areas distance 50 = 45 mounting areas distance 60 = 36 mounting areas

*depending on configuration

Ordering code:	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	447 23	(DRT ...)	(ZUB ...)	(GEH ...)

Built-in components

Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Blanking element	BLV
Key switch	SLS	Control switch	GHG 23 ¹⁾
Mushroom-head pushbutton	SGT	Control switch	GHG 29 ¹⁾
Control switch	SCT	Terminal (4 mm ²)	KLM ... A ²⁾
Signal lamp	SIL	Terminal block (4 mm ²)	KLM ... B
Potentiometer	POT		

¹⁾ Up to 6 mounting areas are needed for measuring instrument AM72, control switch GHG 23 and GHG 29.

²⁾ Terminal blocks and PE-terminals are attached to terminal rail under the fold-out mounting frame.

Optional wiring of control units on standard terminals according to customers' specifications.

For components, accessories and cable entries, please see page 6.52.

For fixing materials and accessories, please see page 6.106 pp.

EX - CONTROL STATIONS

**For individual control units
Light alloy-Version for Zone 1**

CEAG explosion-protected Series 443 control stations are made of high-quality cast aluminium-silicon (AlSi). A robust plastic powder coating according to RAL 7031 protects the CEAG control stations against aggressive atmospheres and chemicals. Cover screws as well as all internal and external metal parts are made of stainless steel. These explosion-protected light-alloy control stations are designed to accommodate up to nine customer-specified built-in components. CEAG's flameproof built-in components, such as signal lamps, pushbuttons and switches, provide snap-on mounting on rails screwed into the enclosures. Notches in the mounting rails prevent the built-in components from being twisted out of place. The built-in components differ in size. The diverse enclosure types allow variable combinations of these components. Example diagrams of the enclosure types show the placement options for the built-in components with numbers or predefined positions.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.

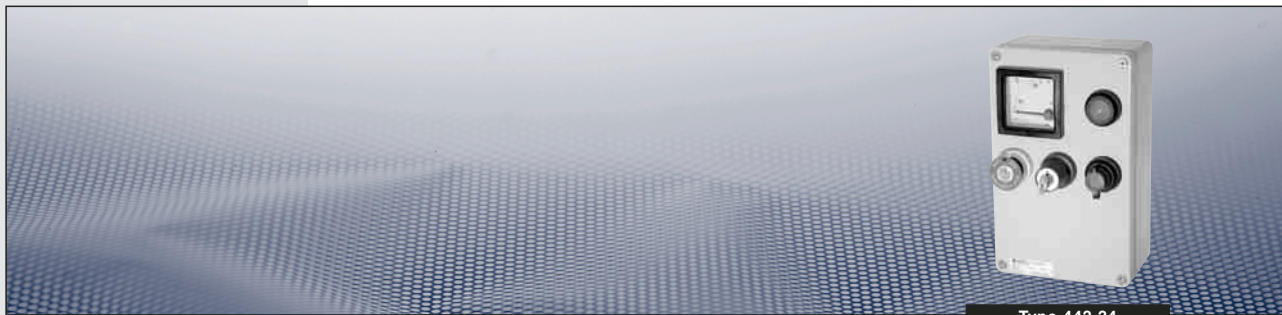
For ordering examples, please see page 6.80 pp.



High mechanical, chemical and thermal resistance

Individual configuration for up to 9 built-in components

Impact-resistant plastic powder coating

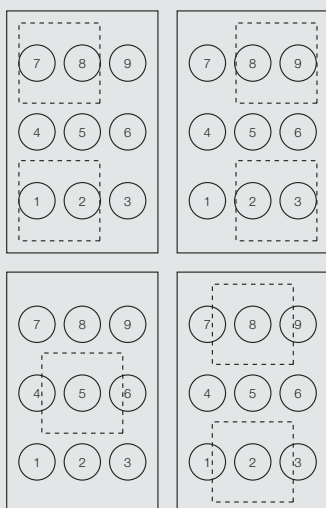


Type 443 34

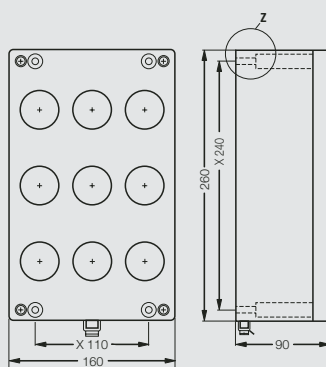
EX - CONTROL STATIONS

| Type 443 34 |

6.45



Distance between centres 40, 50 and 60 mm for positioning of built-in components



Type 443 34

x = fixing dimensions

Dimensions in mm

Technical data

Type 443 34, up to 9 built-in components

Marking to 94/9/EC	Ex II 2 G Ex II 2 D*
Type of protection	EEx de ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 01 ATEX 1115
Rated voltage	up to 690 V
Rated current	max. 63 A
Degree of protection acc. to EN 60529	IP 66 (list version)
	IP 65 with measuring, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	as ordered, acc. to manufacturer's specifications
Cable entry	as ordered, acc. to manufacturer's specifications
Empty weight	approx. 2.3 kg (incl. folding mounting framework)
Mounting arrangement	distance between centres 50 = 9 mounting areas

*applied for

Ordering code:	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	443 34	(DRT ...)	(ZUB ...)	(GEH ...)

Built-in components

Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Blanking element	BLV
Key switch	SLS	Control switch	GHG 23 ¹⁾
Mushroom-head pushbutton	SGT	Control switch	GHG 29 ¹⁾
Control switch	SCT	Terminal (4 mm ²)	KLM ... A ¹⁾
Signal lamp	SIL	Terminal block (4 mm ²)	KLM ... B ¹⁾
Potentiometer	POT		

¹⁾ Depending on the configuration, up to 6 mounting areas are needed for measuring instrument AM72, control switch GHG 23 and GHG 29 as well as for the terminal block and PE-terminal.

Other enclosure sizes available on request.

Optional wiring of control units on standard terminals according to customers' specifications.

For components, accessories and cable entries, please see page 6.52.

For fixing materials and accessories, please see page 6.106 pp.

EX - CONTROL STATIONS

**For individual control units
stainless-steel version for Zone 1**

CEAG explosion-protected control stations made of high-grade 316L stainless steel are designed to accommodate up to 54 built-in components. These stainless-steel control stations with electro-polished surfaces offer protection for applications in the off-shore industry and at sites with especially severe mechanical, chemical and climatic conditions.

The CEAG control stations are installed using pre-wired connection terminals. The wired built-in components are snap-on mounted on a stainless-steel fold-out mounting frame. To connect the control and indicating elements, the mounting frame is folded out, the cables are quickly and easily fed into enclosure and attached logically to the terminals.

The built-in components differ in size. The diverse enclosure types allow variable combinations of these components. Example diagrams of the enclosure types show the placement options for the built-in components with numbers or predefined positions.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

Internationally approved.

For ordering examples, please see page 6.80 pp.

Mounting frame for up to 54 built-in components

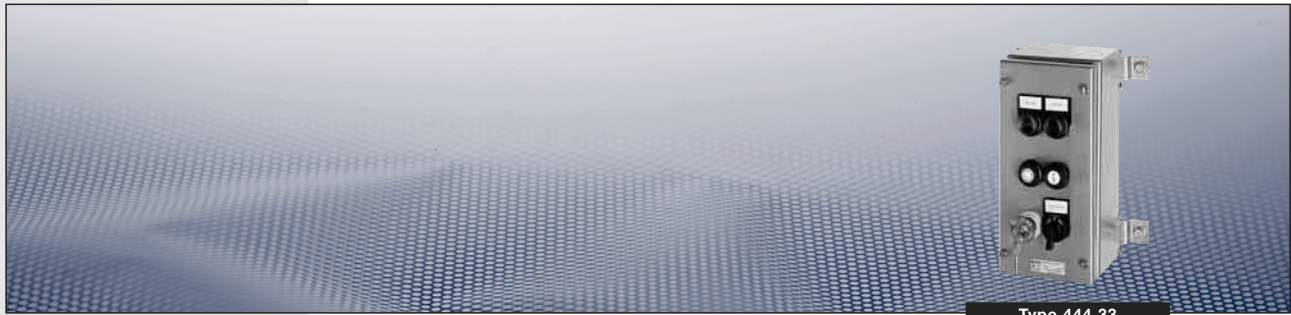
High mechanical, chemical and thermal resistance

Individual configuration

Time-saving connection system

Clean-room applications



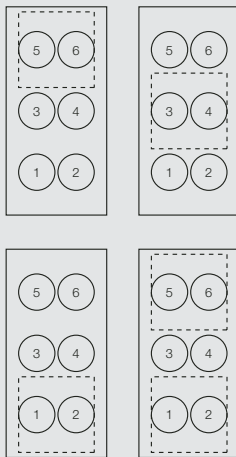


Type 444 33

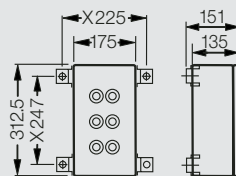
EX - CONTROL STATIONS

| Type 444 33 |

6.47



Distance between centres
40, 50 and 60 mm



Type 444 33

Technical data

Type 444 33, up to 6 built-in components

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	max. 40 A
Degree of protection acc. to EN 60529	IP 66 (list version) IP 65 with measuring, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	max. 20 terminal UK3 N
Cable entry	as ordered, acc. to manufacturer's specifications
Empty weight	approx. 1.5 kg (incl. folding mounting framework)
Mounting arrangement	distance 40 = 6 mounting areas distance 50 = 6 mounting areas distance 60 = 6 mounting areas

Ordering code:	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	444 33	(DRT ...)	(ZUB ...)	(GEH ...)

Built-in components

Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Blanking element	BLV
Key switch	SLS	Control switch	GHG 23 ¹⁾
Mushroom-head pushbutton	SGT	Control switch	GHG 29 ¹⁾
Control switch	SCT	Terminal (4 mm ²)	KLM ... A ²⁾
Signal lamp	SIL	Terminal block (4 mm ²)	KLM ... B
Potentiometer	POT		

¹⁾ Depending on the configuration, up to 6 mounting areas are needed for measuring instrument AM72, control switch GHG 23 and GHG 29 as well as for the terminal.

²⁾ Terminal blocks and PE-terminals are attached to terminal rail under the fold-out mounting frame.

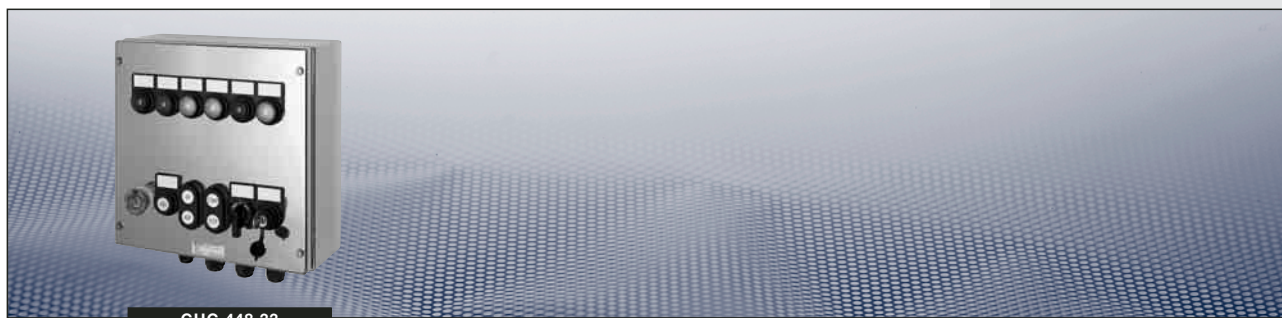
Optional wiring of control units on standard terminals according to customers' specifications.

For components, accessories and cable entries, please see page 6.52.

For fixing materials and accessories, please see page 6.106 pp.

x = fixing dimensions

Dimensions in mm



GHG 448 33

EX - CONTROL STATIONS

| Type 448 33 |

Technical data

Type 448 33, up to 18 built-in components

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx d e ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	max. 40 A
Degree of protection acc. to EN 60529	IP 66 (list version)
	IP 65 with measuring, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	max. 30 terminal UK3 N
Cable entry	as ordered, acc. to manufacturer's specifications
Empty weight	approx. 2.5 kg (incl. folding mounting framework)
Mounting arrangement	distance 40 = 18 mounting areas distance 50 = 15 mounting areas distance 60 = 12 mounting areas

Ordering code:	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	448 33	(DRT ...)	(ZUB ...)	(GEH ...)

Built-in components

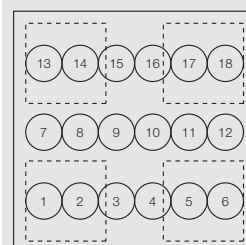
Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Blanking element	BLV
Key switch	SLS	Control switch	GHG 23 ¹⁾
Mushroom-head pushbutton	SGT	Control switch	GHG 29 ¹⁾
Control switch	SCT	Terminal (4 mm ²)	KLM ... A ²⁾
Signal lamp	SIL	Terminal block (4 mm ²)	KLM ... B
Potentiometer	POT		

¹⁾ Up to 6 mounting areas are needed for measuring instrument AM72, control switch GHG 23 and GHG 29.

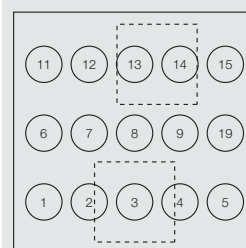
²⁾ Terminal blocks and PE-terminals are attached to terminal rail under the fold-out mounting frame.

Optional wiring of control units on standard terminals according to customers' specifications.
For components, accessories and cable entries, please see page 6.52.

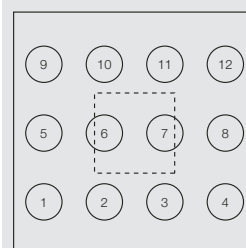
For fixing materials and accessories, please see page 6.106 pp.



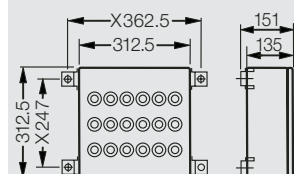
Distance between centres 40 mm



Distance between centres 50 mm



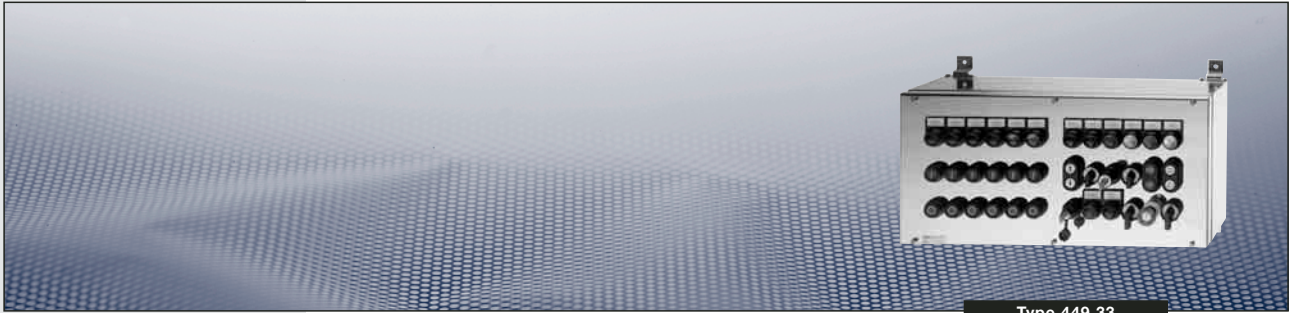
Distance between centres 60 mm



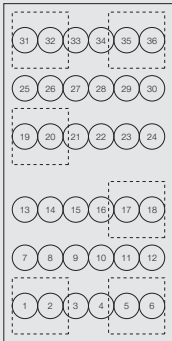
Type 448 33

x = fixing dimensions

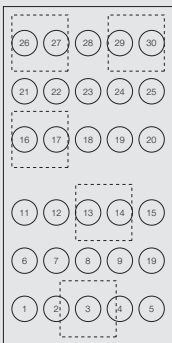
Dimensions in mm



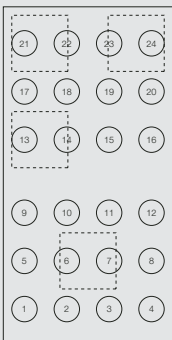
Type 449 33



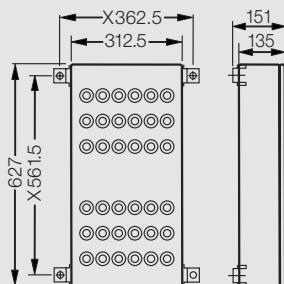
Distance between centres 40 mm



Distance between centres 50 mm



Distance between centres 60 mm



Type 449 33

x = fixing dimensions
Dimensions in mm

EX - CONTROL STATIONS

| Type 449 33 |

6.49

Technical data

Type 449 33, up to 36 built-in components

Marking to 94/9/EC:	Ex II 2 G
Type of protection	EEx d e ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	max. 40 A
Degree of protection acc. to EN 60529	IP 66 (list version)
	IP 65 with measuring, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	max. 60 terminal UK3 N
Cable entry	as ordered, acc. to manufacturer's specifications
Empty weight	approx. 4.5 kg (incl. folding mounting framework)
Mounting arrangement	distance 40 = 36 mounting areas distance 50 = 30 mounting areas distance 60 = 24 mounting areas

Ordering code:	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	449 33	(DRT ...)	(ZUB ...)	(GEH ...)

Built-in components

Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Blanking element	BLV
Key switch	SLS	Control switch	GHG 23 ¹⁾
Mushroom-head pushbutton	SGT	Control switch	GHG 29 ¹⁾
Control switch	SCT	Terminal (4 mm ²)	KLM ... A ²⁾
Signal lamp	SIL	Terminal block (4 mm ²)	KLM ... B
Potentiometer	POT		

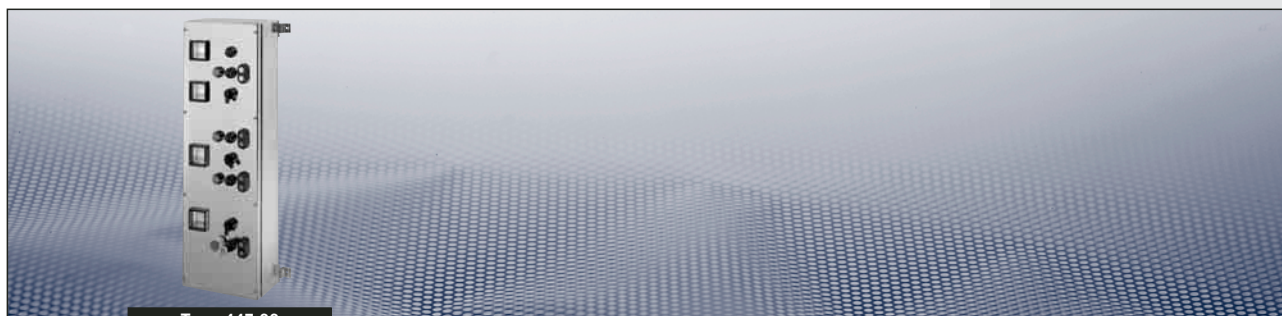
¹⁾ Up to 6 mounting areas are needed for measuring instrument AM72, control switch GHG 23 and GHG 29.

²⁾ Terminal blocks and PE-terminals are attached to terminal rail under the fold-out mounting frame.

Optional wiring of control units on standard terminals according to customers' specifications.

For components, accessories and cable entries, please see page 6.52.

For fixing materials and accessories, please see page 6.106 pp.



Type 447 33

EX - CONTROL STATIONS

| Type 447 33 |

Technical data

Type 447 33, up to 54 built-in components

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx d e ia/ib m [ia/ib] IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1044
Rated voltage	up to 690 V
Rated current	max. 40 A
Degree of protection acc. to EN 60529	IP 66 (list version) IP 65 with measuring, double pushbutton
PE-Connection terminals	2 x 4 mm ²
Connection terminals	max. 90 terminal UK3 N
Cable entry	as ordered, acc. to manufacturer's specifications
Empty weight	approx. 6.5 kg (incl. folding mounting framework)
Mounting arrangement	distance 40 = 54 mounting areas distance 50 = 45 mounting areas distance 60 = 36 mounting areas

Ordering code:	A	B	C	D
Designation:	Control stations	Components	Labels	Cable entries
Code	447 33	(DRT ...)	(ZUB ...)	(GEH ...)

Built-in components

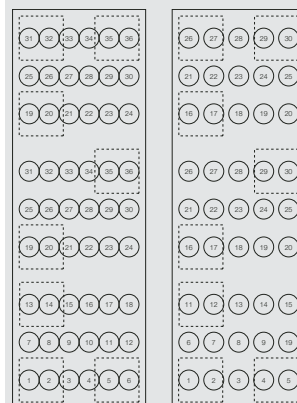
Component	Code	Component	Code
Pushbutton	DRT	Measuring instrument	AM72 ¹⁾
Double pushbutton	DDT	Measuring instrument	AM45
Key-operated pushbutton	SLT	Blanking element	BLV
Key switch	SLS	Control switch	GHG 23 ¹⁾
Mushroom-head pushbutton	SGT	Control switch	GHG 29 ¹⁾
Control switch	SCT	Terminal (4 mm ²)	KLM ... A ²⁾
Signal lamp	SIL	Terminal block (4 mm ²)	KLM ... B
Potentiometer	POT		

¹⁾ Up to 6 mounting areas are needed for measuring instrument AM72, control switch GHG 23 and GHG 29.

²⁾ Terminal blocks and PE-terminals are attached to terminal rail under the fold-out mounting frame.

Optional wiring of control units on standard terminals according to customers' specifications.
For components, accessories and cable entries, please see page 6.52.

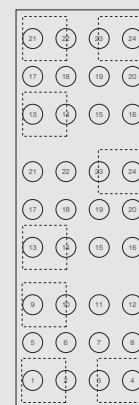
For fixing materials and accessories, please see page 6.106 pp.



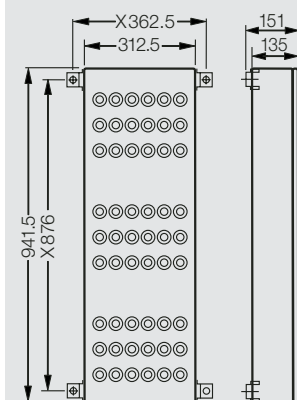
Distance between centres

40 mm

50 mm



Distance between centres 60 mm



Type 447 33

x = fixing dimensions

Dimensions in mm

1

2

3

4

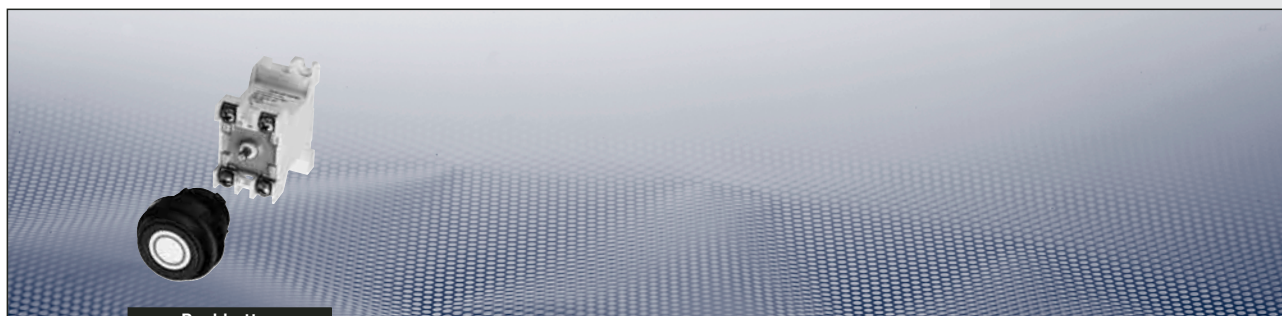
5

6

7

8

9



Pushbutton

BUILT-IN COMPONENTS

Pushbutton DRT

Ordering code

Pushbutton DRT, for enclosure mounting

	A	B	C	D
Designation:	Component	Seal	Contact	contacts label

Code

„A“ Component: DRT

„B“ Seal:	Material	Colour	Properties	Code
	Neoprene	black	standard	0
	Fluoric silicone	blue	heat and cold resistant	1
	Viton	green	mineral-oil resistant	2

„C“ Contact:	Code	Code
	Silver contact points	Gold contact points
2 NC	13	16
2 NO	14	17
1 NO + 1 NC	15	18

„D“ label:	Inscription	Code	Inscription	Code
	0, I, Start, Stop	001	0	002
	I	003	II	004
	☀	005	STOP	006
	START	007	NOT-AUS	008
	LANGSAM	009	SCHNELL	010
	EMERG.STOP	011	—	012
	ARRET	014	MARCHE	015
	AUF	016	AB	017
	Neutral whtie	018	Neutral green	019
	0, I, Arret, Marche	020	UP	024
	DOWN	025	ZU	026
	ON	027	OFF	028
	+	030	-	031
	Neutral red	033	Neutral yellow	034
	EIN	036	AUS	037
	AUTO	039	HAND	050
	SENKEN	051	HEBEN	052
	LINKS	053	RECHTS	054
	FAST	055	SLOW	056
	RESET	057	OPEN	058

For further labels, please see page 6.112.

Code 13



2 NC

Code 14

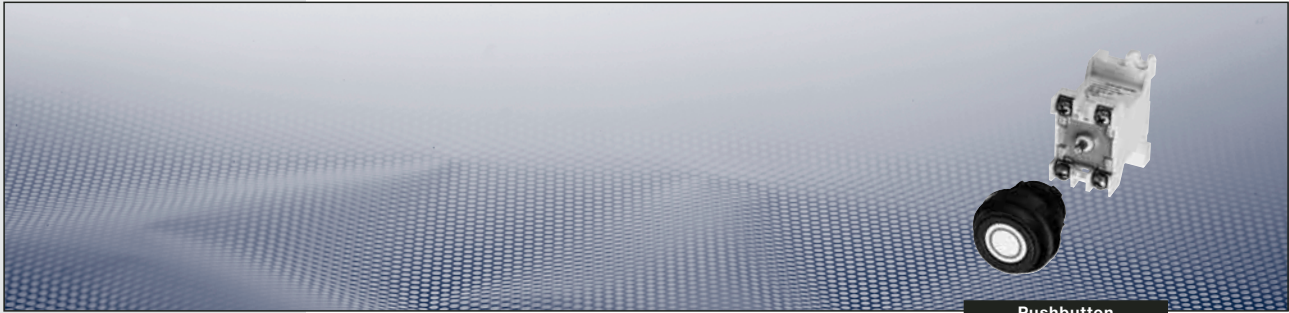


2 NO

Code 15



1 NO + 1 NC



Pushbutton

BUILT-IN COMPONENTS

6.53

Pushbutton DRT

Technical data

Pushbutton DRT, for enclosure mounting

Marking to 94/9/EC	Ex II 2 G
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Connection terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Ordering code

	A	B	C	D
Designation:	„DRT“	Seal	Contact	Contacts label

Example for ordering code

Version	Contact arrangement	Code	Ordering code			
			A	B	C	D

Pushbutton with silver contact points

Version with neoprene seal and standard label (0, I, START, STOP)

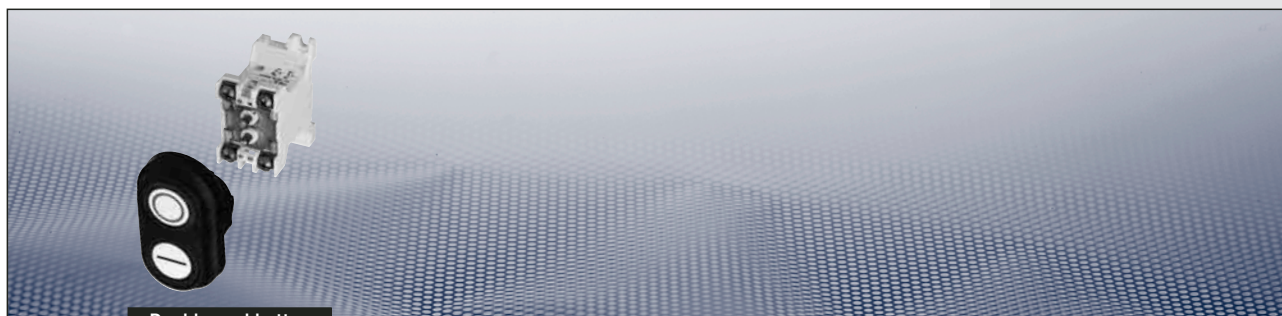
2 NC	2 NC	13	DRT	0	13	001
2 NO	2 NO	14	DRT	0	14	001
1 NO + 1 NC	1 NO + 1 NC	15	DRT	0	15	001

Pushbutton with gold contact points

Version with neoprene seal and standard label (0, I, START, STOP)

2 NC	2 NC	16	DRT	0	16	001
2 NO	2 NO	17	DRT	0	17	001
1 NO + 1 NC	1 NO + 1 NC	18	DRT	0	18	001

Other versions on request.



Double pushbutton

BUILT-IN COMPONENTS

Double pushbutton DDT

Ordering code

Double pushbutton DDT, for enclosure mounting

	A	B	C	D
Designation:	Component	Seal	Contact	contacts label

Code

„A“ Component: „DDT“

„B“ Seal:	Material	Colour	Properties	Code
	Neoprene	black	standard	0
	Fluoric silicone	blue	heat and cold resistant	1
	Viton	green	mineral-oil resistant	2

„C“ Contact:	Code	Code
	Silver contact points	Gold contact points
2 NC	13	16
2 NO	14	17
1 NO + 1 NC	15	18

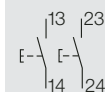
„D“ label:	Inscription	Code	Inscription	Code
	0, I, Start, Stop	001	0	002
	I	003	II	004
	☀	005	STOP	006
	START	007	NOT-AUS	008
	LANGSAM	009	SCHNELL	010
	EMERG.STOP	011	—	012
	ARRET	014	MARCHE	015
	AUF	016	AB	017
	Neutral whtie	018	Neutral green	019
	0, I, Arret, Marche	020	UP	024
	DOWN	025	ZU	026
	ON	027	OFF	028
	+	030	-	031
	Neutral red	033	Neutral yellow	034
	EIN	036	AUS	037
	AUTO	039	HAND	050
	SENKEN	051	HEBEN	052
	LINKS	053	RECHTS	054
	FAST	055	SLOW	056
	RESET	057	OPEN	058

Code 13



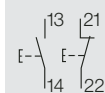
2 NC

Code 14



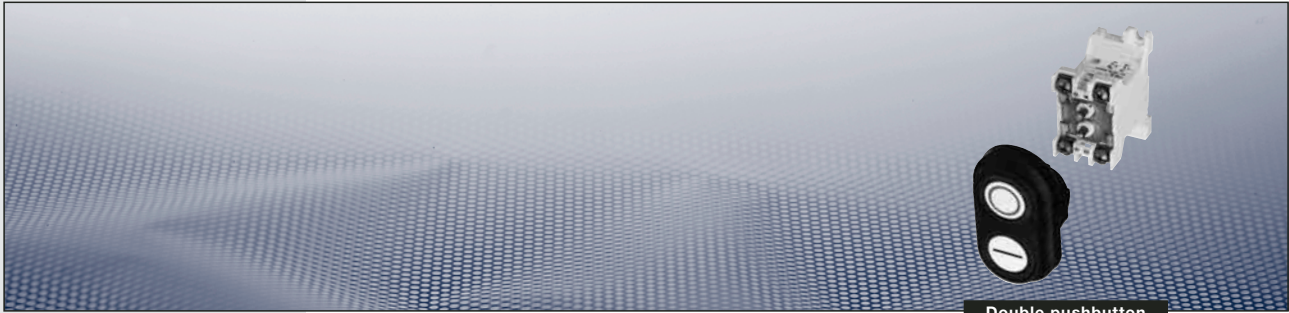
2 NO

Code 15



1 NO + 1 NC

For further labels, please see page 6.112.



Double pushbutton

BUILT-IN COMPONENTS

Double pushbutton DDT

6.55

Technical data

Double pushbutton DDT, for enclosure mounting

Marking to 94/9/EC	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Connection terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Ordering code

	A	B	C	D
Designation:	„DDT“	Seal	Contact	contacts label

Example for ordering code

Version	Contact arrangement	Code	Ordering code				
			A	B	C	D1	D2

Double pushbutton with silver contact points

Version with neoprene seal and standard label (0, I, START, STOP)

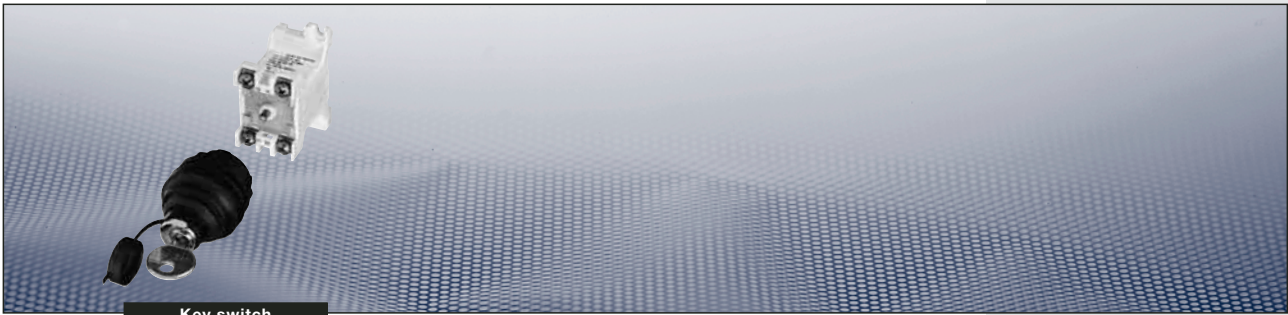
2 NC	2 NC	13	DDT 0	13	001	001
2 NO	2 NO	14	DDT 0	14	001	001
1 NO + 1 NC	1 NO + 1 NC	15	DDT 0	15	001	001

Double pushbutton with gold contact points

Version with neoprene seal and standard label (0, I, START, STOP)

2 NC	2 NC	16	DDT 0	16	001	001
2 NO	2 NO	17	DDT 0	17	001	001
1 NO + 1 NC	1 NO + 1 NC	18	DDT 0	18	001	001

Other versions on request.



Key switch

BUILT-IN COMPONENTS

Key switch SLT

Ordering code					
Key switch SLT, for enclosure mounting					
	A	B	C	D	
Designation:	Component	Seal	Contact	Function	
Code					
„A“ Component	SLT				
„B“ Seal	Material	Colour	Properties	Code	
	Neoprene	black	standard	0	
	Fluoric silicone	blue	heat and cold resistant	1	
	Viton	green	mineral-oil resistant	2	
„C“ Contact		Code	Code		
		Silver contact points	Gold contact points		
	2 NC	13	16		
	2 NO	14	17		
	1 NO + 1 NC	15	18		
„D“ Function	Not depressedKey		Depressed	Key	Code
	lockable	removable	lockable	not removable	11
	lockable	removable	not lockable	not removable	12
	lockable	not removable	lockable	removable	13
	not lockable	not removable	lockable	removable	14
	not lockable	removable	lockable auto	removable	15
	lockable	removable	lockable	removable	10
Standard contact system		„CEAG 1“			

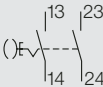
Other contact systems on request.

Code 13



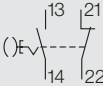
2 NC

Code 14

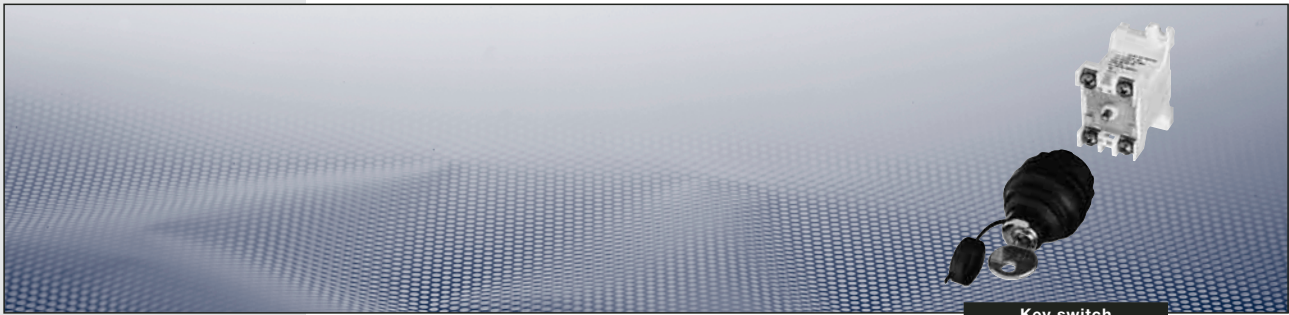


2 NO

Code 15



1 NO + 1 NC



Key switch

BUILT-IN COMPONENTS

6.57

Key switch SLT

Technical data

Key switch SLT, for enclosure mounting

Marking to 94/9/EC	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Latch point	CEAG 1 (other contact systems on request)
Connection terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Ordering code

	A	B	C	D
Designation:	„SLT“	Seal	Contact	function

Example for ordering code

Version	Contact arrangement	Code	Ordering code
			A B C D

Key switch with silver contact points

Version with neoprene seal and contact function 10

2 NC	2 NC	13	SLT	0	13	10
2 NO	2 NO	14	SLT	0	14	10
1 NO + 1 NC	1 NO + 1 NC	15	SLT	0	15	10

Key switch with silver contact points

Version with neoprene seal and contact function 11

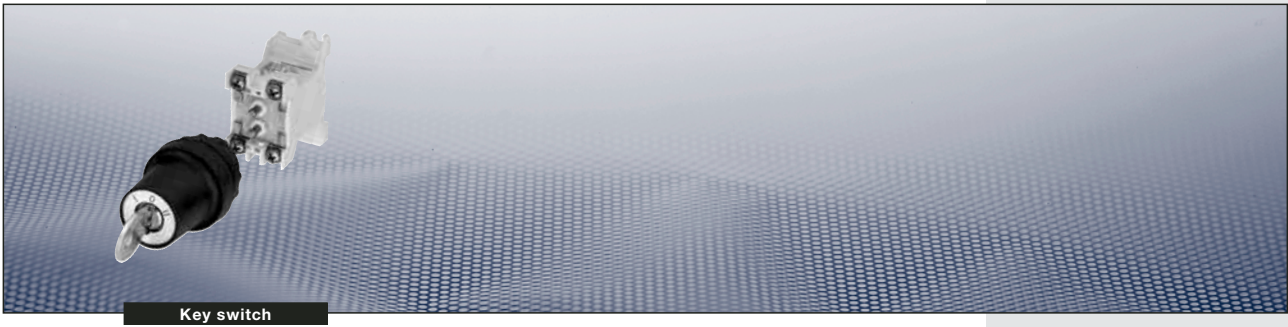
2 NC	2 NC	13	SLT	0	13	11
2 NO	2 NO	14	SLT	0	14	11
1 NO + 1 NC	1 NO + 1 NC	15	SLT	0	15	11

Key switch with gold contact points

Version with neoprene seal and contact function 10

2 NC	2 NC	16	SLT	0	16	10
2 NO	2 NO	17	SLT	0	17	10
1 NO + 1 NC	1 NO + 1 NC	18	SLT	0	18	10

Other versions on request.



Key switch

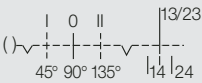
B U I L T - I N C O M P O N E N T S

| K e y s w i t c h S L S |

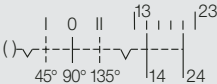
Ordering code				
Key switch SLS, for enclosure mounting				
	A	B	C	D
Designation:	Component	Switch mechanism	Contact	contacts label
Code				
„A“ Component		„SLS“	Component	
„B“ Switch mechanism		Version	Code	
		engaging-engaging-engaging	05	
„C“ Contact		Code	Code	
		Silver contact points	Gold contact points	
		2 NO	04 14	
		2 NO	05 15	
„D“ Contacts label		Inscription	Code	
		I 0 II	01	
		Fern 0 Ort	02	
		Hand 0 Auto	03	
Standard contact system		„CEAG 1“		

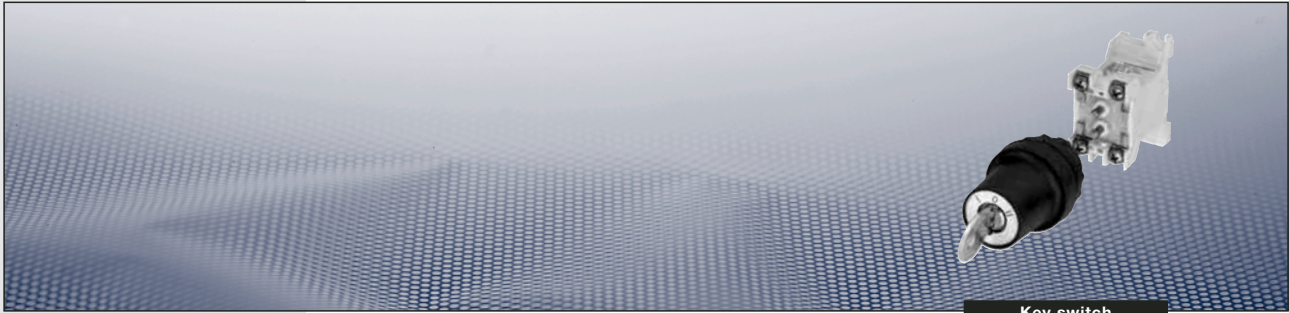
Other contact systems on request.

Code 04/14



Code 05/15





Key switch

BUILT-IN COMPONENTS

6.59

Key switch SLS

Technical data

Key switch SLS, for enclosure mounting

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Latch point	CEAG 1 (other contact systems on request)
Connection terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Ordering code

	A	B	C	D
Designation:	„SLS“	Switch mechanism	Contact	contacts label

Example for ordering code

Version	Switch mechanism	Contact Code	Ordering code			
			A	B	C	D

Key switch with silver contact points

Switch can be locked in all positions and key can be removed in all positions

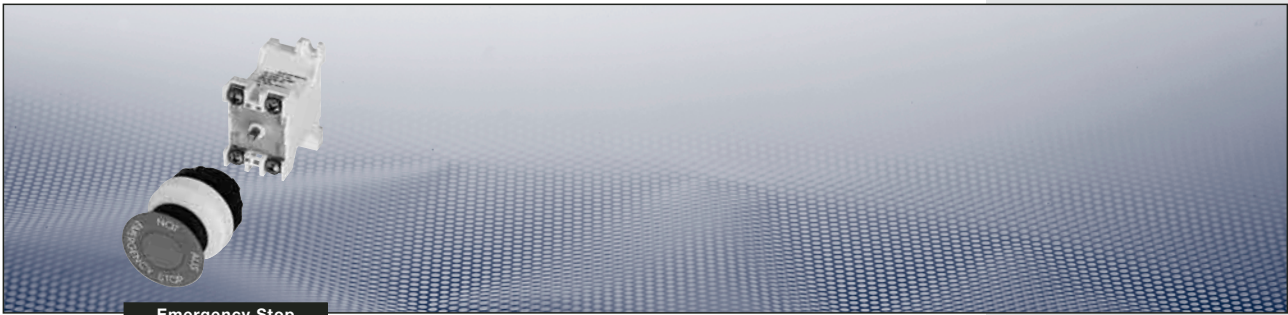
I – 0 – II	5	04	SLS	5	04	01
I – 0 – II	5	05	SLS	5	05	01

Key switch with gold contact points

Switch can be locked in all positions and key can be removed in all positions

Hand – 0 – Auto	5	14	SLS	5	14	03
Hand – 0 – Auto	5	15	SLS	5	15	03

Other versions on request.



Emergency Stop

BUILT-IN COMPONENTS

EMERGENCY STOP mushroom-head pushbutton SGT

Ordering code

EMERGENCY STOP mushroom-head pushbutton SGT, for enclosure mounting

	A	B	C	D	E	F
Designation:	Component	Seal	Contact	Inscription	Mushroom head	Function
Code						
„A“ Component		„SGT“				
„B“ Seal		Material	Colour	Properties	Code	
		Neoprene	black	standard	0	
		Fluoric silicone	blue	heat and cold resistant	1	
		Viton	green	mineral-oil resistant	2	
„C“ Contact			Code	Code		
			Silver contact points	Gold contact points		
2 NC			13	16		
2 NO			14	17		
1 NO + 1 NC			15	18		
„D“ Inscription Mushroom head			Sprache	Code		
			German/English	1		
			German/French	4		
„E“ Mushroom head			Colour	Code		
Red			1			
„F“ Function		Not depressed	Depressed	Unlocking	Code	
		not lockable	lockable	by pulling the mushroom head	2	
		not lockable	lockable	with the key	3	

Code 13



2 NC

Code 14



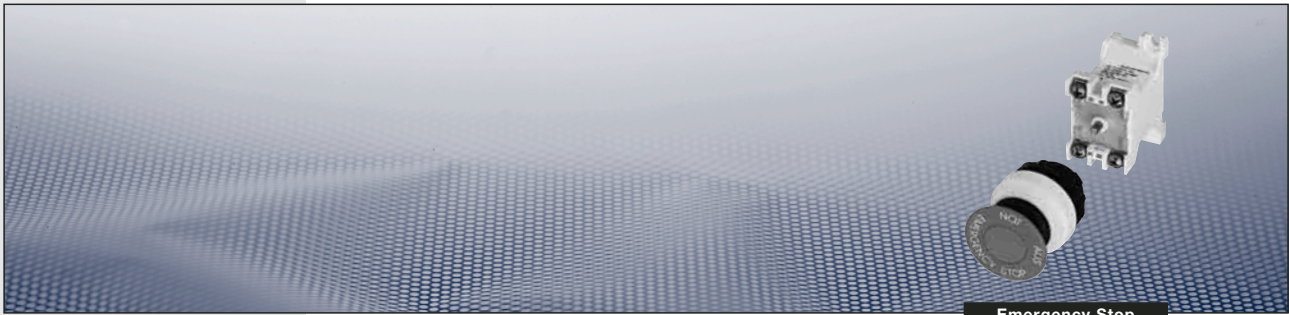
2 NO

Code 15



1 NO + 1 NC

EMERGENCY STOP mushroom-head pushbutton with key unlocking contact system CEAG 1.
Other contact systems on request.



Emergency Stop

B U I L T - I N C O M P O N E N T S

| EMERGENCY STOP mushroom-head pushbutton SGT |

6.61

Technical data

EMERGENCY STOP mushroom-head pushbutton SGT for enclosure mounting

Marking to 94/9/EC	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Latch point	CEAG 1 (other contact systems on request)
Connection terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Ordering code

	A	B	C	D	E	F
Designation:	„SGT“	Seal	Contact	Inscription	Mushroom head	Function

Ordering details

Version	Contact arrangement	Ordering code
		A B C D E F

EMERG. STOP mushroom-head pushbutton red, with silver contact points

Version with neoprene seal, inscription D/E, by pulling the mushroom head unlockable

2 NC	2 NC	SGT 0 13 1 1 2
2 NO	2 NO	SGT 0 14 1 1 2
1 NO + 1 NC	1 NO + 1 NC	SGT 0 15 1 1 2

EMERG. STOP mushroom-head pushbutton red, with silver contact points

Version with neoprene seal, inscription D/F, key release

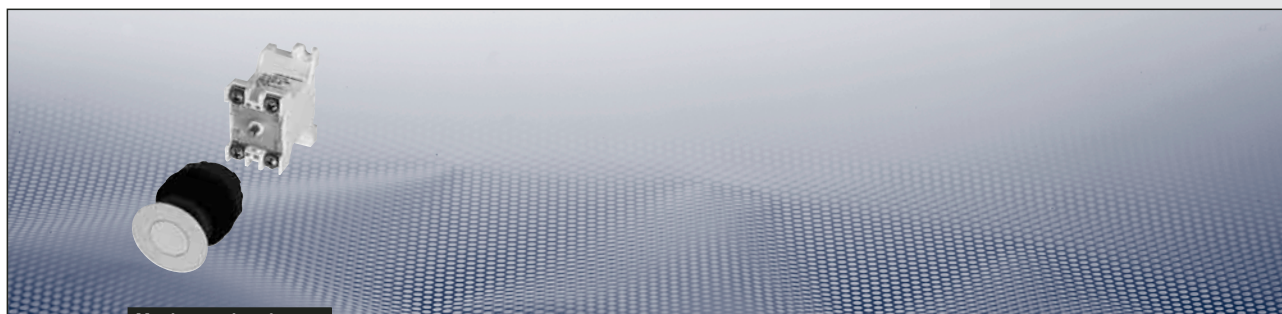
2 NC	2 NC	SGT 0 13 4 1 3
2 NO	2 NO	SGT 0 14 4 1 3
1 NO + 1 NC	1 NO + 1 NC	SGT 0 15 4 1 3

EMERG. STOP mushroom-head pushbutton red, with gold contact points

Version with neoprene seal, inscription D/E, hand release

2 NC	2 NC	SGT 0 16 1 1 2
2 NO	2 NO	SGT 0 17 1 1 2
1 NO + 1 NC	1 NO + 1 NC	SGT 0 18 1 1 2

Other versions and contact systems on request.



Mushroom-h. p.button

6.62

BUILT-IN COMPONENTS

Mushroom-head pushbutton SGT

Ordering code

Mushroom-head pushbutton SGT, for enclosure mounting

	A	B	C	D	E	F
Designation:	Component	Seal	Contact	Inscription	Mushroom head	Function

Code

„A“ Component „SGT“

„B“ Seal:	Material	Colour	Properties	Code
	Neoprene	black	standard	0
	Fluoric silicone	blue	heat and cold resistant	1
	Viton	green	mineral-oil resistant	2

„C“ Contact:	Code	Code
	Silver contact points	Gold contact points
2 NC	13	16
2 NO	14	17
1 NO + 1 NC	15	18

„D“ Label:	Inscription	Code	Inscription	Code
	0, I, Start, Stop	001	0	002
	I	003	II	004
	☀	005	STOP	006
	START	007	NOT-AUS	008
	LANGSAM	009	SCHNELL	010
			–	012
	ARRET	014	MARCHE	015
	0, I, Arret, Marche	020	UP	024
	DOWN	025	ZU	026
	ON	027	OFF	028
	+	030	-	031

For further labels, please see page 6.112.

„E“ Mushroom head	Colour	Code
	Red	1
	Yellow	2
	Black	3

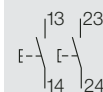
„F“ Function	Not depressed	Depressed	Unlocking	Code
	not lockable	not lockable	N/A (pushbutton function)	1
	not lockable	lockable	hand release	2
	not lockable	lockable	key release	3

Code 13



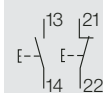
2 NC

Code 14

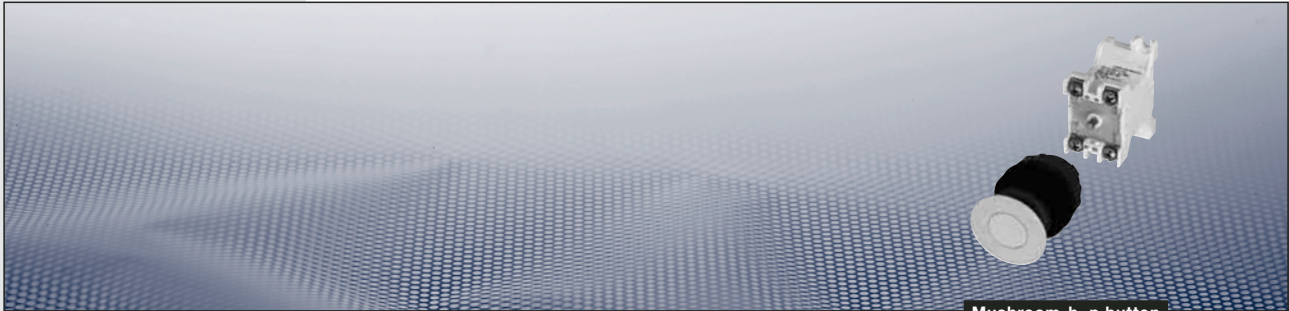


2 NO

Code 15



1 NO + 1 NC



Mushroom-h. p.button

BUILT-IN COMPONENTS

Mushroom-head pushbutton SGT

6.63

Technical data

Mushroom-head pushbutton SGT for enclosure mounting

Marking to 94/9/EC	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Connection terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Ordering code

	A	B	C	D	E	F
Designation:	„SGT“	Seal	Contact	Inscription	Mushroom head	Function

Example for ordering code

Version	Contact arrangement	Code	Ordering code					
			A	B	C	D	E	F

Mushroom-head pushbutton with silver contact points, without locking, mushroom head - black

Version with neoprene seal and standard label (0, I, START, STOP)

2 NC	2 NC	013	SGT	0	13	1	3	1
2 NO	2 NO	014	SGT	0	14	1	3	1
1 NO + 1 NC	1 NO + 1 NC	015	SGT	0	15	1	3	1

Mushroom-head pushbutton with gold contact points, without locking, mushroom head - black

Version with neoprene seal and standard label (0, I, START, STOP)

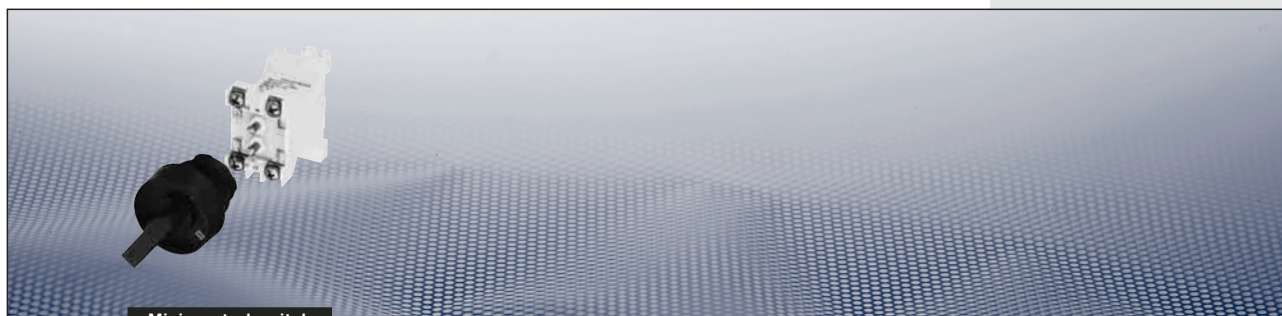
2 NC	2 NC	016	SGT	0	16	1	3	1
2 NO	2 NO	017	SGT	0	17	1	3	1
1 NO + 1 NC	1 NO + 1 NC	018	SGT	0	18	1	3	1

Mushroom-head pushbutton with silver contact points, without locking, mushroom head - yellow

Version with neoprene seal and standard label (0, I, START, STOP)

2 NC	2 NC	013	SGT	0	13	1	2	1
2 NO	2 NO	014	SGT	0	14	1	2	1
1 NO + 1 NC	1 NO + 1 NC	015	SGT	0	15	1	2	1

Other versions and contact systems on request.



Mini-control switch

6.64

BUILT-IN COMPONENTS

Mini-control switch SCT

Ordering code

Mini-control switch SCT, for enclosure mounting

	A	B	C	D
Designation:	Component	Switch mechanism	Contact	Contacts label

Code

„A“ Component „SCT“

„B“ Switch mechanism Version Code

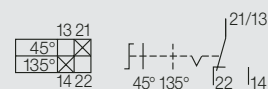
spring - engaging - spring	4	
engaging - engaging - engaging	5	
engaging - engaging	6	
spring - engaging - engaging	7	
engaging - engaging - spring	8	

„C“ Contact:

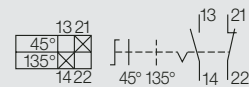
Code	Code
Silver contact points	Gold contact points
01	11
02	12
03	13
04	14
05	15
07	17

„D“ Contacts label:

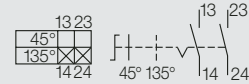
Inscription	Code	Inscription	Code
0	I 01	0	I 18
I	II 02	AUS	AUTO EIN 19
STOP	START 03	AUS	HAND AUTO 20
HAND	AUTO 04	ÖRTLICH	AUS FERN 21
SENKEN	HEBEN 05	START	NORMAL STOP 22
REMOTE	LOCAL 06	OFF	0 ON 23
I 0	II 07	HAND	OFF AUTO 24
AUS	BETRIEB EIN 08	0	IN START 25
AUS	0 EIN 09	MAN	AUTO 26
AUF	0 AB 10	START	STOP 27
Enriegelt	0 Verriegelt 11	HEBEN	SENKEN 28
OUT	OF HAND 12	OFF	ON 29
LOCAL	REMOTE AUTO 13	AUS	EIN 30



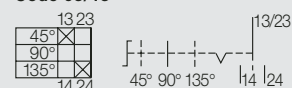
Code 01/11



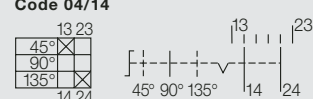
Code 02/12



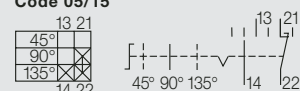
Code 03/13



Code 04/14

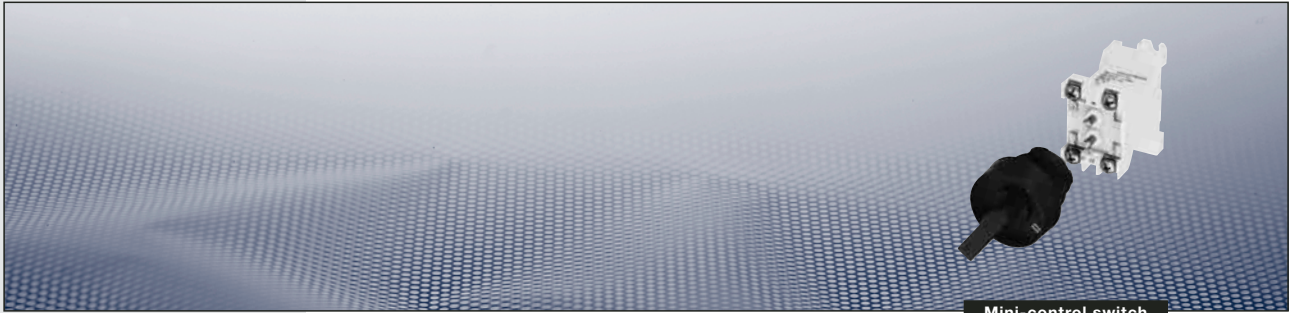


Code 05/15



Code 07/17

For further labels, please see page 6.113.



Mini-control switch

BUILT-IN COMPONENTS

6.65

Mini-control switch SCT

Technical data

Mini-control switch SCT, for enclosure mounting

Marking to 94/9/EC	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Connection terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Ordering code

	A	B	C	D
Designation:	„SCT“	Switch mechanism	Contact	Contacts label

Example for ordering code

Version	Switch mechanism	Contact Code	Ordering code			
			A	B	C	D

Control switch with silver contact points

Switch can be locked in all positions

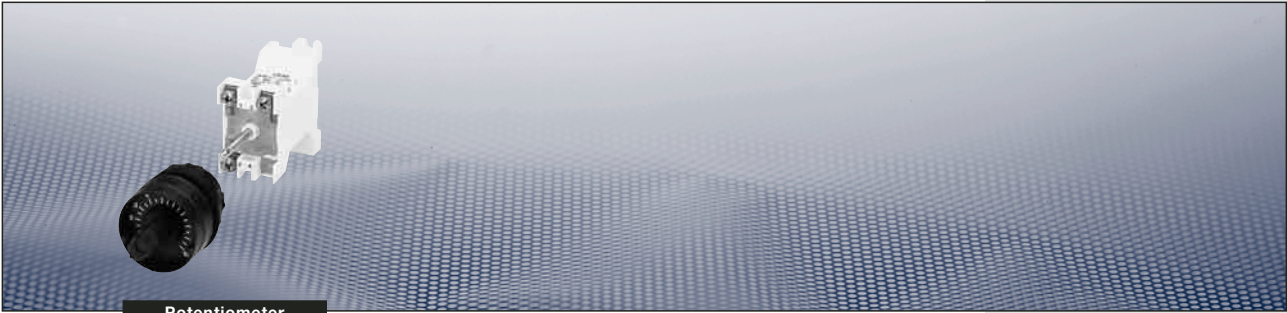
I	II	6	01	SCT	6	01	02
0	I	6	03	SCT	6	03	01
I	II	6	02	SCT	6	02	02
I	0	II	4	SCT	4	04	07
I	0	II	5	SCT	5	05	07
0	I	7	07	SCT	7	07	01

Control switch with gold contact points

Switch can be locked in all positions

I	II	6	11	SCT	6	11	02
0	I	6	13	SCT	6	13	01
I	II	6	12	SCT	6	12	02
I	0	II	4	SCT	4	14	07
I	0	II	5	SCT	5	15	07
0	I	7	17	SCT	7	17	01

Control switches without locking facility are standard.



Potentiometer

BUILT-IN COMPONENTS

Potentiometer POT

Technical data

Potentiometer POT, for enclosure mounting

Marking to 94/9/EC	II 2 G
EC-Type Examination Certificate	PTB 97 ATEX 1081 U
Rated voltage	up to 250 V
Power consumption	max. 1 W
Resistance range	100 - 10 000 Ω
Angle of rotation	270°
Scale	0 – 100%
Tolerance	±20%
Connection terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Ordering code

	A	B
Designation:	Component	Resistance

Example for ordering code

Version	Code A	Code B	Ordering code	
			A	B

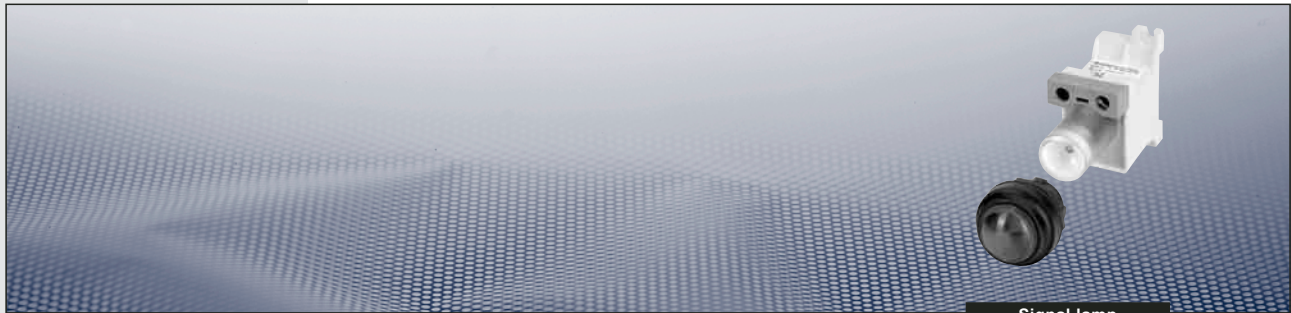
Potentiometer POT

Version 1 W, 25% tolerance

100 Ω	POT	01	POT	01
220 Ω	POT	02	POT	02
470 Ω	POT	03	POT	03
1 000 Ω	POT	04	POT	04
2 200 Ω	POT	07	POT	07
4 700 Ω	POT	05	POT	05
10 000 Ω	POT	06	POT	06

Other versions on request.





Signal lamp

BUILT-IN COMPONENTS

6.67

Signal lamp SIL

Technical data

Signal lamp SIL, for enclosure mounting

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC EEx d ia IIC EEx de IIC
EC-Type Examination Certificate	PTB 98 ATEX 1040 U
Rated voltage	20 V to 250 V AC/DC 10 V to 28 V DC 12 V to 30 V AC/DC
Input current	approx. 4 - 15 mA max. 25 mA (DC) max. 24 mA
Connection terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

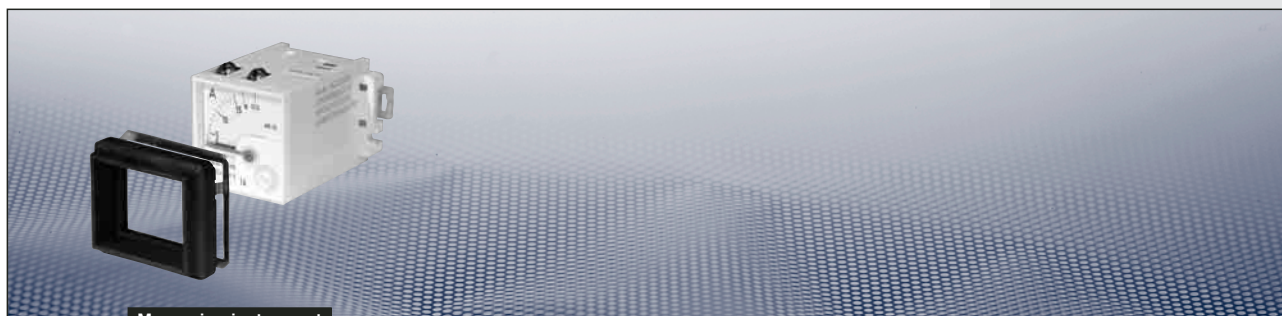
Ordering code

	A	B	C
Designation:	Component	Colour	Voltage
Code			
„A“ Component	„SIL“		
„B“ Colour	Colour	Code	
	white	1	
	yellow	2	
	red	3	
	blue	4	
	green	5	
„C“ Voltage	Voltage	Code	
	20 V – 250 V AC/DC	10	
	18 V – 30 DC (Ex-i) ¹⁾	34	
	12 V – 24 V AC/DC	11	

Ordering details

Version	Ordering code		
	A	B	C
Signal lamp SIL (examples)			
Universal voltage 20V - 250 V AC/DC			
white	SIL	1	10
For intrinsically safe circuits 18 V up to 30 V DC ¹⁾			
blue	SIL	4	34
Low voltage 12 V up to 24 V AC/DC			
red	SIL	3	11

¹⁾ see page 6.89



Measuring instrument

6.68

BUILT-IN COMPONENTS

Measuring instrument AM 45

Ordering code

Measuring instrument AM 45, for enclosure mounting

	A	B	C
Designation:	Component	Movement	Measuring range

Code

„A” Measuring instr.	Display size	Code
	50 mm x 45 mm	AM 45

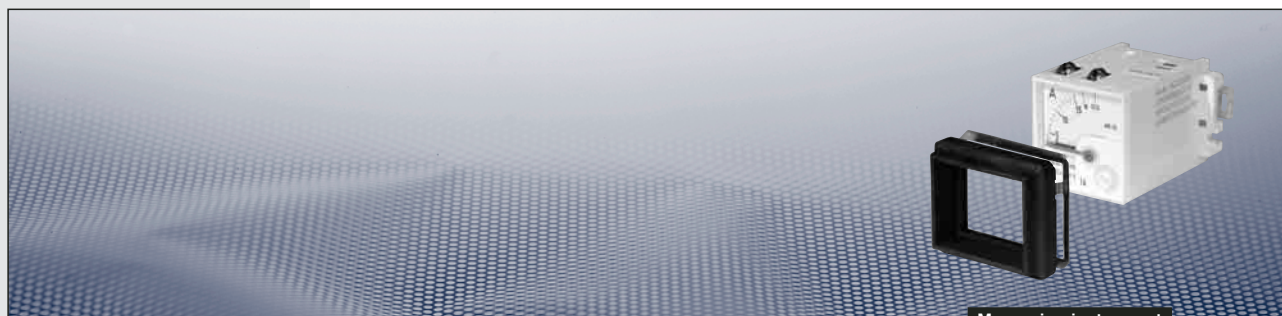
„B” Movement	Connection type	Code
	Direct connection	1
	Ct connection 1 /A	2
	Port 0 - 20/24 mA (scale 0-100% / 120%) ¹⁾	5
	Port 4 - 20/24 mA (scale 0-100% / 120%) ¹⁾	6
	Moving-coil connection 0 - 20/24 mA (scale 0-100% / 120%) ¹⁾	7
	Moving-coil connection 4 - 20/24 mA (scale 0-100% / 120%) ¹⁾	8

„C” Scale	Measuring range	Code	Measuring range	Code
	0 - 1 / 1.5 A ²⁾	02	0 - 75 / 112.5 A	13
	0 - 2.5 / 3.75 A ²⁾	03	0 - 100 / 150 A	14
	0 - 5 / 7.5 A ²⁾	04	0 - 150 / 225 A	15
	0 - 10 / 15 A ²⁾	05	0 - 200 / 300 A	16
	0 - 15 / 22.5 A	06	0 - 250 / 375 A	17
	0 - 20 / 30 A ²⁾	08	0 - 300 / 450 A	18
	0 - 30 / 45 A	09	0 - 400 / 600 A	19
	0 - 40 / 60 A	10	0 - 500 / 750 A	20
	0 - 50 / 75 A	11	0 - 600 / 900 A	21
	0 - 60 / 90 A	12	0 - 100% / 150%	33

¹⁾ Movements 0-20 mA/4-20 mA and with moving-coil connection are only available with scale 0-100%/120%.

²⁾ Version for direct connection (standard: CT connection n/1A) possible.

Other interchangeable scales available on request.


Measuring instrument
B U I L T - I N C O M P O N E N T S
6.69
| Measuring instrument AM 45 |
Technical data
Measuring instrument AM 45, for enclosure mounting

Marking to 94/9/EC	Ⓔ II 2 G	
EC-Type Examination Certificate	PTB 99 ATEX 2032 U	
Type of protection	Moving iron EEx e II	Moving coil EEx ib IIC
Accuracy	Class 2.5	Class 1.5
Overload range	10-fold - 25 sec. 25-fold - 4 sec. 50-fold - 1 sec. indicated 1:1.5	10-fold - 5 sec.
Measuring range	n / 1 A 0 - 25 A direct	0 - 20 mA 4 - 20 mA
Li	-	max. 0.1 mH
Ci	-	max. 0.1 nF
Ui	-	max. 30 V
Ii	-	max. 150 mA
Connection terminals	2 x 1.5 - 4 mm ²	
Weight	approx. 0.35 kg	

Example for ordering code

Movement	Measuring range	Code	Ordering code		
			A	B	C

Moving iron measuring instrument

Version with direct connection

Direct	0 - 1 / 1,5 A	02	AM45	1	02
Direct	0 - 10 / 15 A	05	AM45	1	05
0 - 20 / 24 mA	0-100% / 120%	33	AM45	5	33
4 - 20 / 24 mA	0-100% / 120%	33	AM45	6	33

Moving-iron measuring instrument

Version with CT connection n / 1 A

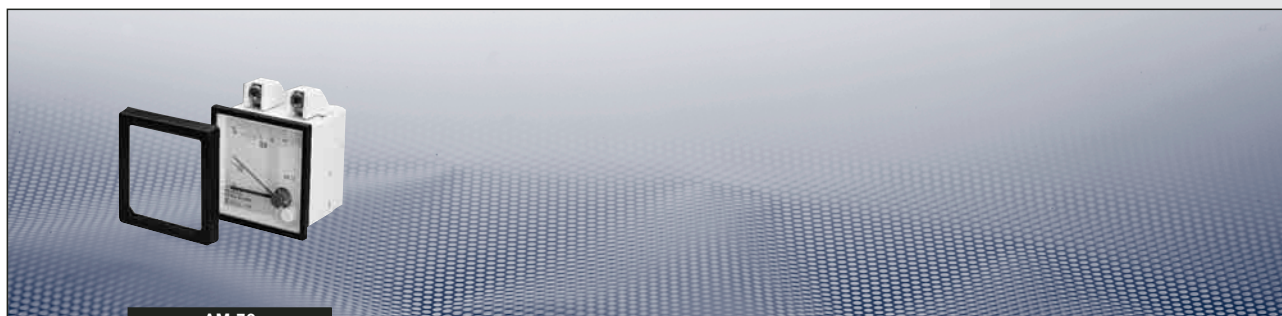
Converter n / 1 A	0 - 100% / 150%		AM45	1	33
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Moving-coil measuring instrument

Version with direct connection

0 - 20 / 24 mA	0-100% / 120%	33	AM45	7	33
4 - 20 / 24 mA	0-100% / 120%	33	AM45	8	33

Other versions as well as voltage measuring instruments are available on request.



AM 72

6.70

B U I L T - I N C O M P O N E N T S

| Measuring instrument AM 72 |

Ordering code

Measuring instrument AM 72, for enclosure mounting

	A	B	C
Designation:	Component	Movement	Measuring range

Code

„A“ Measuring instr.	Display size	Code
	72 mm x 72 mm	AM 72

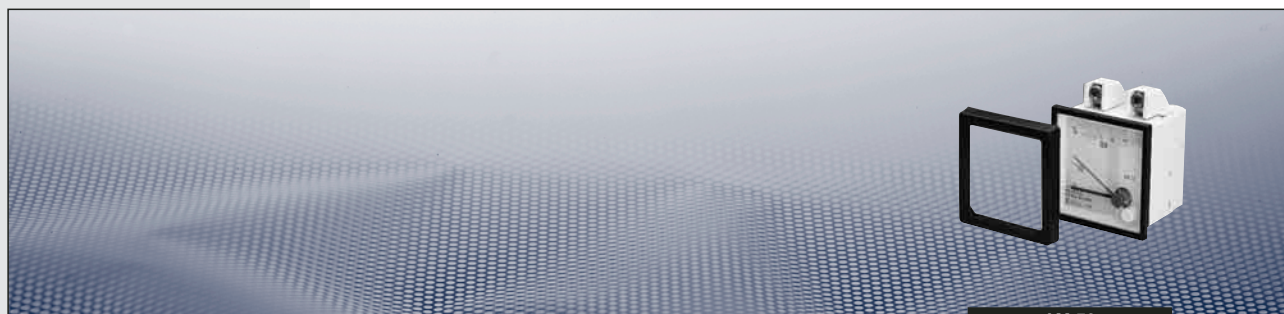
„B“ Movement	Connection type	Code
	Direct connection	1
	Ct connection n / 1 A	2
	Port 0 - 20 / 24 mA (scale 0-100% / 120%) ¹⁾	5
	Port 4 - 20 / 24 mA (scale 0-100% / 120%) ¹⁾	6
	Moving-coil connection 0 - 20 / 24 mA (scale 0-100% / 120%) ¹⁾	7
	Moving-coil connection 4 - 20 / 24 mA (scale 0-100% / 120%) ¹⁾	8

„C“ Scale	Measuring range	Code	Measuring range	Code
	0 - 1 / 1.5 A ²⁾	02	0 - 75 / 112.5 A	13
	0 - 2.5 / 3.75 A ²⁾	03	0 - 100 / 150 A	14
	0 - 5 / 7.5 A ²⁾	04	0 - 150 / 225 A	15
	0 - 10 / 15 A ²⁾	05	0 - 200 / 300 A	16
	0 - 15 / 22.5 A	06	0 - 250 / 375 A	17
	0 - 20 / 30 A ²⁾	08	0 - 300 / 450 A	18
	0 - 30 / 45 A	09	0 - 400 / 600 A	19
	0 - 40 / 60 A	10	0 - 500 / 750 A	20
	0 - 50 / 75 A	11	0 - 600 / 900 A	21
	0 - 60 / 90 A	12	0 - 100% / 150%	33

¹⁾ Movements 0-20 mA/4-20 mA and with moving-coil connection are only available with scale 0-100%/120%.

²⁾ Version with direct connection or with CT connection n/1A possible.

Other interchangeable scales available on request.


AM 72
B U I L T - I N C O M P O N E N T S
6.71
Measuring instrument AM 72
Technical data
Measuring instrument AM 72, for enclosure mounting

Marking to 94/9/EC	Ⓔ II 2 G	
EC-Type Examination Certificate	PTB 99 ATEX 2032 U	
Type of protection	Moving iron EEx e II	Moving coil EEx ib IIC
Accuracy	Class 2.5	Class 1.5
Overload range	10-fold - 25 sec. 25-fold - 4 sec. 50-fold - 1 sec. indicated 1:1.5	10-fold - 5 sec.
Measuring range	n / 1A 0 - 25 A direct	0 - 20 mA 4 - 20 mA
Li	-	max. 0.1 mH
Ci	-	max. 0.1 nF
Ui	-	max. 30 V
Ii	-	max. 150 mA
Connection terminals	2 x 1.5 - 4 mm ²	
Weight	approx. 0.40 kg	

Example for ordering code

Movement	Measuring range	Code	Ordering code		
			A	B	C

Moving iron measuring instrument AM72

Version with direct connection

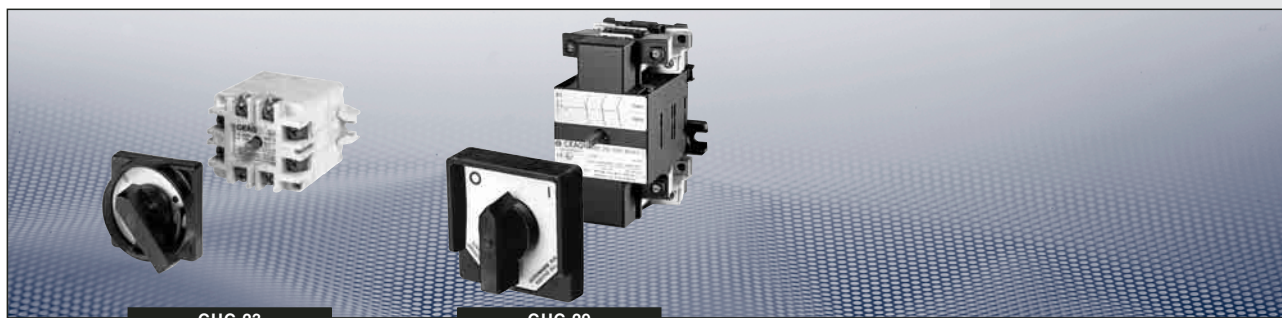
Direct	0 - 1 / 1.5 A	02	AM72	1	02
Direct	0 - 2.5 / 3.75 A	03	AM72	1	03
Direct	0 - 5 / 7.5 A	04	AM72	1	04
Direct	0 - 10 / 15 A	05	AM72	1	05
Direct	0 - 20 / 30 A	08	AM72	1	07
0 - 20 / 24 mA	0-100% / 120%	33	AM72	5	33
4 - 20 / 24 mA	0-100% / 120%)	33	AM72	6	33

Moving iron measuring instrument AM72

Version with CT connection n/1A

Converter n / 1A	0 - 100% / 150%	AM72	2	33
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Other versions as well as voltage measuring instruments are available on request.



GHG 23

GHG 29

BUILT-IN COMPONENTS

Control switch GHG 29 | Control switch GHG 23

Ordering code

Control switch GHG 23, Control switch GHG 29, for enclosure mounting

	A	B	C	D	E
Designation:	Component	Switch mechanism	Contact	Label	Locking facility

Code

„A“ Control switch	GHG 23
	GHG 29

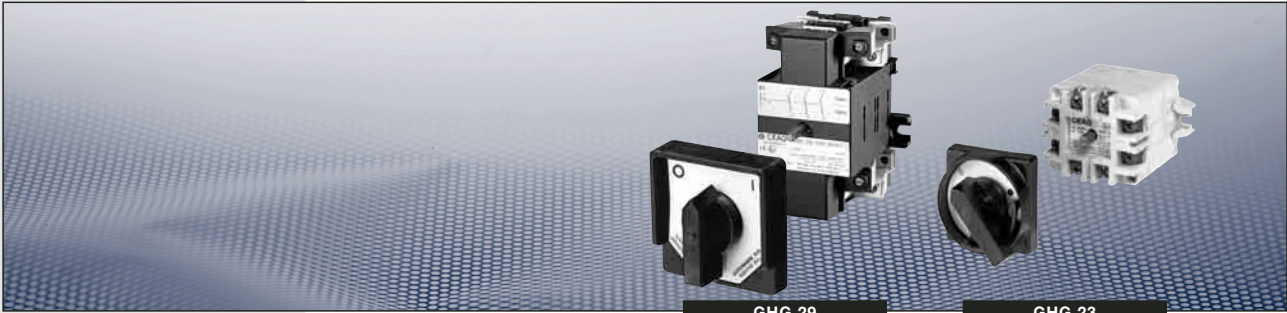
„B“ Switch mechanism Version Code

spring - engaging - spring	4	
engaging - engaging - engaging	5	
engaging - engaging	6	
spring - engaging - engaging	7	
engaging - engaging - spring	8	

„C“ Contact:	Code	Code
	Silver contact points	Silver contact points
	060	
	062	
	065	
	061	
	063	
	067	
	011	

Versions with gold contact points are available on request.

Versions with compulsory NO are possible.



BUILT-IN COMPONENTS

Control switch GHG 23 | Control switch GHG 29

6.73

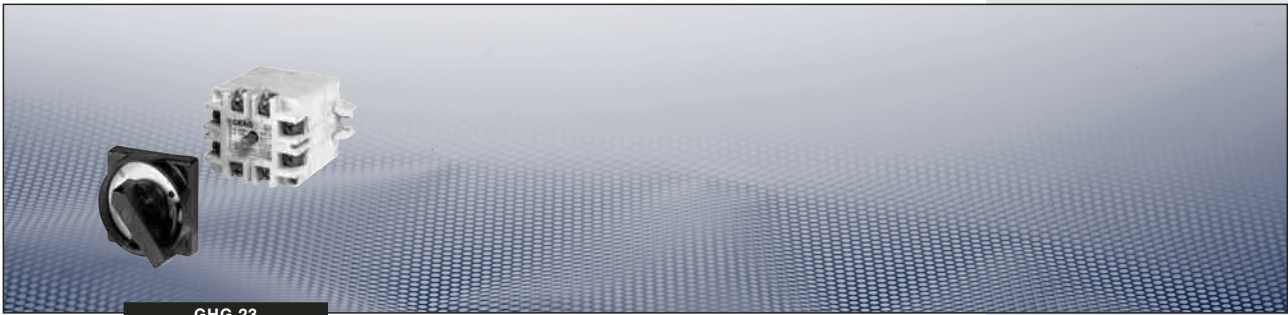
Ordering code

Control switch GHG 23, Control switch GHG 29, for enclosure mounting

Code						
„D“ Contacts label:						
Inscription			Code	Inscription		Code
0	I	01	0	I	II	18
I	II	02	AUS	AUTO	EIN	19
STOP	START	03	AUS	HAND	AUTO	20
HAND	AUTO	04	ÖRTLICH	AUS	FERN	21
SENKEN	HEBEN	05	START	NORMAL	STOP	22
REMOTE	LOCAL	06	OFF	0	ON	23
I	0	II	07	HAND	OFF	AUTO
AUS	BETRIEB	EIN	08	0	IN	START
AUS	0	EIN	09	MAN		AUTO
AUF	0	AB	10	START		STOP
Entriegelt	0	Verriegelt	11	HEBEN		SENKEN
OUT	OF	HAND	12	OFF		ON
LOCAL	REMOTE	AUTO	13	AUS		EIN
STOP	0	START	14	HAND		AUTO
HAND	0	AUTO	15	ON		OFF
AUF	AUS	ZU	16	I	II	III
HAND	AUS	AUTO	17			

For further labels, please see page 6.113.

„E“	Locking facility	none	Centre	Left	Right
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Code	0	1	2	3



GHG 23

BUILT-IN COMPONENTS

Control switch GHG 23 up to 4 contacts

Technical data

Control switch GHG 23, for enclosure mounting

Marking to 94/9/EC	II 2 G
Type of protection	EEx de IIC
EC-Type Examination Certificate	PTB 98 ATEX 1116 U
Rated voltage	up to 500 V
Rated current	max. 10 A
Rated switching capacity	Control switch GHG 23
	AC 11: 230 V/10 A 500 V/6 A
	DC 11: 24 V/ 2 A 230 V/0.4 A
Version with gold contact points	max. 400 mA
Connection terminals	2 x 0.5 - 2.5 mm ²
Weight	1 tier approx. 0.20 kg 2 tiers approx. 0.35 kg

Ordering code

	A	B	C	D	E
Designation:	Component	Switch mechanism	Contact	Label	Locking facility

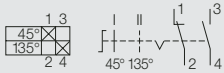
Example for ordering code

Version	Move-ment	Contact	Label	Locking facility	Ordering code				
A	B	C	D	E	A	B	C	D	E
	90°		I – II	none					
GHG 23	6	060	02	0	GHG 23	6	060	02	0
	90°		I – II	none					
GHG 23	6	062	02	0	GHG 23	6	062	02	0
	90°		0 – I	none					
GHG 23	6	065	01	0	GHG 23	6	065	01	0

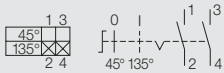
Other versions on request.



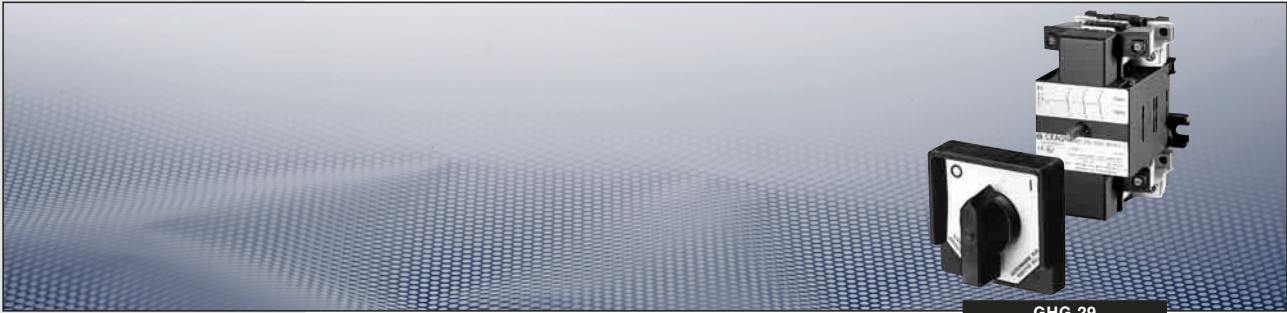
Code 060



Code 062



Code 065



GHG 29

BUILT-IN COMPONENTS

Control switch GHG 29 up to 6 contacts

6.75

Technical data

Control switch GHG 29, for enclosure mounting

Marking to 94/9/EC	II 2 G
Type of protection	EEx de IIC
EC-Type Examination Certificate	PTB 98 ATEX 1118 U
Rated voltage	up to 500 V
Rated current	max. 16 A for rated current ≥12 A cable diameters must be ≥ 2.5 mm ²
Switching capacity AC 15	230 V/6 A 400 V/4.0 A
Switching capacity DC 13	24 V/2 A 230 V/0.5 A
Version with gold contact points	max. 400 mA
Connection terminals	2 x 0.5 - 2.5 mm ² or 1 x 1.0 - 6.0 mm ²
Weight	1 tier approx. 0.25 kg 2 tiers approx. 0.40 kg 3 tiers approx. 0.55 kg

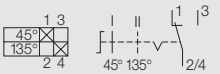
Ordering code

	A	B	C	D	E
Designation:	Component	Switch mechanism	Contact	Label	Locking facility

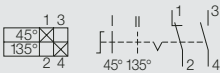
Example for ordering code

Version	Move- ment	Contact	Label	Locking facility	Ordering code				
A	B	C	D	E	A	B	C	D	E
	90°		I – II	none					
GHG 29	6	060	02	0	GHG 29	6	060	02	0
	90°		I – II	none					
GHG 29	6	062	02	0	GHG 29	6	062	02	0
	90°		0 – I	none					
GHG 29	6	065	01	0	GHG 29	6	065	01	0

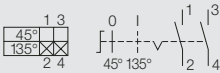
Other versions on request.



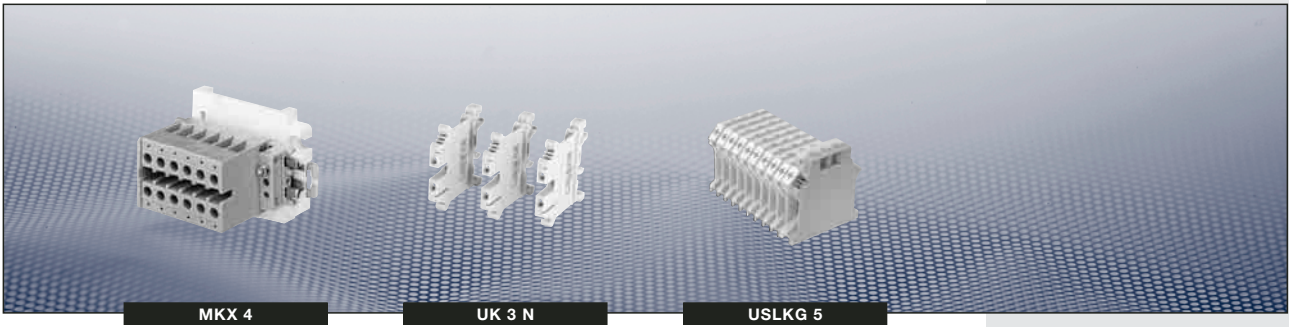
Code 060



Code 062



Code 065



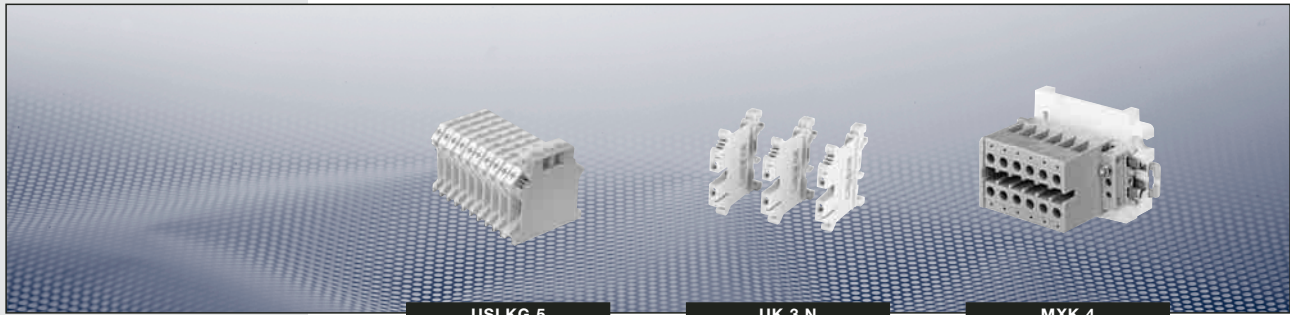
6.76

BUILT-IN COMPONENTS

Terminals KLM

Ordering code					
Terminals KLM, for enclosure mounting					
	A	B	C	D	E
Designation:	Component	Version	Terminal type	Number of terminals	Number of PE-terminals
Code					
„A“ Terminals	KLM				
„B“	Version				Code
	Ex-e				01
	Ex-i				02
„C“	Terminal type				Code
	Terminal block (max. 6 x terminal MXK 4-EX)				B
	Terminal insert (max. 3 x terminal MXK 4-EX)				E
	Terminal UK 3 N				A
„D“	Number of terminals				Code
	1				001
	2				002
	3				003
	etc.				etc.
„E“	Number of PE-terminals				Code
	1				01
	2				02
	3				03
	etc.				etc.

Other variants, e.g. modules with resistors or fine-wire fuses, available on request.



USLKG 5

UK 3 N

MXK 4

BUILT-IN COMPONENTS

Terminals KLM

6.77

Technical data

Terminals KLM, for enclosure mounting

	Terminal MXK 4-Ex	Terminal UK 3 N	PE-terminal USLKG 5
Code to 94/9/EG	II 2 G	II 2 G	II 2 G
Type of protection	EEx e II		
EC Type Examination			
Certificate	PTB 99 ATEX 3132 U	KEMA 98 ATEX 1651 U	KEMA 99 ATEX 4487 U
Rated voltage	up to 420 V	to max. 750 V	to max. 750 V
Rated current	max. 27 A	max. 32 A	max. 32 A
Rated terminal cross-section	4.0 mm ² single -wire, fine-wire and multi-wire	4.0 mm ² single-wire 2.5 mm ² fine-wire and multi-wire	4.0 mm ² single wire, fine-wire and multi-wire
Terminal width	6.2 mm	5.2 mm	6.2 mm
End-plate width	1.5 mm	1.8 mm	–

Ordering code

	A	B	C	D	E
Designation:	Component	Version	Terminal type	Number of terminals	Number of PE-Terminals

Example for ordering code

Version	Number	Ordering code
		A B C D E

Terminal block MXK 4-EX

6 x Ex-e terminals MXK 4 + 1 PE-terminal

Ex-e Connection terminals	6	KLM 1 B 006 01
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Terminal block MXK 4-EX

6 x Ex-e terminals MXK 4

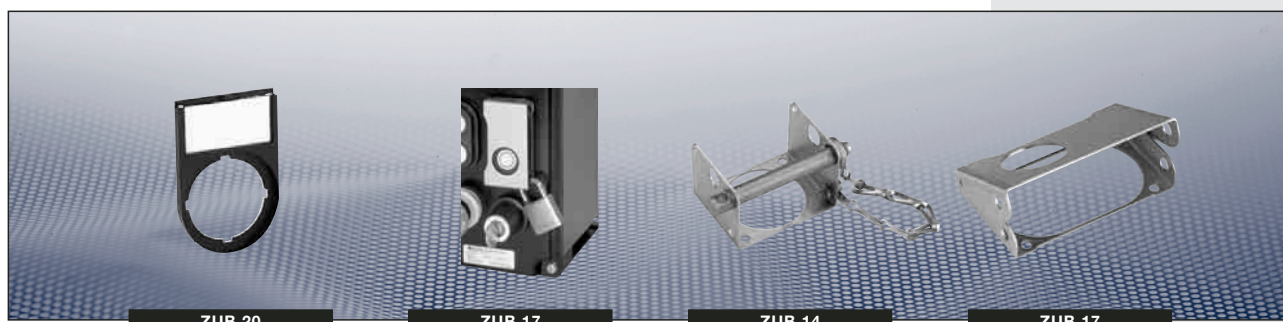
Ex-e terminal	6	KLM 1 B 006 00
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Terminal UK 3 N

12 x Ex-e terminal UK 3 N + 2 PE terminal

Ex-e terminal	12	KLM 1 A 012 02
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Other versions on request.



ZUB 20

ZUB 17

ZUB 14

ZUB 17

BUILT-IN COMPONENTS

| Label and locking facilities |

Ordering code

Labels „C“

	C1	C2	C3
Designation:	Label	Inscription	Mounting area

Code

„C1“ Label	Version	Code
	52.0 x 13 mm	ZUB 19
	37.0 x 17 mm with holder	ZUB 20
„C2“ Inscription	Version
„C3“ Mounting area	Version	Field

Locking facility „C“

Code

„C1“ Locking facility	for operating element	Code	„C3“ Field
with flap (red)	Mushroom-head pushbutton	ZUB 01	...
with flap (blank)	Mushroom-head pushbutton	ZUB 02	...
Fire alarm (red) with hammer	activates alarm when broken*	ZUB 05	...
Fire alarm (red) with hammer	Mushroom-head pushbutton*	ZUB 15	...
with flap (blank)	Pushbutton	ZUB 12	...
with flap (red)	Pushbutton	ZUB 13	...
with bolt and chain	Mushroom-head pushbutton	ZUB 14	...
with flap without „0“ activation	Double pushbutton	ZUB 16	...
with flap with „0“ activation	Double pushbutton	ZUB 17	...

Other versions on request.

Please find order numbers for locking facilities for retrofitting on page 6.114.

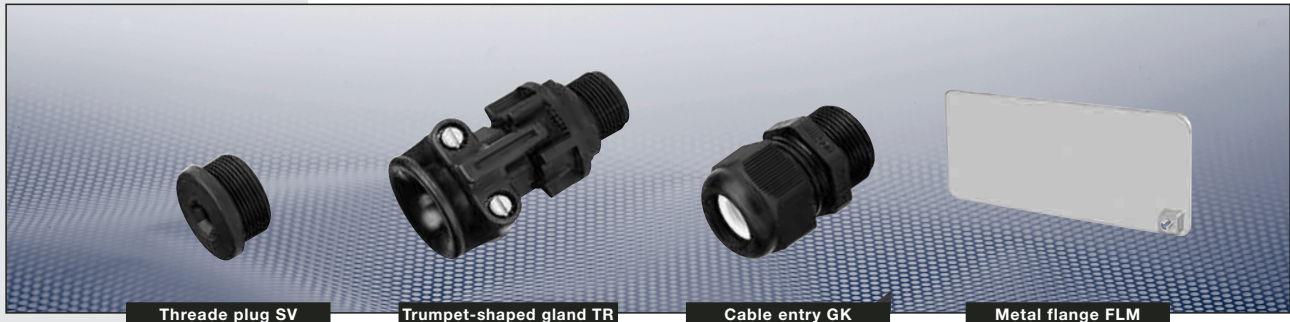
* select appropriate activation element

Example for ordering code label

Version	Number	Ordering code
		C1 C2 C3
Label with holder inscribed with „ANTRIEB 1“ on mounting area 6	X	ZUB 20 „ANTRIEB 1“ 06

Example for ordering code Locking facility

Version	Number	Ordering code
		C1 C3
Locking facility with flap with „0“		
Activation for double pushbutton on mounting area 4	X	ZUB 17 04



Threaded plug SV

Trumpet-shaped gland TR

Cable entry GK

Metal flange FLM

BUILT-IN COMPONENTS

6.79

| Cable entries and flanges |

Ordering code

Built-in components „D“

	D1	D2	D3	D4	D5
Designation:	Entry type	Entry side	Entry element	Size	Number

Code

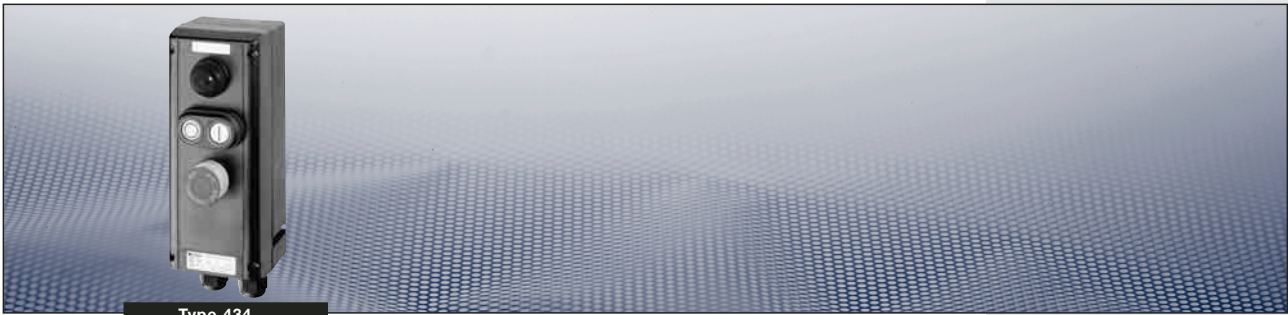
„D1“ Entry type	Version	Code
	Entry direct in enclosure	GEH
	Entry via plastic flange	FLK
	Entry via metal flange	FLM
„D2“ Entry side	Version	Code
	Entry side on bottom	1
	Entry side on top	2
„D3“ Entry element	Version	Code
	only threaded entry	BO
	Threaded plug	SV
	Cable entry moulded plastic	GK
	Cable entry metal*	GM*
	Cable entry with plug	GV
	Trumpet-shaped gland	TR
„D4“ Size	Version	Code
	M12, M16, M20, M25, M32, M40, M50, M63	M..
	Ø21, Ø26	Ø..
„D5“ Number	Version	Code
	Number of entries	..

* For metal glands, the type of cable/entry must be stated in plain language in the order.

Other versions on request.

Example for ordering code

Version	Number	Ordering code				
		D1	D2	D3	D4	D5
2 cable entries M25 moulded plastic without plug direct from below into the enclosure	X	GEH	1	GK	M25	02



Type 434 ...

ORDERING EXAMPLE

| Control station moulded plastic |

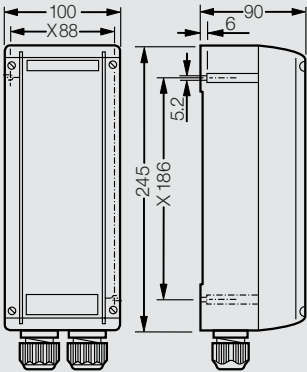
Version

with 4 built-in components

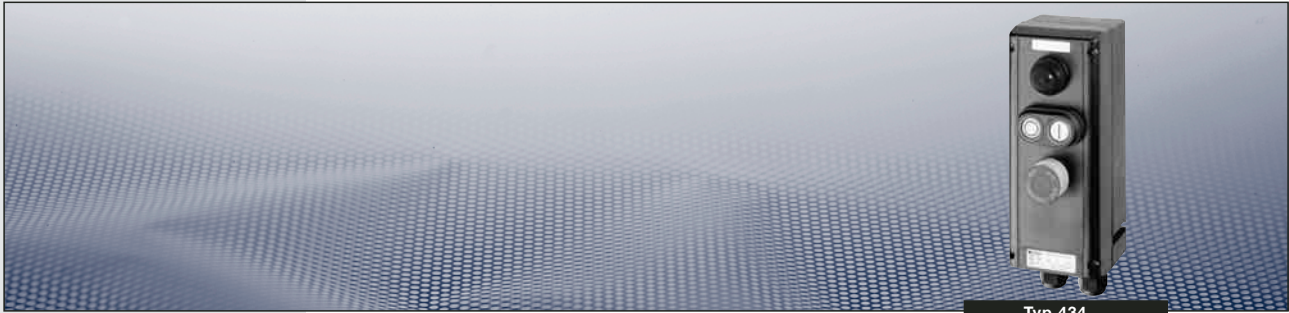
- Moulded plastic control station 434, with:
- 6 x terminal + 1 x PE-terminal,
- 1 x EMERGENCY STOP Mushroom-head pushbutton 1 NO + 1 NC silver contact points (manual release),
- 1 x double pushbutton 1 NO + 1 NC silver ocntact points, inscription „0“ + „I“
- 1 x signal lamp 230 V AC with label „RÜHRWERK 1“
- Components wired to terminals (8 connectors)
- Cable entry on bottom 1 x M32

Ordering code

	A	B	C	D
Designation:	Control unit	Components	Accessories	Cable entries



Type 434



Typ 434 ...

ORDERING EXAMPLE

Control station moulded plastic

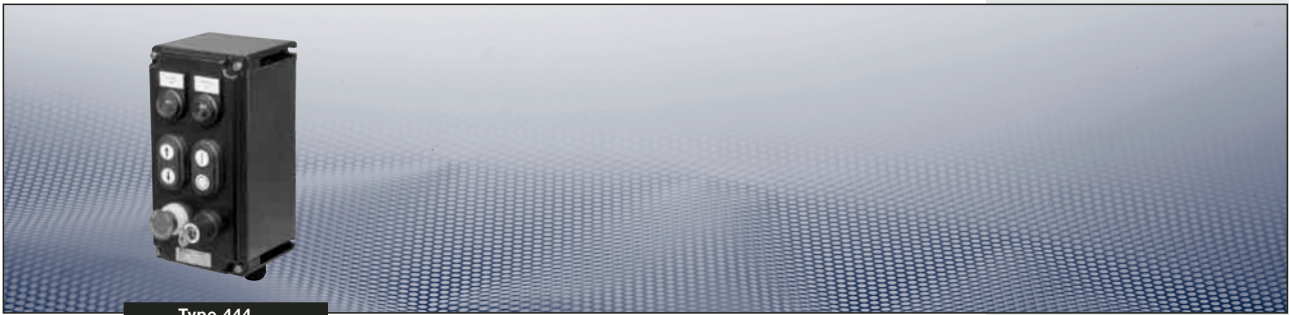
6.81

Ordering code				
	A	B	C	D
Designation:	Control unit	Components	Accessories	Plugs and sockets

Example for ordering code				
Code	Moun- ting area	Components	Ordering code	Description
„A“		Control station, Typ 434, with wiring (6 connectors)	A04 434 00 006	P. 6.33
„B“	1	Terminal block with: 6x Ex-e terminals MXK4 1 x PE-terminal 4 mm ²	B01 KLM 1 B 006 01	P. 6.76 + 6.77
	2	Mushroom-head pushbutton EMERGENCY STOP, 1NO+1NC with manual release	B02 SGT 0 15 1 1 2	P. 6.60 + 6.61
	3	Double pushbutton, 1 NO + 1 NC Label „0“ + „I“	B03 DDT 0 15 2 3	P. 6.54 + 6.55
	4	Signal lamp 20 V-250 V 6 Lens cover: green	B04 SIL 5 10	P. 6.67
„C“	4	Contacts label with holder, Inscription: RÜHRWERK 1	C04 ZUB 20 -RÜHRWERK 1-	P. 6.78
„D“		Cable entry, Moulded plastic M32, on bottom	GEH 1 GK M32 01	P. 6.79

Other versions on request. – for combining your individual control station, see pages 6.33 to 6.79.

Fixing materials and accessories, see page 6.106 pp.



Type 444 ...

ORDERING EXAMPLE

| Control station moulded plastic |

Version

with 6 built-in components

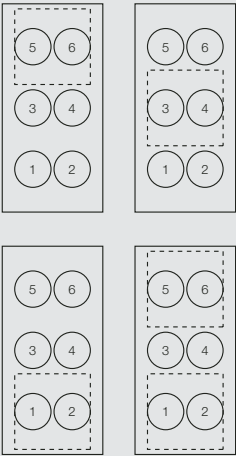
Control station 444 with fold-out mounting frame,

Distance between centres 50 mm and 6 built-in components:

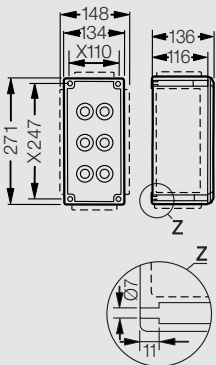
- 16 x Ex-e terminal + 2 x PE-terminal (under fold-out mounting frame),
- 1 x Emergency stop Mushroom-head pushbutton 1 NO + 1 NC, silver contact points (key release),
- 1 x Key switch 2 NO, silver contact points, switch mechanism 5, label „I - 0 - II“
- 1 x Double pushbutton 2 NO, silver contact points, „↓“ + „↑“
- 1 x Double pushbutton 1 NO + 1 NC silver contact points, „0“ + „I“
- 1 x Signal lamp 230 V AC with label „DECKEL AUF“, red
- 1 x Signal lamp 230 V AC with label „ANTRIEB EIN“, green
- Components wired to terminals (16 connectors)
- Cable entry on bottom 2 x M25 (1 x mit blanking plug)

Ordering code

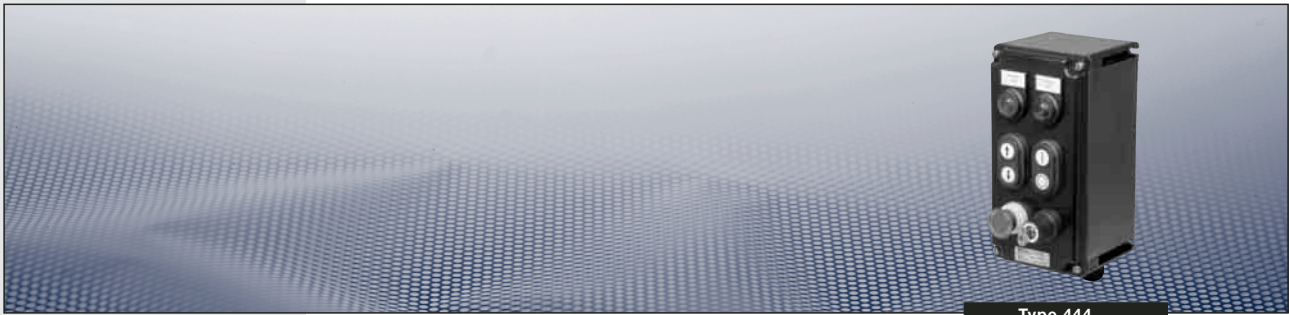
	A	B	C	D
Designation:	Control unit	Components	Accessories	Cable entries



Distance between centres 40, 50 and 60 mm for positioning of built-in components



Type 444 23



Type 444 ...

ORDERING EXAMPLE

Control station moulded plastic

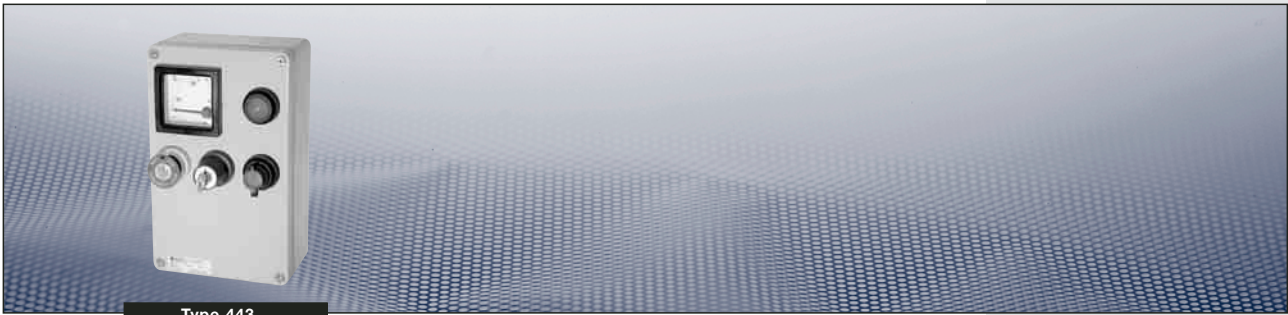
6.83

Example for ordering code

Code	Moun- ting area	Components	Ordering code		Description
„A“		Control station, Typ 444 23, with wiring (16 connectors)	A06	444 25 50 016	P. 6.40
„B“	0	terminal rail with: 16 x Ex-e terminals UK3 N, 2 x PE-terminals 4 mm ²	B00	KLM 1 A 016 02	P. 6.76 + 6.77
	1	Mushroom-head pushbutton EMERGENCY STOP 1 NO + 1 NC, with key release	B01	SGT 0 15 0 1 1 3	P. 6.60 + 6.61
	2	Key switch 2 NO, Switch mechanism 5, label „I-O-II“	B02	SLS 5 05 01	P. 6.58 + 6.59
	3	Double pushbutton 2 NO, Label „↓“ + „↑“	B03	DDT 0 14 012 012	P. 6.54 + 6.55
	4	Double pushbutton 1 NO + 1 NC, Label „0“ + „I“	B04	DDT 0 15 002 003	P. 6.54 + 6.55
	5	Signal lamp 20 V-250 V AC/DC, Lens cover: red	B05	SIL 3 10	P. 6.67
	6	Signal lamp 20 V-250 V AC/DC, Lens cover: green	B06	SIL 5 10	P. 6.67
„C“	5	Contacts label with holder, Inscription: Deckel AUF	C05	ZUB 20 -DECKEL AUF-	P. 6.78
	6	Contacts label with holder, Inscription: Antrieb Ein	C06	ZUB 20 -ANTRIEB EIN-	P. 6.78
„D“		Cable entry, Moulded plastic M25, on bottom	GEH 1	GK M25 01	P. 6.79

Other versions on request. – for combining your individual control station, see pages 6.33 to 6.79.

For fixing materials and accessories, please see page 6.106 pp.



Type 443...

ORDERING EXAMPLE

Control station light alloy

Version

with 5 built-in components

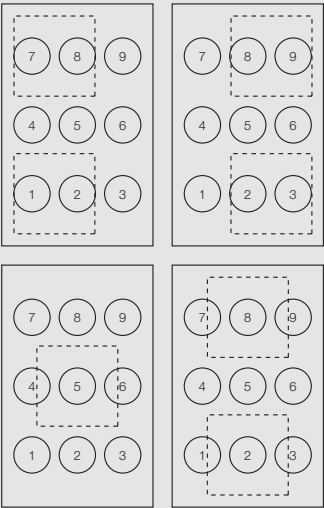
Control station 443,

Distance between centres 50 mm and 5 built-in components:

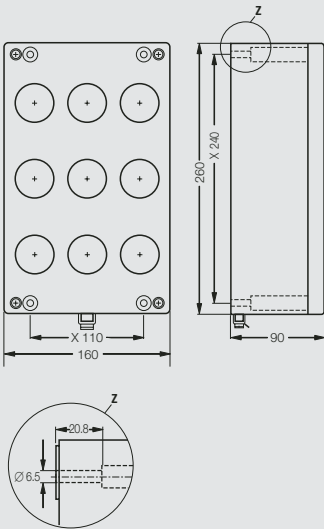
- 11 x Ex-e terminal + 2 x PE-terminal,
- 1 x Emergency stop Mushroom-head pushbutton 1 NO + 1 NC, silver contact points (key release),
- 1 x Key switch 2 S, silver contact points, switch mechanism 5, label „I - 0 - II“
- 1 x Key switch 1 NO + 1 NC silver contact points, in all positions
- lockable and key removable,
- 1 x Measuring instrument AM 72, Ct connection n/1A,
- Scale 0 - 100/150%,
- 1 x Signal lamp 230 V AC with label „STÖRUNG“, red,
- Components wired to terminals (13 connectors),
- Cable entry on bottom 1 x threaded hole M20.

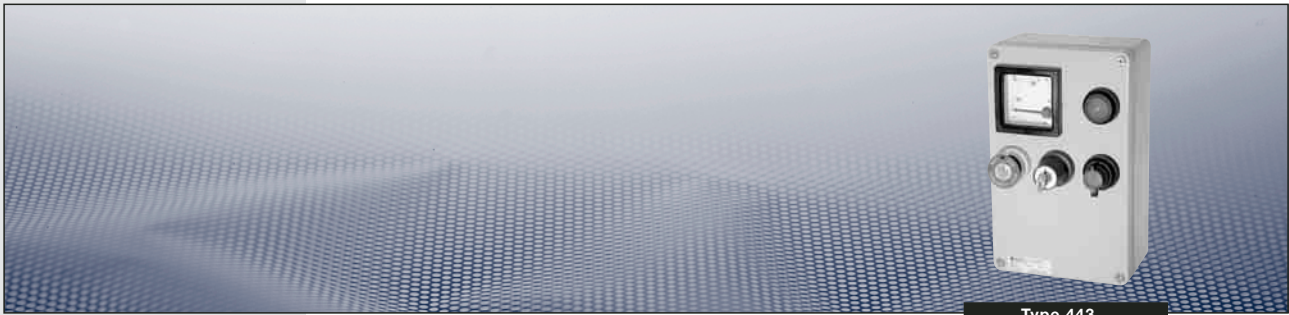
Ordering code

	A	B	C	D
Designation:	Control unit	Components	Accessories	Cable entries



Distance between centres
40, 50 and 60 mm





Type 443...

ORDERING EXAMPLE

| Control station light alloy |

6.85

Ordering code

	A	B	C	D
Designation:	Control unit	Components	Accessories	Cable entry

Example for ordering code

Code	Moun- ting area	Components	Ordering code	Description
„A“		Control station, Typ 443 35 with wiring (13 connectors)	A06 443 35 50 013	P. 6.45
„B“	1-3	terminal rail with: 11 x Ex-e terminals UK3 N, 2 x PE-terminals 4 mm ²	B01-03 KLM 1 A 11 02	P. 6.76 + 6.77
	4	Mushroom-head pushbutton EMERGENCY STOP 1 NO + 1 NC, with key release	B04 SGT 0 15 1 1 3	P. 6.60 + 6.61
	5	Key switch 2 NO, Switch mechanism 5, label „I-0-II“	B05 SLS 5 05 01	P. 6.58 + 6.59
	6	Key switch 1 NO + 1 NC, lockable in all positions and key removable	B06 SLT 0 15 10	P. 6.56 + 6.57
	7-8	Measuring instrument AM 72 n /1A, Scale 0 - 100/150%	B07-08 AM72 2 33	P. 6.70 + 6.71
	9	Signal lamp 20 V-250 V AC/DC, Lens cover: red	B09 SIL 3 10	P. 6.67
„C“	9	Contacts label with holder, Inscription: Störung	B09 ZUB 20 -STÖRUNG-	P. 6.78
„D“		Cable entries, threaded hole M20, down	GEH 1 BO M20 01	P. 6.79

Other versions on request. – for combining your individual control station, see pages 6.33 to 6.79.

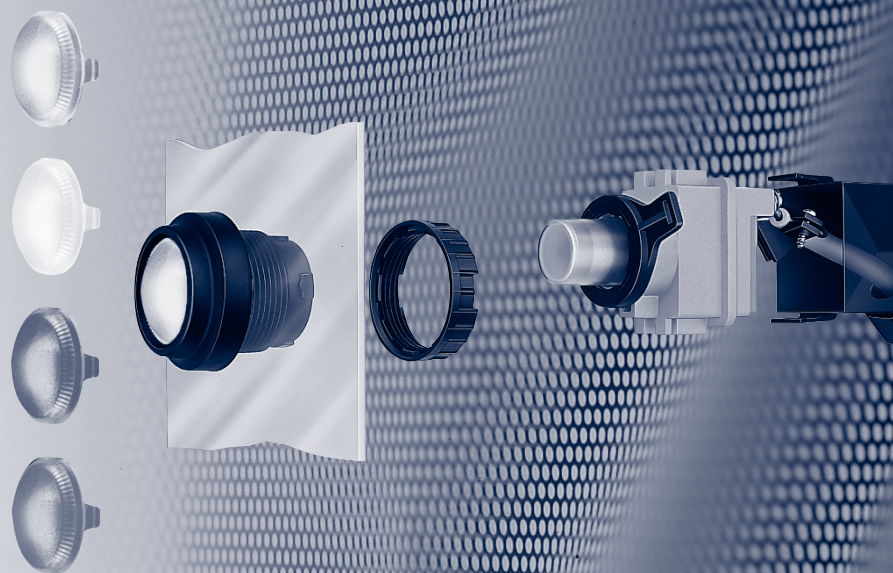
Fixing materials and accessories, see page 6.106 pp.

EX - CONTROL AND SIGNAL UNITS

For panel mounting

CEAG control and indicating elements can be integrated in panels with a wall thickness of up to 5 mm.

The CEAG components for panel mounting, such as signal lamps, pushbuttons and switches, can be instantly plugged into the control and indicating elements on the panel via bayonet-ring fitting. The single-wire installation is clear and simple. All panel-mounted apparatus can be retrofitted for cable connection with a slip-on strain relief and protective cover and is then completely certified. Planning and procurement of panel-mounted apparatus with different cable lengths is a thing of the past. The completely certified measuring instruments for direct and indirect measurement are available for different amperage ranges. The instruments are equipped with a transformer for easy adaptation to other ranges on the interchangeable scales.

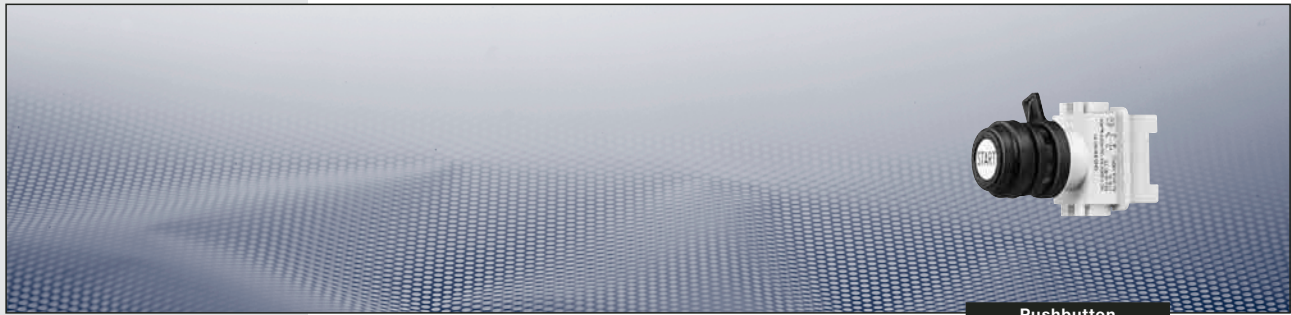


Bayonet-ring catch for quick one-hand mounting

Complete certification of built-in apparatus

Connection terminals for variable, low-cost wiring

Standard actuator-element size of Ø 30.5 mm



Pushbutton

EX - CONTROL AND SIGNAL UNITS

| Pushbutton |

6.87

Technical data

Pushbutton for panel mounting type 418 811

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC EEx de IIC T6
EC-Type Examination Certificate	
without protective cover	PTB 97 ATEX 1081 U
with protective cover	PTB 99 ATEX 1034 *
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC 1	400 V/16 A
Switching capacity AC 11	400 V/ 4 A
with gold contact points	max. 400 mA
Terminal	2 x 2.5 mm ²
Weight	approx. 0.20 kg

Ordering code

Code	A	B	C
Designation:	Component	Contact	Label
„A“ Pushbutton			
	GHG 418 811		
„B“ Contact			
	Contact	Code	Contact Code
Silver contacts	2 Ö 3	2 S 4	1 NO + 1 NC 5
Gold contacts	2 Ö 6	2 S 7	1 NO + 1 NC 8
„C“ Label			
	Inscription	Code	Inscription Code
	0, I, Start, Stop	001 0	002
	I	003 I I	004
	☹	005 STOP	006
	START	007 NOT-AUS	008
	LANGSAM	009 SCHNELL	010

For further labels, please see under accessories on page 6.112.

Example for ordering code

Contact system	Label	Order No.
		A B C

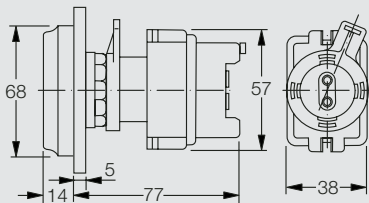
Pushbutton with silver contact points

Version without protective cover with neoprene seal

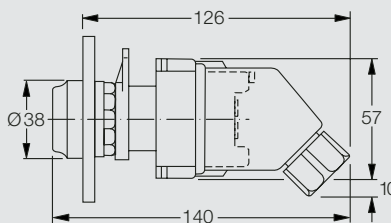
1 NO + 1 NC	„0“, „I“, „START“, „STOP“	GHG 418 811 5 R0 001
2 NC	„0“, „I“, „START“, „STOP“	GHG 418 811 3 R0 001
2 NO	„0“, „I“, „START“, „STOP“	GHG 418 811 4 R0 001

* If protective covers are used, the components are completely certified.

Other versions on request.



Pushbutton without protective cover



Pushbutton with protective cover

Code 13



2 NC

Code 14

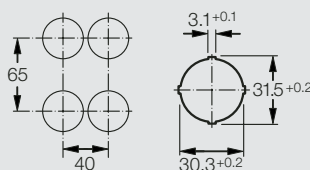


2 NO

Code 15



1 NO + 1 NC



Minimum distances

Dimensions in mm



COOPER Crouse-Hinds

COOPER CROUSE-HINDS GMBH

6.87

1

2

3

4

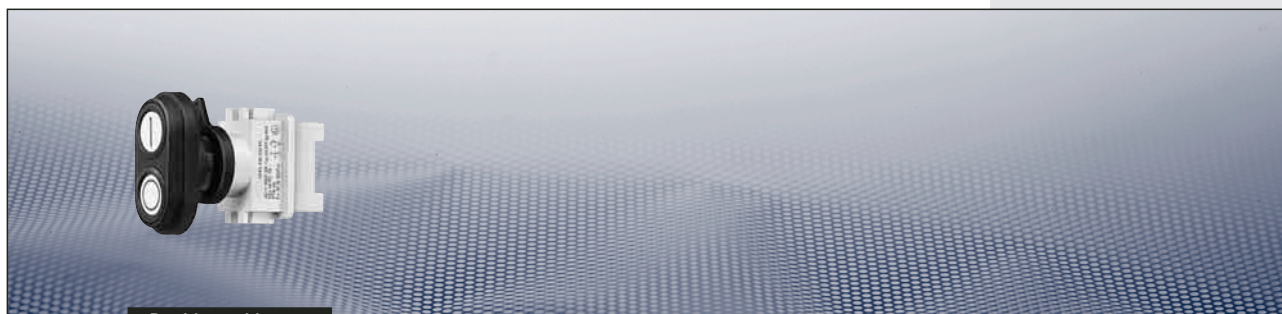
5

6

7

8

9



Double pushbutton

6.88

EX - CONTROL AND SIGNAL UNITS

| Double pushbutton |

Technical data

Double pushbutton, for panel mounting type 418 814

Marking to 94/9/EC	II 2 G
Type of protection	EEx de IIC EEx de IIC T6
EC-Type Examination Certificate	
without prot. cover	PTB 97 ATEX 1081 U
with prot. cover	PTB 99 ATEX 1034*
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC 1	400 V/16 A
Switching capacity AC 11	400 V/ 4 A
with gold contact points	max. 400 mA
Terminal	2 x 2.5 mm ²
Weight	approx. 0.20 kg

Ordering code

Code	A	B	C1 on top	C2 on bottom
Designation:	Component	Contact	Label	
„A“ Double pushbutton GHG 418 814				
„B“ Contact				
	Contact	Code	Contact	Code
Silver contacts	2 NC 3	2 NO 4	1 NO + 1 NC 5	
Gold contacts	2 NC 6	2 NO 7	1 NO + 1 NC 8	
„C“ Label				
	Inscription	Code	Inscription	Code
	0, I, Start, Stop	01 0		02
	I	03 II		04
	STOP	05 STOP		06
	START	07 NOT-AUS		08
	LANGSAM	09 SCHNELL		10

For further labels, please see under accessories on page 6.112.

Example for ordering code

Contact system	Label	Order No.
		A B C1 C2

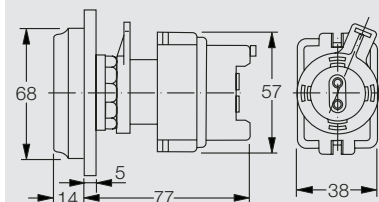
Double pushbutton with silver contact points

Version without protective cover with neoprene seal

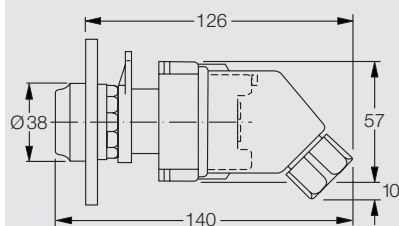
1 NO + 1 NC	„0“, „I“, „START“, „STOP“	GHG 418 814 5 R00 01
2 NO	„0“, „I“, „START“, „STOP“	GHG 418 814 3 R00 01
2 NC	„0“, „I“, „START“, „STOP“	GHG 418 814 4 R00 01

* If protective covers are used, the components are completely certified.

Other versions on request.



Double pushbutton without protective cover



Double pushbutton with protective cover

Code 3/6



2 NC

Code 4/7

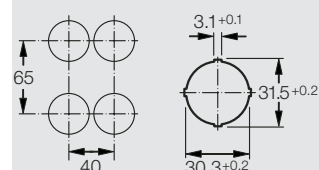


2 NO

Code 5/8

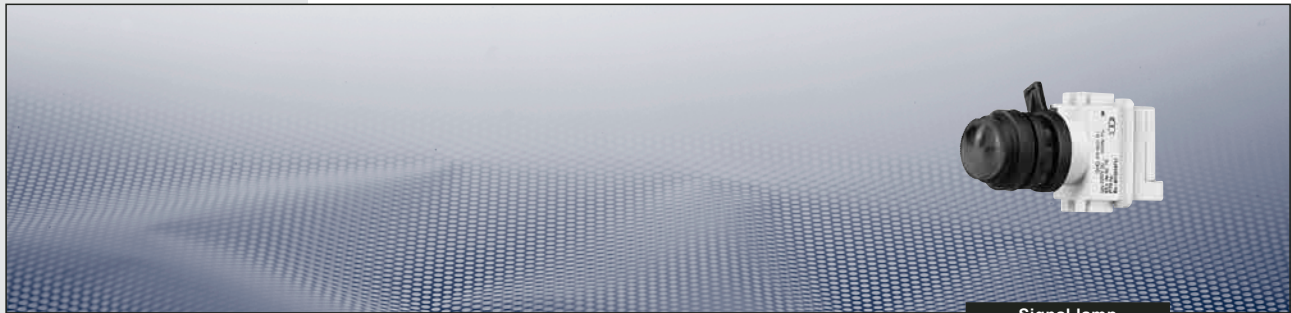


1 NO + 1 NC



Minimum distances

Dimensions in mm



Signal lamp

EX - CONTROL AND SIGNAL UNITS

6.89

| Signal lamp |

Technical data

Signal lamp, for panel mounting type 418 8170

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC EEx d ia IIC EEx de IIC T6
EC-Type Examination Certificate	
without protective cover	PTB 98 ATEX 1040 U
with protective cover	PTB 99 ATEX 1034 *
Rated voltage	20 V to 250 V AC/DC 10 V to 28 V DC ¹⁾ 12 V to 30 V AC/DC
Input current I _e	approx. 4 - 15 mA max. 25 mA (DC) max. 24 mA
Terminal	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Ordering code

Code	A	B
Designation:	Component	Voltage
„A“ Signal lamp	GHG 418 8170	
„B“ Voltage	Value	Code
	20 V - 250 V AC/DC	51 (universal-voltage variant)
	18 V - 30 V DC (Ex-i) ¹⁾	52 (Ex-i-variant for intrinsically safe circuits)
	12 V - 24 V AC/DC	53 (low-voltage variant)

Example for ordering code

Version	Order No.
	A B

Signal lamp

Version without protective cover with lens cover yellow, red, green and white

20 V - 250 V AC/DC	GHG 418 81 70 R0051
18 V - 30 V DC (Ex-i) ¹⁾	GHG 418 81 70 R0052
12 V - 24 V AC/DC	GHG 418 81 70 R0053

* If protective covers are used, the components are completely certified.

Other versions on request..

For accessories, please see page 6.110 pp.

¹⁾ Supply by valve-driver components, e.g., with data:

U₀ = 20 V - 28 V DC with R_i = 200 Ω - 500 Ω or

U₀ = 10 V - 18 V DC with R_i = 100 Ω - 200 Ω

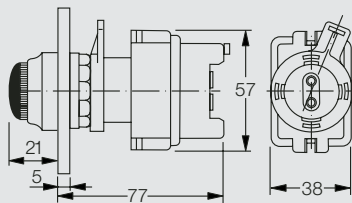
Typically used CEAG valve-driver components:

- LB 2104, LB 2112, LB 2113

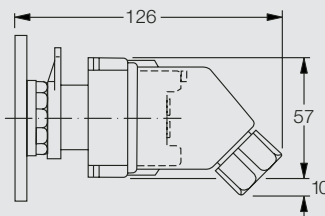
- FB 2204, FB 2212, FB 2213

- Type 6/915-7 / - Type 7/915-7 / - Type 4/915-7

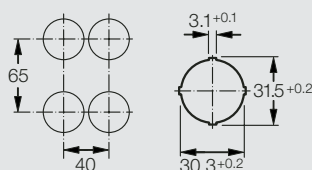
No effective C_i and L_i values.



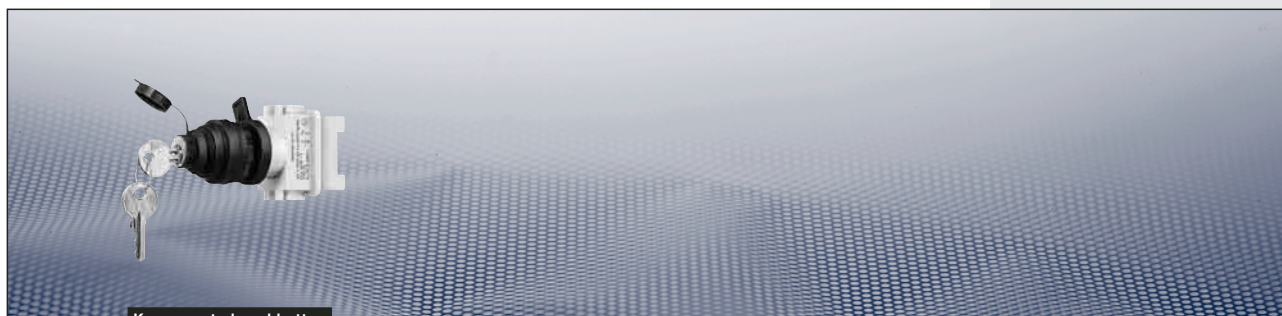
Signal lamp
without protective cover



Signal lamp
with protective cover



Minimum distances



Key operated pushbutton

EX - CONTROL AND SIGNAL UNITS

Key operated pushbutton

Technical data

Key switch, for panel mounting type 418 812

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC EEx de IIC T6
EC-Type Examination Certificate	
without protective cover	PTB 97 ATEX 1081 U
with protective cover	PTB 99 ATEX 1034 *
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC 1	400 V/16 A
Switching capacity AC 11	400 V/ 4 A
with gold contacts	max. 400 mA
Terminal	2 x 2.5 mm ²
Weight	approx. 0.25 kg

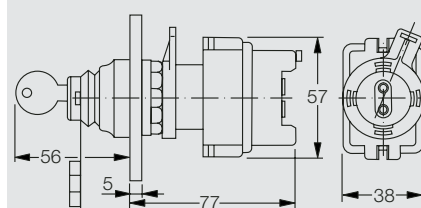
Ordering code

Code	A	B	C
Designation:	Component	Contact	Function
„A“ Key switch	GHG 418 812		
„B“ Contact	Contact	Code	Contact Code
Silver contacts	2 NC	3	2 NO 4
Gold contacts	2 NC	6	2 NO 7
„C“ Function	Not depressed	Key	Depressed Key Code
	lockable	removable	lockable not removable 11
	lockable	removable	not lockable not removable 12
	lockable	not removable	lockable removable 13
	not lockable	not removable	lockable removable 14
	not lockable	removable	lockable autom. Removable 15
	lockable	removable	lockable removable 10

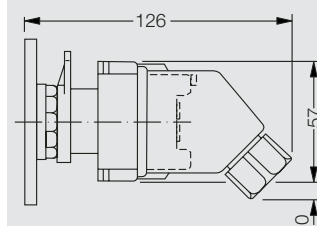
* If protective covers are used, the components are completely certified.

Standard contact system: „CEAG 1“ | Other contact systems on request.

For accessories, please see page 6.110 pp.

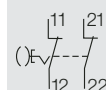


Key switch
without protective cover



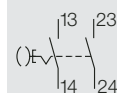
Key switch
with protective cover

Code 3/6



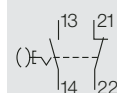
2 NC

Code 4/7

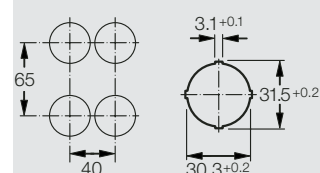


2 NO

Code 5/8

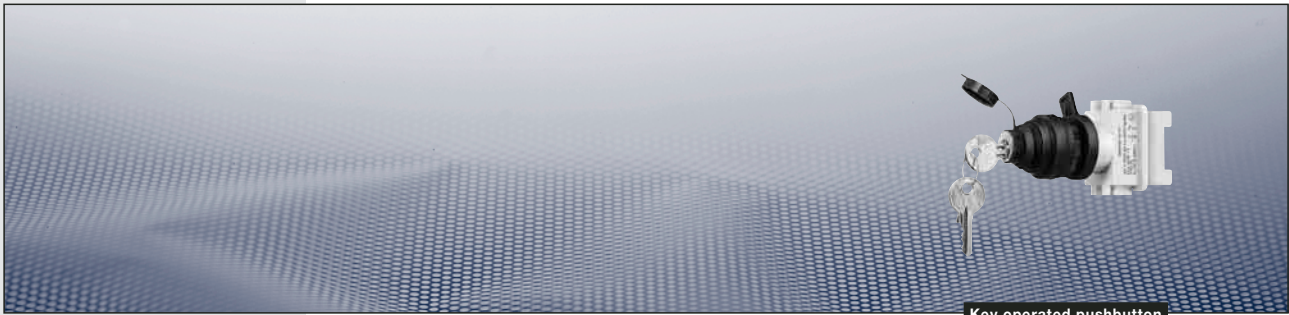


1 NO + 1 NC



Minimum distances

Dimensions in mm



Key operated pushbutton

EX - CONTROL AND SIGNAL UNITS

Key operated pushbutton

6.91

Example for ordering code

Contact system	Function		Order No.		
	OFF position	ON position	A	B	C
Key switch with silver contacts					
Version without protective cover with neoprene seal					
1 NO + 1 NC	lockable	lockable	GHG 418 812 5 R00 10		
	Key removable	Key removable			
2 NC	lockable	lockable	GHG 418 812 3 R00 11		
	Key removable	Key not removable			
2 NO	lockable	not lockable	GHG 418 812 4 R00 12		
	Key removable	Key not removable			

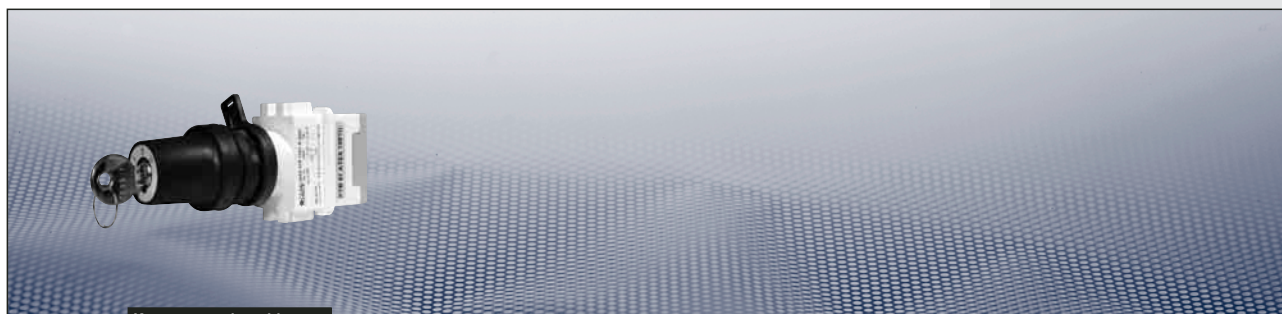
Example for ordering code

Contact system	Function		Order No.		
	OFF position	ON position	A	B	C
Key switch with gold contacts					
Version without protective cover with neoprene seal					
1 NO + 1 NC	lockable	lockable	GHG 418 812 8 R00 10		
	Key removable	Key removable			
2 NC	lockable	lockable	GHG 418 812 6 R00 11		
	Key removable	Key not removable			
2 NO	lockable	not lockable	GHG 418 812 7 R00 12		
	Key removable	Key not removable			

* If protective covers are used, the components are completely certified.

Other versions on request..

For accessories, please see page 6.110 pp.



Key operated pushbutton

6.92

EX - CONTROL AND SIGNAL UNITS

| Key operated pushbutton |

Technical data

Key switch, for panel mounting type 418 8195

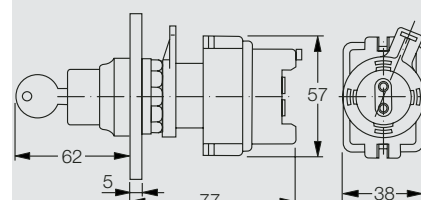
Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC EEx de IIC T6
EC-Type Examination Certificate	
without protective cover	PTB 97 ATEX 1081 U
with protective cover	PTB 99 ATEX 1034*
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC 1	400 V/16 A
Switching capacity AC 11	400 V/ 4 A
with gold contact points	max. 400 mA
Terminal	2 x 2.5 mm ²
Weight	approx. 0.25 kg

Ordering code

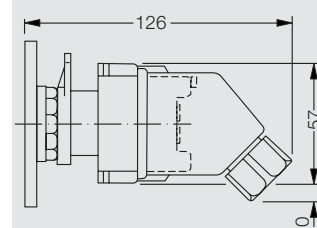
Code	A	B	C	D
Versionation:	Component	Switch mechanism	Contact	Label
„A“ Key switch	GHG 418 8195			
„B“ Switch mechanism	Version		Code	
	engaging – engaging – engaging		5	
„C“ Contact	Silver contacts		Code	
	2 NO 4			
	2 NO 5			
„D“ Label	Inscription		Code	
	I 0 II		07	
	FERN 0 ORT		08	
	HAND 0 AUTO		09	

* If protective covers are used, the components are completely certified.

Standard contact system: „CEAG 1“ | Other contact systems on request.



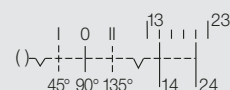
Key switch
without protective cover



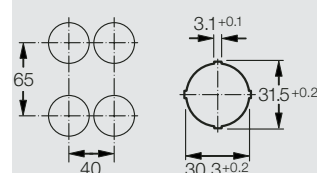
Key switch with protective cover



Code 4

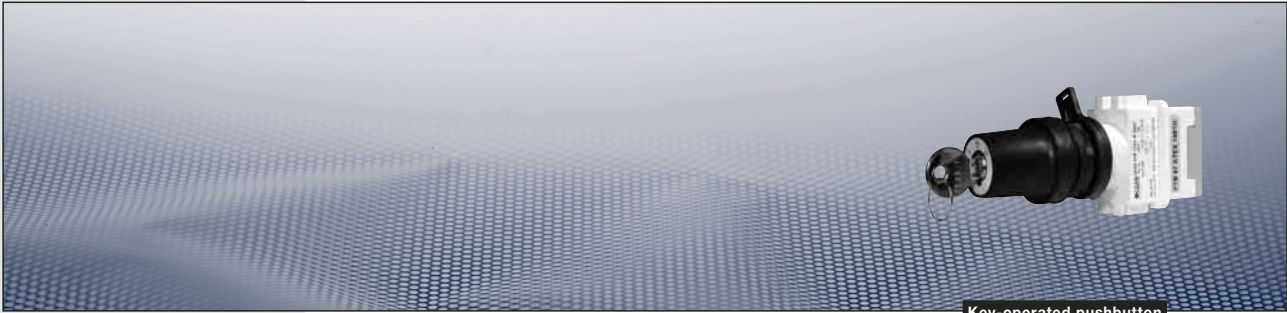


Code 5



Minimum distances

Dimensions in mm



Key-operated pushbutton

EX - CONTROL AND SIGNAL UNITS

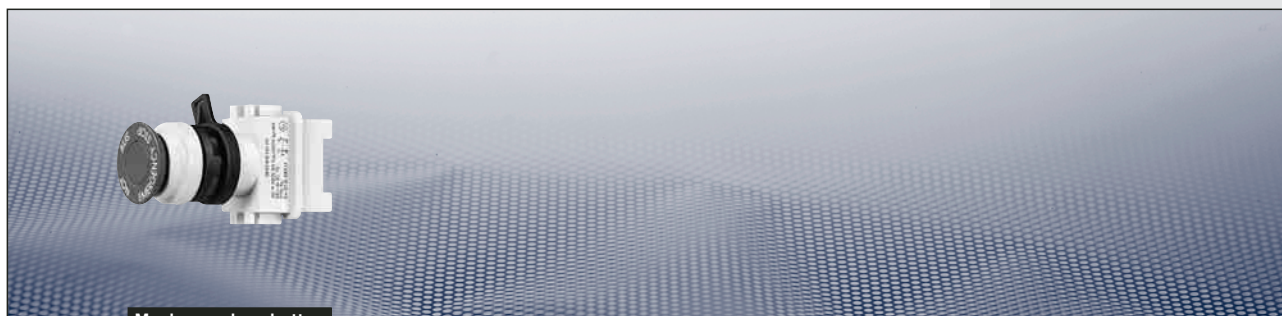
6.93

Key-operated pushbutton

Example for ordering code						
Switch	Contact	Label	Order No.			
mechanism	system		A	B	C	D
Key switch with silver contacts						
Version without protective cover						
4		I 0 II	GHG 418 8195	R	5	4 07
4		FERN 0 ORT	GHG 418 8195	R	5	4 08
4		HAND 0 AUTO	GHG 418 8195	R	5	4 09
5		I 0 II	GHG 418 8195	R	5	5 07
5		FERN 0 ORT	GHG 418 8195	R	5	5 08
5		HAND 0 AUTO	GHG 418 8195	R	5	5 09

* If protective covers are used, the components are completely certified.
For accessories, please see page 6.110 pp.





Mushroom-h.p.-button

EX - CONTROL AND SIGNAL UNITS

EMERGENCY STOP Mushroom-head pushbutton

Technical data

EMERGENCY STOP mushroom-head pushbutton, for panel mounting type 418 815

Marking to 94/9/EC:	II 2 G
Type of protection	EEx de IIC EEx de IIC T6
EC-Type Examination Certificate	
without protective cover	PTB 97 ATEX 1081 U
with protective cover	PTB 99 ATEX 1034*
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC 1	400 V/16 A
Switching capacity AC 11	400 V/ 4 A
with gold contacts	max. 400 mA
Terminal	2 x 2.5 mm ²
Weight	approx. 0.20 kg, (with key release approx. 0.25 kg)

Ordering code

Code	A	B	C	D	E
Designation:	Component	Contact	Mushroom head	Function	Label

„A“ Mushroom-head pushbutton GHG 418 815

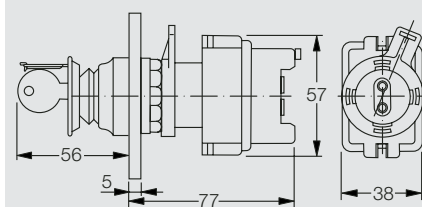
„B“ Contact	Silver contacts	Code
	2 NC	3
	2 NO	4
	1 NO + 1 NC	5

„C“ Mushroom head	Colour	Inscription	Code
	Red	German/Englisch	1
	Red	German/French	4

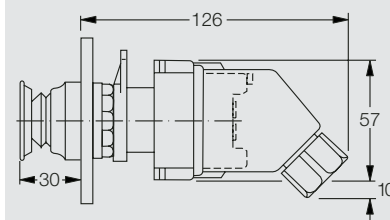
„D“ Function	Not depressed	Depressed	Unlocking	Code
	not lockable	lockable	hand release	2
	not lockable	lockable	key release	3

„E“ Label	Inscription	Code
	neutral red	00 (standard version)
	NOT-AUS EMERGENCY STOP	08

Standard contact system: „CEAG 1“ | Other contact systems on request.



Mushroom-head pushbutton without protective cover with key release

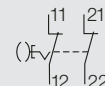


Mushroom-head pushbutton with protective cover with manual release

Hand release

Key release

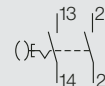
Code 3



2 NC

2 NC

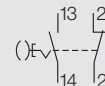
Code 4



2 NO

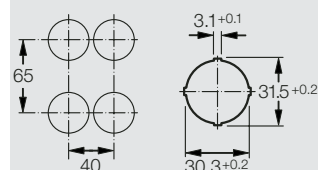
2 NO

Code 5



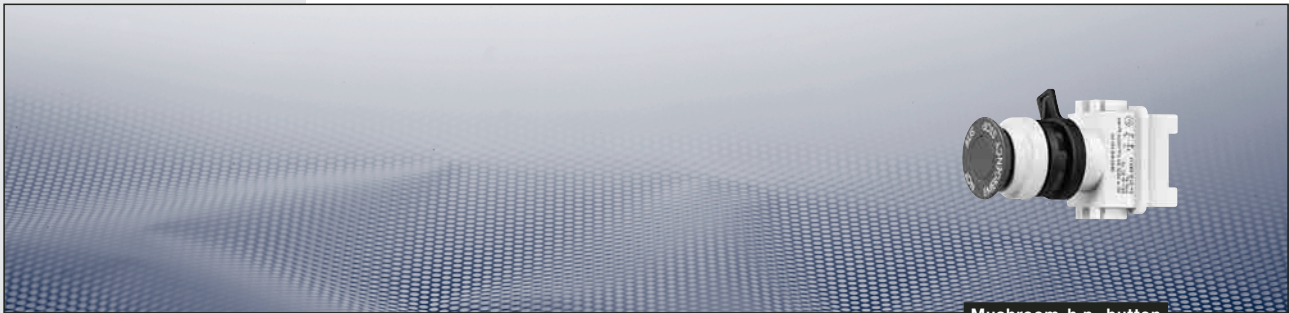
1 NO + 1 NC

1 NO + 1 NC



Minimum distances

Dimensions in mm



Mushroom-h.p.-button

EX - CONTROL AND SIGNAL UNITS

6.95

EMERGENCY-STOP Mushroom-head pushbutton

Example for ordering code

Contact	Mushroom	Inscription	Order No.				
system	head		A	B	C	D	E
Emergency Stop mushroom-head pushbutton with silver contacts							
Version without protective cover, hand release							
2 NC	red	German/Englisch	GHG 418 815	3 R 1	2	00	
	red	German/French	GHG 418 815	3 R 4	2	00	
2 NO	red	German/Englisch	GHG 418 815	4 R 1	2	00	
	red	German/French	GHG 418 815	4 R 4	2	00	
1 NO + 1 NC	red	German/Englisch	GHG 418 815	5 R 1	2	00	
	red	German/French	GHG 418 815	5 R 4	2	00	

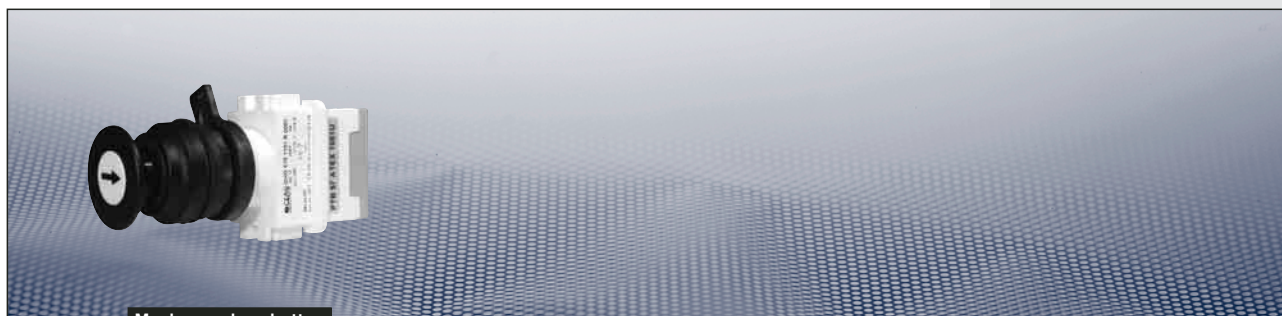
Example for ordering code

Contact	Mushroom	Inscription	Order No.				
system	head		A	B	C	D	E
Emergency Stop Mushroom-head pushbutton with silver contacts							
Version without protective cover, release							
2 NC	red	German/Englisch	GHG 418 815	3 R 1	3	00	
	red	German/French	GHG 418 815	3 R 4	3	00	
2 NO	red	German/Englisch	GHG 418 815	4 R 1	3	00	
	red	German/French	GHG 418 815	4 R 4	3	00	
1 NO + 1 NC	red	German/Englisch	GHG 418 815	5 R 1	3	00	
	red	German/French	GHG 418 815	5 R 4	3	00	

* If protective covers are used, the components are completely certified.

Other versions on request..

For accessories, please see page 6.110 pp.



Mushroom-h.p.-button

EX - CONTROL AND SIGNAL UNITS

Mushroom-head pushbutton

Technical data

Mushroom-head pushbutton, for panel mounting type 418 815

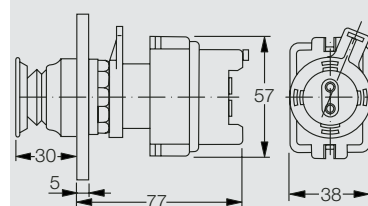
Marking to 94/9/EC:	II 2 G
Type of protection	EEx de IIC EEx de IIC T6
EC-Type Examination Certificate	
without protective cover	PTB 97 ATEX 1081 U
with protective cover	PTB 99 ATEX 1034*
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC 1	400 V/16 A
Switching capacity AC 11	400 V/ 4 A
with gold contacts	max. 400 mA
Terminal	2 x 2.5 mm ²
Weight	approx. 0.20 kg

Ordering code

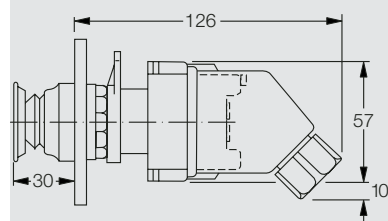
Code	A	B	C	D	E
Versionation:	Component	Contact	Mushroom head	Function	Label
„A“ Mushroom-head pushbutton		GHG 418 815			
„B“ Contact	Silver contacts	Code			
	2 NC	3			
	2 NO	4			
	1 NO + 1 NC	5			
„C“ Mushroom head Colour		Code			
	Red	1			
	Yellow	2			
	Black	3			
„D“ Function	Not depressed	Depressed	Unlocking	Code	
	not lockable	not lockable	N/A (pushbutton function)	1	
„E“ Label	Inscription	Code	Inscription	Code	
	0, I, Start, Stop	01	0	02	
	I	03	II	04	
	💡	05	STOP	06	
	START	07	NOT-AUS	08	

* If protective covers are used, the components are completely certified.

For further labels, please see accessories on page 6.112 pp.



Mushroom-head pushbutton
without protective cover



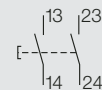
Mushroom-head pushbutton with
protective cover

Code 13



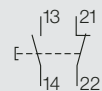
2 NC

Code 14

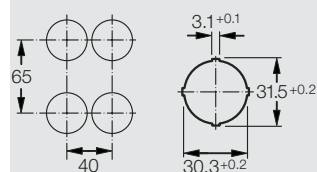


2 NO

Code 15

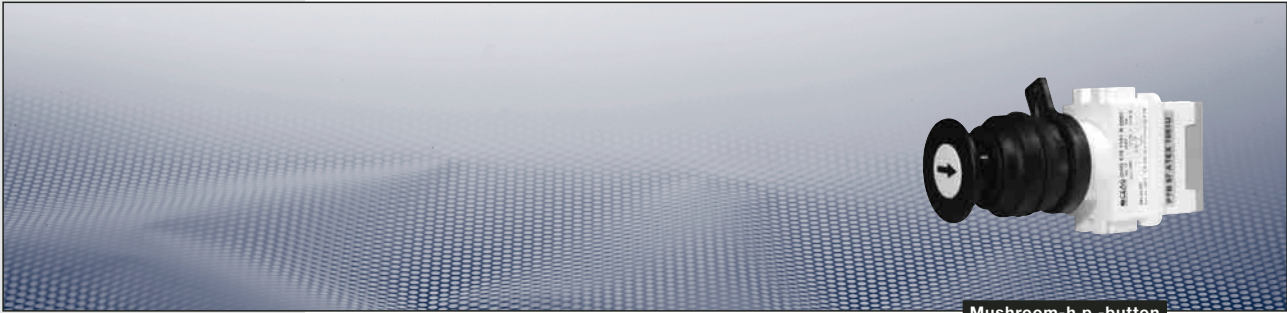


1 NO + 1 NC



Minimum distances

Dimensions in mm



Mushroom-h.p.-button

EX - CONTROL AND SIGNAL UNITS

6.97

Mushroom-head pushbutton

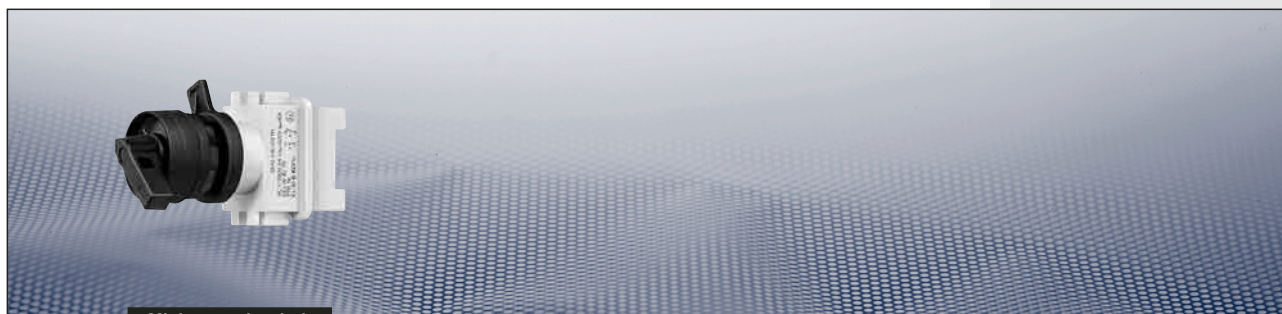
Example for ordering code							
Contact system	Mushroom head	Inscription	Order No.				
			A	B	C	D	E
Mushroom-head pushbutton with silver contacts							
Version without protective cover							
2 NC	black	0, I, START, STOP	GHG 418 815	3 R 3	1	01	
	yellow	0, I, START, STOP	GHG 418 815	3 R 2	1	01	
2 NO	black	0, I, START, STOP	GHG 418 815	4 R 3	1	01	
	yellow	0, I, START, STOP	GHG 418 815	4 R 2	1	01	
1 NO + 1 NC	black	0, I, START, STOP	GHG 418 815	5 R 3	1	01	
	yellow	0, I, START, STOP	GHG 418 815	5 R 2	1	01	

* If protective covers are used, the components are completely certified.

Other versions on request..

For accessories, please see page 6.110 pp.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9



Mini-control switch

EX - CONTROL AND SIGNAL UNITS

Mini-control switch

Technical data

Mini-control switch, for panel mounting type 418 8190

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC EEx de IIC T6
EC-Type Examination Certificate	
without protective cover	PTB 97 ATEX 1081 U
with protective cover	PTB 99 ATEX 1034*
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC 1	400 V/16 A
Switching capacity AC 11	400 V/ 4 A
with gold contact points	max. 400 mA
Terminal	2 x 2.5 mm ²
Weight	approx. 0.25 kg

Ordering code

Code	A	B	C	D
Designation:	Component	Switch mechanism	Contact	Label

„A“ Mini-control switch 418 8190

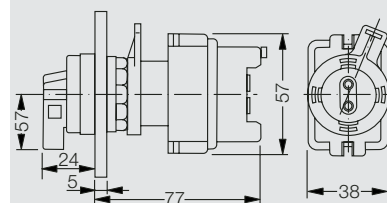
„B“ Switch mechanism

Version	Code
spring - engaging - spring	4
engaging - engaging - engaging	5
engaging - engaging	6
spring - engaging - engaging	7
engaging - engaging - spring	8

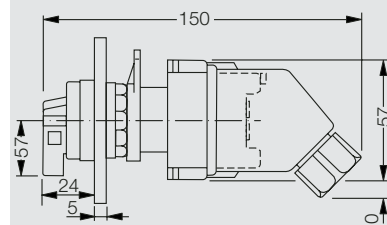
„C“ Contact

Contact arrangement	Code	Contact arrangement	Code
Silver contacts			
	0		3
	1		5
	2		7

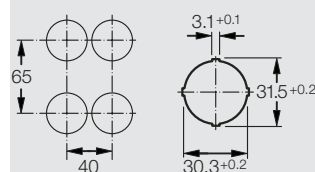
* If protective covers are used, the components are completely certified.



Mini-control switch
without protective cover

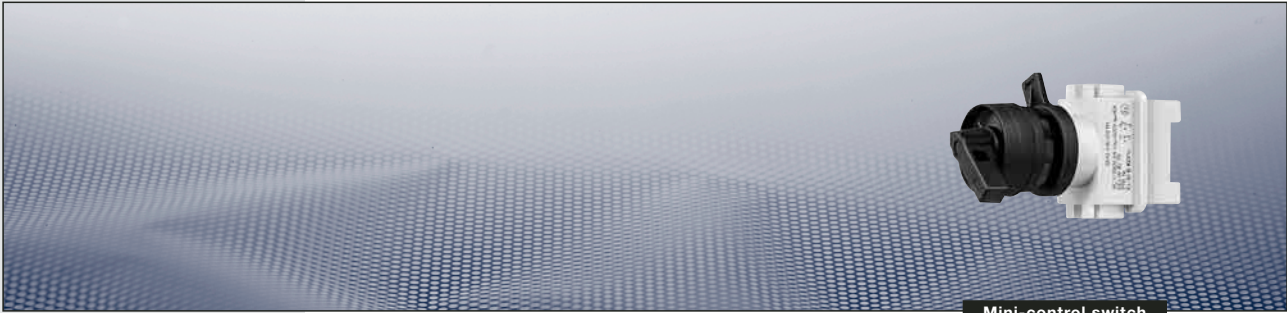


Mini-control switch
with protective cover



Minimum distances

Dimensions in mm



Mini-control switch

EX - CONTROL AND SIGNAL UNITS

Mini-control switch

6.99

Ordering code

Code	A	B	C	D
Designation:	Component	Switch mechanism	Contact	Label
„D“ Label:				
Inscription	Code		Inscription	Code
0	I	01	HAND	0
I	II	02	AUF	AUS
STOP	START	03	HAND	AUS
HAND	AUTO	04	0	I
SENKEN	HEBEN	05	AUS	AUTO
REMOTE	LOCAL	06	AUS	HAND
I	0	II	ÖRTLICH	AUS
AUS	BETRIEB	EIN	START	NORMAL
AUS	0	EIN	OFF	0
AUF	0	AB	HAND	OFF
STOP	0	START	0	IN

Example for ordering code

Move- ment	Contact system	Label	Order No. A	B	C	D
---------------	-------------------	-------	----------------	---	---	---

Control switch mit Silver contacts

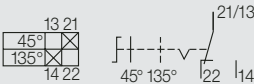
Version without protective cover

6	I	II	GHG 418 8190 R 6	0	02
6	0	I	GHG 418 8190 R 6	2	01
6	I	II	GHG 418 8190 R 6	1	02
5	I	0	GHG 418 8190 R 5	3	07
5	I	0	GHG 418 8190 R 5	5	07
8	0	I	GHG 418 8190 R 8	7	01

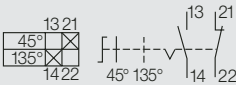
* If protective covers are used, the components are completely certified.

Other versions on request..

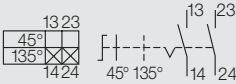
For accessories, please see page 6.110 pp.



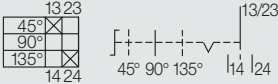
Code 0



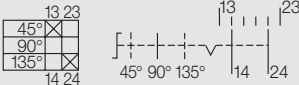
Code 1



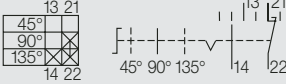
Code 2



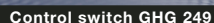
Code 3



Code 5



Code 7



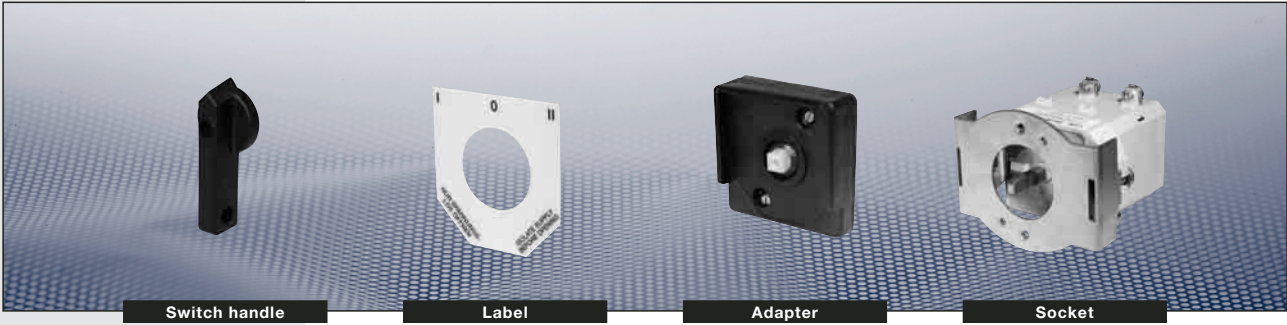
Control switch GHG 249

Control switch GHG 249, for panel mounting

Dimensions a

4 chamber level = 132 mm

038



EX - CONTROL AND SIGNAL UNITS

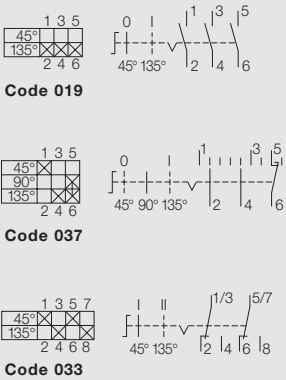
Control switch GHG 249

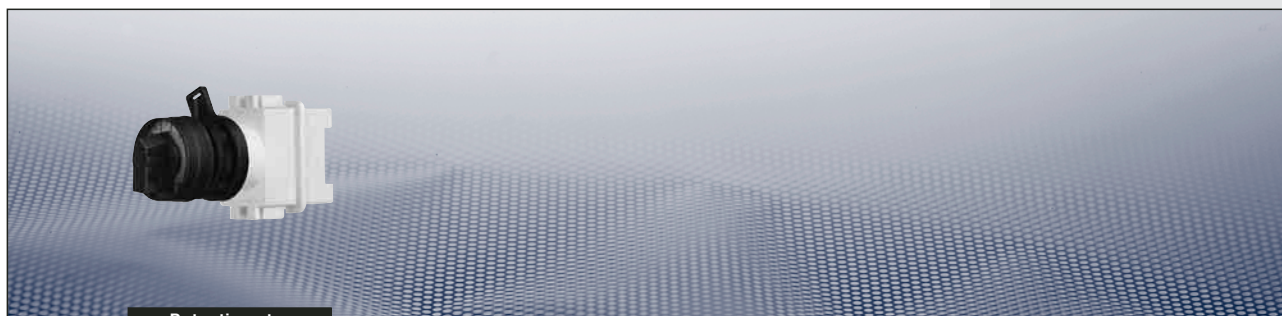
6.101

Ordering code						
Code	A		B		C	D
Designation:	Component		Switch mechanism		Contact	Label
„D“ Label:						
Inscription		Code		Inscription		Code
0		I	01	0	I	II 18
I		II	02	AUS	AUTO	EIN 19
STOP		START	03	AUS	HAND	AUTO 20
HAND		AUTO	04	ÖRTLICH	AUS	FERN 21
SENKEN		HEBEN	05	START	NORMAL	STOP 22
REMOTE		LOCAL	06	OFF	0	ON 23
I	0	II	07	HAND	OFF	AUTO 24
AUS	BETRIEB	EIN	08	0	IN	START 25
AUS	0	EIN	09	MAN		AUTO 26
AUF	0	AB	10	START		STOP 27

Example for ordering code				
Component	Move-ment	Contact system	Label	Order No.
A	B	C	D	
GHG 249	6	019	01	GHG 249 0004 R0056
GHG 249	6	037	14	GHG 249 0004 R0039
GHG 249	6	033	02	GHG 249 0004 R0084

Other versions on request..
For accessories, please see page 6.110 pp.





Potentiometer

6.102

EX - CONTROL AND SIGNAL UNITS

| Potentiometer |

Technical data

Potentiometer, for panel mounting type 418 8131

Marking to 94/9/EC	Ⓔ II 2 G
Type of protection	EEx de IIC EEx de IIC T6
EC-Type Examination Certificate	
without protective cover	PTB 97 ATEX 1081 U
with protective cover	PTB 99 ATEX 1034 *
Rated voltage	up to 250 V
Power	max. 1 W
Resistance range	100 - 10 000 Ω
Angle of rotation	270°
Scale	0 - 100%
Tolerance	±20%
Terminal	2 x 2.5 mm ²
Weight	approx. 0.20 kg

Ordering code

Code	A	B
Designation:	Component	Resistance

„A“ Potentiometer Typ 418 8131

„B“ Resistance	Value	Code	Value	Code
	100 Ω	11	2 200 Ω	17
	220 Ω	12	4 700 Ω	15
	470 Ω	13	10 000 Ω	16
	1 000 Ω	14		

Example for ordering code

Version	Order No.
A	B

Potentiometer

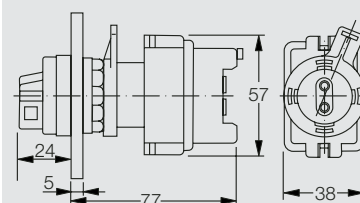
Version without protective cover, 1 Watt, 25% tolerance

100 Ω	GHG 418 8131 R00 11
220 Ω	GHG 418 8131 R00 12
470 Ω	GHG 418 8131 R00 13
1 000 Ω	GHG 418 8131 R00 14
2 200 Ω	GHG 418 8131 R00 17
4 700 Ω	GHG 418 8131 R00 15
10 000 Ω	GHG 418 8131 R00 16

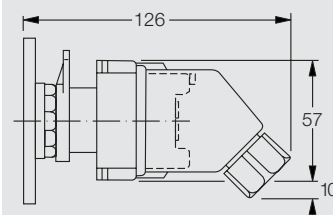
* If protective covers are used, the components are completely certified.

Other versions on request..

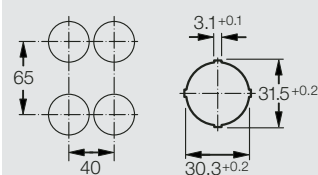
For accessories, please see page 6.110 pp.



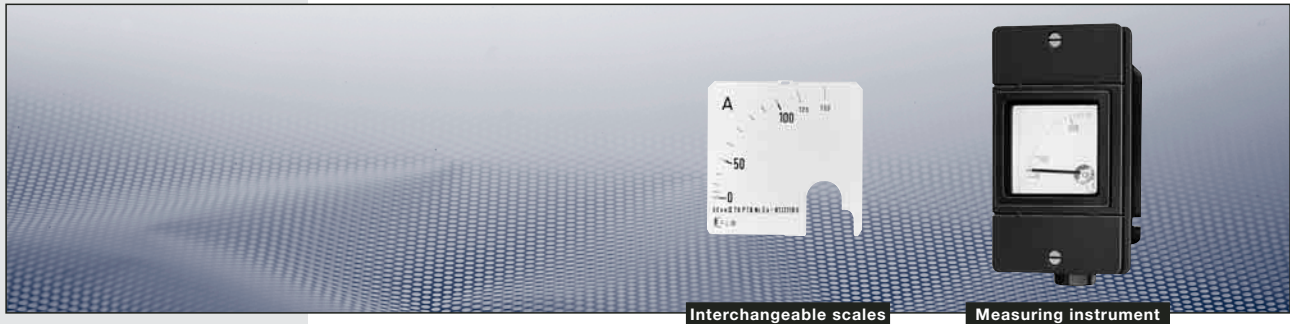
Potentiometer without protective cover



Potentiometer with protective cover



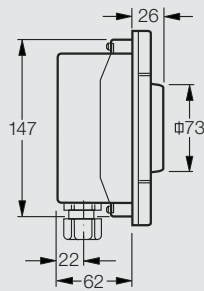
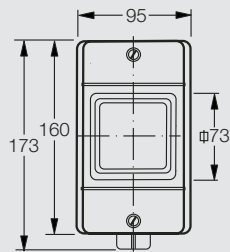
Minimum distances



EX - CONTROL AND SIGNAL UNITS

6.103

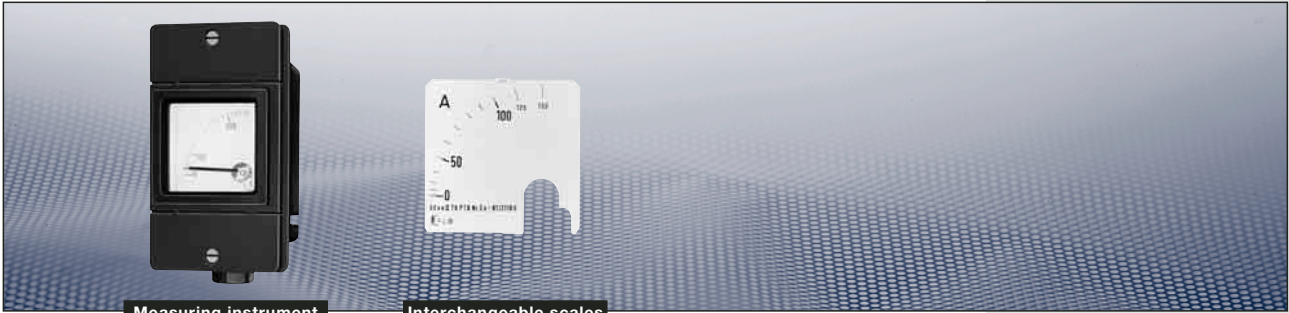
| Measuring instrument AM72 |



Technical data

Measuring instrument AM 72, Typ 412 82, complete in enclosure for panel mounting

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 48°C
Type of protection	EEx e II T6 EEx e ib IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 3117
Degree of protection EN 60529	IP 66 (listed design)
Movement	Moving iron EEx e Moving coil EEx ib IIC
Accuracy	Class 2.5 Class 1.5
Overload range	10-fold - 25 sec. 25-fold - 4 sec. 50-fold - 1 sec. indicated 1:1.5
Measuring range	n / 1A 0 - 20 mA 0 - 25 A direct 4 - 20 mA
Li	- max. 0.1 mH
Ci	- max. 0.1 nF
Ui	- max. 30 V
Ii	- max. 150 mA
Terminal	2 x 1.5 - 4 mm ²
Cable entry	1 x M25 (Ø 8 - 17 mm)
Weight	approx. 0.80 kg



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EX - CONTROL AND SIGNAL UNITS

| Measuring instrument AM72 |

Ordering code			
Code	A	B	C
Designation:	Component	Movement	Measuring range/Scale
„A“ Measuring instrument AM72		Type 412 828	
„B“ Movement	Connection type		Code
	Direct connection		1
	Ct connection n / 1 A		2
	Port 0 - 20/24 mA (scale 0-100%/120%) ¹⁾		5
	Port 4 - 20/24 mA (scale 0-100%/120%) ¹⁾		6
	Moving-coil connection 0 - 20/24 mA (scale 0-100%/120%) ¹⁾		7
	Moving-coil connection 4 - 20/24 mA (scale 0-100%/120%) ¹⁾		8

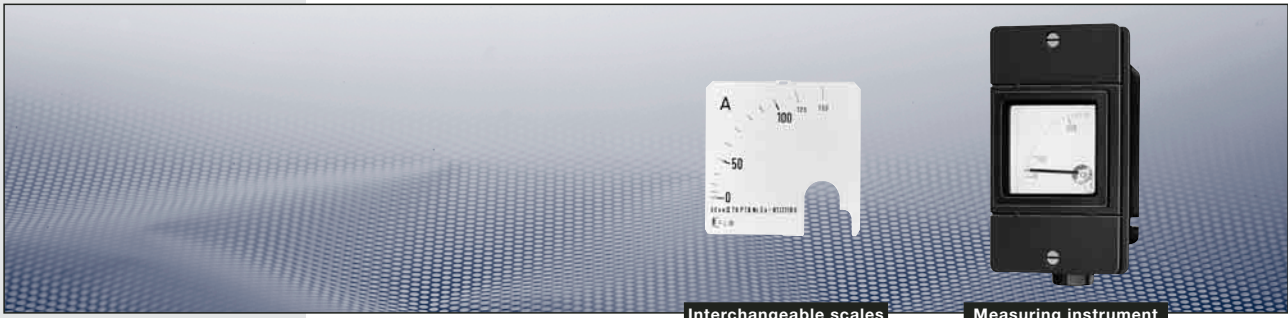
Ordering code				
„C“ Scale	Measuring range	Code	Measuring range	Code
	0 - 1 / 1.5 A ²⁾	002	0 - 75 / 112.5 A	013
	0 - 2.5 / 3.75 A ²⁾	003	0 - 100 / 150 A	014
	0 - 5 / 7.5 A ²⁾	004	0 - 150 / 225 A	015
	0 - 10 / 15 A ²⁾	005	0 - 200 / 300 A	016
	0 - 15 / 22.5 A	006	0 - 250 / 375 A	017
	0 - 20 / 30 A ²⁾	008	0 - 300 / 450 A	018
	0 - 30 / 45 A	009	0 - 400 / 600 A	019
	0 - 40 / 60 A	010	0 - 500 / 750 A	020
	0 - 50 / 75 A	011	0 - 600 / 900 A	021
	0 - 60 / 90 A	012	0 - 100% / 150%	033

¹⁾ Movements 0-20 mA/4-20 mA and with moving-coil connection are only available with scale 0-100%/120%.

²⁾ Version with direct connection or with CT connection n/1A possible.

Special scales with other measuring ranges available on request.

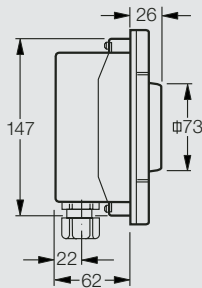
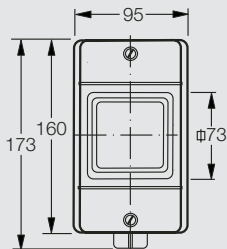
For accessories, please see page 6.110 pp.



EX - CONTROL AND SIGNAL UNITS

6.105

| Measuring instrument AM72 |



Example for ordering code

Version	Order No.
Measuring instrument AM 72, direct measurement	
Version with 1 x cable entry M25	
0 - 1 / 1.5 A	GHG 412 8281 R0002
0 - 2.5 / 3.75 A	GHG 412 8281 R0003
0 - 5 / 7.5 A	GHG 412 8281 R0004
0 - 10 / 15 A	GHG 412 8281 R0005
0 - 16 / 24 A	GHG 412 8281 R0007
0 - 20 / 24 mA 0-100% / 120% (Ri = 320 Ω)	GHG 412 8285 R0033
4 - 20 / 24 mA 0-100% / 120% (Ri = 320 Ω)	GHG 412 8286 R0035

Example for ordering code

Scale	Order No.
Measuring instrument AM 72, Ct connection n/1A	
Version with 1 x Cable entry M25	
0 - 1 / 1.5 A	GHG 412 8282 R0002
0 - 2.5 / 3.75 A	GHG 412 8282 R0003
0 - 5 / 7.5 A	GHG 412 8282 R0004
0 - 10 / 15 A	GHG 412 8282 R0005
0 - 15 / 22.5 A	GHG 412 8282 R0006
0 - 20 / 30 A	GHG 412 8282 R0008
0 - 30 / 45 A	GHG 412 8282 R0009
0 - 40 / 60 A	GHG 412 8282 R0010
0 - 50 / 75 A	GHG 412 8282 R0011
0 - 60 / 90 A	GHG 412 8282 R0012
0 - 75 / 112.5 A	GHG 412 8282 R0013
0 - 100 / 150 A	GHG 412 8282 R0014
0 - 150 / 225 A	GHG 412 8282 R0015
0 - 200 / 300 A	GHG 412 8282 R0016
0 - 250 / 375 A	GHG 412 8282 R0017
0 - 300 / 450 A	GHG 412 8282 R0018
0 - 400 / 600 A	GHG 412 8282 R0019
0 - 500 / 750 A	GHG 412 8282 R0020
0 - 600 / 900 A	GHG 412 8282 R0021
0 - 100% / 150%	GHG 412 8282 R0031

Other versions on request.

For accessories, please see page 6.110 pp.

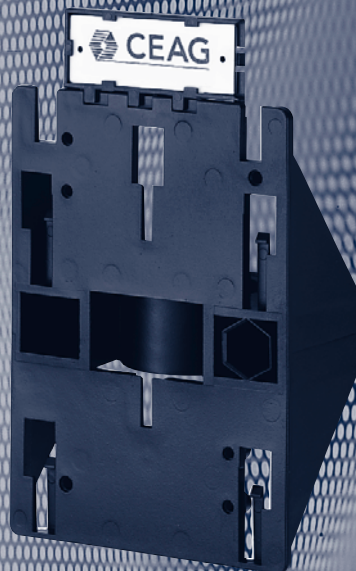
FIXING MATERIALS AND ACCESSORIES

Control stations and control units

CEAG mounting plates are the innovative answer to the users' demand to mount apparatus without tools. This intelligent and trend-setting solution for mounting switchgear on trellis work, pipes and walls was developed in close cooperation with our customers. The snap-on mounting system offers decisive cost savings. The apparatus is attached to the mounting plates without screws – in a snap and without using tools. Thus, hot-work permits are not necessary. Optional plug-in canopies protect the apparatus against aggressive environments, the sun and rain.

Locking facilities in different versions let you secure the operating elements of control units and switches against unauthorised or inadvertent actuation. The large selection of labels covers almost all needs – nevertheless, customised solutions are available on request.

Threaded entries for retrofitting later extensions with operating elements are capped with certified blanking elements.

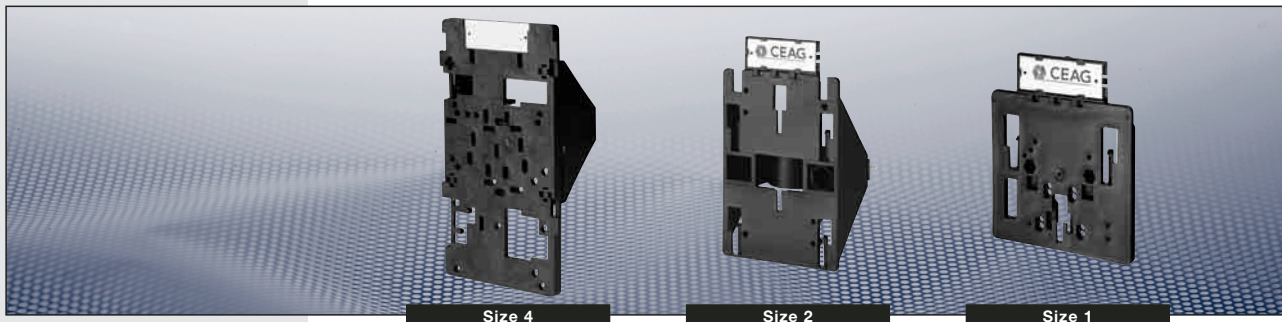


**Decisive cost savings –
in a snap**

**No hot-work permit necessary
Mounting plates can be used on walls,
trellis work and pipes**

**For universal use as apparatus
holders – in a snap**

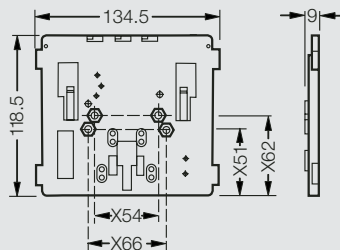
Quick mounting with snap-on system



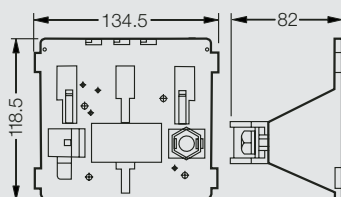
FIXING MATERIALS AND ACCESSORIES

Mounting plate

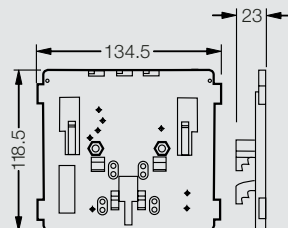
6.107



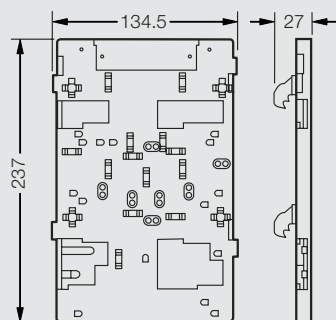
Size 1 Wall mounting



Size 1 Pipe mounting



Size 1 Trellis-work mounting



Size 4 Wall mounting

Dimensions in mm

Mounting plate for control station type 411 81

Type	Application	Mounting technique	OU	Order No.
Size 1	Wall mounting	screw-on	1	GHG 610 1953 R0101
Size 1	Pipe mounting	screw-on	1	GHG 610 1953 R0102
Size 1	Trellis-work mounting	screw-on	1	GHG 610 1953 R0103
Size 4	Wall mounting	snap-on *	1	GHG 610 1953 R0126
Size 4	Trellis-work mounting	snap-on *	1	GHG 610 1953 R0126
Size 4	Pipe mounting	snap-on *	1	GHG 610 1953 R0130
Snap-on mounting for CEAG apparatus with 5.5 mm and 11 mm mounting size per 4 pieces			10	GHG 610 1953 R0041

*snap-on with snap-on mounting 5.5 mm

Mounting plate for control station type 411 82

Type	Application	Mounting technique	OU	Order No.
Size 2	Wall mounting	screw-on	1	GHG 610 1953 R0104
Size 2	Pipe mounting	screw-on	1	GHG 610 1953 R0105
Size 2	Trellis-work mounting	screw-on	1	GHG 610 1953 R0106
Size 4	Wall mounting	snap-on*	1	GHG 610 1953 R0126
Size 4	Trellis-work mounting	snap-on*	1	GHG 610 1953 R0126
Size 4	Pipe mounting	snap-on*	1	GHG 610 1953 R0130
Snap-on mounting for CEAG apparatus with 5.5 mm and 11 mm mounting size per 4 pieces			10	GHG 610 1953 R0041

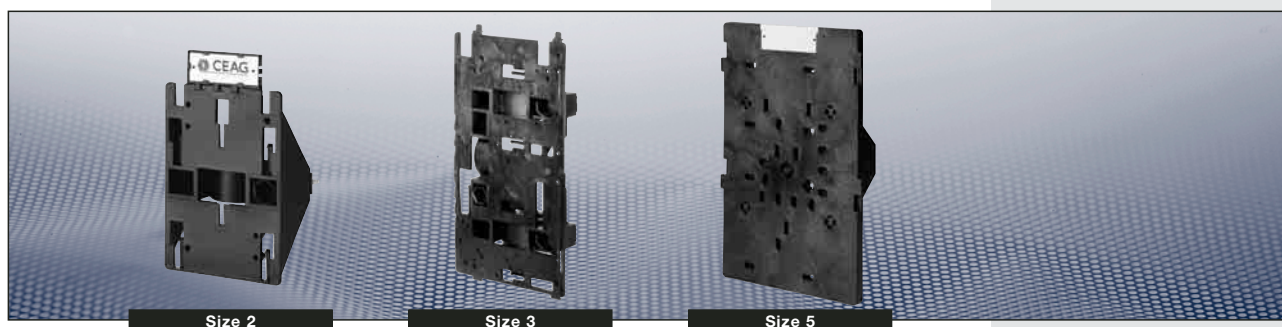
*snap-on with snap-on mounting 5.5 mm

Mounting plate for control station type 411 83

Type	Application	Mounting technique	OU	Order No.
Size 2	Wall mounting	screw-on	1	GHG 610 1953 R0104
Size 2	Pipe mounting	screw-on	1	GHG 610 1953 R0105
Size 2	Trellis-work mounting	screw-on	1	GHG 610 1953 R0106
Size 4	Wall mounting	snap-on*	1	GHG 610 1953 R0126
Size 4	Trellis-work mounting	snap-on*	1	GHG 610 1953 R0126
Size 4	Pipe mounting	snap-on*	1	GHG 610 1953 R0130
Snap-on mounting for CEAG apparatus with 5.5 mm and 11 mm mounting size per 4 pieces			10	GHG 610 1953 R0041

*snap-on with snap-on mounting 5.5 mm

Please note that we can only deliver in the ordering units (OU) stated in the tables above.



6.108

FIXING MATERIALS AND ACCESSORIES

| Mounting plate |

Mounting plate for control station type 432 00

Type	Application	Mounting technique	OU	Order No.
Size 2	Wall mounting	screw-on	1	GHG 610 1953 R0104
Size 2	Pipe mounting	screw-on	1	GHG 610 1953 R0105
Size 2	Trellis-work mounting	screw-on	1	GHG 610 1953 R0106
Size 5	Wall mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Trellis-work mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Pipe mounting	snap-on *	1	GHG 610 1953 R0132
Snap-on mounting for CEAG apparatus with 5.5 mm and 11 mm mounting size per 4 pieces			10	GHG 610 1953 R0041

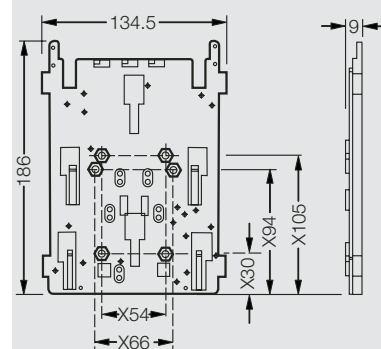
*snap-on with snap-on mounting 5.5 mm

Mounting plate for control station type 434 00

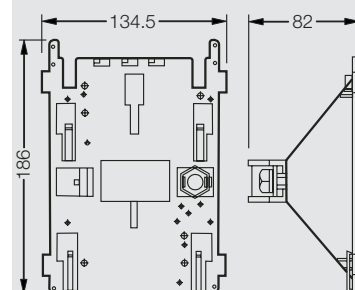
Type	Application	Mounting technique	OU	Order No.
Size 3	Wall mounting	screw-on	1	GHG 610 1953 R0118
Size 3	Pipe mounting	screw-on	1	GHG 610 1953 R0110
Size 3	Trellis-work mounting	screw-on	1	GHG 610 1953 R0118
Size 5	Wall mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Trellis-work mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Pipe mounting	snap-on *	1	GHG 610 1953 R0132
Snap-on mounting for CEAG apparatus with 5.5 mm and 11 mm mounting size per 4 pieces			10	GHG 610 1953 R0041

*snap-on with snap-on mounting 5.5 mm

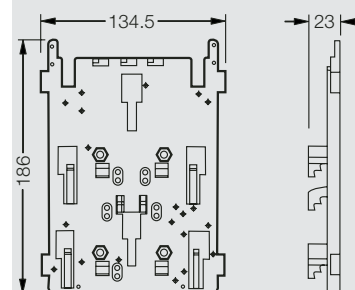
Please note that we can only deliver in the ordering units (OU) stated in the tables above.



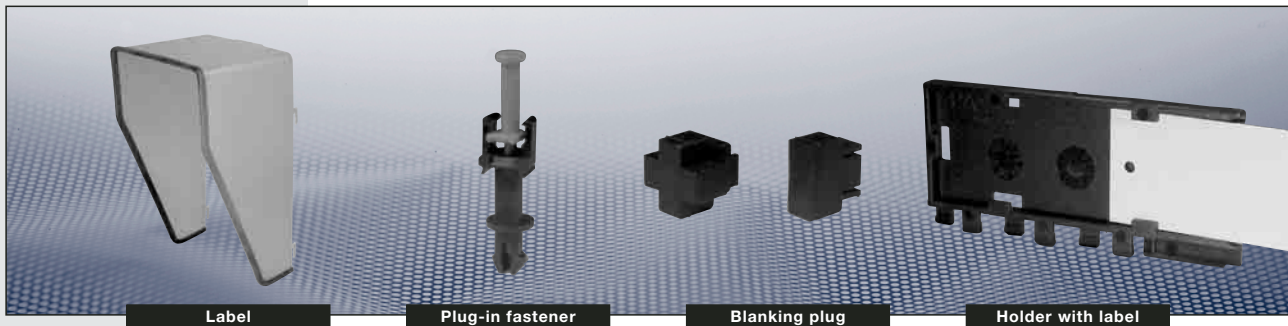
Size 2 Wall mounting



Size 2 Pipe mounting



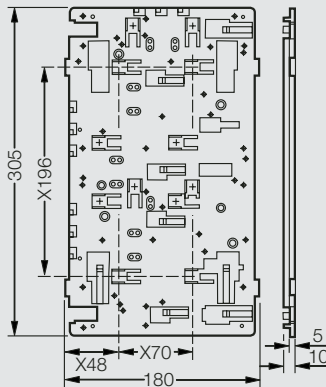
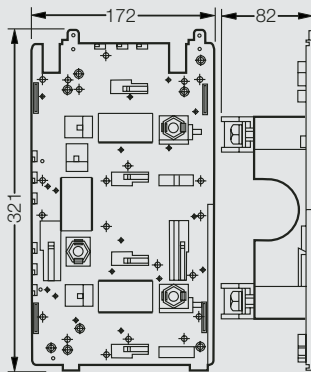
Size 2 Trellis-work mounting



FIXING MATERIALS AND ACCESSORIES

6.109

| Mounting plate |

Size 3 Wall- and
Trellis-work mounting

Size 3 Pipe mounting

Mounting plate for control unit Typ 444 01

Type	Application	Mounting technique	Order No.
Size 3	Wall mounting	screw-on	GHG 610 1953 R0118
Size 3	Pipe mounting	screw-on	GHG 610 1953 R0110
Size 3	Trellis-work mounting	screw-on	GHG 610 1953 R0118

Mounting plate for control unit Typ 448 02

Type	Application	Mounting technique	Order No.
2 x Size 3	Pipe mounting*	screw-on	GHG 610 1953 R0110

Mounting plate for control unit Typ 449 03

Type	Application	Mounting technique	Order No.
2 x Size 3	Pipe mounting*	screw-on	GHG 610 1953 R0110

Mounting plate for control unit Typ 447 04

Type	Application	Mounting technique	Order No.
2 x Size 3	Pipe mounting*	screw-on	GHG 610 1953 R0110

* observe mounting distance

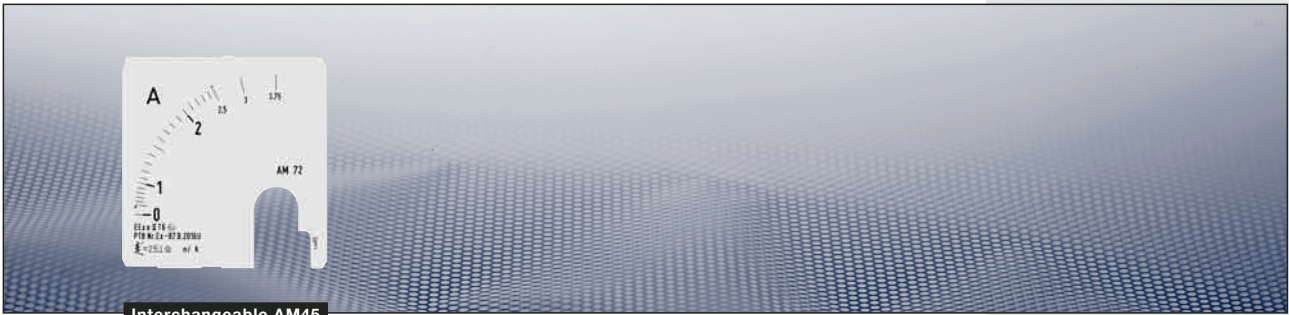
Ordering details

Type	OU	Order No.
Accessories for mounting plate		
Label holder with label (blank) for mounting plate Size 1, 2, 2A and 3	10 pieces	GHG 610 1953 R0057
Label for label holder and Mounting plate Size 4 and Size 5	10 pieces	GHG 610 1953 R0011
Blanking plug for mounting plate 1 x Size 4 and blanking plug for mounting plate 1 x Size 5	10 Set	GHG 610 1953 R0134
Snap-on mounting for CEAG apparatus with 5,5 mm and 11 mm mounting feet 1 Set = 4 pieces	10 Set	GHG 610 1953 R0041
mounting kit 1" (Ø 27 - 30 mm) for mounting plate for pipe mounting	10 pieces	GHG 610 1953 R0020

Ordering details

Type	Application	Order No.
Canopies for mounting plate		
Size 1	for mounting plate Size 1	GHG 610 1955 R0101
Size 2	for mounting plate Size 2	GHG 610 1955 R0102
Size 2A	for mounting plate Size 2A	GHG 610 1955 R0103
Size 3	for pipe mounting size 3 vertical	GHG 610 1955 R0104
Size 3A	for wall/trellis-work mounting plate Size 3 vert.	GHG 610 1955 R0105
Size 3B	for pipe mounting plate Size 3 horizontal	GHG 610 1955 R0106
Size 4	for mounting plate Size 4	GHG 610 1955 R0107
Size 5	for mounting plate Size 5	GHG 610 1955 R0108

Please note that we can only deliver in the ordering units (OU) stated in the tables above.



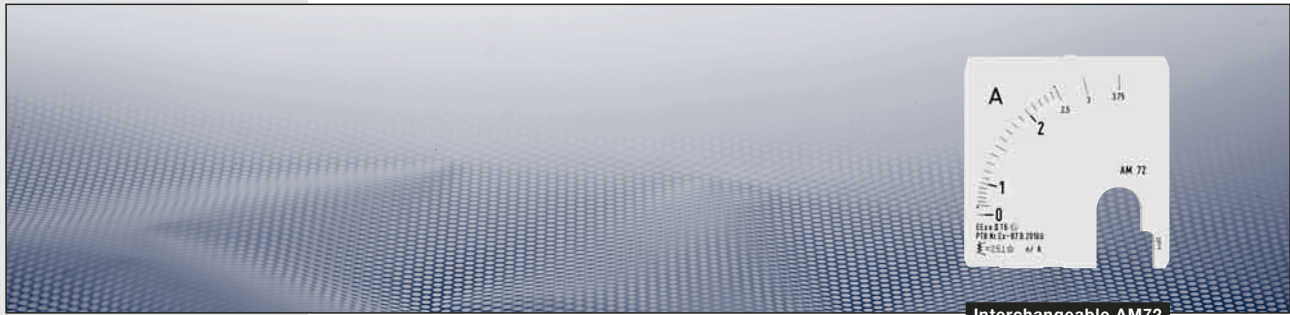
6.110

FIXING MATERIALS AND ACCESSORIES

Interchangeable AM45

Ordering details		
Scale	Package unit	Order No.
Interchangeable scales for measuring instrument AM45, CT connection n/1A		
0 - 1 / 1.5 A	10 pieces	GHG 410 1926 R0001
0 - 2.5 / 3.75 A	10 pieces	GHG 410 1926 R0002
0 - 5 / 7.5 A	10 pieces	GHG 410 1926 R0003
0 - 10 / 15 A	10 pieces	GHG 410 1926 R0004
0 - 15 / 22.5 A	10 pieces	GHG 410 1926 R0005
0 - 20 / 30 A	10 pieces	GHG 410 1926 R0006
0 - 25 / 37.5 A	10 pieces	GHG 410 1926 R0021
0 - 30 / 45 A	10 pieces	GHG 410 1926 R0007
0 - 40 / 60 A	10 pieces	GHG 410 1926 R0008
0 - 50 / 75 A	10 pieces	GHG 410 1926 R0009
0 - 60 / 90 A	10 pieces	GHG 410 1926 R0010
0 - 75 / 112.5 A	10 pieces	GHG 410 1926 R0011
0 - 100 / 150 A	10 pieces	GHG 410 1926 R0012
0 - 150 / 225 A	10 pieces	GHG 410 1926 R0013
0 - 200 / 300 A	10 pieces	GHG 410 1926 R0014
0 - 250 / 375 A	10 pieces	GHG 410 1926 R0015
0 - 300 / 450 A	10 pieces	GHG 410 1926 R0016
0 - 400 / 600 A	10 pieces	GHG 410 1926 R0017
0 - 500 / 750 A	10 pieces	GHG 410 1926 R0018
0 - 600 / 900 A	10 pieces	GHG 410 1926 R0019
0 - 100% / 150%	10 pieces	GHG 410 1926 R0020

Special scales available on request.



Interchangeable AM72

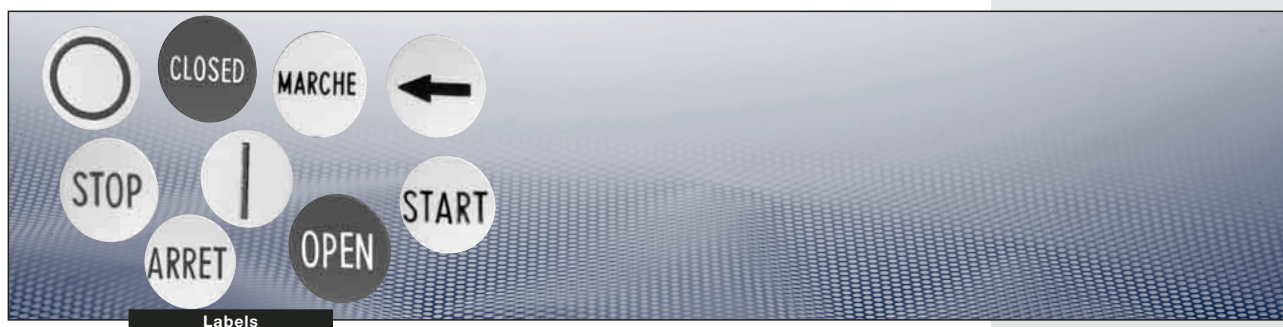
FIXING MATERIALS AND ACCESSORIES

6.111

| Interchangeable AM72 |

Ordering details		
Scale	Package unit	Order No.
Interchangeable scales for measuring instrument AM72, CT connection n/1A		
0 - 1 / 1.5 A	10 pieces	GHG 410 1928 R0001
0 - 2.5 / 3.75 A	10 pieces	GHG 410 1928 R0002
0 - 5 / 7.5 A	10 pieces	GHG 410 1928 R0003
0 - 10 / 15 A	10 pieces	GHG 410 1928 R0004
0 - 15 / 22.5 A	10 pieces	GHG 410 1928 R0005
0 - 20 / 30 A	10 pieces	GHG 410 1928 R0006
0 - 25 / 37.5 A	10 pieces	GHG 410 1928 R0052
0 - 30 / 45 A	10 pieces	GHG 410 1928 R0007
0 - 40 / 60 A	10 pieces	GHG 410 1928 R0008
0 - 50 / 75 A	10 pieces	GHG 410 1928 R0009
0 - 60 / 90 A	10 pieces	GHG 410 1928 R0010
0 - 75 / 112.5 A	10 pieces	GHG 410 1928 R0011
0 - 100 / 150 A	10 pieces	GHG 410 1928 R0012
0 - 150 / 225 A	10 pieces	GHG 410 1928 R0013
0 - 200 / 300 A	10 pieces	GHG 410 1928 R0014
0 - 250 / 375 A	10 pieces	GHG 410 1928 R0015
0 - 300 / 450 A	10 pieces	GHG 410 1928 R0016
0 - 400 / 600 A	10 pieces	GHG 410 1928 R0017
0 - 500 / 750 A	10 pieces	GHG 410 1928 R0018
0 - 600 / 900 A	10 pieces	GHG 410 1928 R0019
0 - 100% / 150%	10 pieces	GHG 410 1928 R0051

Special scales available on request.



6.112

FIXING MATERIALS AND ACCESSORIES

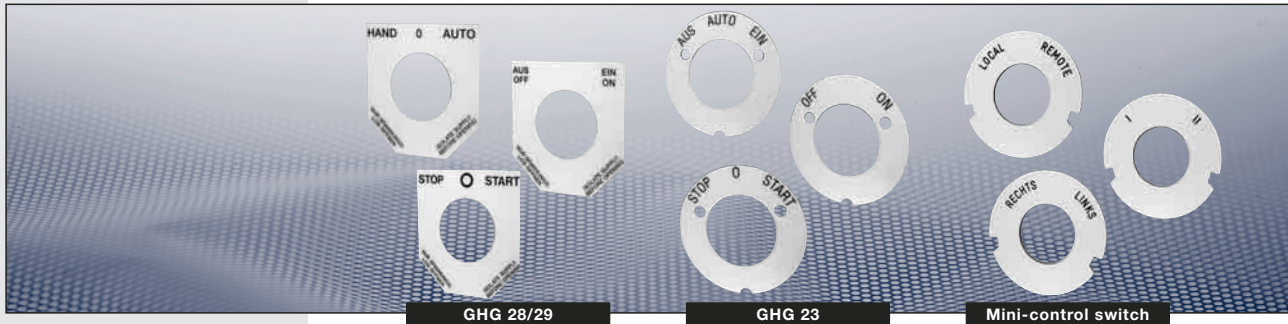
Labels for pushbuttons

Ordering code

Inscription for pushbuttons

Inscription	Code	Inscription	Code
0, I, Start, Stop	001	0	002
I	003	II	004
D	005	STOP	006
START	007	NOT-AUS	008
LANGSAM	009	SCHNELL	010
EMERG.STOP	011	—	012
ARRET	014	MARCHÉ	015
AUF	016	AB	017
Neutral white	018	Neutral green	019
0, I, Arret, Marche	020	UP	024
DOWN	025	ZU	026
ON	027	OFF	028
+	030	-	031
Neutral red	033	Neutral yellow	034
EIN	036	AUS	037
AUTO	039	HAND	050
SENKEN	051	HEBEN	052
LINKS	053	RECHTS	054
FAST	055	SLOW	056
RESET	057	OPEN	058
HALT	069	III	070
VOR	073	ZURÜCK	074
FIRE ALARM	094	FORWARD	095
REVERSE	096	RUN	100
HIGH	101	LOW	102
LP	151	HQ	152
LQ	157	STÖR. QUITT	162
SPERREN	163	ENTSPERREN	164
ENTRIEGELN	165	VERRIEGELN	166

Further labels are available on request.



GHG 28/29

GHG 23

Mini-control switch

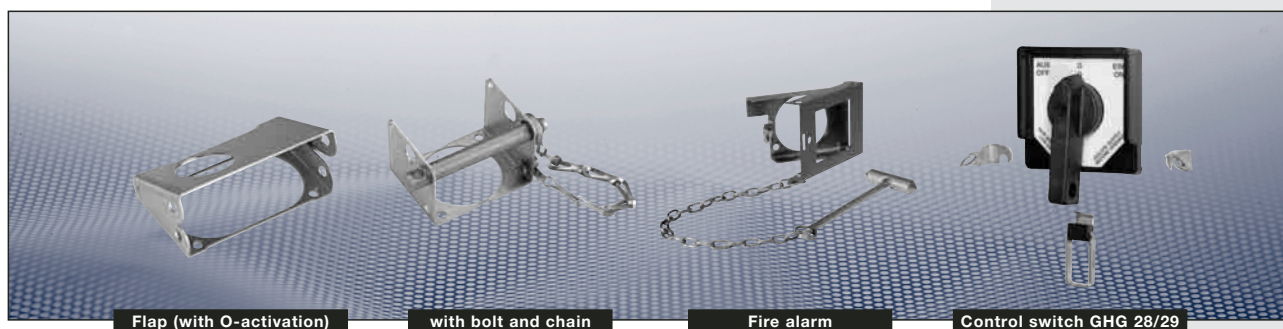
FIXING MATERIALS AND ACCESSORIES

6.113

Labels for control switches

Ordering code							
Label for control switch							
Inscription	Code			Inscription	Code		
0	I	01		0	I	II	18
I	II	02		AUS	AUTO	EIN	19
STOP	START	03		AUS	HAND	AUTO	20
HAND	AUTO	04		ÖRTLICH	AUS	FERN	21
SENKEN	HEBEN	05		START	NORMAL	STOP	22
REMOTE	LOCAL	06		OFF	0	ON	23
I	0	II	07	HAND	OFF	AUTO	24
AUS	BETRIEB	EIN	08	0	IN	START	25
AUS	0	EIN	09	MAN		AUTO	26
AUF	0	AB	10	START		STOP	27
Enriegelt	0	Verriegelt	11	HEBEN		SENKEN	28
OUT	OF	HAND	12	OFF		ON	29
LOCAL	REMOTE	AUTO	13	AUS		EIN	30
STOP	0	START	14	HAND		AUTO	31
HAND	0	AUTO	15	ON		OFF	32
AUF	AUS	ZU	16	I	II	III	33
HAND	AUS	AUTO	17				

Further labels are available on request.



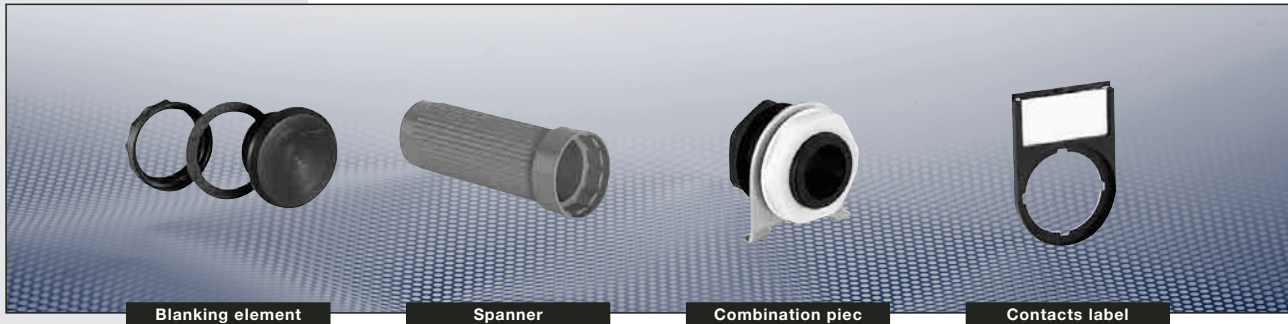
6.114

FIXING MATERIALS AND ACCESSORIES**| Locking facilities |**

Ordering details			
Version	Operating element	OU	Order No.
Locking facility			
with flap (blank)	Mushroom-head pushbutton	1	GHG 410 1901 R0124
with flap (red)	Mushroom-head pushbutton	1	GHG 410 1901 R0125
with bolt and chain (blank)	Mushroom-head pushbutton	1	GHG 410 1901 R0126
Fire alarm (red)*	Taster	1	GHG 410 1901 R0128
Fire alarm (red)	Mushroom-head pushbutton	1	GHG 410 1901 R0141
with flap (blank)	Pushbutton	1	GHG 410 1901 R0132
with flap (red)	Pushbutton	1	GHG 410 1901 R0133
with flap without „O“-activation (blank)	Double pushbutton	1	GHG 410 1901 R0134
with flap with „O“-activation (blank)	Double pushbutton	1	GHG 410 1901 R0135
with bracket (1 Set)	Switch GHG 23/28	5	GHG 440 1917 R0001

*released when window is broken – select appropriate activation element.

Please note that we can only deliver in the ordering units (OU) stated in the tables above.



Blanking element

Spanner

Combination piec

Contacts label

FIXING MATERIALS AND ACCESSORIES

6.115

| Labels for control switches |

Ordering details

Version	Ordering unit	Order No.
Label with label holder		
Blank (can be engraved)	10 pieces	GHG 410 1953 R0001
Combination piece for Control station Typ 411		
incl. twist protection and seal	1 piece	GHG 410 1921 R0001
Mounting and dismantling tool for lock nuts on operating elements		
Spanner	1 piece	GHG 410 1914 R0001
Blanking element for control units		
incl. seal and lock nut	10 pieces	GHG 410 1920 R0001
Protective cap		
for panel-mounted operating elements	5 pieces	GHG 410 1939 R0002

Please note that we can only deliver in the ordering units (OU) stated in the tables above.

EX - CONTROL SWITCHES

With and without Measuring instruments

The new GHG 29 control switch series features an easy-to-install and easy-to-connect design.

This control switch can be implemented with up to 6 contacts and for 2 to 5 switch positions. Thus, practically all applications in modern control engineering can be covered. Contacts are protected against contact to VBG 4 and have a terminal cross section of up to 6 mm² for the connection of single and multi-wire conductors. The rated current of the control switch at 500 V is 16 A. The external contours of the enclosure facilitate access to the connection terminals and thus allow easy installation.

Further installation advantages result from the snap-on/snap-off switch contact block and measuring instrument.

A labyrinth seal in the cover guarantees the degree of protection IP 66. The impact-resistant, glass-fibre-reinforced polyester enclosure material is a prerequisite for withstanding even the most rugged industrial operating conditions.

The switch can be padlocked using the integrated locking facility.

The locking position is indicated by a red pin. An interchangeable apparatus label and a neutral switch-position label are supplied with each switch.

With CEAG installation system, control switches can be installed with high cost-efficiency.

The control switches are also available on request with snap-on metal or moulded-plastic flanges.



Decisive cost saving with the CEAG mounting system

Easily accessible connection terminals

Degree of protection IP 66

Cable connection range up to 6 mm²

Integrated locking facility

Optional forced contact on request






















GHG 293

GHG 292

EX - CONTROL SWITCHES

6.117

| Type 292 | Type 293 |

Ordering code			
Code	Designation	Code	Designation
A	Control switch		
B1	Switch mechanism	B2	Contacts
C	Label		
D	Locking facility		
E1	Measuring instrument (movement)	E2	Measuring instrument (scale)
F	Cable entry		
„A“ Control switch		GHG292	
Control switch with measuring instrument		GHG293	
„B1“ Switch	Design	Code	
mechanism:	spring - latching - spring	4 	
	latching - latching - latching	5 	
	latching - latching	6 	
	spring - latching - latching	7 	
	latching - latching - spring	8 	
„B2“ Contacts:	Code	Contacts:	Code
	Silver contacts		Silver contacts
	060		034
	062		037
	065		049
	061		023
	063		019
	067		033
	011		024

Other versions as well as gold contact points are available on request.

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6.118
 EX - CONTROL SWITCHES
 | Type 292 | Type 293 |

Ordering code							
„C“ Labels for control switch							
Inscription	Code		Inscription	Code			
0	I	001	0	I	II	018	
I	II	002	AUS	AUTO	EIN	019	
STOP	START	003	AUS	HAND	AUTO	020	
HAND	AUTO	004	ÖRTLICH	AUS	FERN	021	
SENKEN	HEBEN	005	START	NORMAL	STOP	022	
REMOTE	LOCAL	006	OFF	0	ON	023	
I	0	II	007	HAND	OFF	AUTO	024
AUS	BETRIEB	EIN	008	0	IN	START	025
AUS	0	EIN	009	MAN		AUTO	026
AUF	0	AB	010	START		STOP	027
Entriegelt	0	Verriegelt	011	HEBEN		SENKEN	028
OUT	OF	HAND	012	OFF		ON	029
LOCAL	REMOTE	AUTO	013	AUS		EIN	030
STOP	0	START	014	HAND		AUTO	031
HAND	0	AUTO	015	ON		OFF	032
AUF	AUS	ZU	016	I	II	III	033
HAND	AUS	AUTO	017				

Further labels are available on request.

„D“ Locking facility	none	centre	left	right
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Code	0	1	2	3
„E1“ Movement	Connection	Code		
	Direct connection	01		
	CT connection 1n /A	02		
	Connection 0 - 20/24 mA (Scale 0-100 % / 120%)	05		
	Connection 4 - 20/24 mA (Scale 0-100 % / 120%)	06		
	Moving-coil connection 0 - 20/24 mA (Scale 0-100 % / 120%)	07		
	Moving-coil connection 4 - 20/24 mA (Scale 0-100 % / 120%)	08		



GHG 293

GHG 292

EX - CONTROL SWITCHES

| Type 292 | Type 293 |

6.119

Ordering code				
„E2“ Scale	Measuring range	Code	Measuring range	Code
	0 - 1 / 1.5 A	002	0 - 75 / 112.5 A	013
	0 - 2.5 / 3.75 A	003	0 - 100 / 150 A	014
	0 - 5 / 7.5 A	004	0 - 150 / 225 A	015
	0 - 10 / 15 A	005	0 - 200 / 300 A	016
	0 - 15 / 22.5 A	006	0 - 250 / 375 A	017
	0 - 20 / 30 A	008	0 - 300 / 450 A	018
	0 - 30 / 45 A	009	0 - 400 / 600 A	019
	0 - 40 / 60 A	010	0 - 500 / 750 A	020
	0 - 50 / 75 A	011	0 - 600 / 900 A	021
	0 - 60 / 90 A	012	0 - 100 % / 150 %	031

Special scales with other measuring ranges are available on request.

„F“ Built-in components				
	F1	F2	F3	F4
Designation:	Entry type	Entry element	Size	Number

Code		Code
„F1“ Entry type	Entry direct in enclosure	GEH
	Entry via plastic flange	FLK
	Entry via metal flange	FLM
„F2“ Entry element	only threaded entry	BO
	Threaded plug	SV
	Cable entry moulded plastic	GK
	Cable entry metal*	GM*
„F3“ Size 3	Cable entry with plug	GV
	M12, M16, M20, M25, M32, M40	M1 Ø ..
	Ø21, Ø26	
„F4“ Number 4	No. of entries	..

* For metal glands, the type of cable/entry must be stated in plain language in the order.

Example for ordering code

Designation

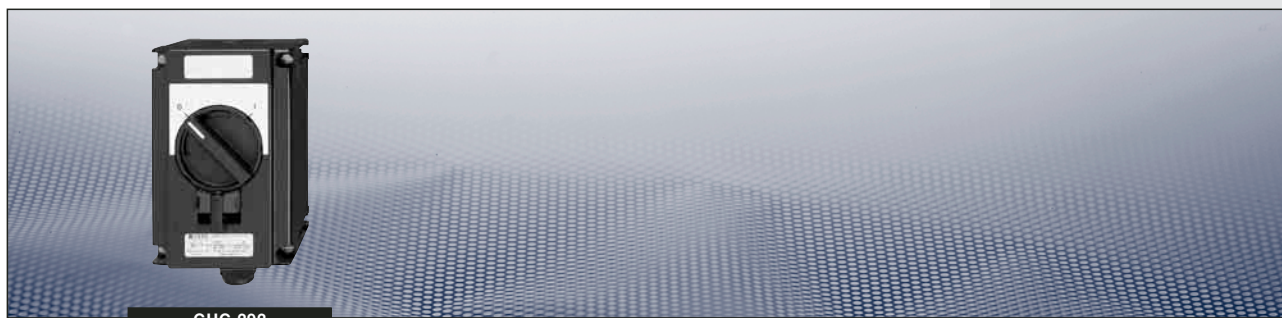
Control switch with silver contact points, Switch mechanism „5“, Contact arrangement „063“,

Label „HAND-0-AUTO“, can be locked at „0“,

Measuring instrument AM72 for Ct connection „n/1A“, Scale „0 - 50/75 A“,

Cable entry 1 x threaded entry M20 on bottom via 1 x brass flange.

Code	A	B1	B2	C	D	E1	E2	F1	F2	F3	F4
	GHG 293	/ 5 /	063 /	015 /	1 /	2 /	011 /	FLM /	BO /	M20 /	1



GHG 292

EX - CONTROL SWITCHES

Type 292

Technical data

Ex- Control switch Type 292 without measuring instrument

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 49°C
Type of protection	EEx ed IIC T6 EEx ed ia IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1163
Rated voltage	to max. 500 V (GHG 29) to max. 690 V (GHG 28)
Rated current	max. 16 A (GHG 29) 20 A (GHG 28)
Switching capacity AC-3 (GHG 29)	500 V/10 A
Switching capacity DC-13 (GHG 29)	24 V/ 6 A 60 V/0.8 A 110 V/0.5 A 230 V/0.3 A
Switching capacity AC-3 (GHG 28)	400 V/20 A 500 V/16 A 690 V/10 A
with gold contacts	max. 400 mA
Degree of protection to EN 60529	IP 66 (list version)
Connecting terminals	2 x 0.5 - 2.5 mm ² or 1 x 1.0 - 6.0 mm ²
Cable entry	1 x M25 (Ø 8 - 17 mm)*
Weight	1 Level approx. 1.10 kg 2 Levels approx. 1.25 kg 3 Levels approx. 1.40 kg

* Brass flange for metal entries available on request (except for II D at date of publication).

Ordering details

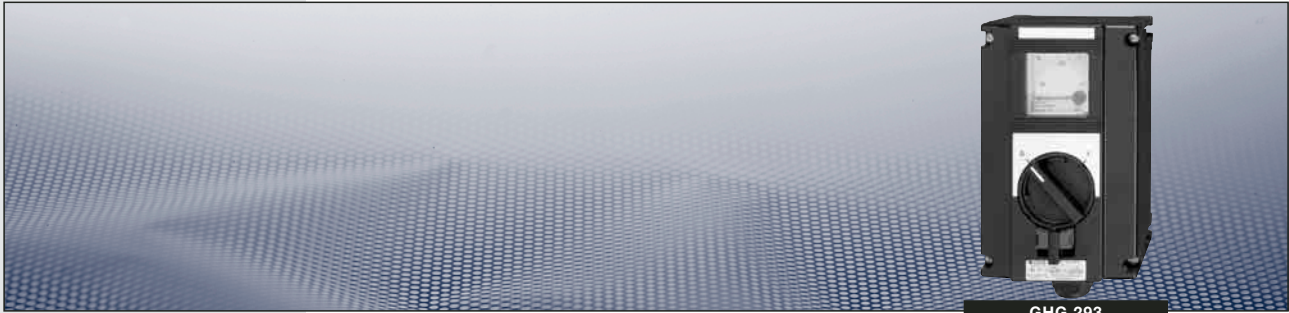
Move- ment	Code	Contact system	Movement	Order No.
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Control switch Type 292 with silver contacts

Version with locking facility at „0“-, or position „right (Code 3)“

Cable entry 1 x M25 on bottom.

6	062	
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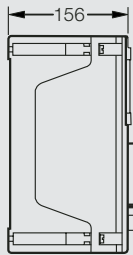
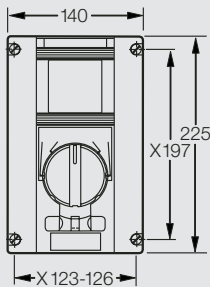


GHG 293

EX - CONTROL SWITCHES

6.121

| Type 293 |



Type 293

Technical data

Ex- Control switch Type 293 with measuring instrument

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 49°C
Type of protection	EEx ed IIC T6 EEx ed ia IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1163
Degree of protection to EN 60529	IP 66 (list version)
Switch socket	
Rated voltage	to max. 500 V (GHG 29) to max. 690 V (GHG 28)
Rated current	max. 16 A
Switching capacity AC-3 (GHG 29)	500 V/10 A
Switching capacity DC-13 (GHG 29)	24 V/ 6 A 60 V/0.8 A 110 V/0.5 A 230 V/0.3 A
Switching capacity AC-3 (GHG 28)	400 V/20 A 500 V/16 A 690 V/10 A
with gold contacts	max. 400 mA
Connecting terminals	2 x 0.5 - 2.5 mm ² or 1 x 1.0 - 6.0 mm ²
Measuring instrument	
Movement	Moving iron EEx e
Accuracy	Class 2.5
Overload range	10-fold - 25 sec. 25-fold - 4 sec. 50-fold - 1 sec. indicated 1:1.5*
Measuring range	n / 1A 0 - 25 A direct
Terminal	2 x 1.5 - 4 mm ²
Connecting terminals	2 x 0.5 - 2.5 mm ² oder 1 x 1.0 - 6.0 mm ²
Cable entry	1 x M25 (Ø 8 - 17 mm)*
Weight	1 Level approx. 1.10 kg 2 Levels approx. 1.25 kg 3 Levels approx. 1.40 kg

* Brass flange for metal entries available on request (except for II D at date of publication).

Control switches with direct indicating measuring instruments in the standard version are delivered with 2 looping terminals and PE terminal as well as M32 and M25 cable entries.

Ordering details

Move- ment	Code	Contact system	Label	Order No.
---------------	------	----------------	-------	-----------

Control switch with measuring instrument Type 293 with silver contacts

Version with locking facility in „0“-, or „left“ position.

Measuring instrument AM 72 for CT connection n/1A, Scale 0 - 100/150 %. 1 x M32 on bottom.

6	062		0	GHG 293 1000 R0001
6	065		0	GHG 293 1000 R0002

Other versions on request.

Fixing materials and accessories, see page 6.128

X = fixing dimensions

Dimensions in mm

EX - CONTROL SWITCHES

**Light alloy
Version for Zone 1**

CEAG explosion-protected control switches are made high-quality cast aluminium-silicon (AlSi). A robust plastic powder coating according to RAL 7031 protects the CEAG control switches against aggressive atmospheres and chemicals. Cover screws as well as all internal and external metal parts are made of stainless steel. These switches feature an easy-to-install and easy-to-connect design. The cam switch version allows implementation of many variants, covering almost all applications in modern control engineering. An optional locking facility lets you secure the switch against unauthorised or inadvertent actuation with a padlock.

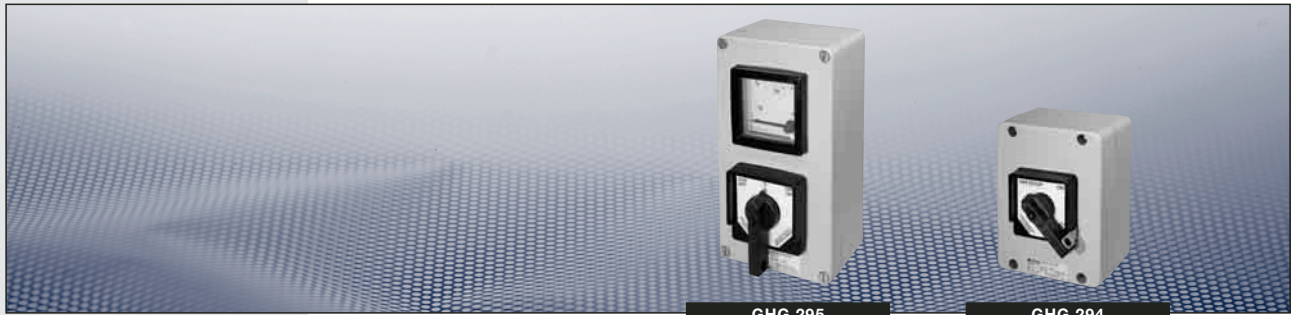
Internationally approved.



High mechanical, chemical and thermal resistance

Impact-resistant plastic powder coating

Snap-on switch holder



GHG 295

GHG 294

EX - CONTROL SWITCHES

| Type 294 | Type 295 |

6.123

Ordering code			
Code	Designation	Code	Designation
A	Control switch		
B1	Switch mechanism	B2	Contacts
C	Label		
D	Locking facility		
E1	Measuring instrument (movement)	E2	Measuring instrument (scale)
F	Cable entry		
„A“ Control switch		GHG294	
Control switch with measuring instrument		GHG295	
„B1“ Switch		Version	
mechanism:		Code	
	spring - latching - spring	4	
	latching - latching - latching	5	
	latching - latching	6	
	spring - latching - latching	7	
	latching - latching - spring	8	
„B2“ Contacts:		Contacts:	
		silver contacts	
	060		034
	062		037
	065		049
	061		023
	063		019
	067		033
	011		024

Other versions as well as gold contact points are available on request.



GHG 294

GHG 295

6.124

EX - CONTROL SWITCHES

| Typ 295 | Typ 294 |

Ordering code

„C“ Labels for control switch

Inscription	Code	Inscription	Code
0	I 001	0	II 018
I	II 002	AUS	AUTO EIN 019
STOP	START 003	AUS	HAND AUTO 020
HAND	AUTO 004	ÖRTLICH	AUS FERN 021
SENKEN	HEBEN 005	START	NORMAL STOP 022
REMOTE	LOCAL 006	OFF	0 ON 023
I	0 II 007	HAND	OFF AUTO 024
AUS	BETRIEB EIN 008	0	IN START 025
AUS	0 EIN 009	MAN	AUTO 026
AUF	0 AB 010	START	STOP 027
Entriegelt	0 Verriegelt 011	HEBEN	SENKEN 028
OUT	OF HAND 012	OFF	ON 029
LOCAL	REMOTE AUTO 013	AUS	EIN 030
STOP	0 START 014	HAND	AUTO 031
HAND	0 AUTO 015	ON	OFF 032
AUF	AUS ZU 016	I	II III 033
HAND	AUS AUTO 017		

Further labels are available on request.

„D“ Locking facility

none

centre

left

right



Code

0

1

2

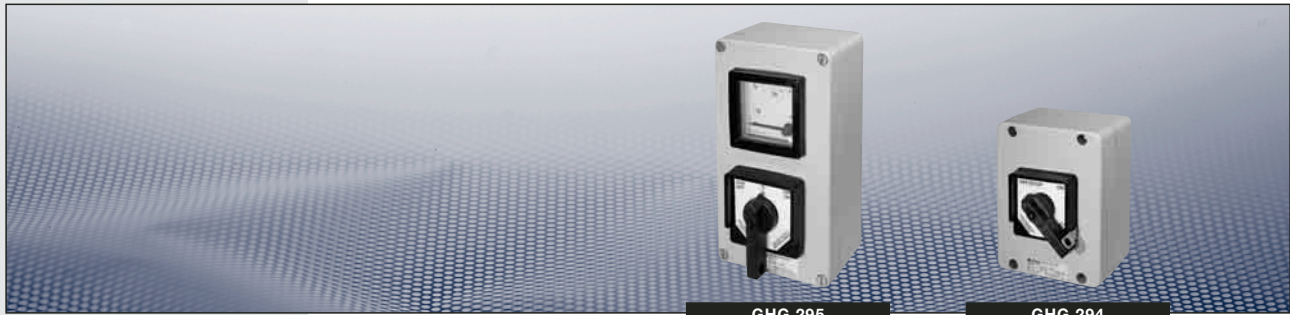
3

„E1“ Movement

Connection

Code

Direct connection	01
Ct connection 1/A	02
Connection 0 - 20/24 mA (Scale 0-100 % / 120%)	05
Connection 4 - 20/24 mA (Scale 0-100 % / 120%)	06
Moving-coil connection 0 - 20/24 mA (Scale 0-100 % / 120%)	07
Moving-coil connection 4 - 20/24 mA (Scale 0-100 % / 120%)	08



GHG 295

GHG 294

EX - CONTROL SWITCHES

| Typ 294 | Typ 295 |

6.125

Ordering code

„E2“ Scale	Measuring range	Code	Measuring range	Code
	0 - 1 / 1.5 A	002	0 - 75 / 112.5 A	013
	0 - 2.5 / 3.75 A	003	0 - 100 / 150 A	014
	0 - 5 / 7.5 A	004	0 - 150 / 225 A	015
	0 - 10 / 15 A	005	0 - 200 / 300 A	016
	0 - 15 / 22.5 A	006	0 - 250 / 375 A	017
	0 - 20 / 30 A	008	0 - 300 / 450 A	018
	0 - 30 / 45 A	009	0 - 400 / 600 A	019
	0 - 40 / 60 A	010	0 - 500 / 750 A	020
	0 - 50 / 75 A	011	0 - 600 / 900 A	021
	0 - 60 / 90 A	012	0 - 100 % / 150 %	031

Special scales with other measuring ranges are available on request.

„F“ Built-in components

	F1	F2	F3	F4
Designation:	Entry type	Entry element	Size	Number

Code		Code
„F1“ Entry type	Entry direct in enclosure	GEH
	Entry via plastic flange	FLK
	Entry via metal flange	FLM
„F2“ Entry element	only threaded entry	BO
	Threaded plug	SV
	Cable entry moulded plastic	GK
	Cable entry metal*	GM*
	Cable entry with plug	GV
„F3“ Size 3	M12, M16, M20, M25, M32, M40	M1 Ø ..
	Ø21, Ø26	
„F4“ Number 4	No. of entries	..

* For metal glands, the type of cable/entry must be stated in plain language in the order.

Example for ordering code

Designation

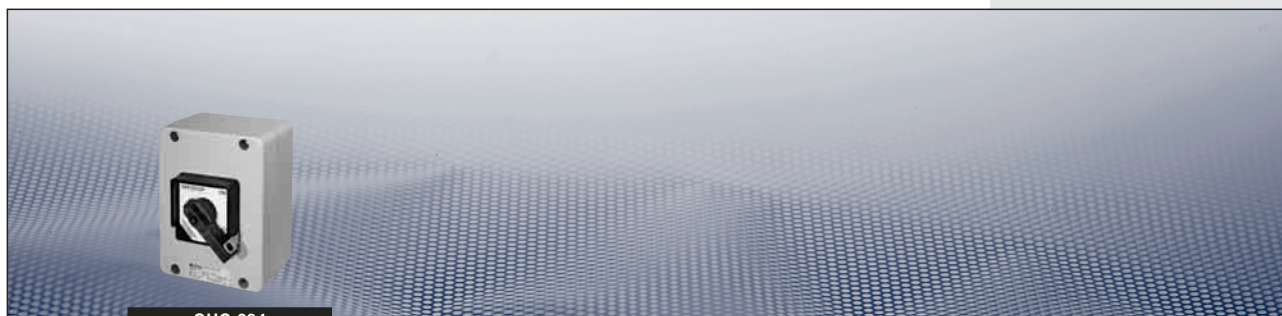
Control switch with silver contacts, Switch mechanism „5“, Contact arrangement „063“,

Label „HAND-0-AUTO“, can be locked at „0“,

Measuring instrument AM72 for CT connection „n/1A“, Scale „0 - 50/75 A“,

Cable entry 1 x threaded entry M20 on bottom via 1 x brass flange.

Code	A	B1	B2	C	D	E1	E2	F1	F2	F3	F4
	GHG 295	5	063	015	1	2	011	FLM	BO	M20	1



GHG 294

EX - CONTROL SWITCHES

| Type 294 |

Technical data

Ex- Control switch Type 294 without measuring instrument

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx ed IIC T6 EEx ed ia IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1163
Rated voltage	to max. 500 V (GHG 29) to max. 690 V (GHG 28)
Rated current	max. 16 A
Switching capacity AC-3 (GHG 29)	500 V/10 A
Switching capacity DC-13 (GHG 29)	24 V/ 6 A 60 V/0.8 A 110 V/0.5 A 230 V/0.3 A
Switching capacity AC-3 (GHG 28)	400 V/20 A 500 V/16 A 690 V/10 A
with gold contacts	max. 400 mA
Degree of protection to EN 60529	IP 66 (list version)
Connecting terminals	2 x 0.5 - 2.5 mm ² oder 1 x 1.0 - 6.0 mm ²
Cable entry	1 x M25 (Ø 8 - 17 mm)*
Weight	1 Level approx. 1.90 kg 2 Levels approx. 2.05 kg

Ordering details

Move-ment	Code	Contact system	Label	Order No.
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Control switch Typ 294 with silver contacts

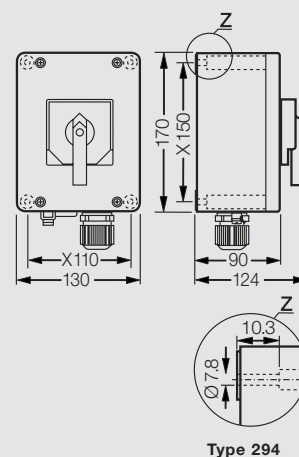
Version with locking facility in „0“-, or position „right (Code 3)“

Cable entry 1 x M25 on bottom.

6	062		0	I	GHG 294 1000 R0001
6	065		0	I	GHG 294 1000 R0002
4	067		0	I	GHG 294 1000 R0003
8	067		0	I	GHG 294 1000 R0004
4	037		0	I	GHG 294 2000 R0002
8	037		0	I	GHG 294 2000 R0003
5	024		I 0 II	II	GHG 294 2000 R0004
5	023		HAND OFF AUTO		GHG 294 2001 R0001

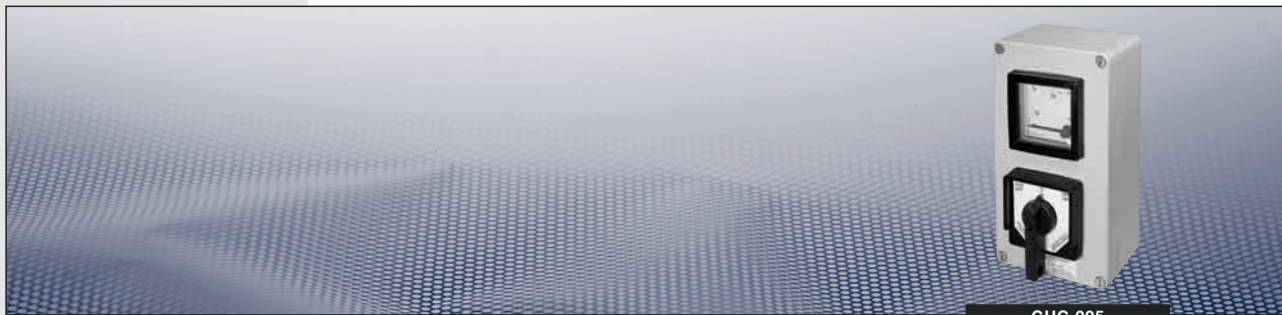
Other versions on request.

Fixing materials and accessories, see page 6.128.



X = fixing dimensions

Dimensions in mm

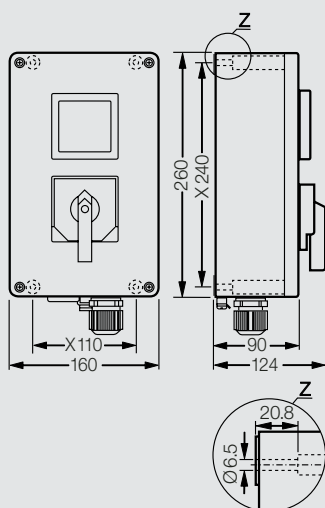


GHG 295

EX - CONTROL SWITCHES

| Type 295 |

6.127



Type 295

Technical data

Ex- Control switch Type 295 with measuring instrument

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx ed IIC T6 EEx ed ia IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1163
Degree of protection to EN 60529	IP 66 (list version)
Switch socket	
Rated voltage	to max. 500 V (GHG 29) to max. 690 V (GHG 28)
Rated current	max. 16 A
Switching capacity AC-3 (GHG 29)	500 V/10 A
Switching capacity DC-13 (GHG 29)	24 V/ 6 A 60 V/0.8 A 110 V/0.5 A 230 V/0.3 A
Switching capacity AC-3 (GHG 28)	400 V/20 A 500 V/16 A 690 V/10 A
with gold contacts	max. 400 mA
Connecting terminals	2 x 0.5 - 2.5 mm ² or 1 x 1.0 - 6.0 mm ²
Measuring instrument	
Movement	Moving iron EEx e
Accuracy	Class 2.5
Overload range	10-fold - 25 sec. 25-fold - 4 sec. 50-fold - 1 sec. indicated 1:1.5*
Measuring range	n / 1A 0 - 25 A direct
Terminal	2 x 1.5 - 4 mm ²
Connecting terminals	2 x 0.5 - 2.5 mm ² or 1 x 1.0 - 6.0 mm ²
Cable entry	1 x M25 (Ø 8 - 17 mm)*
Weight	1 Level approx. 2.90 kg 2 Levels approx. 3.05 kg

Control switches with direct indicating measuring instruments in the standard version are delivered with 2 looping terminals and PE terminal as well as M32 and M25 cable entries.

Ordering details

Move- ment	Code	Contact system	Label	Order No.
Control switch with Measuring instrument Typ 295 with silver contacts				
Version with locking facility in „0“-, or „left“ position.				
Measuring instrument AM 72 for CT connection n/1A, Scale 0 - 100/150 %. 1 x M32 on bottom.				
6	062		0	GHG 295 1000 R0001
6	065		0	GHG 295 1000 R0002

Other versions on request.

Fixing materials and accessories, see page 6.128.

X = fixing dimensions

Dimensions in mm



COOPER CROUSE-HINDS GMBH

6.127

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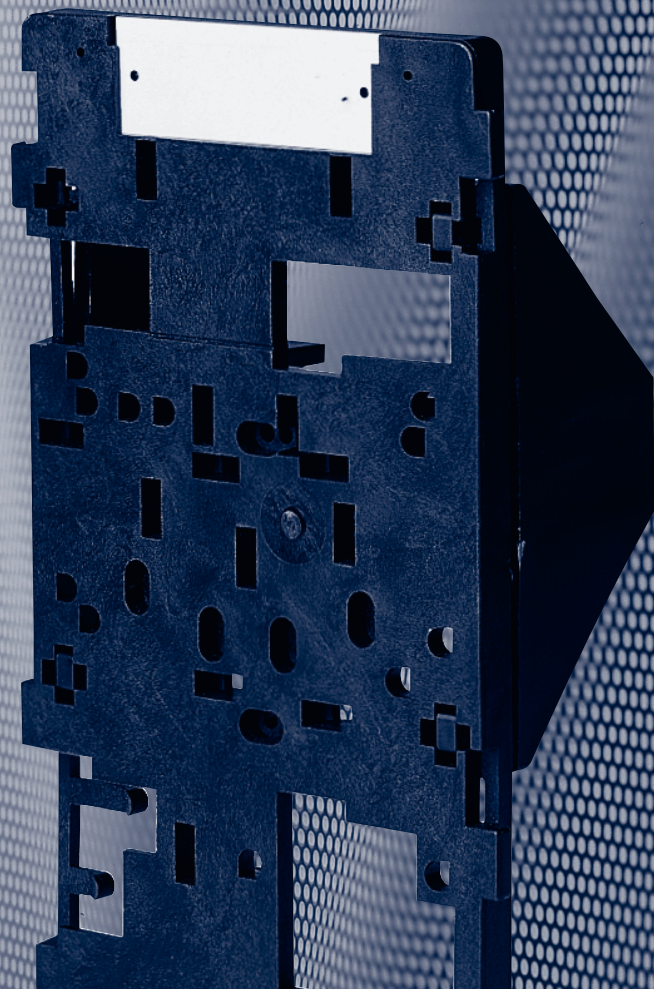
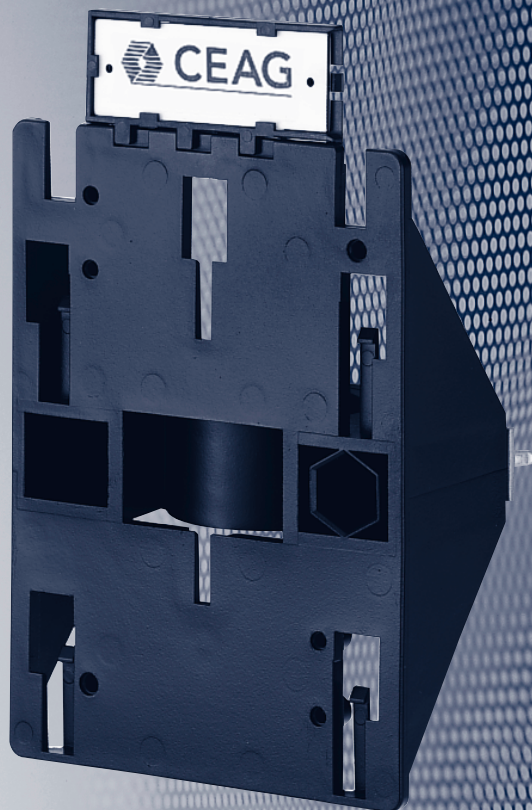
FIXING MATERIALS AND ACCESSORIES

Control units and selection switches

CEAG mounting plates are the innovative answer to the users' demand to mount apparatus without tools. This intelligent and trend-setting solution for mounting the most diverse apparatus on trellis work, pipes and walls was developed in close cooperation with our customers. The snap-on mounting system offers decisive cost savings. The apparatus is attached to the mounting plates without screws – in a snap and without using tools.

Thus, hot-work permits are not necessary. Optional plug-in canopies protect the apparatus against aggressive environments, the sun and rain.

Customised solutions are available on request.



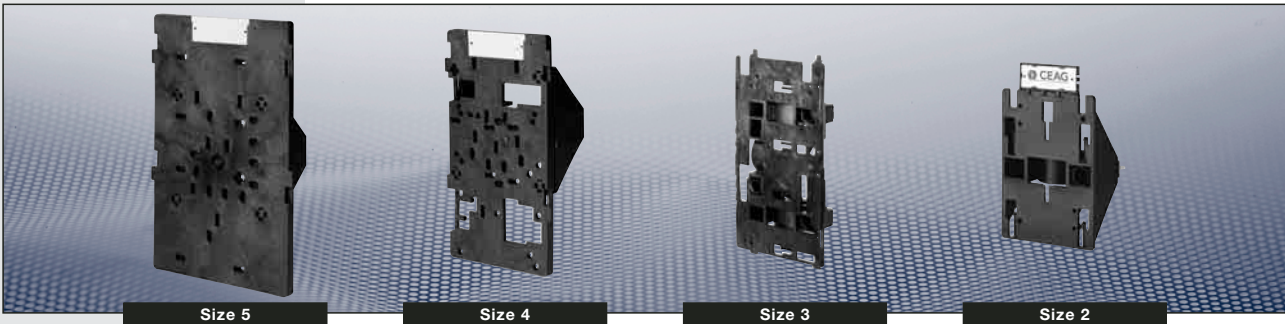
**Decisive cost savings –
in a snap**

**Quick mounting with
snap-on system**

No hot-work permit necessary

**Mounting plates can be used on walls,
trellis work and pipes**

**For universal use as apparatus
holders – in a snap**



FIXING MATERIALS AND ACCESSORIES

6.129

| Mounting plate snap-on |

**Mounting plate for control switch
without Measuring instrument Typ 292**

Type	Application	Mounting technique	OU	Order No.
Size 2	Wall mounting	snap-on	1	GHG 610 1953 R0104
Size 2	Pipe mounting	snap-on	1	GHG 610 1953 R0105
Size 2	Trellis mounting	snap-on	1	GHG 610 1953 R0106
Size 4	Wall mounting	snap-on *	1	GHG 610 1953 R0126
Size 4	Trellis mounting	snap-on *	1	GHG 610 1953 R0126
Size 4	Pipe mounting	snap-on *	1	GHG 610 1953 R0130

Snap-on mounting for CEAG apparatus with 5.5 mm
and 11 mm mounting feet 1 set = 10 pieces

10

GHG 610 1953 R0041

* snap-on with plug-in fasteners 11 mm

**Mounting plate for control switch
with Measuring instrument Typ 293**

Type	Application	Mounting technique	OU	Order No.
Size 3	Wall mounting	snap-on	1	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	1	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	1	GHG 610 1953 R0118
Size 5	Wall mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Trellis mounting	snap-on *	1	GHG 610 1953 R0128
Size 5	Pipe mounting	snap-on *	1	GHG 610 1953 R0132

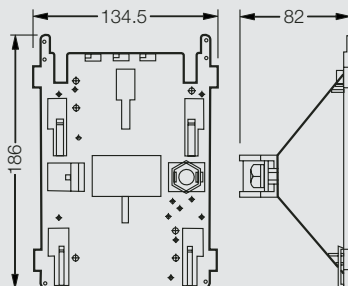
Snap-on mounting for CEAG apparatus with 5.5 mm
and 11 mm mounting feet 1 Set = 10 pieces

10

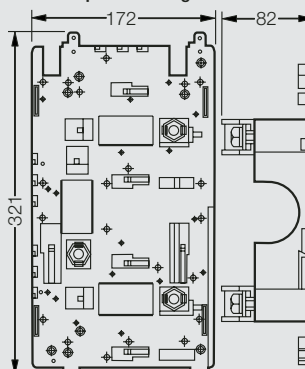
GHG 610 1953 R0041

* snap-on with plug-in fasteners 11 mm

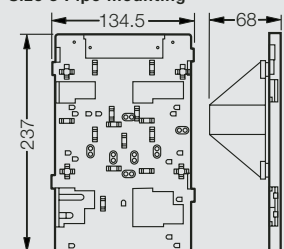
Please note that we can only deliver in the ordering units (OU) stated in the tables above.



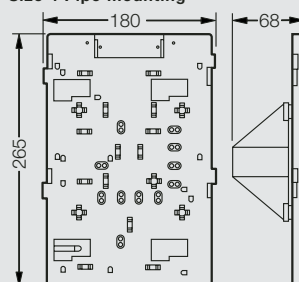
Size 2 Pipe mounting



Size 3 Pipe mounting

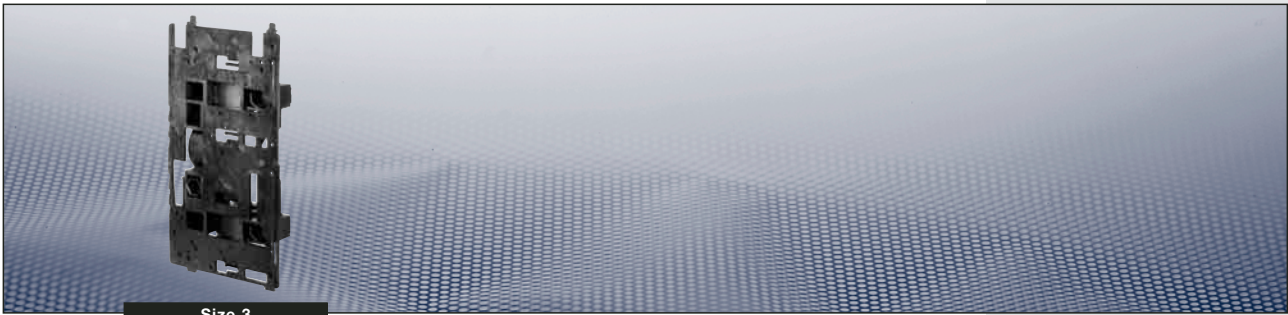


Size 4 Pipe mounting



Size 5 Pipe mounting

Dimensions in mm



Size 3

6.130

FIXING MATERIALS AND ACCESSORIES

Mounting plate screw-on

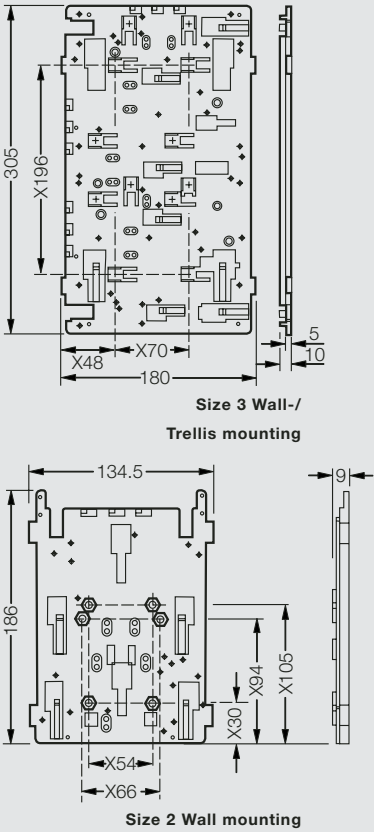
Mounting plate for control unit type 444 01			
Type	Application	Mounting technique	Order No.
Size 3	Wall mounting	screw-on	GHG 610 1953 R0118
Size 3	Pipe mounting	screw-on	GHG 610 1953 R0110
Size 3	Trellis mounting	screw-on	GHG 610 1953 R0118

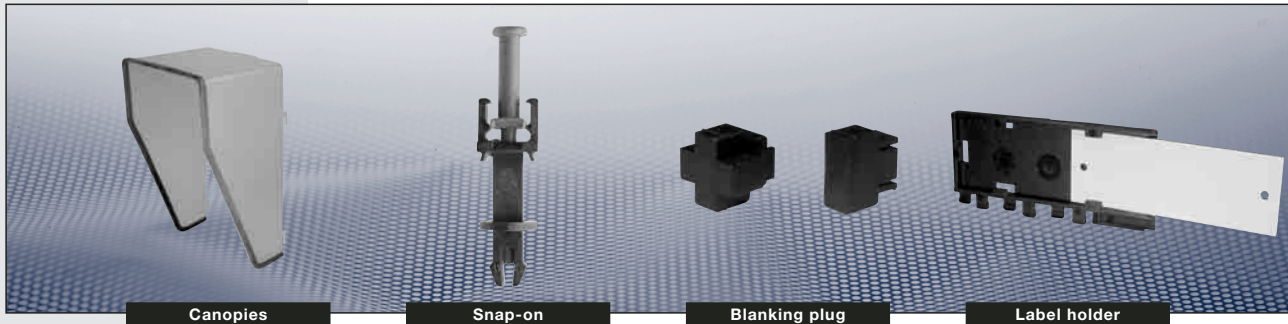
Mounting plate for control unit type 448 02			
Type	Application	Mounting technique	Order No.
2 x Size 3	Pipe mounting*	screw-on	GHG 610 1953 R0110

Mounting plate for control unit type 449 03			
Type	Application	Mounting technique	Order No.
2 x Size 3	Pipe mounting*	screw-on	GHG 610 1953 R0110

Mounting plate for control unit type 447 04			
Type	Mounting	Mounting technique	Order No.
2 x Size 3	Pipe mounting*	screw-on	GHG 610 1953 R0110

* observe mounting distance
The ordering number is for 1 piece only.





Canopies

Snap-on

Blanking plug

Label holder

FIXING MATERIALS AND ACCESSORIES

6.131

| Accessories for mounting plate | Canopies |**Ordering details**

Type	OU	Order No.
Accessories for mounting plate		
Label holder with label (blank) for mounting plate size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Label for label holder and mounting plate size 4 and size 5	10	GHG 610 1953 R0011
Blanking plug for non-used mounting points for mounting plates size 4 and size 5	1	GHG 610 1953 R0134
Snap-on mounting for CEAG apparatus with 5.5 mm and 11 mm mounting feet 1 set = 4 pieces	10	GHG 610 1953 R0041
Mounting kit for pipes 1" (27 - 30 mm) for mounting plate for pipe mounting	10	GHG 610 1953 R0020

Ordering details

Type	Application	Order No.
Canopies for mounting plate		
Size 1	for mounting plate size 1	GHG 610 1955 R0101
Size 2	for mounting plate size 2	GHG 610 1955 R0102
Size 2A	for mounting plate size 2A	GHG 610 1955 R0103
Size 3	for pipe mounting plate size 3 vertical	GHG 610 1955 R0104
Size 3A	for wall/trellis-work mounting plate Size 3 vert.	GHG 610 1955 R0105
Size 3B	for pipe mounting plate size 3 horizontal	GHG 610 1955 R0106
Size 4	for mounting plate size 4	GHG 610 1955 R0107
Size 5	for mounting plate size 5	GHG 610 1955 R0108

Please note that we can only deliver in the ordering units (OU) stated in the tables above.

EX - SAFETY AND MAIN CURRENT SWITCHES

APPLICATIONS	7.2
EX-SAFETY SWITCHES	7.4
INDUSTRIAL SAFETY SWITCHES	7.16
EX-SAFETY SWITCHES FOR VARIABLE-SPEED THREE-PHASE DRIVES	7.26
EX-MAIN CURRENT SWITCHES	7.28
EX-POWER CIRCUIT BREAKERS	7.32
EX-MANUAL MOTOR STARTERS	7.40
FIXING MATERIALS AND ACCESSORIES	7.44

ARE YOU ALWAYS TURNING YOUR MOTORS ON AND OFF SMOOTHLY?

(FROM NO-LOAD TO FULL-LOAD WITH AC-3 SWITCHING CAPACITY: PAGE 7.40 pp)





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Applications

Safety switches are used to reliably isolate the power supply on electrical installations and apparatus during maintenance, cleaning and repair work.

Main current switches are used to operate drives, motors and other electrical equipment.

Star-delta starters, reversing starters and pole-changing switches (Dahlander switches) can be implemented with CEAG main current switches.

Motors have to be protected against overloads, phase failures and overheating: CEAG power circuit breakers and manual motor starters feature phase-failure protection as well as thermal and electromagnetic tripping for reliable motor protection. CEAG manual motor starters have such a precise tripping time that they are equally suited for the protection of Ex-e as well as Ex-d motors – to put you on the safe side.

CEAG safety features

Safety and main current switches can be protected against inadvertent switching on by our integrated locking facility for up to three padlocks in the OFF position. To prevent manipulations, the enclosure covers cannot be opened in the locked position without destroying the enclosure itself.

All CEAG safety switches up to 180 A feature full AC-3 motor switching capacities and isolating properties according to EN 60947-3 with compulsory opening of

the main current contacts; optional EMERGENCY STOP versions according to EN 60204-1 are also available.

Additional lagging/leading auxiliary contacts guarantee double safety for extreme switching conditions.

The switch position is always indicated by the switch handle – practically excluding wrong operation.

You'll find these advantages in all CEAG safety, main current and EMERGENCY OFF switches as well as in the safety switches for converter drives.

A special safety feature offered by the manual motor starter: It can only be switched on on-site – where the drive is. An operating-current trip for remote cut-off is optional.

To take advantage of the short-circuit protection in the starter, a suitable backup fuse must be selected. You'll find the details in the relevant technical data.

Usage categories

The two most important usage categories for circuit breakers and motor starters: AC-23 for circuit breakers and the more demanding usage category AC-3 for motor starters.

Starters, defined according to AC-3, are used to switch motor loads. Switches which fall into the AC-3 usage category are used for switching of motor loads under normal



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operating conditions. Here, the test procedure requires 50 making and breaking samples. Circuit breakers, defined according to AC-23, are designed for occasional separation of motor loads. For this category EN 60947-4 requires only five making and breaking samples.

The AC-3 usage category makes great demands on the operating cycles and the service life of motor starters. All CEAG safety switches and manual motor starters up to 180 A fulfil these high requirements for the motor-switching capacity of usage category AC-3 as specified by EN 60947-3.

Areas of application

We offer you a wide range of products in all areas: explosion-protected apparatus for gas and dust areas as well as for industrial applications in rough environments.

Material

Both explosion-protected as well as industrial switches are provided in impact-resistant polyamide, glass-fibre-reinforced polyester, powder-coated steel, high-grade stainless steel or flameproof enclosures made of aluminium, depending on the area of application and amperage.

All explosion-protected switches are certified according to the ATEX directive.

Mounting

Switches up to 180 A can be mounted simply and quickly with the CEAG mounting system to pipes, trellis work and walls. What's more, CEAG switches up to 40 A offer low-cost mounting – in a snap – with the snap-on system.

EX - SAFETY SWITCHES

Up to 630 A

CEAG safety switches can be protected against inadvertent switching on by our integrated locking facility for up to three padlocks in the OFF position. To prevent manipulations, the enclosure covers cannot be opened in the locked position without destroying the enclosure itself.

All CEAG safety switches feature full AC-3 motor switching capacities and isolating properties according to EN 60947-4-1 with compulsory opening of the main current contacts; optional EMERGENCY STOP versions according to EN 60204-1 are also available.

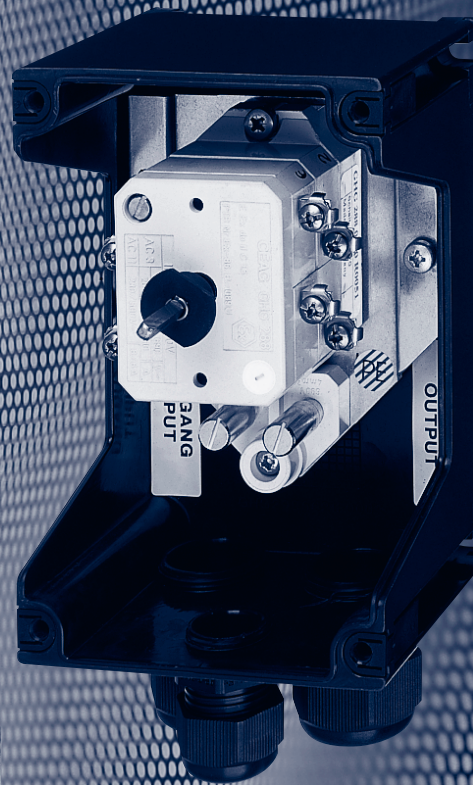
Additional lagging/leading auxiliary contacts guarantee double safety for extreme switching conditions.

The safety switches feature an installation-friendly design and easily accessible connection terminals.

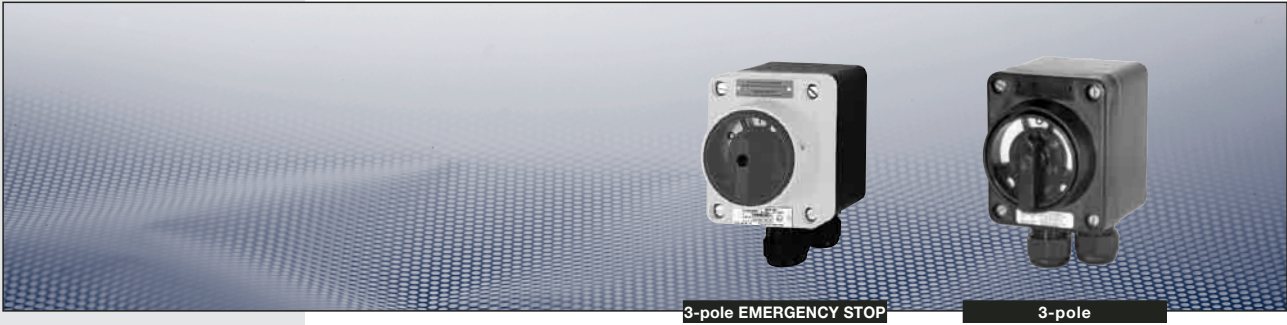
Versions in impact-resistant polyamide or glass-fibre-reinforced polyester enclosures provide the high degree of protection IP 66 for safety switches up to 180 A. These can be optionally supplied with snap-on moulded plastic or brass flanges. Safety switches for amperages up to 630 A are supplied in metal enclosures. These can be equipped with screw-on flanges.

The described safety switches at the sizes 210 - 630 A are also available for Explosion Group IIB, which is sufficient for many of the applications.

Internationally approved.



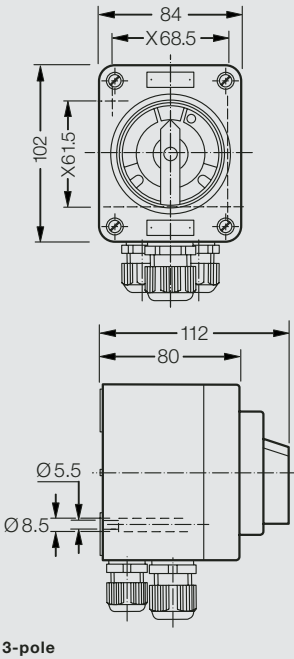
- Full AC-3 switching capacity
- Double safety:
- additional auxiliary contact
- Cost-saving installation up to 180 A
- Snap-on mounting up to 40 A – in snap
- IP 66 protection up to 180 A



EX - SAFETY SWITCH

10 A

7.5



Technical data			
10 A 3-pole			
Marking to 94/9/EC	ⓘ II 2 G ⓘ II 2 D T 53 °C		
Type of protection	EEx de IIC T6		
EC-Type Examination Certificate	PTB 00 ATEX 1074		
Rated voltage	up to 500 V, 50/60 Hz		
Rated current	max. 10 A		
Switching capacity AC-3	230 V/10 A	400 V/10 A	500 V/10 A
Short-circuit backup fuse	max 20 A (400 V) max. 16 A (500 V)		
Degree of protection acc. to EN 60529	IP 66		
Enclosure material	impact-resistant polyamide		
Connecting terminals	2 x 2.5 mm²		
Cable entry	M20 (Ø 5 - 13 mm) M25 (Ø 8 - 17 mm)		
Auxiliary contact: 1 x NO	making – lagging breaking – leading		
Weight	approx. 0.55 kg		

Ordering details safety switch 10 A		
Version with 1 auxiliary contact (NO)		
Version	Cable entry	Order No.
3-pole	2 x M25 / 1 x M20	GHG 261 0005 R0009
3-pole	2 x M20	GHG 261 0005 R0005
3-pole EMERGENCY STOP	2 x M25 / 1 x M20	GHG 261 0005 R0010

Customised versions on request.
For fixing materials and accessories, see page 7.44.



3-pole

3-pole EMERGENCY STOP

6-pole

6-pole EMERGENCY STOP

7.6

EX - SAFETY SWITCHES

| 20 A |

Technical data

20 A 3-pole, 4-pole and 6-pole

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 55 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1161
Rated voltage	up to 690 V, 50/60 Hz
Rated current	max. 20 A
Switching capacity AC-3	230 V/20 A 400 V/20 A 500 V/16 A 690 V/10 A
Short-circuit backup fuse	max. 35 A (400 V) max. 25 A (690 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Connecting terminals	2 x 4 mm ²
Cable entry	M20 (Ø 3 - 13 mm) M25 (Ø 8 - 17 mm) M32 (Ø 12 - 21 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC (only 6-pole version)	making – leading breaking – lagging
Weight	approx. 1.48 kg (3-pole version) approx. 2.43 kg (6-pole version)

**Ordering details safety switch 20 A 3-pole
Version with 1 auxiliary contact (NO)**

Version	Cable entry	Order No.
3-pole	2 x M32 / 1 x M25	GHG 262 2301 R0001
3-pole EMERGENCY STOP	2 x M32 / 1 x M25	GHG 262 2301 R0002

**Ordering details safety switch 20 A 4-pole
Version with 2 auxiliary contacts (1 x NO, 1 x NC)**

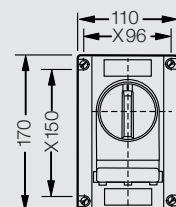
Version	Cable entry	Order No.
4-pole	2 x M20	GHG 262 2301 R0007

**Ordering details safety switch 20 A 6-pole
Version with 2 auxiliary contacts (1 x NO, 1 x NC)**

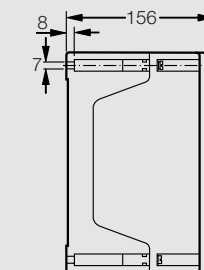
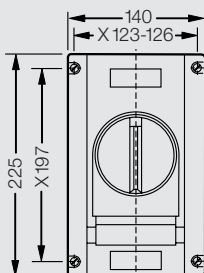
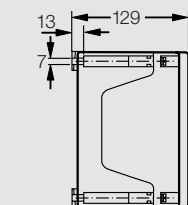
Version	Cable entry	Order No.
6-pole	4 x M32 / 1 x M25	GHG 262 2601 R0001
6-pole	4 x M25	GHG 262 2601 R0005
6-pole EMERGENCY STOP	4 x M32 / 1 x M25	GHG 262 2601 R0002

Customised versions on request, auxiliary contact in EEx ia available.

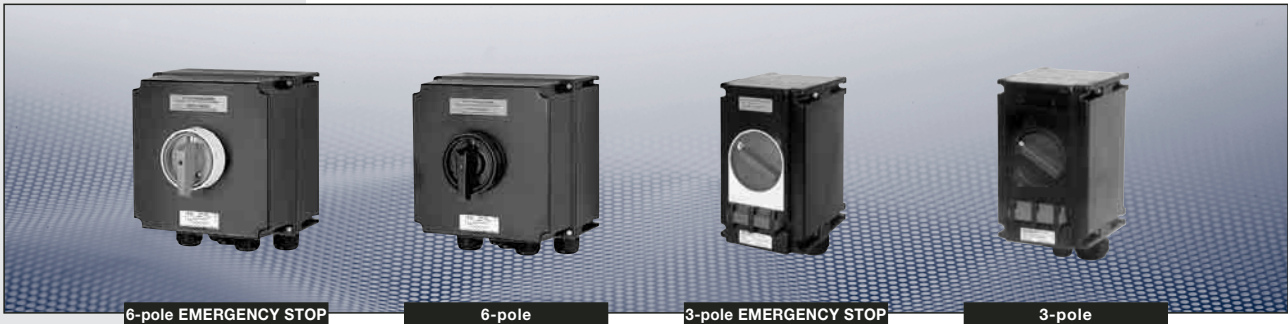
For fixing materials and accessories, see page 7.44.



3/4-pole



6-pole



6-pole EMERGENCY STOP

6-pole

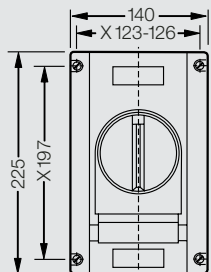
3-pole EMERGENCY STOP

3-pole

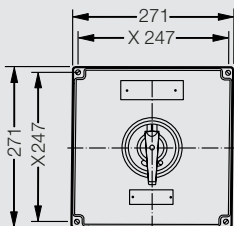
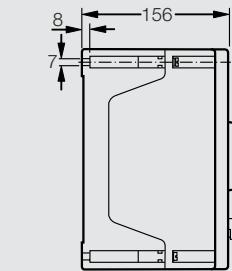
EX - SAFETY SWITCHES

| 40 A |

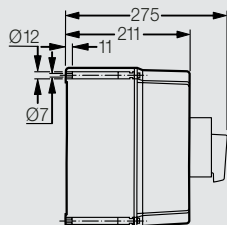
7.7



3/4-pole



6-pole



Technical data

40 A 3-pole, 4-pole and 6-pole

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 53 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1161
Rated voltage	up to 690 V, 50/60 Hz
Rated current	max. 40 A
Switching capacity AC-3	230 V/40 A 400 V/40 A 500 V/40 A 690 V/32 A
Short-circuit backup fuse	max. 80 A (400 V) max. 63 A (690 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Connecting terminals	2 x 16 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M40 (Ø 16 - 28 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC (only 6-pole version)	making – leading breaking – lagging
Weight	approx. 2.3 kg (3-pole version) approx. 2.75 kg (4-pole version) approx. 6.5 kg (6-pole version)

**Ordering details safety switch 40 A 3-pole
Version with 1 auxiliary contact (NO)**

Version	Cable entry	Order No.
3-pole	2 x M40 / 1 x M25	GHG 263 2301 R0001
3-pole EMERGENCY STOP	2 x M40 / 1 x M25	GHG 263 2301 R0002

**Ordering details safety switch 40 A 4-pole
Version with 2 auxiliary contacts (1 x NO, 1 x NC)**

Version	Cable entry	Order No.
4-pole	2 x M25	GHG 263 2301 R0007

**Ordering details safety switch 40 A 6-pole
Version with 2 auxiliary contacts (1 x NO, 1 x NC)**

Version	Cable entry	Order No.
6-pole	4 x M40 / 1 x M25	GHG 263 0050 R0001
6-pole	4 x M25	GHG 263 0050 R0006
6-pole EMERGENCY STOP	4 x M40 / 1 x M25	GHG 263 0050 R0002

Customised versions on request, auxiliary contact in EEx ia available.

For fixing materials and accessories, see page 7.44.

1

2

3

4

5

6

7

8

9



7.8 EX - SAFETY SWITCH

80 A

Technical data

80 A 3-pole und 6-pole

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 53 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 1091
Rated voltage	up to 690 V, 50/60 Hz
Rated current	max. 80 A
Switching capacity AC 3	230 V/80 A 400 V/80 A 500 V/80 A 690 V/63 A
Short-circuit backup fuse	max. 160 A (400 V) max. 100 A (690 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Connecting terminals	2 x 25 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M32 (Ø 12 - 21 mm) M50 (Ø 21 - 35 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Weight	approx. 6.5 kg (3-pole version) approx. 9.0 kg (6-pole version)

Ordering details safety switch 80 A 3-pole Version with 2 auxiliary contacts (NO)

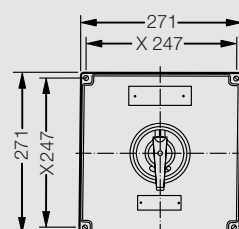
Version	Cable entry	Order No.
3-pole	2 x M50 / 1 x M25	GHG 264 0020 R0001
3-pole EMERGENCY STOP	2 x M50 / 1 x M25	GHG 264 0020 R0002

Ordering details safety switch 80 A 6-pole Version with 2 auxiliary contacts (1 x NO, 1 x NC)

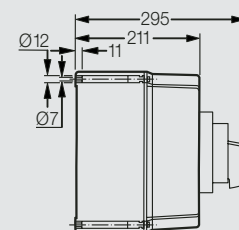
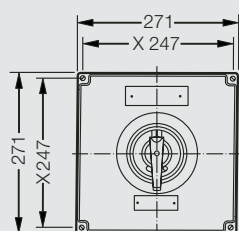
Version	Cable entry	Order No.
6-pole	4 x M50 / 1 x M25	GHG 264 0021 R0001
6-pole EMERGENCY STOP	4 x M50 / 1 x M25	GHG 264 0021 R0002

Customised versions on request, auxiliary contact in EEx ia available.

For fixing materials and accessories, see page 7.44.



3-pole



6-pole

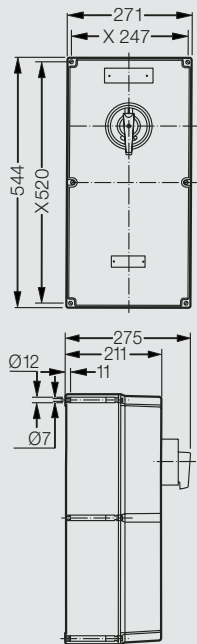


6-pole EMERGENCY STOP

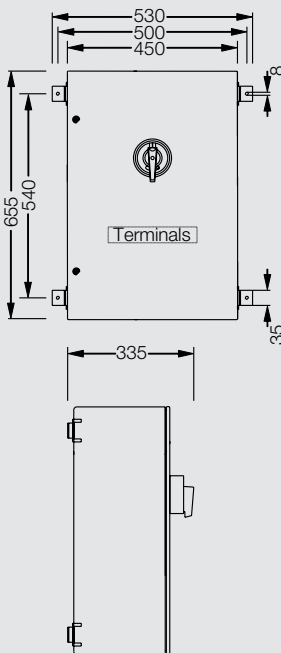
6-pole

3-pole EMERGENCY STOP

3-pole



3/4-pole



6-pole

Dimensions in mm

EX - SAFETY SWITCH

125 A

7.9

Technical data

125 A 3-pole/4-pole/6-pole

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 53 °C*
Type of protection	EEx de IIC T6
EC-Type Examination Certificate	3-pole: PTB 99 ATEX 1164 6-pole: PTB 00 ATEX 1073
Rated voltage	up to 690 V, 50/60 Hz
Rated current	max. 125 A
Switching capacity AC-3	230 V/125 A 400 V/125 A 500 V/125 A 690 V/110 A
Short-circuit backup fuse	max. 200 A (400 V) max. 160 A (690 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	3-pole: Glass-fibre reinforced polyester 6-pole: steel, powder-coated polyester
Connecting terminals	3-pole: 1 x 50/70 mm ² Auxiliary contact 2 x 4 mm ² 6-pole: 6 x 95 mm ² /2 x 95 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M40 (Ø 16 - 28 mm) M63 (Ø 27 - 48 mm)
Auxiliary contact	1 x NO making – lagging breaking – leading 1 x NC making – leading breaking – lagging
Weight	3-pole: approx. 16 kg 6-pole: approx. 31 kg

Ordering details safety switch 125 A

version with 2 auxiliary contacts (1 x NO, 1 x NC)

Version	Cable entry	Order No.
3-pole	2 x M63 / 1 x M25	GHG 265 0010 R0001
4-pole	2 x M40	GHG 265 0010 R0005
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	GHG 265 0010 R0002
6-pole	4 x M63 / 1 x M25	EXKO 224716 K 0000
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	EXKO 224726 K 0000

Customised versions on request, auxiliary contact in EEx ia available.

* 2 D-approval not for 6-pole design.

For fixing materials and accessories, see page 7.44.



7.10

EX - SAFETY SWITCHES

180 A

Technical data

180 A 3-pole/6-pole

Marking to 94/9/EC	Ⓔ II 2 G Ⓔ II 2 D T 53 °C*
Type of protection	EEx de IIC T6
EC-Type Examination Certificate	3-pole: PTB 99 ATEX 1164 6-pole: PTB 00 ATEX 1073
Rated voltage	up to 690 V, 50/60 Hz
Rated current	max. 180 A
Switching capacity AC-3	230 V/180 A 400 V/180 A 500 V/150 A 690 V/125 A
Short-circuit backup fuse	max. 250 A (400 V) max. 200 A (690 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	3-pole: Glass-fibre reinforced polyester 6-pole: steel, powder-coated polyester
Connecting terminals	3-pole: 1 x 120 mm ² Auxiliary contact 2 x 4 mm ² 6-pole: 6 x 150 mm ² /2 x 95 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M40 (Ø 16 - 28 mm) M63 (Ø 27 - 48 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Weight	3-pole: approx. 16.5 kg 6-pole: approx. 31.5 kg

Ordering details safety switch 180 A

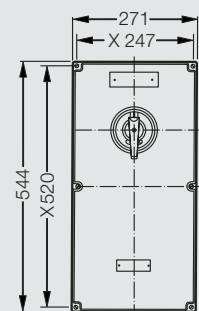
version with 2 auxiliary contacts (1 x NO, 1 x NC)

Version	Cable entry	Order No.
3-pole	2 x M63 / 1 x M25	GHG 266 0006 R0001
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	GHG 266 0006 R0002
6-pole	4 x M63 / 1 x M25	EXKO 224716 L 0000
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	EXKO 224726 L 0000

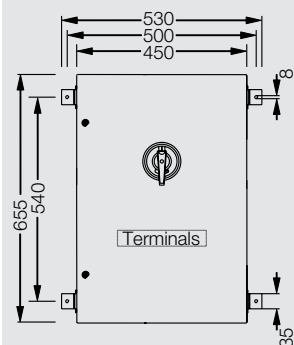
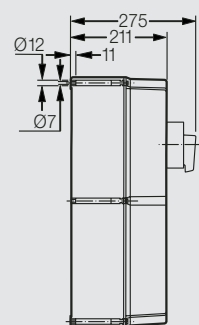
Customised versions on request, auxiliary contact in EEx ia available.

* 2 D-approval not for 6-pole design.

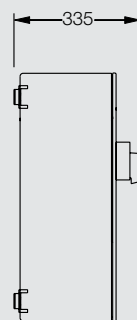
For fixing materials and accessories, see page 7.44.



3-pole



6-pole



Dimensions in mm

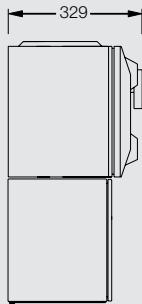
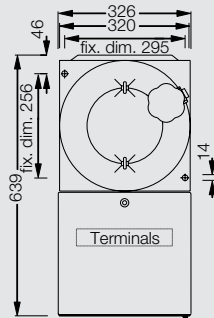


6-pole EMERGENCY STOP

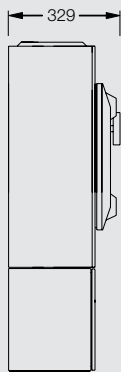
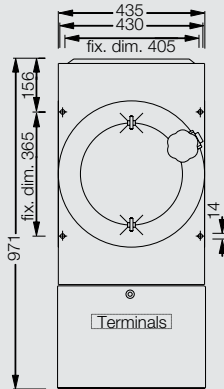
6-pole

3-pole EMERGENCY STOP

3-pole



3-pole



6-pole

Dimensions in mm

EX - SAFETY SWITCHES

210 A

7.11

Technical data

210 A 3-pole and 6-pole

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T6 bzw. T5 ¹⁾
EC-Type Examination Certificate	PTB 99 ATEX 1057
Rated voltage	up to 690 V
Rated current	max. 210 A
Switching capacity AC-23	230 V/210 A 400 V/210 A 500 V/210 A 690 V/210 A
Short-circuit backup fuse	max. 250 A (400 V) max. 200 A (690 V)
Degree of protection acc. to EN 60529	IP 54 (IP 65 optional)
Enclosure material	aluminium, powder-coated polyester
	Connection box steel, powder-coated polyester
Connecting terminals	3 x 150/95 mm ² (3-pole version) 6 x 150/2 x 95 mm ² (6-pole version) Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M63 (Ø 27 - 48 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Weight	3-pole approx. 41.5 kg 6-pole approx. 84.5 kg

Ordering details safety switch 210 A 3-pole

version with 2 auxiliary contacts (1 x NO, 1 x NC)

Version	Cable entry	Order No.
3-pole	2 x M63 / 1 x M25	EXKO 731713 S0001
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	EXKO 731723 S0001

Ordering details safety switch 210 A 6-pole

version with 2 auxiliary contacts (1 x NO, 1 x NC)

Version	Cable entry	Order No.
6-pole	4 x M63 / 1 x M25	EXKO 731716 S0001
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	EXKO 731726 S0001

Customised versions on request, auxiliary contact in EEx ia available.

¹⁾ Also available with Explosion Group IIB



3-pole

3-pole EMERGENCY STOP

6-pole

6-pole EMERGENCY STOP

7.12

EX - SAFETY SWITCHES

| 250 A |

Technical data

250 A 3-pole und 6-pole

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T6 bzw. T5 ¹⁾
EC-Type Examination Certificate	PTB 99 ATEX 1057
Rated voltage	up to 690 V, 50/60 Hz
Rated current	max. 250 A
Switching capacity AC-23	230 V/250 A 400 V/250 A 500 V/250 A 690 V/250 A
Short-circuit backup fuse	max. 250 A (400 V) max. 250 A (690 V)
Degree of protection acc. to EN 60529	IP 54 (IP 65 optional)
Enclosure material	aluminium, powder-coated polyester Connection box steel, powder-coated polyester
Connecting terminals	3 x 150/95 mm ² (3-pole version) 6 x 150/2 x 95 mm ² (6-pole version) Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M63 (Ø 27 - 48 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Weight	3-pole approx. 41.5 kg 6-pole approx. 84.5 kg

Ordering details safety switch 250 A 3-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

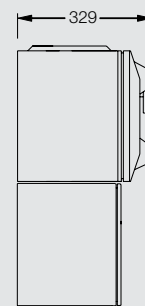
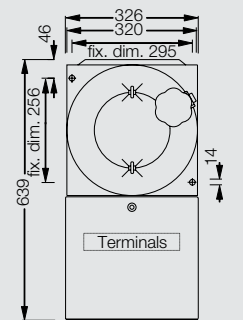
Version	Cable entry	Order No.
3-pole	2 x M63 / 1 x M25	EXKO 731713 T0001
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	EXKO 731723 T0001

Ordering details safety switch 250 A 6-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

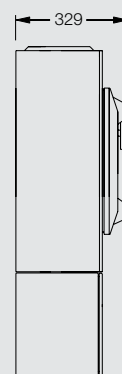
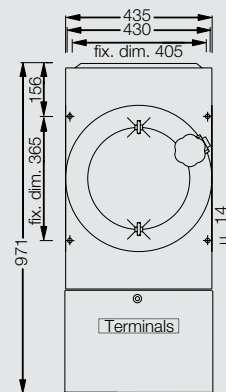
Version	Cable entry	Order No.
6-pole	4 x M63 / 1 x M25	EXKO 731716 T0001
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	EXKO 731726 T0001

Customised versions on request, auxiliary contact in EEx ia available.

¹⁾ Also available with Explosion Group IIB

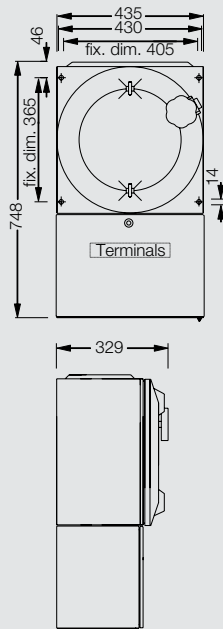
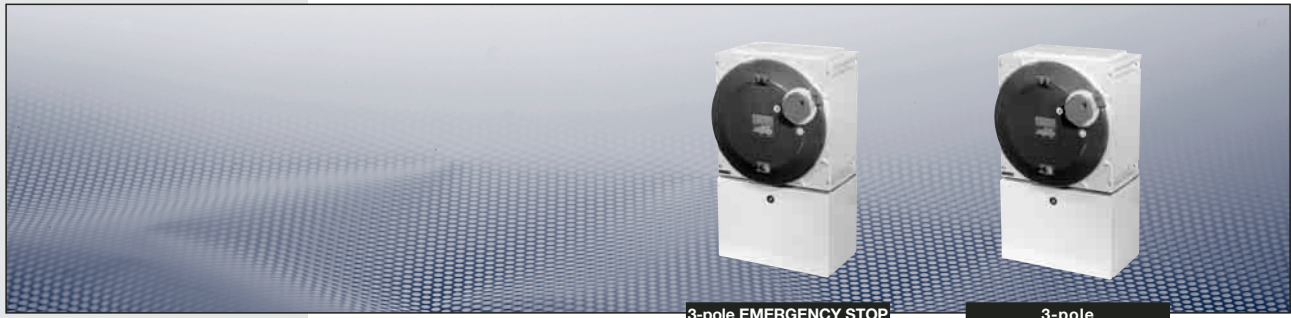


3-pole



6-pole

Dimensions in mm



3-pole

EX - SAFETY SWITCHES

| 400 A |

7.13

Technical data

400 A 3-pole

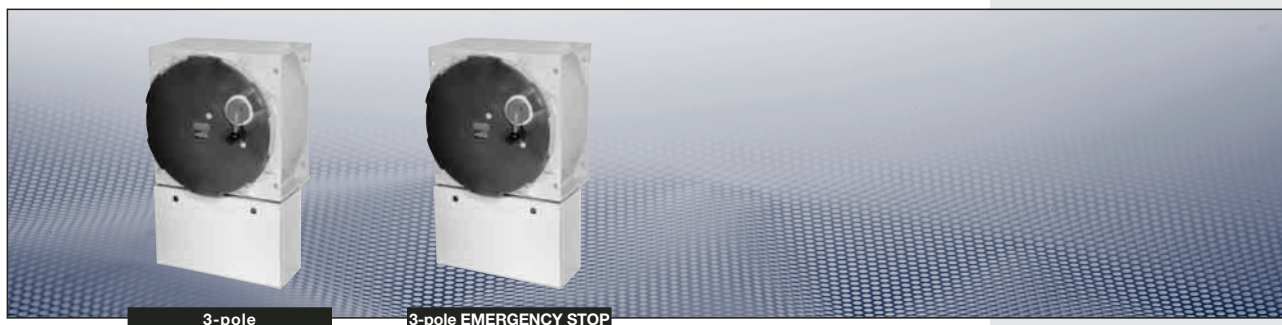
Marking to 94/9/EC	Ⓔ II 2 G
Type of protection	EEx de IIC T6 bzw. T5 ¹⁾
EC-Type Examination Certificate	PTB 99 ATEX 1057
Rated voltage	up to 690 V, 50/60 Hz
Rated current	max. 400 A
Switching capacity AC-23	230 V/400 A 400 V/400 A 500 V/400 A 690 V/400 A
Short-circuit backup fuse	max. 500 A (400 V) max. 500 A (690 V)
Degree of protection acc. to EN 60529	IP 54 (IP 65 optional)
Enclosure material	aluminium, powder-coated polyester
Connecting terminals	6 x 150/2 x 95 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M63 (Ø 27 - 48 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Weight	approx. 64.5 kg

Ordering details safety switch 400 A 3-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

Version	Cable entry	Order No.
3-pole	4 x M63 / 1 x M25	EXKO 731713 U0001
3-pole EMERGENCY STOP	4 x M63 / 1 x M25	EXKO 731723 U0001

Customised versions on request, auxiliary contact in EEx ia available.

¹⁾ Also available with Explosion Group IIB



7.14

EX - SAFETY SWITCHES

630 A

Technical data

630 A 3-pole

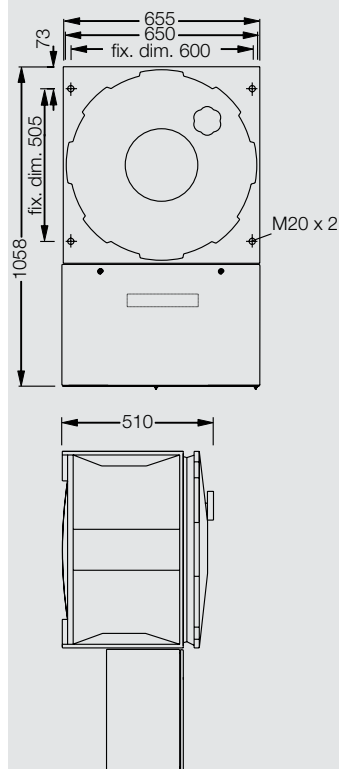
Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T6 bzw. T5 ¹⁾
EC-Type Examination Certificate	PTB 99 ATEX 1057
Rated voltage	up to 690 V, 50/60 Hz
Rated current	max. 630 A
Switching capacity AC-23	230 V/630 A 400 V/630 A 500 V/630 A 690 V/630 A
Short-circuit backup fuse	max. 800 A (400 V) max. 800 A (690 V)
Degree of protection acc. to EN 60529	IP 54 (IP 65 optional)
Enclosure material	steel, powder-coated polyester
Connection box steel, powder-coated polyester	
Connecting terminals	6 x 240/2 x 120 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M80 (Ø 62 - 68 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Weight	approx. 245 kg

Ordering details safety switch 630 A 3-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

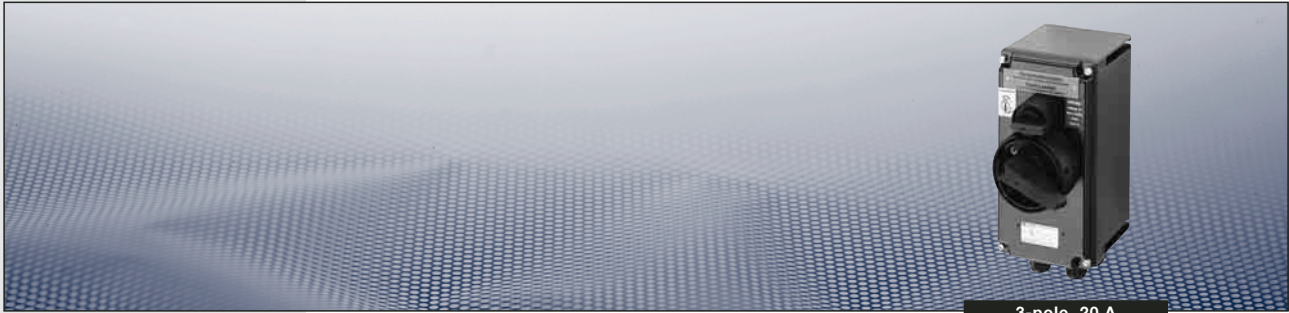
Version	Cable entry	Order No.
3-pole	4 x M80 / 1 x M25	EXKO 731713 V0001
3-pole EMERGENCY STOP	4 x M80 / 1 x M25	EXKO 731723 V0001

Customised versions on request, auxiliary contact in EEx ia available.

¹⁾ Also available with Explosion Group IIB



3-pole

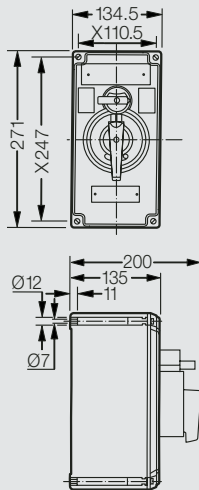


3-pole, 20 A

EX-SAFETY SWITCHES FOR VARIABLE-SPEED THREE-PHASE DRIVES

| 20 A |

7.15



Ex-safety switch 20 A

Technical data

20 A 3-pole

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 55 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1161
Rated voltage	up to 690 V
Rated current	max. 20 A
Switching capacity AC-3	230 V/20 A 400 V/20 A 500 V/16 A 690 V/10 A
Short-circuit backup fuse	max. 35 A (400 V) max. 25 A (690 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Connecting terminals	2 x 4 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M32 (Ø 12 - 21 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Safety interlock for electronics	
1 x NO	making – lagging breaking – leading
Weight	approx. 1.48 kg (3-pole version) approx. 2.43 kg (6-pole version)

Ordering details safety switch 20 A 3-pole

Equipped with 2 auxiliary contacts (1 x NO, 1 x NC) and 1 safety interlock for electronics (1 x NO)

Version	Cable entry	Order No.
3-pole	2 x M32 / 2 x M25	GHG 262 0014 R0001

Customised versions on request, auxiliary contact in EEx ia available.

For fixing materials and accessories, see page 7.44.

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EX-SAFETY SWITCHES FOR VARIABLE-SPEED THREE-PHASE DRIVES

| 80 A | 40 A |

Technical data

40 A 3-pole, 80 A 3-pole

Marking to 94/9/EC	Ⓔ II 2 G Ⓔ II 2 D T 53 °C			
Type of protection	EEx ed IIC T6			
EC-Type Examination Certificate	40 A: PTB 99 ATEX 1161 80 A: PTB 00 ATEX 1091			
Rated voltage	up to 690 V			
Rated current	max. 40 A/max. 80 A			
Switching capacity AC-3	40 A: 230 V/40 A	400 V/40 A	500 V/40 A	690 V/32 A
	80 A: 230 V/80 A	400 V/80 A	500 V/80 A	690 V/63 A
Short-circuit backup fuse	max. 80/160 A (400 V) max. 63/100 A (690 V)			
Degree of protection acc. to EN 60529 IP 66				
Enclosure material	Glass-fibre reinforced polyester			
Connecting terminals	2 x 16 mm ² 2 x 25 mm ² Auxiliary contact 2 x 4 mm ²			
Cable entry	M 25 (Ø 8 - 17 mm) M40 (Ø 16 - 28 mm) M50 (Ø 21 - 35 mm)			
Auxiliary contact				
1 x NO	making – lagging breaking – leading			
1 x NC	making – leading breaking – lagging			
Safety interlock for electronics:				
1 x NO	making – lagging breaking – leading			
Weight	approx. 1.48 kg (3-pole version)			
	approx. 2.43 kg (6-pole version)			

Ordering details safety switch for variable three-phase drives 40 A 3-pole

Equipped with 2 auxiliary contacts (1 x NO, 1 x NC) and 1 safety interlock for electronics (1 x NO)

Version	Cable entry	Order No.
3-pole	2 x M40 / 2 x M25	GHG 263 0053 R0001

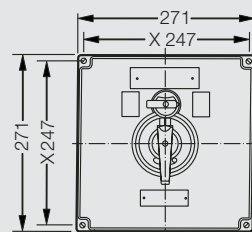
Ordering details safety switch for variable three-phase drives 80 A 3-pole

Equipped with 2 auxiliary contacts (1 x NO, 1 x NC) and 1 safety interlock for electronics (1 x NO)

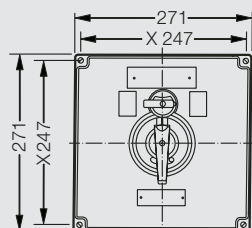
Version	Cable entry	Order No.
3-pole	2 x M50 / 2 x M25	GHG 264 0024 R0001

Customised versions on request, auxiliary contact in EEx ia available.

For fixing materials and accessories, see page 7.44.



Ex-safety switch 40 A



Ex-safety switch 80 A

INDUSTRIAL SAFETY SWITCHES

CEAG safety switches can be protected against inadvertent switching on by our integrated locking facility for up to three padlocks in the OFF position. To prevent manipulations, the enclosure covers cannot be opened in the locked position without destroying the enclosure itself.

Full AC-3 motor switching capacities and isolating properties according to EN 60947-4-1 with compulsory opening of the main current contacts and optional EMERGENCY STOP versions according to EN 60204-1 are further features offered by CEAG safety switches.

Additional lagging/leading auxiliary contacts guarantee double safety for extreme switching conditions.

The safety switches feature an installation-friendly design and easily accessible connection terminals.

For rough industrial environments we use the proven enclosures from the explosion-protection areas:

impact-resistant, modified moulded-plastic enclosures made of glass-fibre-reinforced polyester, powder-coated steel or stainless steel 316 L. These can be optionally supplied with snap-on moulded plastic or brass flanges.

Metal versions can be equipped with screw-on flanges.

Up to 630 A the high degree of protection, IP 66, is guaranteed.



Full AC-3 switching capacity

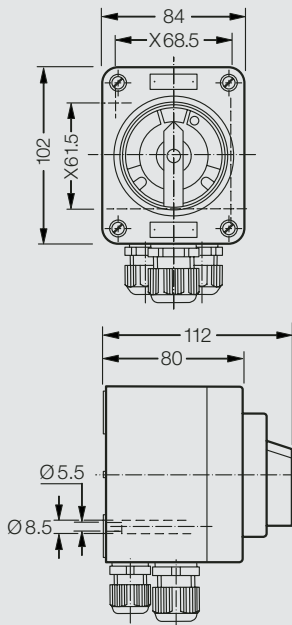
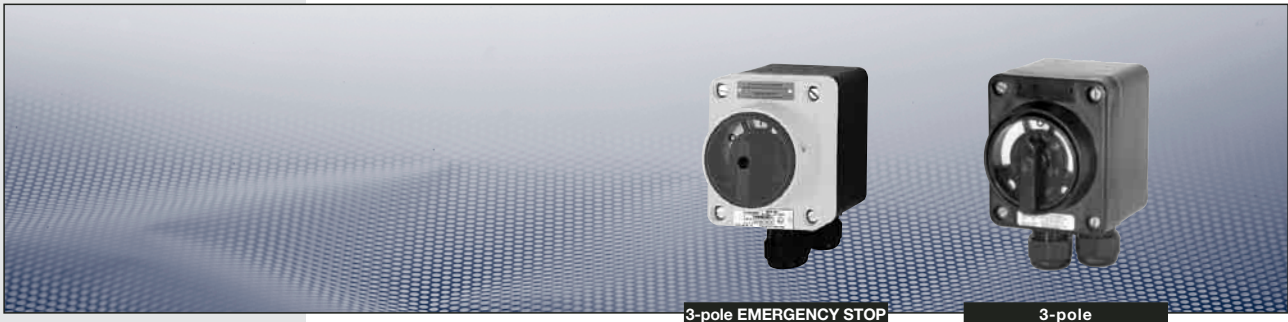
Double safety:

additional auxiliary contact

Cost-saving installation

Up to 40 A: mounting in snap

Up to 630 A: IP 66 protection



3-pole

INDUSTRIAL SAFETY SWITCHES

10 A

7.19

Technical data

10 A 3-pole

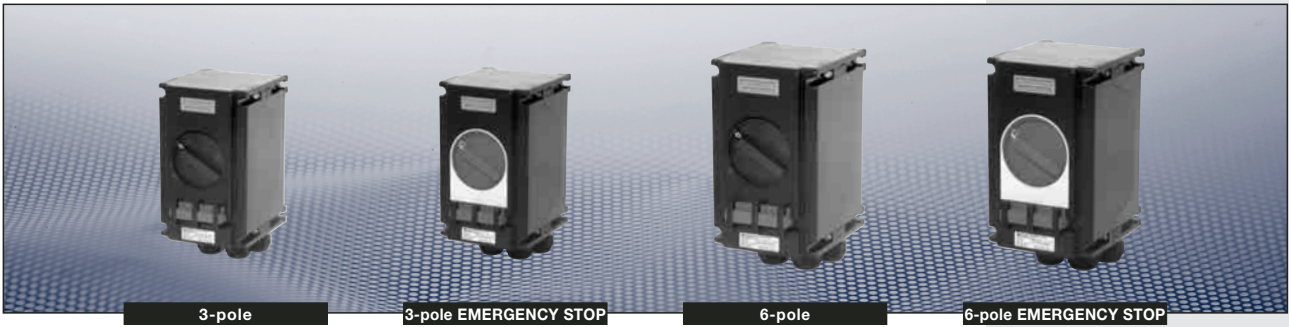
Rated voltage	up to 500 V
Rated current	max. 10 A
Switching capacity AC-3	230 V/10 A 400 V/10 A 500 V/10 A
Short-circuit backup fuse	max. 20 A (400 V) max. 16 A (500 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	impact-resistant polyamide
Connecting terminals	2 x 2.5 mm ² Auxiliary contact 2 x 2.5 mm ²
Cable entry	M20 (Ø 5 - 13 mm) M25 (Ø 8 - 17 mm)
Auxiliary contact	making – lagging breaking – leading
Weight	approx. 0.55 kg

Ordering details safety switch 10 A 3-pole version with 1 auxiliary contact (NO)

Version	Cable entry	Order No.
3-pole	2 x M25 / 1 x M20	GHG 981 0014 R0011
3-pole EMERGENCY STOP	2 x M25 / 1 x M20	GHG 981 0014 R0012

Customised versions on request.

For fixing materials and accessories, see page 7.44.



7.20

INDUSTRIAL SAFETY SWITCHES

| 25 A |

Technical data

25 A 3-pole und 6-pole

Rated voltage	up to 690 V
Rated current	max. 25 A
Switching capacity AC-3	230 V/20 A 400 V/20 A 500 V/16 A 690 V/10 A
Short-circuit backup fuse	max. 35 A (400 V) max. 25 A (690 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Connecting terminals	2 x 4 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M32 (Ø 12 - 21 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC (only 6-pole version)	making – leading breaking – lagging
Weight	approx. 1.48 kg (3-pole version) approx. 2.43 kg (6-pole version)

Ordering details safety switch 25 A 3-pole version with 1 auxiliary contact (NO)

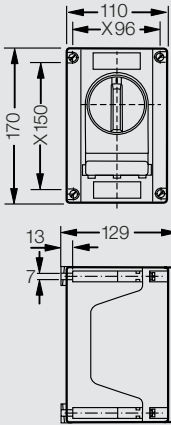
Version	Cable entry	Order No.
3-pole	2 x M32 / 1 x M25	GHG 981 0037 R0001
3-pole EMERGENCY STOP	2 x M32 / 1 x M25	GHG 981 0037 R0002

Ordering details safety switch 25 A 6-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

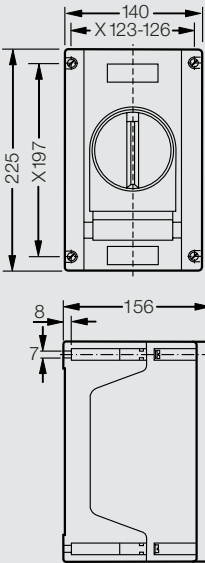
Version	Cable entry	Order No.
6-pole	4 x M32 / 1 x M25	GHG 981 0038 R0001
6-pole EMERGENCY STOP	4 x M32 / 1 x M25	GHG 981 0038 R0002

Customised versions on request.

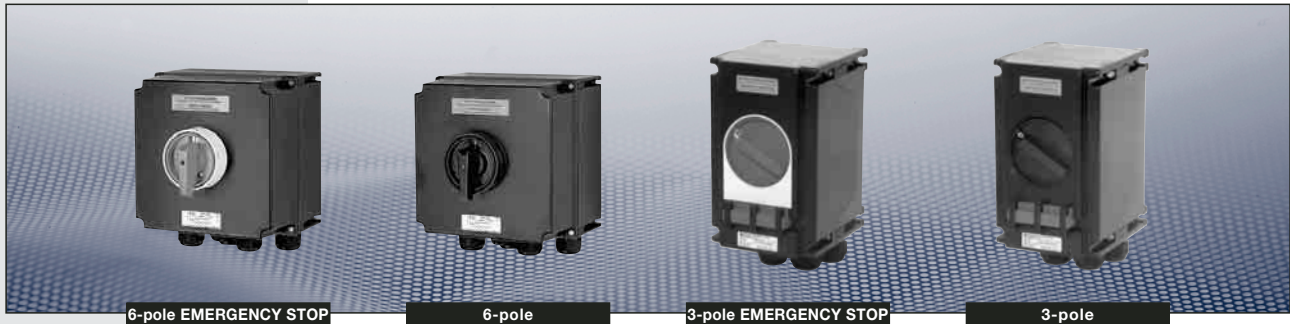
For fixing materials and accessories, see page 7.44.



3-pole



6-pole



6-pole EMERGENCY STOP

6-pole

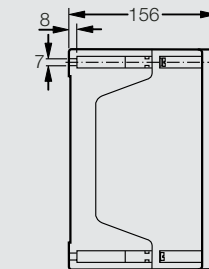
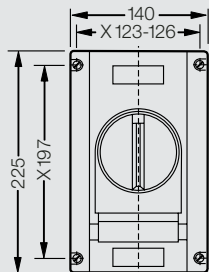
3-pole EMERGENCY STOP

3-pole

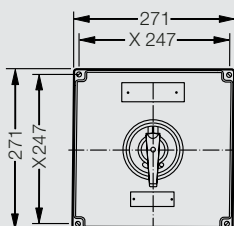
INDUSTRIAL SAFETY SWITCHES

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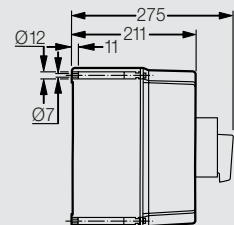
40 A



3-pole



6-pole



Technical data

40 A 3-pole und 6-pole

Rated voltage	up to 690 V
Rated current	max. 40 A
Switching capacity AC-3	230 V/40 A 400 V/40 A 500 V/40 A 690 V/32 A
Short-circuit backup fuse	max. 80 A (400 V) max. 63 A (690 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Connecting terminals	2 x 16 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M40 (Ø 16 - 28 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Weight	approx. 2.3 kg (3-pole version) approx. 6.5 kg (6-pole version)

Ordering details safety switch 40 A 3-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

Version	Cable entry	Order No.
3-pole	2 x M40 / 1 x M25	GHG 981 0039 R0001
3-pole EMERGENCY STOP	2 x M40 / 1 x M25	GHG 981 0039 R0002

Ordering details safety switch 40 A 6-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

Version	Cable entry	Order No.
6-pole	4 x M40 / 1 x M25	GHG 981 0024 R0001
6-pole EMERGENCY STOP	4 x M40 / 1 x M25	GHG 981 0024 R0002

Customised versions on request.

For fixing materials and accessories, see page 7.44.

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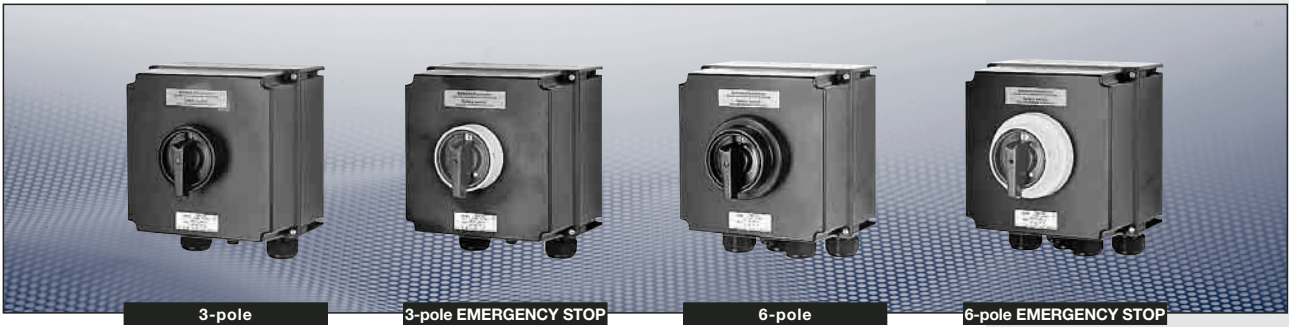
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INDUSTRIAL SAFETY SWITCHES

80 A

Technical data

80 A 3-pole and 6-pole

Rated voltage	up to 690 V
Rated current	max. 80 A
Switching capacity AC-3	230 V/80 A 400 V/80 A 500 V/80 A 690 V/80 A
Short-circuit backup fuse	max. 160 A (400 V) max. 100 A (690 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Connecting terminals	2 x 25 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M50 (Ø 21 - 35 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Weight	approx. 6.5 kg (3-pole version) approx. 9.0 kg (6-pole version)

Ordering details safety switch 80 A 3-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

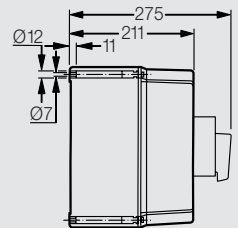
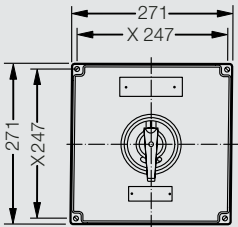
Version	Cable entry	Order No.
3-pole	2 x M50 / 1 x M25	GHG 981 0025 R0001
3-pole EMERGENCY STOP	2 x M50 / 1 x M25	GHG 981 0025 R0002

Ordering details safety switch 80 A 6-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

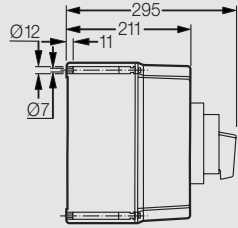
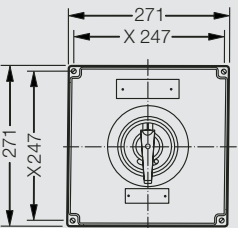
Version	Cable entry	Order No.
6-pole	4 x M50 / 1 x M25	GHG 981 0026 R0001
6-pole EMERGENCY STOP	4 x M50 / 1 x M25	GHG 981 0026 R0002

Customised versions on request.

For fixing materials and accessories, see page 7.44.



3-pole



6-pole



6-pole EMERGENCY STOP

6-pole

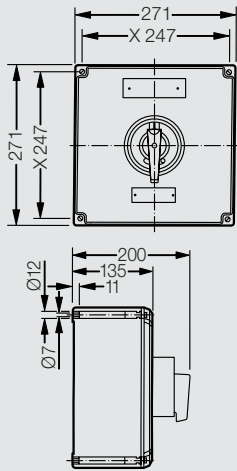
3-pole EMERGENCY STOP

3-pole

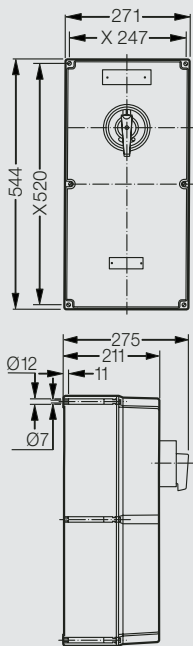
INDUSTRIAL SAFETY SWITCHES

100 A

7.23



3-pole



6-pole

Technical data

100 A 3-pole and 6-pole

Rated voltage	up to 690 V
Rated current	max. 100 A
Switching capacity AC-3	230 V/100 A 400 V/100 A 500 V/100 A 690 V/100 A
Short-circuit backup fuse	max. 200 A (400 V) max. 160 A (690 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Connecting terminals	1 x 50/70 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M50 (Ø 21 - 35 mm)
Auxiliary contact	
2 x NO	making – lagging breaking – leading
2 x NC	making – leading breaking – lagging
Weight	approx. 4.7 kg (3-pole version) approx. 16 kg (6-pole version)

Ordering details safety switch 100 A 3-pole version with 4 auxiliary contacts (2 x NO, 2 x NC)

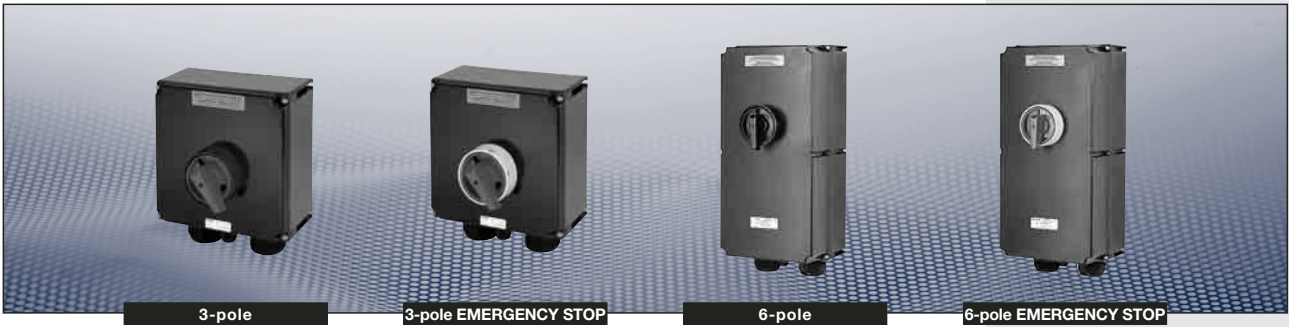
Version	Cable entry	Order No.
3-pole	2 x M50 / 1 x M25	GHG 981 0029 R0001
3-pole EMERGENCY STOP	2 x M50 / 1 x M25	GHG 981 0029 R0002

Ordering details safety switch 100 A 6-pole version with 4 auxiliary contacts (2 x NO, 2 x NC)

Version	Cable entry	Order No.
6-pole	4 x M50 / 1 x M25	GHG 981 0030 R0001
6-pole EMERGENCY STOP	4 x M50 / 1 x M25	GHG 981 0030 R0002

Customised versions on request.

For fixing materials and accessories, see page 7.44.



7.24

INDUSTRIAL SAFETY SWITCHES

| 160 A |

Technical data

160 A 3-pole und 6-pole

Rated voltage	up to 690 V
Rated current	max. 160 A
Switching capacity AC-3	230 V/160 A 400 V/160 A 500 V/160 A 690 V/160 A
Short-circuit backup fuse	max. 250 A (400 V) max. 200 A (690 V)
Degree of protection acc. to EN 60529	IP 66
Enclosure material	Glass-fibre reinforced polyester
Connecting terminals	1 x 95 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) double-cable end box (Ø 46-72 mm) M63 (Ø 27 - 48 mm)
Auxiliary contact	
2 x NO	making – lagging breaking – leading
2 x NC	making – leading breaking – lagging
Weight	approx. 5.5 kg (3-pole version) approx. 16.5 kg (6-pole version)

Ordering details safety switch 160 A 3-pole version with 4 auxiliary contacts (2 x NO, 2 x NC)

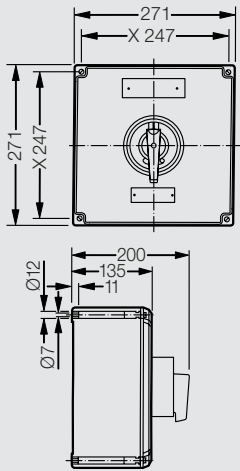
Version	Cable entry	Order No.
3-pole	2 x M63 / 1 x M25	GHG 981 0031 R0001
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	GHG 981 0031 R0002

Ordering details safety switch 160 A 6-pole version with 4 auxiliary contacts (2 x NO, 2 x NC)

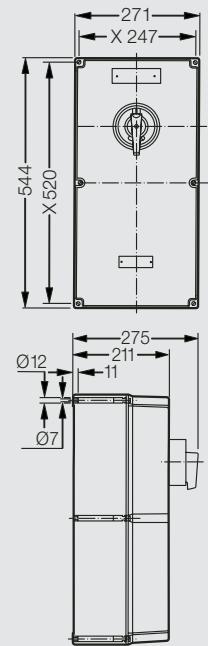
Version	Cable entry	Order No.
6-pole	4 x M50 / 1 x M25	GHG 981 0032 R0001
6-pole EMERGENCY STOP	4 x M50 / 1 x M25	GHG 981 0032 R0002

Customised versions on request.

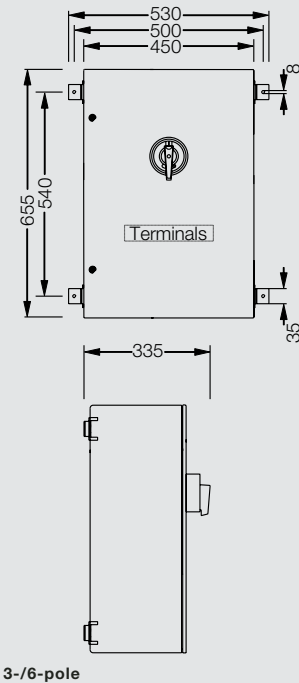
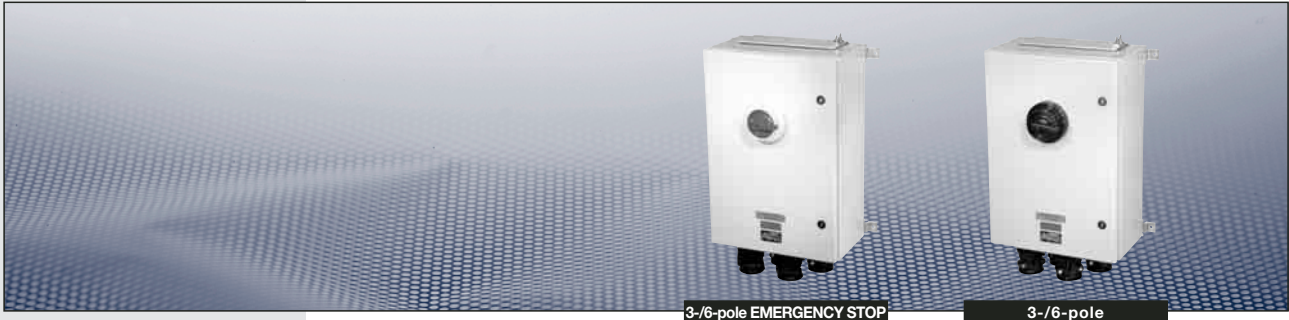
For fixing materials and accessories, see page 7.44.



3-pole



6-pole



INDUSTRIAL SAFETY SWITCHES

250 A

7.25

Technical data

250 A 3-pole und 6-pole

Rated voltage	up to 690 V
Rated current	max. 250 A
Switching capacity AC-23	230 V/250 A 400 V/250 A 500 V/250 A 690 V/250 A
Short-circuit backup fuse	max. 250 A (400 V) max. 200 A (690 V)
Degree of protection acc. to EN 60529	IP 65
Enclosure material	steel, powder-coated polyester
Connecting terminals	3 x 150/95 mm ² (3-pole version) 6 x 150/2 x 95 mm ² (6-pole version) Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M63 (Ø 27 - 48 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Weight	approx. 18 kg (3-pole version) approx. 31 kg (6-pole version)

Ordering details safety switch 250 A 3-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

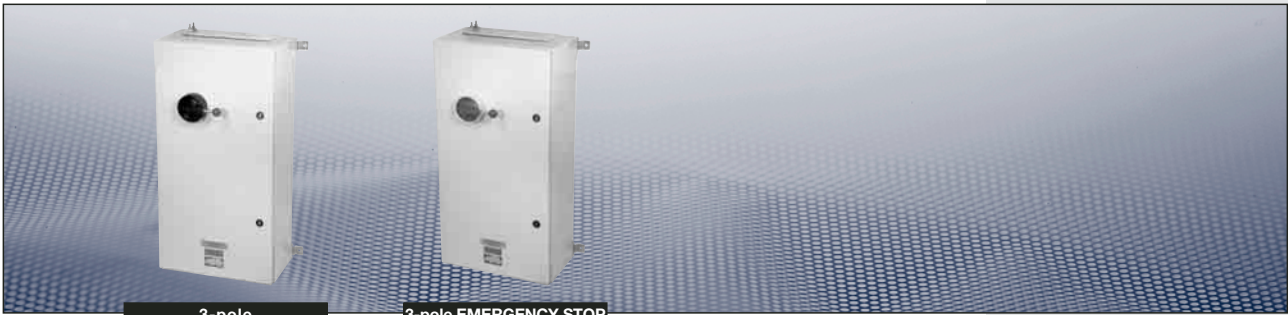
Version	Cable entry	Order No.
3-pole	2 x M63 / 1 x M25	KO 731713 W0001
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	KO 731723 W0001

Ordering details safety switch 250 A 6-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

Version	Cable entry	Order No.
6-pole	4 x M63 / 1 x M25	KO 731716 W0001
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	KO 731726 W0001

Customised versions on request.

For fixing materials and accessories, see page 7.44.



INDUSTRIAL SAFETY SWITCHES

400 A 3-pole

Technical data

400 A 3-pole

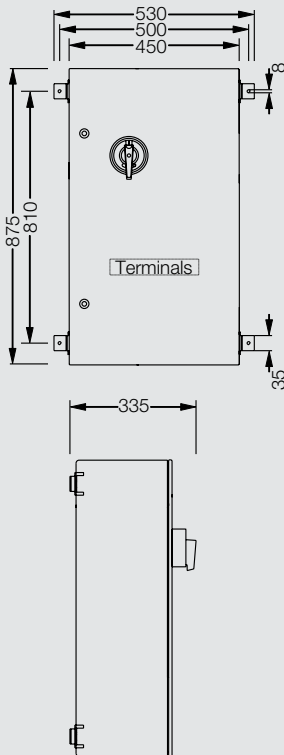
Rated voltage	up to 690 V
Rated current	max. 400 A
Switching capacity AC-23	230 V/400 A 400 V/400 A 500 V/400 A 690 V/400 A
Short-circuit backup fuse	max. 500 A (400 V) max. 500 A (690 V)
Degree of protection acc. to EN 60529	IP 65
Enclosure material	steel, powder-coated polyester
Connecting terminals	3 x 150/2 x 95 mm ² Auxiliary contact 2 x 4 mm ²
Cable entry	M25 (Ø 8 - 17 mm) M63 (Ø 27 - 48 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Weight	approx. 39.5 kg

Ordering details safety switch 400 A 3-pole
version with 2 auxiliary contacts (1 x NO, 1 x NC)

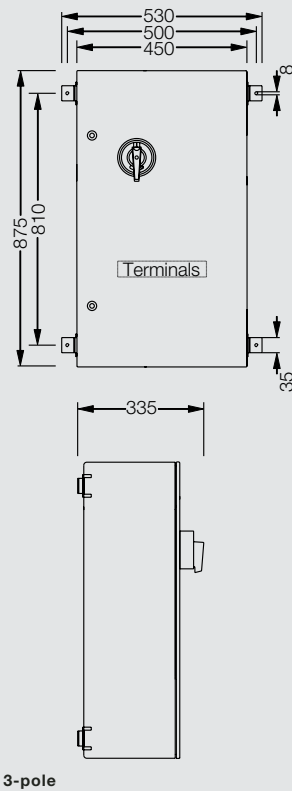
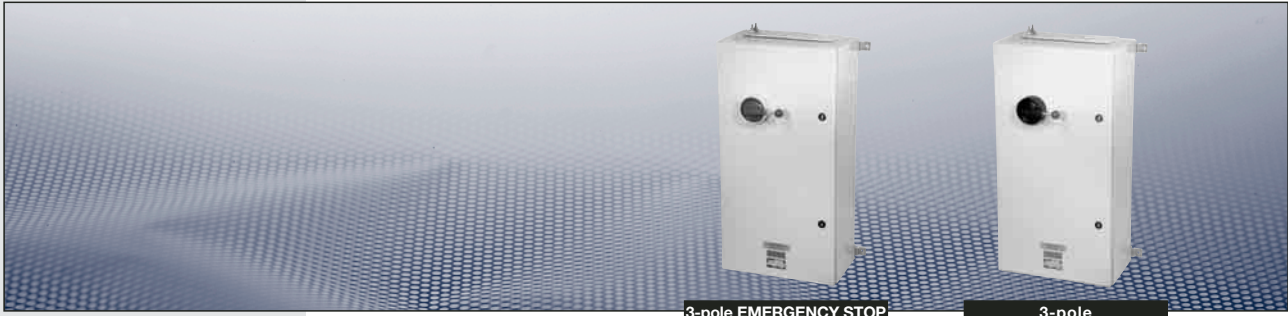
Version	Cable entry	Order No.
3-pole	4 x M63 / 1 x M25	KO 731713 X0001
3-pole EMERGENCY STOP	4 x M63 / 1 x M25	KO 731723 X0001

Customised versions on request.

For fixing materials and accessories, see page 7.44.



3-pole



INDUSTRIAL SAFETY SWITCHES

7.27

630 A 3-pole

Technical data

630 A 3-pole

Rated voltage	up to 690 V
Rated current	max. 630 A
Switching capacity AC-23	230 V/630 A 400 V/630 A 500 V/630 A 690 V/630 A
Short-circuit backup fuse	max. 800 A (400 V) max. 800 A (690 V)
Degree of protection acc. to EN 60529	IP 65
Enclosure material	steel, powder-coated polyester
Connecting terminals	3 x 240/120 mm ²
	Auxiliary contact 2 x 4 mm ²
Cable entry	M 25 (Ø 8 - 17 mm) M80 (Ø 62 - 68 mm)
Auxiliary contact	
1 x NO	making – lagging breaking – leading
1 x NC	making – leading breaking – lagging
Weight	approx. 40.5 kg

Ordering details safety switch 630 A 3-pole version with 2 auxiliary contacts (1 x NO, 1 x NC)

Version	Cable entry	Order No.
3-pole	4 x M80 / 1 x M25	KO 731713 Y0001
3-pole EMERGENCY STOP	4 x M80 / 1 x M25	KO 731723 Y0001

Customised versions on request.

For fixing materials and accessories, see page 7.44.

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EX-MAIN CURRENT SWITCHES

Up to 630 A

CEAG main current switches in a number of versions can be protected against inadvertent switching on by our integrated locking facility for up to three padlocks in the OFF position. To prevent manipulations, the enclosure covers cannot be opened in the locked position without destroying the enclosure itself.

Full AC-3 motor switching capacities and isolating properties according to EN 60947-4-1 with compulsory opening of the main current contacts according to EN 60204-1 are just some of the eminent features offered by CEAG's main current switches.

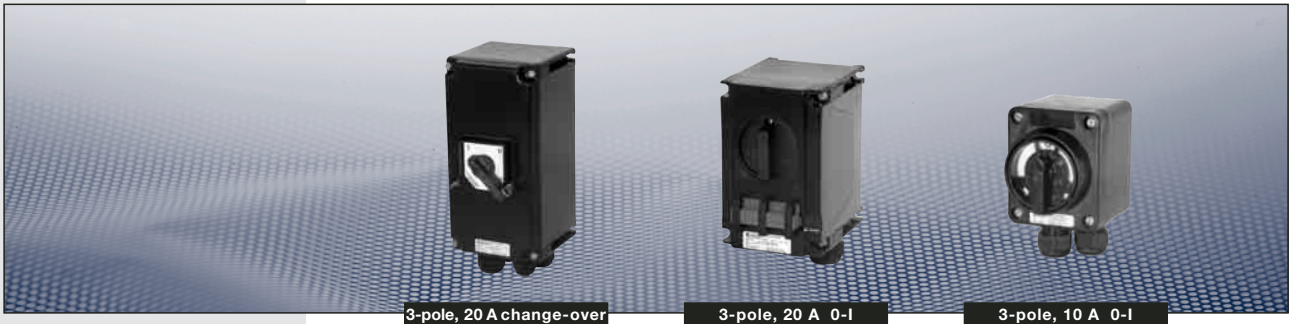
The main current switches feature an installation-friendly design and easily accessible connection terminals. Versions in impact-resistant polyamide or glass-fibre-reinforced polyester guarantee the high degree of protection IP 66 for amperages up to 180 A. These can be optionally supplied with snap-on moulded plastic or brass flanges. They can be equipped with screw-on flanges.

Main current switches >180 A are realized in metal enclosures.

Internationally approved.

Full AC-3 switching capacity
Cost-saving installation
Variants: star, delta, Dahlander or
reversing switches up to 80 A
Up to 40 A: mounting in snap
Up to 180 A: IP 66 protection





3-pole, 20 A change-over

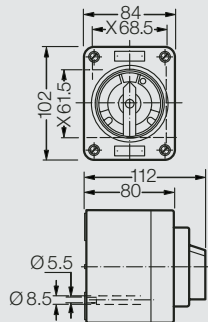
3-pole, 20 A 0-I

3-pole, 10 A 0-I

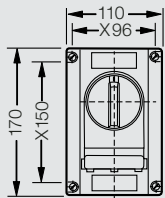
EX - MAIN CURRENT SWITCHES

| 10 A | 20 A |

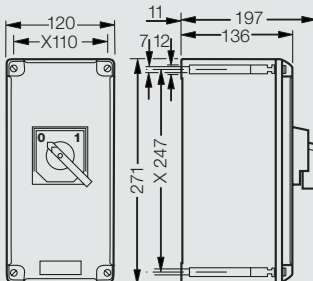
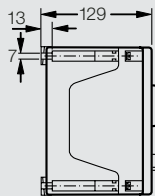
7.29



GHG 261 0006 R0001



GHG 262 1301 R0001



GHG 262 0016 R...

Technical data

10 A 3-pole, 20 A 3-pole

Marking to 94/9/EC	Ⓔ II 2 G Ⓔ II 2 D T 53 °C/55 °C			
Type of protection	EEx ed IIC T6			
EC-Type Examination Certificate	10 A: PTB 00 ATEX 1074 20 A: PTB 99 ATEX 1161			
Rated voltage	up to 500 V (10 A) up to 690 V (20 A)			
Rated current	max. 10 A max. 20 A			
Switching capacity AC-3	10 A	230 V/10 A	400 V/10 A	500 V/10 A
	20 A	230 V/20 A	400 V/20 A	500 V/16 A 690 V/10 A
Short-circuit backup fuse	max. 20 A (400 V) max. 16 A (500 V)			
Degree of protection acc. to EN 60529	IP 66			
Enclosure material	10 A: Plastic 20 A: Glass-fibre reinforced polyester			
Connecting terminals	2 x 2,5 mm ² 2 x 4 mm ²			
Cable entry	M 25 (Ø 8 - 17 mm) M32 (Ø 12 - 21 mm)			
Weight	10 A: approx. 0.6 kg 20 A: approx. 1.4 kg			

Ordering details main current switch 10 A 3-pole

Version	Cable entry	Order No.
3-pole 0-I	2 x M25	ON-OFF switch GHG 261 0006 R0001

Ordering details main current switch 20 A 3-pole

Version	Cable entry	Order No.
3-pole 0-I	2 x M32	ON-OFF switch GHG 262 1301 R0001
0 - Y - D	3 x M32	star-delta GHG 262 0016 R0004
0 - I - II	3 x M32	Dahlander GHG 262 0016 R0005

**Ordering details main current switch 20 A 3-pole
Equipped with 1 x NO, 1 x NC**

Version	Cable entry	Order No.
I - II	3 x M32/1 x M25	change-over switch GHG 262 0016 R0001
I - 0 - II	3 x M32/1 x M25	change-over switch GHG 262 0016 R0002
I - 0 - II	2 x M32/1 x M25	reversing switch GHG 262 0016 R0003

Customised versions on request, auxiliary contact in EEx ia available.

For fixing materials and accessories, see page 7.44.

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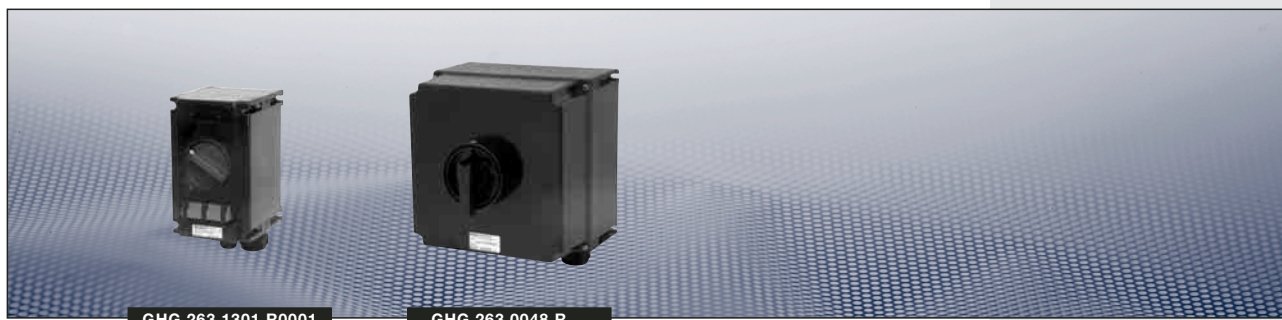
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EX - MAIN CURRENT SWITCHES

| 40 A |

Technical data

40 A 3-pole

Marking to 94/9/EC	Ex II 2 G Ex II 2 DT 53 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1161
Rated voltage	up to 690 V (20 A)
Rated current	max. 40 A
Switching capacity AC-3	230 V/40 A 400 V/40 A 500 V/40 A 690 V/32 A
Short-circuit backup fuse	max. 80 A (400 V) max. 63 A (690 V)
Degree of protection acc. to EN 60529 IP 66	
Enclosure material	Glass-fibre reinforced polyester
Connecting terminals	2 x 16 mm ²
Cable entry	M 25 (Ø 8 - 17 mm) M40 (Ø 16 - 28 mm)
Weight	approx. 2.3 kg (3-pole version) approx. 6.5 kg (6-pole version)

Ordering details main current switch 40 A 3-pole

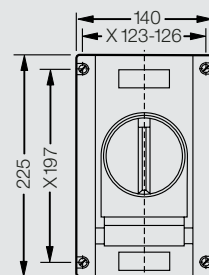
Version	Cable entry	Type	Order No.
0 - I	2 x M40, 1 x M25	ON-OFF switch	GHG 263 1301 R0001
0 - Y - D	3 x M40,		
	2 x M25 screw plug	star-delta	GHG 263 0048 R0005
0 - I - II	3 x M40,		
	2 x M25 screw plug	Dahlander	GHG 263 0048 R0006

Ordering details main current switch 40 A 3-pole Bestückt with 2 auxiliary contacts, 1 x NO, 1 x NC

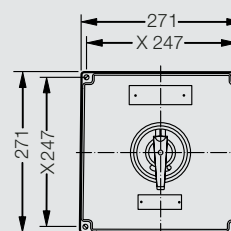
Version	Cable entry	Type	Order No.
I - II	3 x M40, 1 x M25,		
	1 x M25 screw plug	change-over switch	GHG 263 0048 R0002
I - 0 - II	3 x M40, 1 x M25		
	1 x M25 screw plug	change-over switch	GHG 263 0048 R0003
I - 0 - II	2 x M40, 1 x M25		
	1 x M25 screw plug	reversing switch	GHG 263 0048 R0004

Customised versions on request, auxiliary contact in EEx ia available.

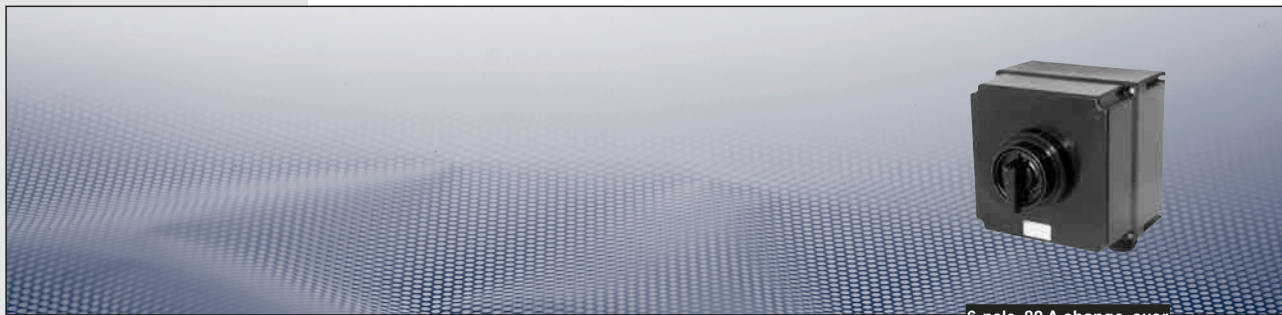
For fixing materials and accessories, see page 7.44.



GHG 263 1301 R0001



GHG 263 0048 R....

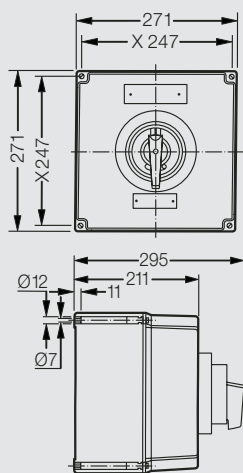


6-pole, 80 A change-over

EX - MAIN CURRENT SWITCHES

| 80 A |

7.31



GHG 264 0019 R....

Technical data

80 A 4-pole and 6-pole

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 53 °C
Type of protection	EEx ed IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 1091
Rated voltage	up to 690 V
Rated current	max. 80 A
Switching capacity AC-3	230 V/80 A 400 V/80 A 500 V/80 A 690 V/63 A
Short-circuit backup fuse	max. 80 A (400 V) max. 63 A (690 V)
Degree of protection acc. to EN 60529	IP 66 (3-pole version) IP 65 (6-pole version)
Enclosure material	Glass-fibre reinforced polyester
Connecting terminals	2 x 16 mm ² Auxiliary contact: 2 x 4 mm ²
Cable entry	M 25 (Ø 8 - 17 mm) M50 (Ø 21 - 35 mm)
Weight	approx. 6.5 kg (3-pole version) approx. 9.0 kg (6-pole version)

Ordering details main current switch 80 A

Equipped with 2 auxiliary contacts, 1 x NO, 1 x NC

Version	Cable entry	Type	Order No.
4-pole 0 - I	2 x M50, without aux. contacts	change-over switch	GHG 264 0022 R9015
I - 0 - II	3 x M50, 1 x M25 screw plug	change-over switch	GHG 264 0019 R0003
I - 0 - II	2 x M50, 1 x M25 screw plug	reversing switch	GHG 264 0019 R0004

Main current switches >180 A on request.

Customised versions on request, auxiliary contact in EEx ia available.

For fixing materials and accessories, see page 7.44.

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EX-POWER CIRCUIT BREAKERS

Up to 630 A

CEAG power circuit breakers enable making or breaking of circuits under normal operating conditions as well as cutting in, briefly conducting and cutting out currents under exceptional conditions, such as short circuiting.

Full AC-3 motor switching capacities and isolating properties according to EN 60947-4-1 with compulsory opening of the main current contacts according to EN 60204-1 are just some of the eminent features offered by CEAG power circuit breakers. Versions up to 180 A guarantee the optional high degree of protection IP 65. The switch position is always clearly indicated and easily seen. The main current switches feature an installation-friendly design and easily accessible connection terminals.

Metal versions can be equipped with metal screw-on flanges allowing simple integration in system as well as cost-efficient later extensions.

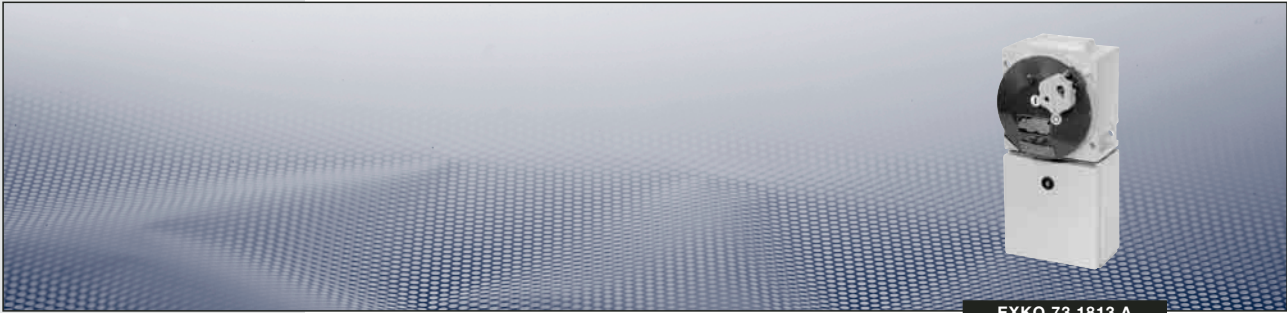
These can be optionally supplied with snap-on moulded plastic or brass flanges.

The described power circuit breakers are also available for Explosion Group IIB, which is sufficient for many of the applications.

Internationally approved.



Full AC-3 motor switching capacity
High degree of IP protection
Simple integration in systems

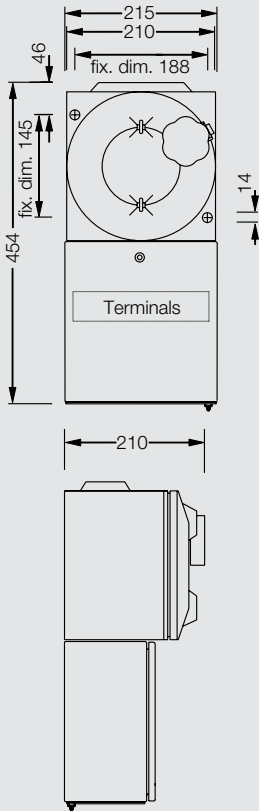


EXKO 73 1813 A

EX - POWER CIRCUIT BREAKERS

7.33

| 63 A |



EXKO 73 1813 A

Technical data

63 A 3-pole and 4-pole

Marking to 94/9/EC	II 2 G
Type of protection	EEx de IIC T6 ¹⁾
EC-Type Examination Certificate	PTB 99 ATEX 1057
Rated voltage	up to 690 V
Rated current	max. 63 A
Switching capacity AC-3	230 V/63 A 400 V/63 A 500 V/63 A 690 V/63 A
Short-circuit backup fuse	max. 80 A (400 V) max. 80 A (690 V)
Degree of protection acc. to EN 60529	IP 54 (optional IP 65)
Enclosure material	aluminium, powder-coated polyester
	Connection box steel, powder-coated polyester
Connecting terminals	35 mm ²
Cable entry	M50 (Ø 21 - 35 mm)
Weight	approx. 17 kg (3-pole version) approx. 18 kg (4-pole version)

Ordering details power circuit breaker 63 A 3-pole

Version	Cable entry	Order No.
3-pole	2 x M50	EXKO 73 1813 A 0001

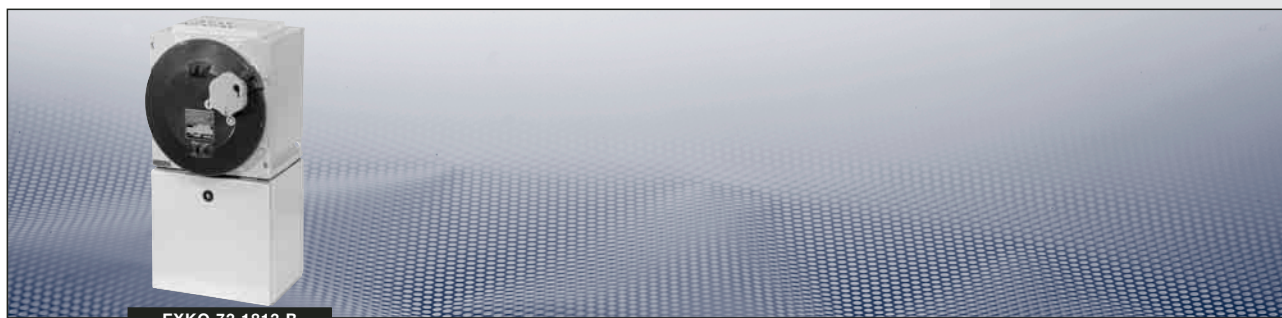
Ordering details power circuit breaker 63 A 4-pole

Version	Cable entry	Order No.
4-pole	2 x M50	EXKO 73 1814 A 0001

Customised versions on request.

¹⁾ Also available with Explosion Group IIB





EXKO 73 1813 B

EX - POWER CIRCUIT BREAKERS

125 A

Technical data

125 A 3-pole and 4-pole

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T6 ¹⁾
EC-Type Examination Certificate	PTB 99 ATEX 1057
Rated voltage	up to 690 V
Rated current	max. 125 A
Switching capacity AC-3	230 V/125 A 400 V/125 A 500 V/125 A 690 V/125 A
Short-circuit backup fuse	max. 160 A (400 V) max. 160 A (690 V)
Degree of protection acc. to EN 60529	IP 54 (IP 65 optional)
Enclosure material	aluminium, powder-coated polyester
	Connection box steel, powder-coated polyester
Connecting terminals	50/35 mm ²
Cable entry	M50 (Ø 21 - 35 mm)
Weight	approx. 48 kg (3-pole version)
	approx. 52 kg (4-pole version)

Ordering details power circuit breaker 125 A 3-pole

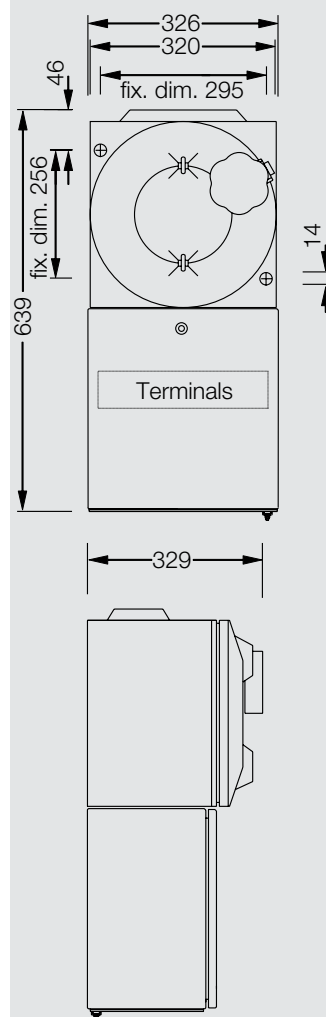
Version	Cable entry	Order No.
3-pole	2 x M50	EXKO 73 1813 B 0001

Ordering details power circuit breaker 125 A 4-pole

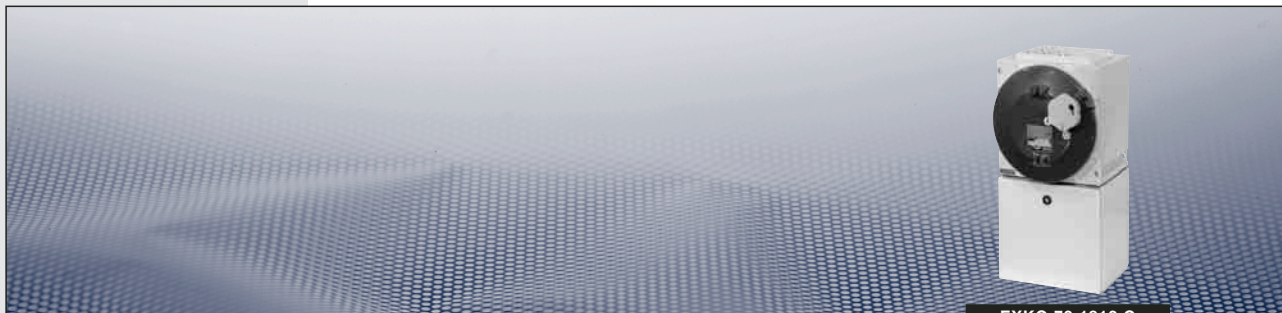
Version	Cable entry	Order No.
4-pole	2 x M50	EXKO 73 1814 B 0001

Customised versions on request.

¹⁾ Also available with Explosion Group IIB



EXKO 73 1813 B

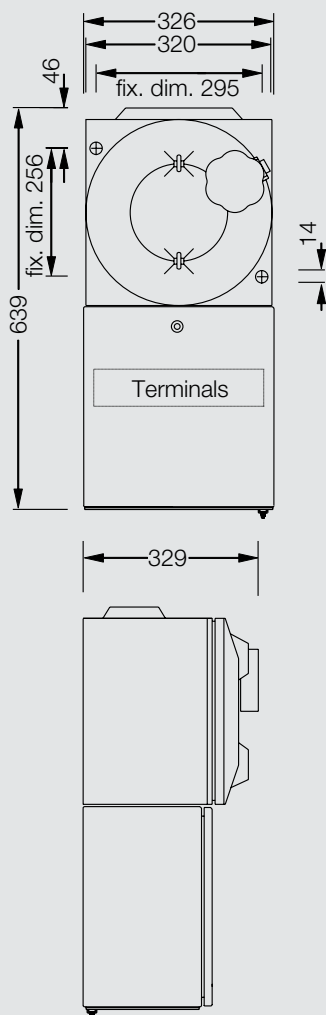


EXKO 73 1813 C

EX - POWER CIRCUIT BREAKERS

| 160 A |

7.35



EXKO 73 1813 C

Technical data

160 A 3-pole and 4-pole

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T6 ¹⁾
EC-Type Examination Certificate	PTB 99 ATEX 1057
Rated voltage	up to 690 V
Rated current	max. 180 A
Switching capacity AC-3	230 V/180 A 400 V/180 A 500 V/150 A 690 V/125 A
Short-circuit backup fuse	max. 210 A (400 V) max. 210 A (690 V)
Degree of protection acc. to EN 60529	IP 54 (IP 65 optional)
Enclosure material	aluminium, powder-coated polyester
	Connection box steel, powder-coated polyester
Connecting terminals	95/50 mm ²
Cable entry	M50 (Ø 21 - 35 mm)
Weight	approx. 48 kg (3-pole version) approx. 52 kg (4-pole version)

Ordering details power circuit breaker 160 A 3-pole

Version	Cable entry	Order No.
3-pole	2 x M50	EXKO 73 1813 C 0001

Ordering details power circuit breaker 160 A 4-pole

Version	Cable entry	Order No.
4-pole	2 x M50	EXKO 73 1814 C 0001

Customised versions on request.

¹⁾ Also available with Explosion Group IIB

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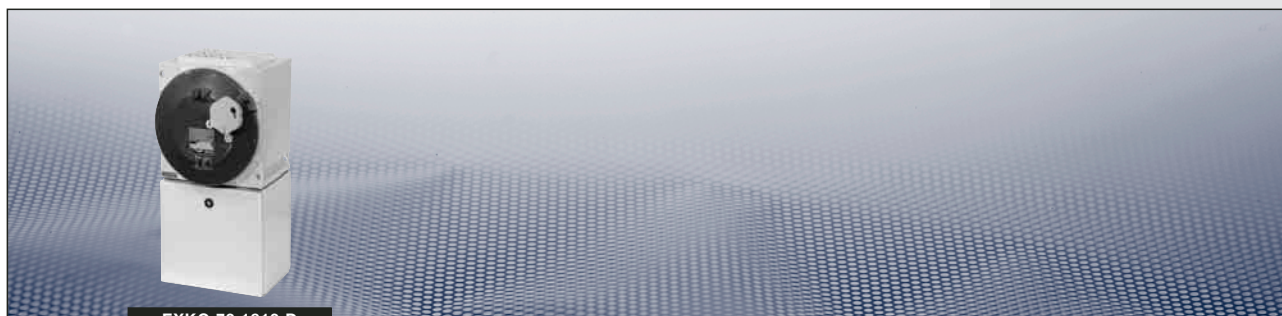
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EXKO 73 1813 D

EX - POWER CIRCUIT BREAKERS

| 250 A |

Technical data

250 A 3-pole and 4-pole

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T6 ¹⁾
EC-Type Examination Certificate	PTB 99 ATEX 1057
Rated voltage	up to 690 V
Rated current	max. 250 A
Switching capacity AC-3	230 V/250 A 400 V/250 A 500 V/250 A 690 V/250 A
Short-circuit backup fuse	max. 250 A (400 V) max. 250 A (690 V)
Degree of protection acc. to EN 60529	IP 54
Enclosure material	aluminium, powder-coated polyester
	Connection box steel, powder-coated polyester
Connecting terminals	150/95 mm ²
Cable entry	M63 (Ø 27 - 48 mm)
Weight	approx. 50 kg (3-pole version)
	approx. 55 kg (4-pole version)

Ordering details power circuit breaker 250 A 3-pole

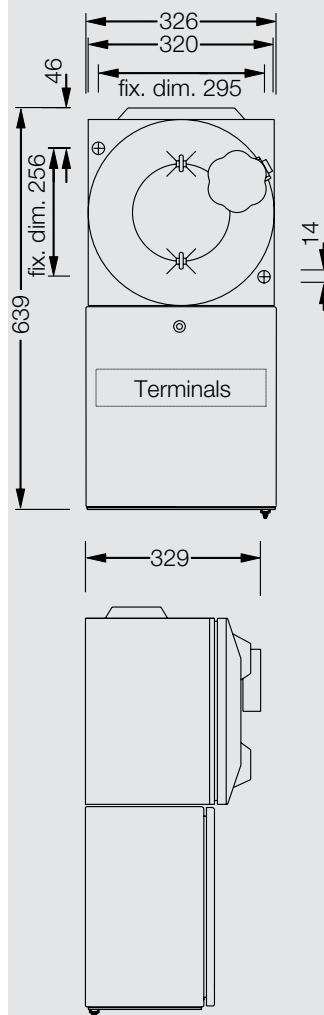
Version	Cable entry	Order No.
3-pole	2 x M63	EXKO 73 1813 D 0001

Ordering details power circuit breaker 250 A 4-pole

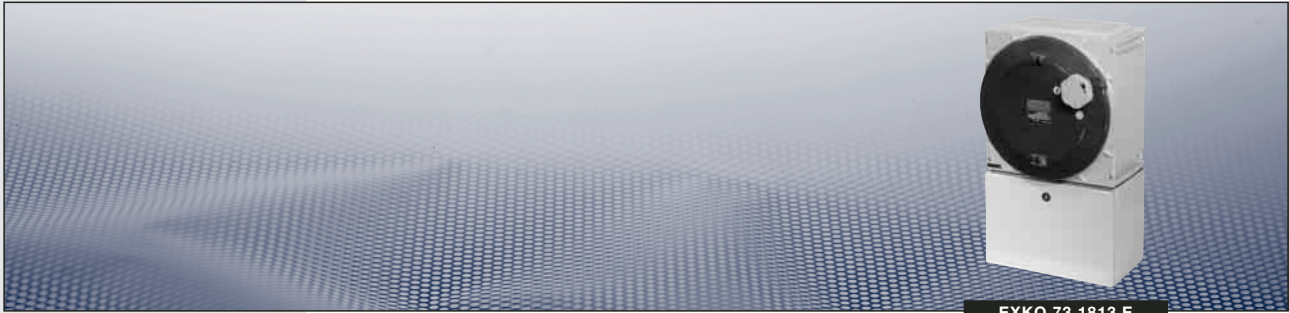
Version	Cable entry	Order No.
4-pole	4 x M63	EXKO 73 1814 D 0001

Customised versions on request.

¹⁾ Also available with Explosion Group IIB



EXKO 73 1814 D

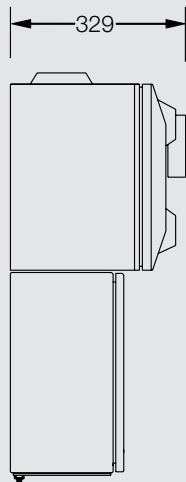
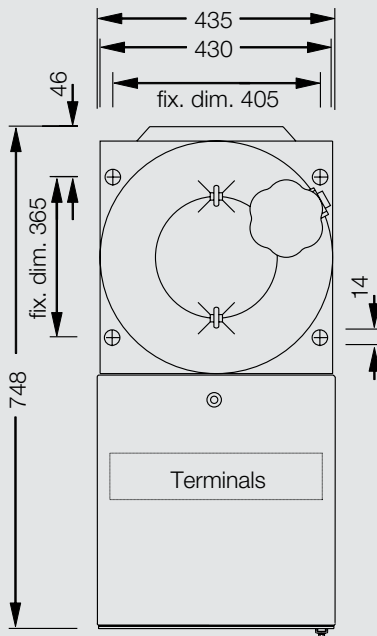


EXKO 73 1813 E

EX - POWER CIRCUIT BREAKERS

| 400 A |

7.37



EXKO 73 1813 E

Technical data

400 A 3-pole and 4-pole

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T6 ¹⁾
EC-Type Examination Certificate	PTB 99 ATEX 1057
Rated voltage	up to 690 V
Rated current	max. 400 A
Switching capacity AC-3	230 V/400 A 400 V/400 A 500 V/400 A 690 V/400 A
Short-circuit backup fuse	max. 500 A (400 V) max. 500 A (690 V)
Degree of protection acc. to EN 60529	IP 54
Enclosure material	aluminium, powder-coated polyester
	Connection box steel, powder-coated polyester
Connecting terminals	150/95 mm ²
Cable entry	M63 (Ø 27 - 48 mm)
Weight	approx. 85 kg (3-pole version)
	approx. 90 kg (4-pole version)

Ordering details power circuit breaker 400 A 3-pole

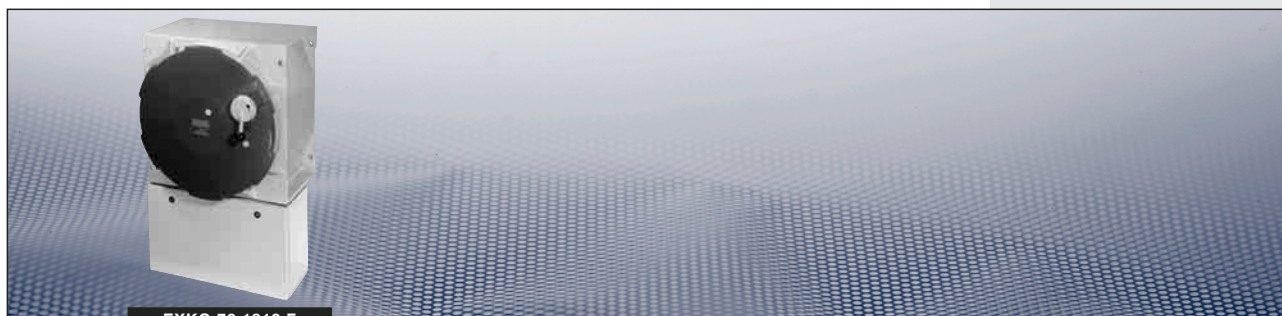
Version	Cable entry	Order No.
3-pole	4 x M63	EXKO 73 1813 E 0001

Ordering details power circuit breaker 400 A 4-pole

Version	Cable entry	Order No.
4-pole	4 x M63	EXKO 73 1814 E 0001

Customised versions on request.

¹⁾ Also available with Explosion Group IIB



EXKO 73 1813 F

EX - POWER CIRCUIT BREAKERS

| 630 A |

Technical data

630 A 3-pole and 4-pole

Marking to 94/9/EC	Ex II 2 G
Type of protection	EEx de IIC T6 ¹⁾
EC-Type Examination Certificate	PTB 99 ATEX 1057
Rated voltage	up to 690 V
Rated current	max. 630 A
Switching capacity AC-3	230 V/630 A 400 V/630 A 500 V/630 A 690 V/630 A
Short-circuit backup fuse	max. 800 A (400 V) max. 800 A (690 V)
Degree of protection acc. to EN 60529	IP 54
Enclosure material	steel, powder-coated polyester
	Connection box steel, powder-coated polyester
Connecting terminals	240/120 mm ²
Cable entry	M80 (Ø 62 - 68 mm)
Weight	approx. 245 kg (3-pole version) approx. 250 kg (4-pole version)

Ordering details power circuit breaker 630 A 3-pole

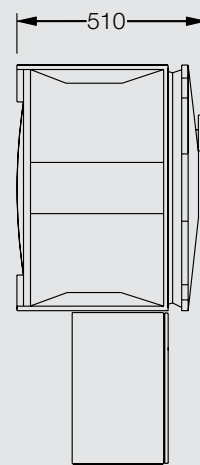
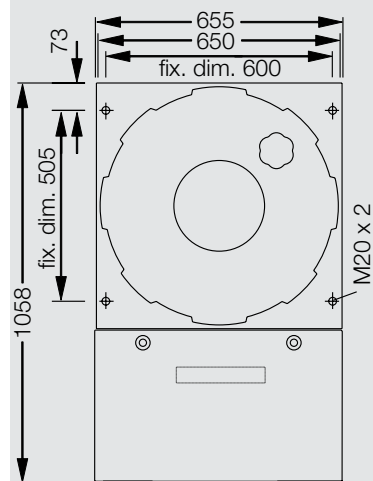
Version	Cable entry	Order No.
3-pole	4 x M80	EXKO 73 1813 F 0001

Ordering details power circuit breaker 630 A 4-pole

Version	Cable entry	Order No.
4-pole	4 x M80	EXKO 73 1814 F 0001

Customised versions on request.

¹⁾ Also available with Explosion Group IIB



EXKO 73 1813 F

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EX - MANUAL MOTOR STARTERS

Up to 25 A

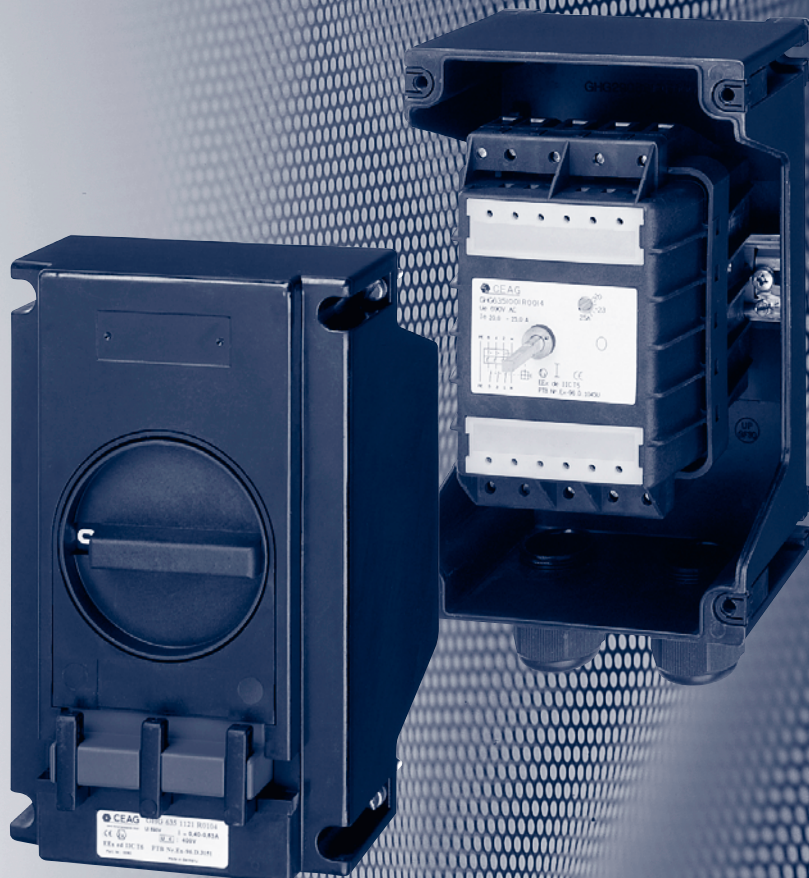
Motors have to be protected against overloads, phase failures and overheating: CEAG's power circuit breaker and manual motor starter features phase-failure protection as well as thermal and electromagnetic tripping for reliable motor protection.

An optional under-voltage trip or auxiliary contact complements the safety package. The switch position is always indicated by the switch handle – practically excluding wrong operation.

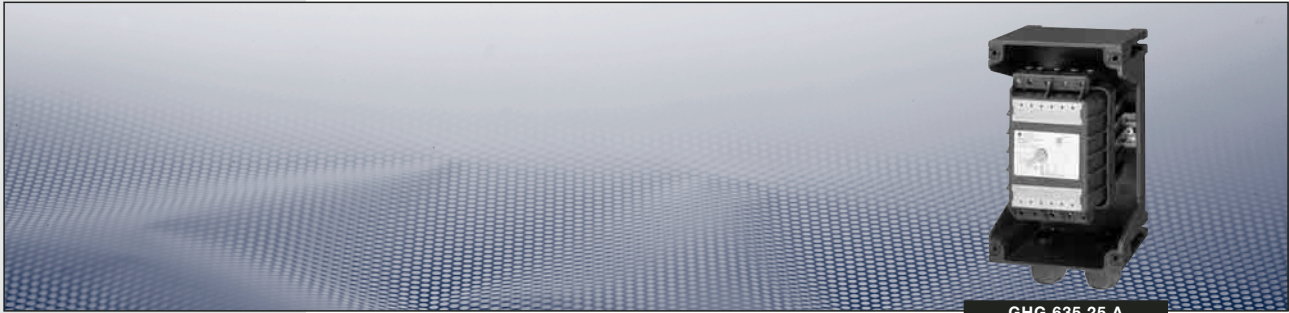
A special safety feature offered by the manual motor starter: It can only be switched on on-site – where the drive is. An operating-current trip for remote switch-off is optional.

CEAG manual motor starters have such a precise tripping time that they are equally suited for the protection of Ex-e as well as Ex-d motors – just to put you on the safe side.

Internationally approved.



- Full AC-3 motor switching capacity
- Decisive cost savings with CEAG's mounting system
- Easily accessible connection terminals
- Degree of protection IP 66
- Isolating properties according to DIN EN 60947-4-1
- Clear indication of switch position
- Phase-failure protection
- Integrated locking facility

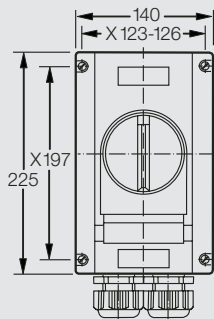


GHG 635 25 A

EX - MANUAL MOTOR STARTERS

| GHG 635/25 A |

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GHG 635

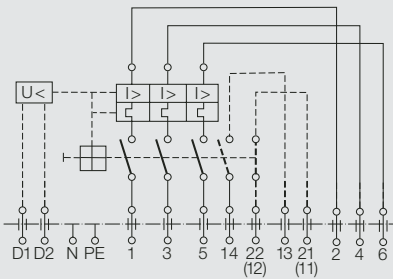
Technical data

GHG 635/25 A

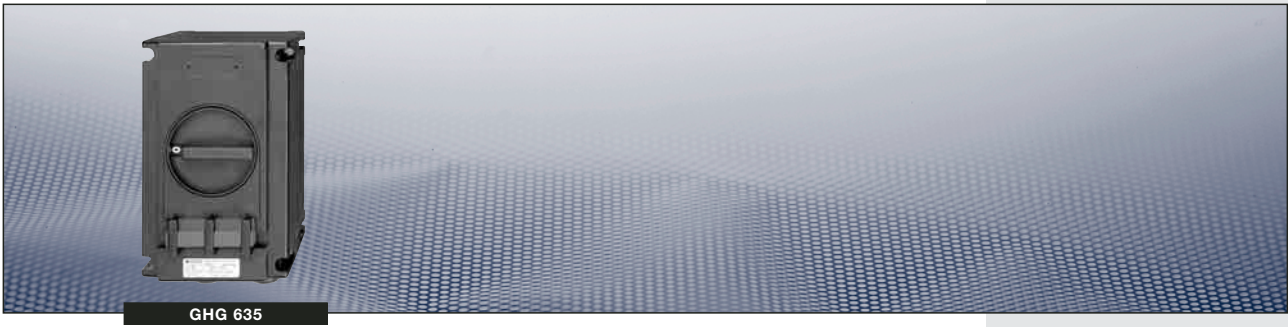
Marking to 94/9/EC	Ex II 2 G Ex II 2 D T 55 °C
Type of protection	EEx ed IIC T5-T6
EC-Type Examination Certificate	PTB 99 ATEX 1162
Enclosure material	Glass-fibre reinforced polyester
Degree of protection acc. to EN 60529	IP 66
Rated voltage	up to 690 V AC
Rated current	up to 25 A
Rated current auxiliary contact	2 A
Switching capacity AC-3	up to 690 V/25 A
Short-circuit backup fuse	see table down
Undervoltage trip	tripping at 15 % - 75 % U _N can be switched on at U > 80 % U _C
Connecting terminals	up to 10 mm ²
Connecting terminals auxiliary contact	2 x 2.5 mm ²
Cable entries	0.1 - 6.3 A 2 x M25 for cables with Ø 8 - 17 mm 6.3 - 25 A 2 x M32 for cables with Ø 12 - 21 mm
Weight	approx. 2.5 kg

Short-circuit protection up to 100 kA and maximum backup fuse

Setting range	230 V AC		400 V AC		500 V AC		690 V AC		Temp.
	Ics	gl, aM	Ics	gl, aM	Ics	gl, aM	Ics	gl, aM	
0.1 A ... 0.16 A									T6
1.0 A ... 1.6 A									T6
1.6 A ... 2.5 A	short-circuit proof						40	25	T6
2.5 A ... 4.0 A	no backup fuse						40	40	T6
4.0 A ... 6.3 A	required						30	50	T6
6.3 A ... 9.0 A					30	80	3	50	T6
9.0 A ... 12.5 A			50	80	20	80	3	50	T6
12.5 A ... 16.0 A			50	100	20	100	3	50	T6
16.0 A ... 20.0 A			50	100	20	100	2	50	T5
20.0 A ... 25.0 A	50	125	50	125	20	125	2	50	T5



Dimensions in mm

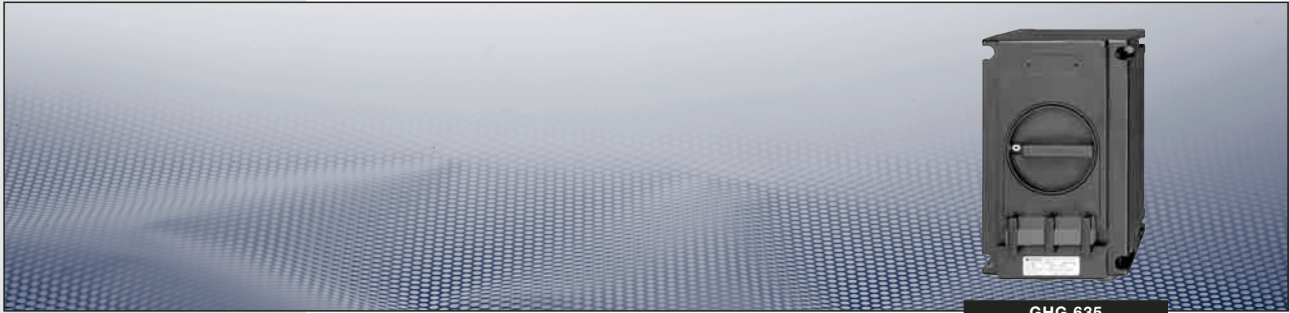


EX - MANUAL MOTOR STARTERS

GHG 635/25 A

Order coding for special versions				
GHG 635/25 A				
	A	B	C	
Description:	Version	Undervoltage trip	Auxiliary contact	
GHG 635 1	A	B	C	R....

Coding	
„A“ Version:	1 = standard version
„B“ Undervoltage trip:	
	0 = without undervoltage trip
	1 = Undervoltage trip 230 V
	2 = Undervoltage trip 400 V
	3 = Undervoltage trip 440 V
	4 = Undervoltage trip 500 V
	5 = Undervoltage trip 24 V
	6 = Undervoltage trip 48 V
	7 = Undervoltage trip 60 V
	8 = Undervoltage trip 110 V
	9 = Undervoltage trip 415 V
„C“ Auxiliary contact:	
	1 = without auxiliary contact
	2 = with auxiliary contact 1 S + 1 Ö
	3 = with auxiliary contact 2 NO



GHG 635

EX - MANUAL MOTOR STARTERS

7.43

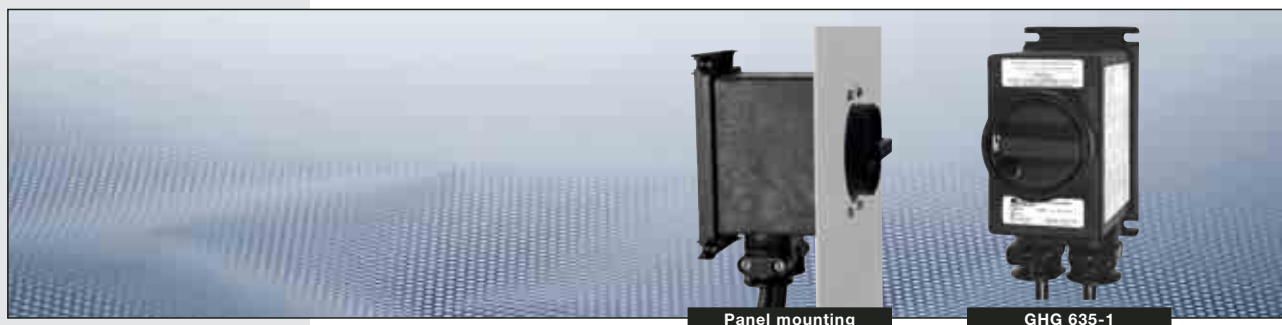
| GHG 635/25 A |

Ordering details for standard versions

Setting range of rated current	Order No.
Version without undervoltage trip, without auxiliary contact	A B C
0.1 A - 0.16 A	GHG 635 1 1 0 1 R0101
0.16 A - 0.25 A	GHG 635 1 1 0 1 R0102
0.25 A - 0.40 A	GHG 635 1 1 0 1 R0103
0.40 A - 0.63 A	GHG 635 1 1 0 1 R0104
0.63 A - 1.0 A	GHG 635 1 1 0 1 R0105
1.0 A - 1.6 A	GHG 635 1 1 0 1 R0106
1.6 A - 2.5 A	GHG 635 1 1 0 1 R0107
2.5 A - 4.0 A	GHG 635 1 1 0 1 R0108
4.0 A - 6.3 A	GHG 635 1 1 0 1 R0109
6.3 A - 9.0 A	GHG 635 1 1 0 1 R0110
9.0 A - 12.5 A	GHG 635 1 1 0 1 R0111
12.5 A - 16 A	GHG 635 1 1 0 1 R0112
16 A - 20 A	GHG 635 1 1 0 1 R0113
20 A - 25 A	GHG 635 1 1 0 1 R0114

Other versions on request.

Fixing materials and accessories see page 7.44 pp.

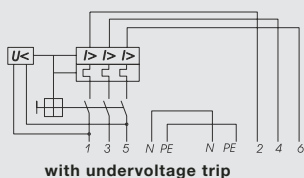
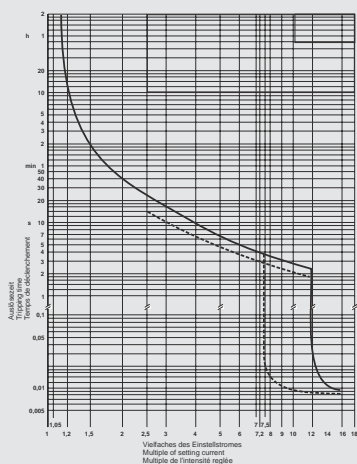


Panel mounting

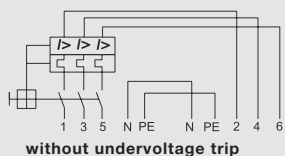
GHG 635-1

EX - MANUAL MOTOR STARTERS

| GHG 635-1 |



with undervoltage trip



without undervoltage trip

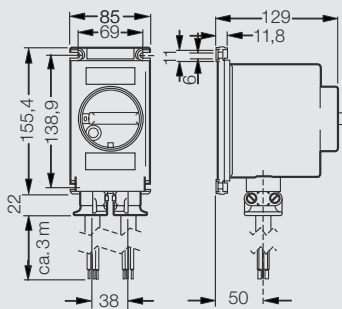
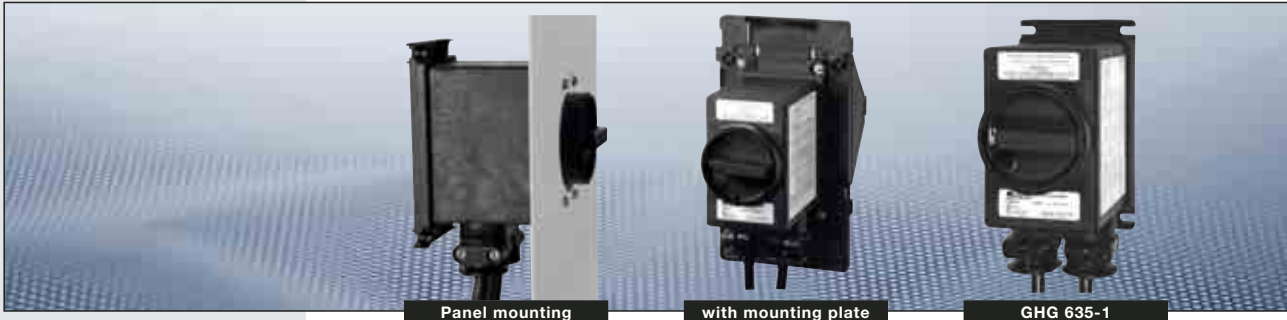
Technical data

GHG 635-1

EC-Type Examination Certificate	PTB 05 ATEX 1020
Marking to 94/9/EC	II 2 G II 2 D IP 66 T80°C
Type of protection	EEx d IIC T6
Enclosure material	Glass-fibre reinforced polyester
Rated voltage	up to 690 V, 50/60 Hz
Rated current	0,1 A up to 16 A
Short-circuit backup fuse up to 400 V AC	short circuit protected up to 50 kA
Switching capacity AC 3	690 V / 16 A
Thermal release tripping	T II
Permissible ambient temperature	-20° C to +40° C
Permissible storage temperature in original packing	-40° C to +80° C
Degree of protection acc. to EN 60529/IEC 529	IP 66
Protection class acc. EN 60598/IEC 598	I
Line cord H05 V2-V2-F	2 x 5 x 1.0 mm ² (up to 9.0 A)
(Standard length 3 m, other length on request)	2 x 5 x 1.5 mm ² (up to 12.5 A)
	2 x 5 x 2.5 mm ² (up to 16.0 A)
Weight (without line cord)	approx. 1 kg
Dimensions (W x H x D)	85 x 178 x 129 mm

Undervoltage trip

Rated voltages	230/400 V 50/60 Hz (Standard)
	440 V/500 V/24 V/48 V/60 V on request
Tripping at	35....70 % U _R
Can be switched on at	U > 85 % U _R
Back-up fuse	no additional short circuit fuse required



Ordering details

Setting range	Undervoltage trip	Cord length H05 V2-V2-F	Order No.
0.1 - 0.16 A	no	2 x 3 m 1.0 mm ²	GHG 635 1200 R0001
	230 V	2 x 3 m 1.0 mm ²	GHG 635 1210 R0001
	400 V	2 x 3 m 1.0 mm ²	GHG 635 1220 R0001
0.16 - 0.25 A	no	2 x 3 m 1.0 mm ²	GHG 635 1200 R0002
	230 V	2 x 3 m 1.0 mm ²	GHG 635 1210 R0002
	400 V	2 x 3 m 1.0 mm ²	GHG 635 1220 R0002
0.25 - 0.40 A	no	2 x 3 m 1.0 mm ²	GHG 635 1200 R0003
	230 V	2 x 3 m 1.0 mm ²	GHG 635 1210 R0003
	400 V	2 x 3 m 1.0 mm ²	GHG 635 1220 R0003
0.40 - 0.63 A	no	2 x 3 m 1.0 mm ²	GHG 635 1200 R0004
	230 V	2 x 3 m 1.0 mm ²	GHG 635 1210 R0004
	400 V	2 x 3 m 1.0 mm ²	GHG 635 1220 R0004
0.63 - 1.0 A	no	2 x 3 m 1.0 mm ²	GHG 635 1200 R0005
	230 V	2 x 3 m 1.0 mm ²	GHG 635 1210 R0005
	400 V	2 x 3 m 1.0 mm ²	GHG 635 1220 R0005
1.0 - 1.6 A	no	2 x 3 m 1.0 mm ²	GHG 635 1200 R0006
	230 V	2 x 3 m 1.0 mm ²	GHG 635 1210 R0006
	400 V	2 x 3 m 1.0 mm ²	GHG 635 1220 R0006
1.6 - 2.5 A	no	2 x 3 m 1.0 mm ²	GHG 635 1200 R0007
	230 V	2 x 3 m 1.0 mm ²	GHG 635 1210 R0007
	400 V	2 x 3 m 1.0 mm ²	GHG 635 1220 R0007
2.5 - 4.0 A	no	2 x 3 m 1.0 mm ²	GHG 635 1200 R0008
	230 V	2 x 3 m 1.0 mm ²	GHG 635 1210 R0008
	400 V	2 x 3 m 1.0 mm ²	GHG 635 1220 R0008
4.0 - 6.3 A	no	2 x 3 m 1.0 mm ²	GHG 635 1200 R0009
	230 V	2 x 3 m 1.0 mm ²	GHG 635 1210 R0009
	400 V	2 x 3 m 1.0 mm ²	GHG 635 1220 R0009
6.3 - 9 A	no	2 x 3 m 1.0 mm ²	GHG 635 1200 R0010
	230 V	2 x 3 m 1.0 mm ²	GHG 635 1210 R0010
	400 V	2 x 3 m 1.0 mm ²	GHG 635 1220 R0010
9 - 12.5 A	no	2 x 3 m 1.5 mm ²	GHG 635 1200 R0011
	230 V	2 x 3 m 1.5 mm ²	GHG 635 1210 R0011
	400 V	2 x 3 m 1.5 mm ²	GHG 635 1220 R0011
12.5 - 16 A	no	2 x 3 m 2.5 mm ²	GHG 635 1200 R0012
	230 V	2 x 3 m 2.5 mm ²	GHG 635 1210 R0012
	400 V	2 x 3 m 2.5 mm ²	GHG 635 1220 R0012

Accessories

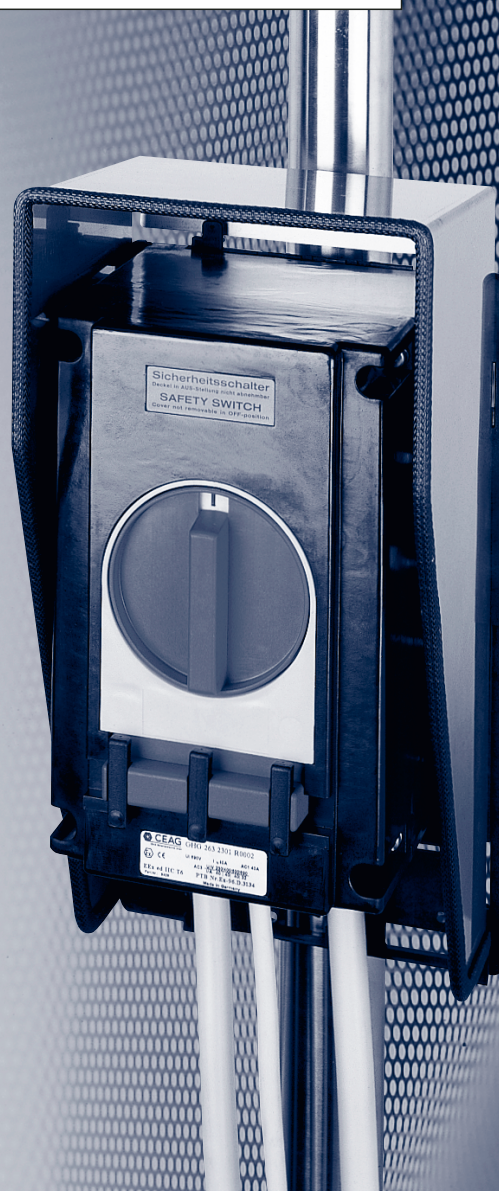
Type	Content	Order No.
Mounting plate	Mounting plate for pipe mounting (1" or 2") square profile 41 x 41 mm or U-profile 60 x 40 mm incl. snap-on fixing clips	GHG 630 1926 R0001
Screws size 1	5 self-tapping screws for panel mounting 1 - 2 mm wall thickness	GHG 630 1925 R0001
Screws size 2	5 self-tapping screws for panel mounting 2- 3 mm wall thickness	GHG 630 1925 R0002

FIXING MATERIALS AND ACCESSORIES

Safety and main current switches

In close cooperation with our customers, we have implemented a trend-setting solution in response to the demands from the industry for an apparatus mounting technique without tools in hazardous areas. Our snap-on mounting system allows low-cost mounting on walls, trellis work or pipes. CEAG's standard apparatus can be easily attached on the mounting plates which come in four sizes.

The allocation of the mounting plates to the various apparatus is shown in the technical data. The mounting plates can be equipped with a label holder. Optional stainless-steel canopies provide protection against aggressive environments, the sun and rain.

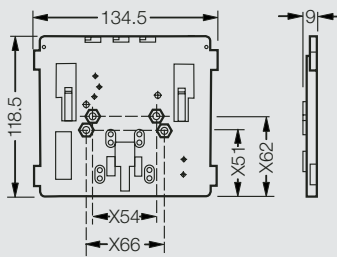
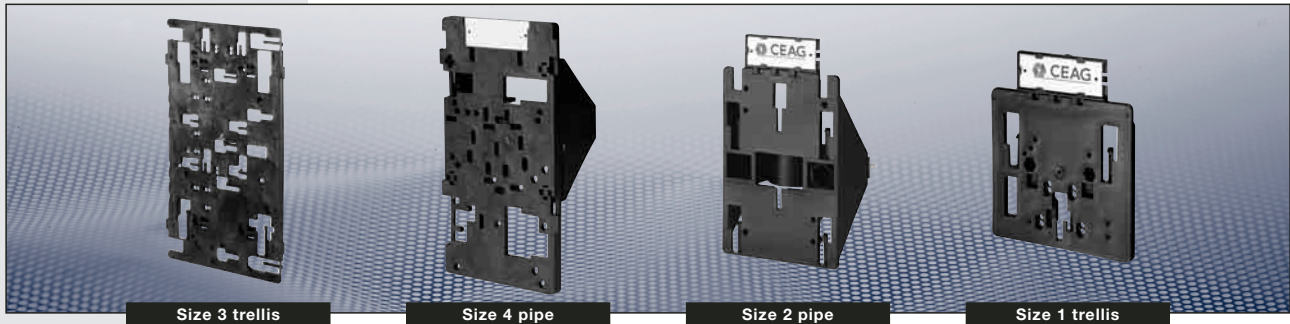


Decisive cost savings using this mounting system

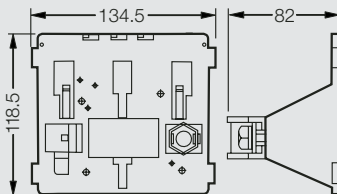
Simple attachment of mounting plates on walls, trellis work or pipes

Quick attachment of new apparatus generation using snap-on mounting

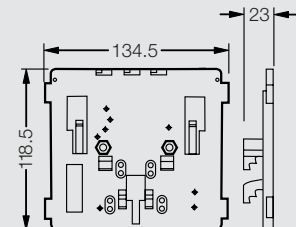
Universal use as apparatus holder



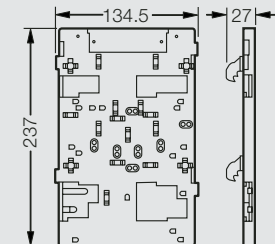
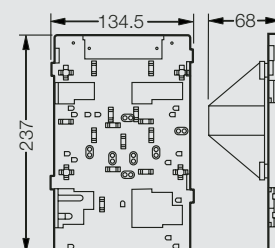
Size 1 Wall mounting



Size 1 Pipe mounting



Size 1 Trellis mounting

Size 4
Wall and trellis mountingSize 4
Pipe mounting

Dimensions in mm

FIXING MATERIALS AND ACCESSORIES

| Mounting plates |

Mounting plate for Ex-safety switch 10A 3-pole

Type	Application	Fixing technique	Order No.
Size 1	Wall mounting	screw-on	GHG 610 1953 R0101
Size 1	Pipe mounting	screw-on	GHG 610 1953 R0102
Size 1	Trellis mounting	screw-on	GHG 610 1953 R0103

Mounting plate for Ex-safety switch 20A 3-pole

Type	Application	Fixing technique	Order No.
Size 2	Wall mounting	snap-on	GHG 610 1953 R0104
Size 2	Pipe mounting	snap-on	GHG 610 1953 R0105
Size 2	Trellis mounting	snap-on	GHG 610 1953 R0106

Mounting plate for Ex-safety switch 20A 6-pole

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	snap-on	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	GHG 610 1953 R0118

Mounting plate for Ex-safety switch 40A 3-pole

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	snap-on	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	GHG 610 1953 R0118

Mounting plate for Ex-safety switch 40A 6-pole

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

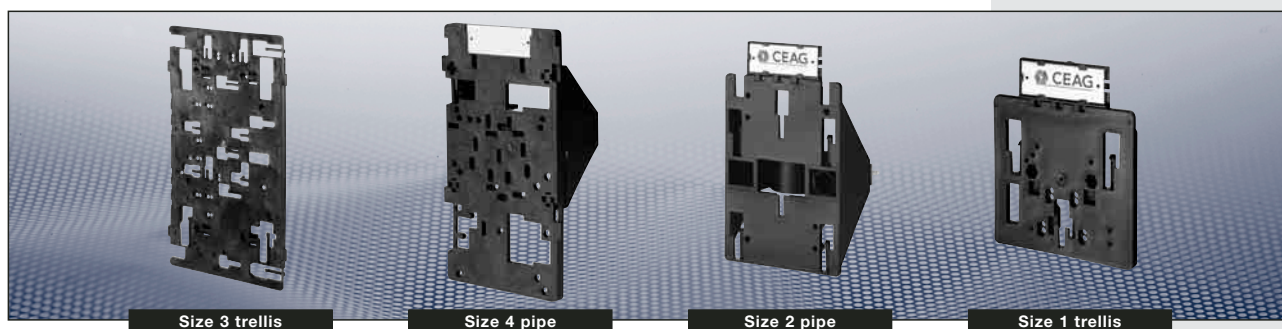
Mounting plate for Ex-safety switch 80A 3- und 6-pole

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

Mounting plate for Ex-safety switch 125A/180A 3-pole

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

¹⁾ observe mounting distance



FIXING MATERIALS AND ACCESSORIES

| Mounting plates |

Mounting plate for Industry safety switch 10A 3-pole

Type	Application	Fixing technique	Order No.
Size 1	Wall mounting	screw-on	GHG 610 1953 R0101
Size 1	Pipe mounting	screw-on	GHG 610 1953 R0102
Size 1	Trellis mounting	screw-on	GHG 610 1953 R0103

Mounting plate for Industry safety switch 20A 3-pole

Type	Application	Fixing technique	Order No.
Size 2	Wall mounting	snap-on	GHG 610 1953 R0104
Size 2	Pipe mounting	snap-on	GHG 610 1953 R0105
Size 2	Trellis mounting	snap-on	GHG 610 1953 R0106

Mounting plate for Industry safety switch 20A 6-pole

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	snap-on	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	GHG 610 1953 R0118

Mounting plate for Industry safety switch 40A 3-pole

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	snap-on	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	GHG 610 1953 R0118

Mounting plate for Industry safety switch 40A 6-pole

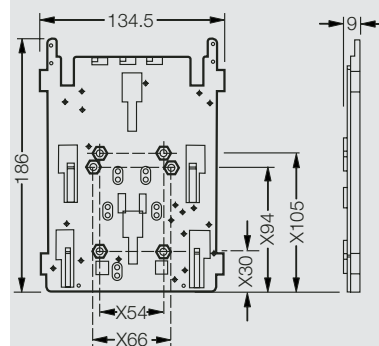
Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

Mounting plate for Industry safety switch 80A 3- and 6-pole

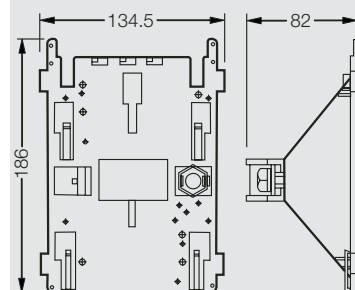
Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

Mounting plate for Industry safety switch 125A/180A 3-pole

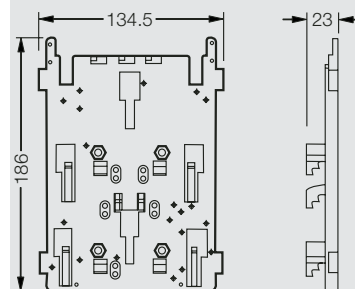
Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

¹⁾ observe mounting distance

Size 2 Wall mounting

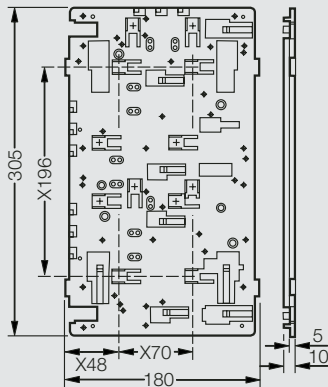
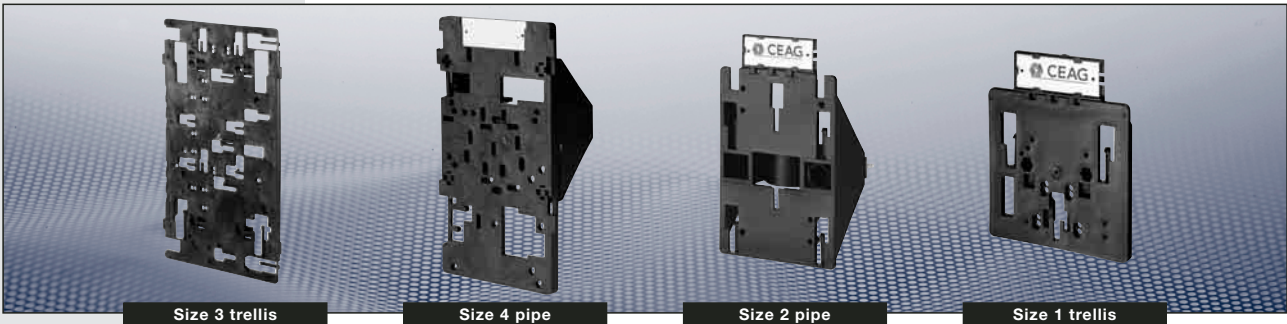


Size 2 Pipe mounting

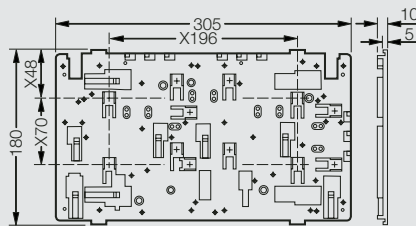


Size 2 Trellis mounting

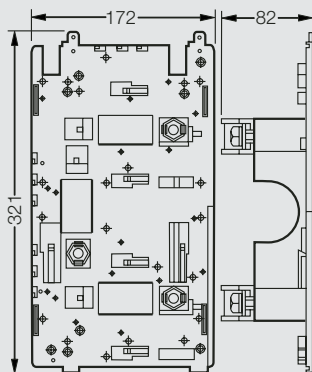
Dimensions in mm



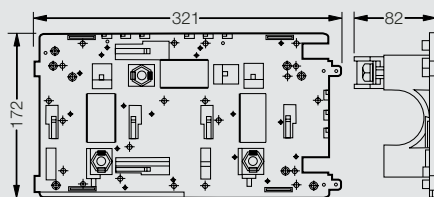
Size 3 vertical for
wall- and trellis mounting



Size 3 horizontal for
wall- and trellis mounting



Size 3 vertical for
pipe mounting



Size 3 horizontal for
pipe mounting

Dimensions in mm

FIXING MATERIALS AND ACCESSORIES

Mounting plate

Mounting plate for Ex-safety switch 20A variable-speed three-phase drives

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	screw-on	GHG 610 1953 R0118
Size 3	Pipe mounting	screw-on	GHG 610 1953 R0110
Size 3	Trellis mounting	screw-on	GHG 610 1953 R0118

Mounting plate for Ex-safety switch 40A variable-speed three-phase drives

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

Mounting plate for Ex-safety switch 80A variable-speed three-phase drives

Type	Application	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

Mounting plate for Ex-main current switch 10A 3-pole

Type	Application	Fixing technique	Order No.
Size 1	Wall mounting	screw-on	GHG 610 1953 R0101
Size 1	Pipe mounting	screw-on	GHG 610 1953 R0102
Size 1	Trellis mounting	screw-on	GHG 610 1953 R0103

Mounting plate for Ex-main current switch 20A 3-pole

Type	Application	Fixing technique	Order No.
Size 2	Wall mounting	snap-on	GHG 610 1953 R0104
Size 2	Pipe mounting	snap-on	GHG 610 1953 R0105
Size 2	Trellis mounting	snap-on	GHG 610 1953 R0106

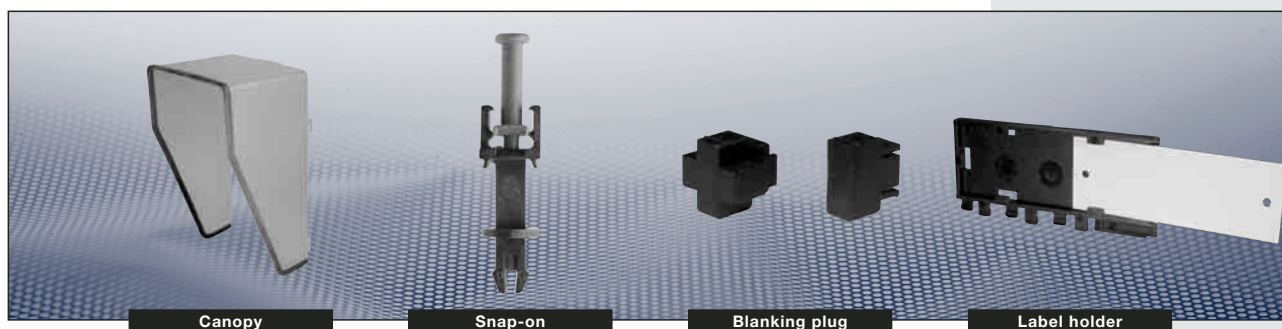
Mounting plate for Ex-main current switch 20A 6-pole

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	snap-on	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	GHG 610 1953 R0118

Mounting plate for Ex-main current switch 40A 3-pole

Type	Application	Fixing technique	Order No.
Size 3	Wall mounting	snap-on	GHG 610 1953 R0118
Size 3	Pipe mounting	snap-on	GHG 610 1953 R0110
Size 3	Trellis mounting	snap-on	GHG 610 1953 R0118

¹⁾ observe mounting distance



Canopy

Snap-on

Blanking plug

Label holder

FIXING MATERIALS AND ACCESSORIES

| Accessories for mounting plates | Canopies |

Mounting plate for Ex-main current switch 40A 6-pole

Type	Mounting	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

Mounting plate for Ex-main current switch 80A 3- and 6-pole

Type	Mounting	Fixing technique	Order No.
Size 3	2 x Pipe mounting	screw-on ¹⁾	GHG 610 1953 R0110

Mounting plate for Ex-main current switch 25 A

Type	Mounting	Fixing technique	Order No.
Size 3	Wall mounting	screw-on	GHG 610 1953 R0118
Size 3	Pipe mounting	screw-on	GHG 610 1953 R0110
Size 3	Trellis mounting	screw-on	GHG 610 1953 R0118

Ordering details

Type	OU	Order No.
Accessories for mounting plate		
Label holder with label (unlabelled) for label holder size 1, 2, 2A and 3	10	GHG 610 1953 R0057
Label for label holder and mounting plates size 4 and size 5	10	GHG 610 1953 R0011
Blanking plug for label holder size 4 and size 5 1 set = 1 each	10	GHG 610 1953 R0134
Snap-on for CEAG apparatus with 5.5 mm and 11 mm mounting feet 1 set = 4 each	10	GHG 610 1953 R0041
Installation kit for pipes 1" (of 27 - 30 mm) for label holder for pipe mounting	10	GHG 610 1953 R0020

Ordering details

Type	Application	OU	Order No.
Canopies for mounting plates			
Size 1	for label holder size 1	1	GHG 610 1955 R0101
Size 2	for label holder size 2	1	GHG 610 1955 R0102
Size 2A	for label holder size 2A	1	GHG 610 1955 R0103
Size 3	for pipe mounting plate size 3 vertical	1	GHG 610 1955 R0104
Size 3A	for wall/trellis mounting plate size 3 vert.	1	GHG 610 1955 R0105
Size 3B	for pipe mounting plate size 3 horizontal	1	GHG 610 1955 R0106
Size 4	for label holder size 4	1	GHG 610 1955 R0107
Size 5	for label holder size 5	1	GHG 610 1955 R0108

¹⁾ observe mounting distance

Please note that we can only deliver in the ordering units (OU) stated in the tables above.

DISTRIBUTIONS	8.2
EX-DISTRIBUTIONS IN MOULDED PLASTIC	8.6
EX-DISTRIBUTIONS IN STAINLESS STEEL	8.10
EX-COMPONENT MODULES	8.14
EX-D DISTRIBUTIONS FOR GASES IN EXPLOSIONS GROUP IIC	8.42
EX-D DISTRIBUTIONS FOR GASES IN EXPLOSIONS GROUP IIB	8.50

**DID YOU WANT A BUILDING SET EVEN AS A CHILD WHICH
WOULD LET YOU REALISE ALL YOUR IDEAS?**

(MODULES FOR GROWN-UPS: PAGE 8.14pp)



1

2

3

4

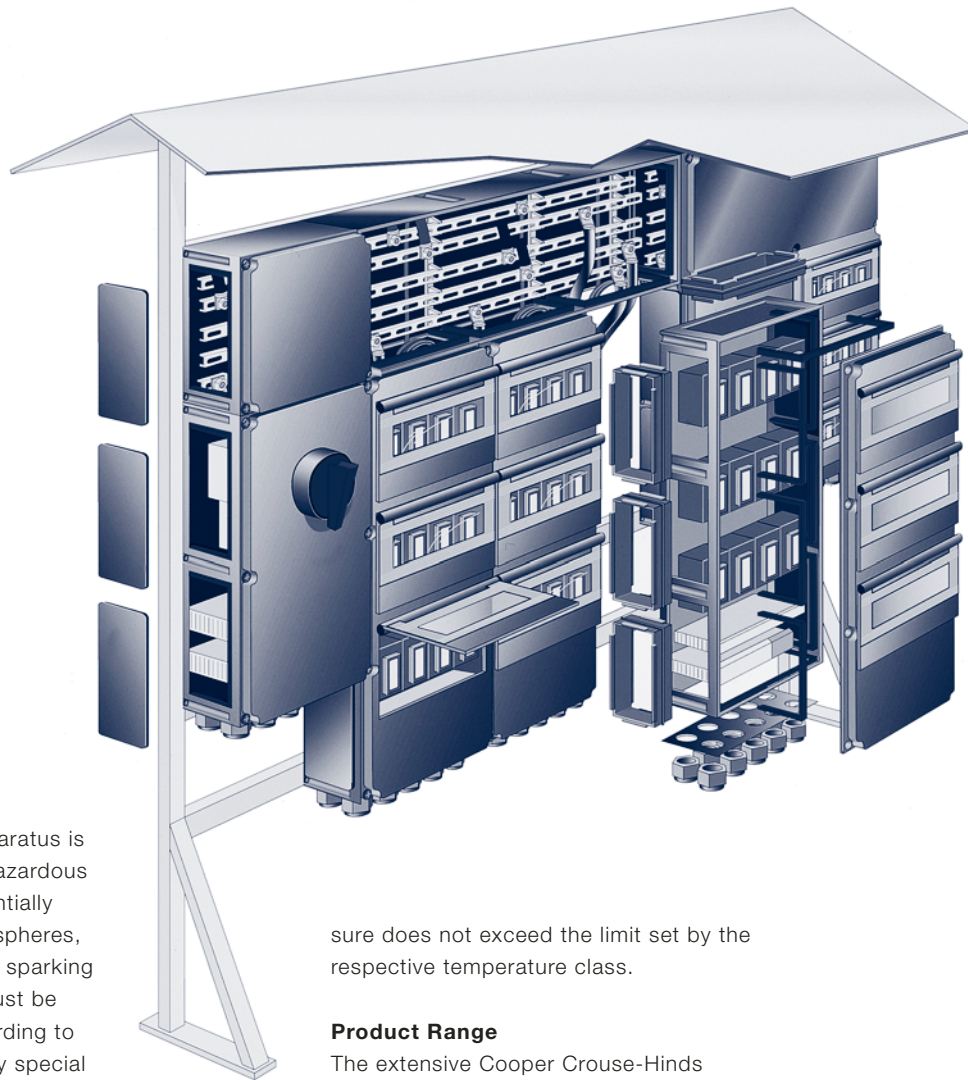
5

6

7

8

9



Distributions

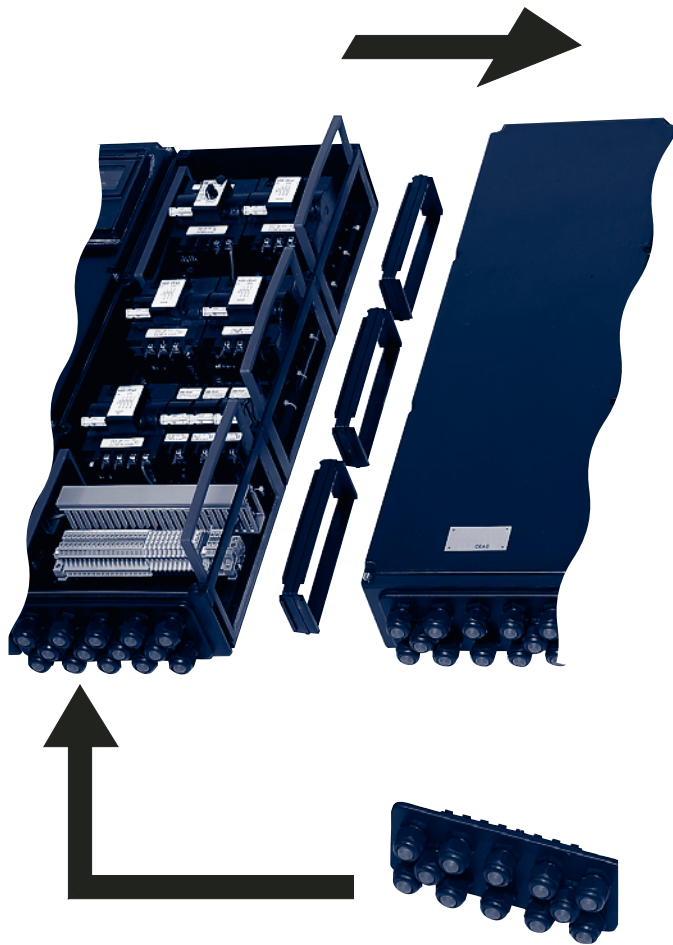
If electrical apparatus is to be used in hazardous areas, i.e. potentially explosive atmospheres, where arcing or sparking can occur, it must be protected according to EN 50014 pp by special constructional measures.

Cooper Crouse-Hinds's explosion-protected apparatus derives its high degree of safety through the combination of various types of protection. Thus, flameproof encapsulated devices (EEx-d), for instance, are also integrated in enclosures of the "Increased Safety" type (EEx-e). As these components are of modular design, they can be combined according to customers' requirements. The modules are inserted by simple snap-on rail mounting. Electrical apparatus with metal enclosures may be used in type "flameproof enclosure" (EEx-d) without any volume limit. Up to three high-capacity apparatus with non-metal enclosures may take up an enclosure volume of up to 2000 cm³. However, the heat generated in the enclosure must be dissipated, so that the temperature on the external surface of the enclosure does not exceed the limit set by the

sure does not exceed the limit set by the respective temperature class.

Product Range

The extensive Cooper Crouse-Hinds product range offers everything you're looking for – just in time: no matter whether you need a flameproof encapsulated component, an encapsulation of the components in a flameproof enclosure – or a combination of both. Whatever material you care for, CEAG has it: Distributions are available in the most diverse materials, such as glass-fibre reinforced polyester, electro-polished stainless steel or die-cast light alloy in explosion group IIB and IIC or alternatively polyester powder-coated steel. The explosion-protected CEAG distributions are certified for hazardous areas of Zones 1 and 2. We also have the right solution for Zones 21 and 22 for you.

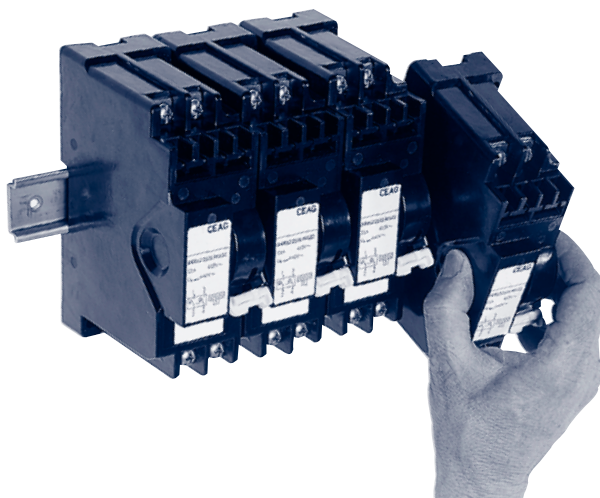


Snappy snap-on

The Cooper Crouse-Hinds GmbH gives you explosion protection in a snap – even with distributions. The enclosures and the main switches are of modular design in standardised sizes and can thus be combined as desired using the reliable flange snap-on mounting technique. Cable entries of all kinds can be mounted individually on the screwless plastic or brass flanges. And since these flanges can be inserted in a snap, cable entries can be easily mounted at any time. The same applies to other extensions or modifications. The snap-on technique gives you greater flexibility and cost-effectiveness for installations in hazardous areas.

Modular design

The modular distribution design makes modifications and extensions a snap: Remove the flange, insert the new enclosure, connect the apparatus, done! Moreover, you can do this as often as your system demands. The only limitation is space.



Rational component replacement

Components which can be quickly and reliably removed and inserted with the snap-on technique provide you with a rational method of replacing components for servicing as well as a simple and easy means of system extension.

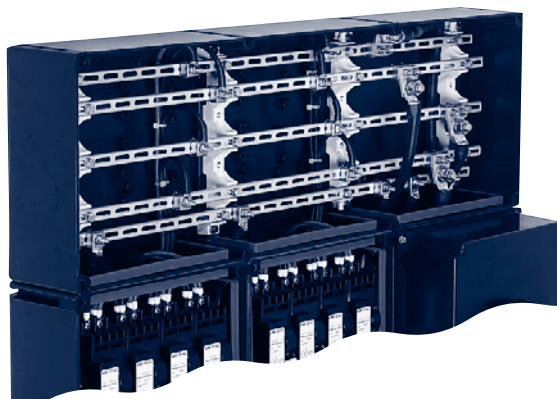


Frameworks

Modular CEAG enclosures of different series can be combined into large distribution systems on standardised wall-mounting or free-standing frameworks. The frameworks come in standardised sizes to accommodate the enclosure modules and can be extended as required. For outdoor installations, we recommend canopies to protect the distribution system from the sun and rain. Smaller distributions are mounted on flat or U-rails. All enclosures are made of galvanised steel or – as an option – stainless steel.

Bus bars

Inexpensive installations: Using the CEAG bus-bar system, a number of circuits can be simply and quickly connected for high cost-effectiveness. If required, individually encapsulated control and indicating units, such as pushbuttons, control switches or measuring instruments, can also be connected to the bus bars.



Worldwide approvals

We have years of experience with explosion-protection approvals worldwide and we carefully monitor the latest trends and developments. For our customers, this means not only better consultation, but future-proof products, such as ATAX-compatible systems and components. You'll also find solutions in our CEAG Spec One product line with approvals in both standards systems, the NEC and the IEC. In other words, for us international or national approvals are nothing out of the ordinary.



Explosion groups IIB and IIC

CEAG offers a complete product line of Ex-d distributions for gas explosion groups IIB and IIC. All common industrial switch-gear that gives off arcs or sparks can be built into flameproof enclosures. The distributions for explosion group IIC are designed for easy installation via "Increased Safety" type connection boxes. Enclosures in explosion group IIB are interconnected via flameproof cable bushings.

Planning and customised solutions

Regardless of whether you have an idea in mind or functional descriptions and wiring diagrams on paper, talk to our experienced project specialists. Our highly-qualified engineers and master technicians will provide you with expert advice and an offer. If you wish, they will also compile the needed documentation for your project (including a parts list as well as dimension, wiring and terminal diagrams as necessary) – on paper or as data files. You can rely on our flexible production for the assembly of your system. All systems and their components are 100% inspected and tested. You're welcome to perform a final acceptance test – including a complete electrical function test – in our laboratory.

Actuating flaps

Via actuating flaps, integrated in the enclosure cover, switches and relays can be actuated without opening the enclosure. The switch positions of the built-in components can be seen from the outside. As an added security measure, the actuating flaps can be locked.



EX - DISTRIBUTIONS

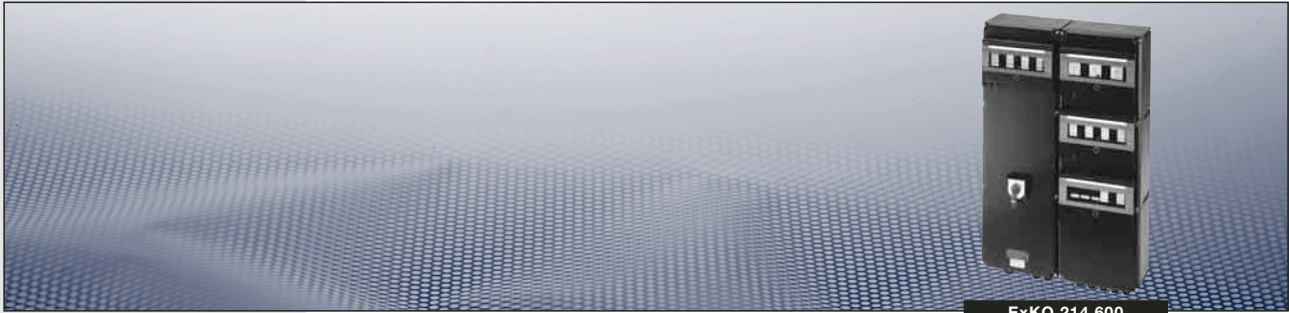
Moulded plastic of modular design

Cooper Crouse-Hinds GmbH makes explosion protection a snap – and that also applies to distributions. Electrical distributions for Ex-areas must be protected according to EN 50014 pp by constructional measures. Thus, the Cooper Crouse-Hinds GmbH flameproof moulded-plastic distributions provide type EEx-e protection. The enclosure and main-switch modules are available in the following materials: fibre-glass reinforced polyester, electro-polished stainless steel and polyester powder-coated steel. Moulded plastic enclosures are flame-retardant according to UL 94 VO. All modules come in standardised sizes and can be interconnected as desired. Cable entries of all kinds can be mounted individually on the screwless plastic or brass flanges. Since these flanges can be inserted in a snap, cable entries can be easily mounted at any time. The same applies to other extensions or modifications. A bus-bar system can be used to provide power to the individual components. The flameproof encapsulated modules (EEx-d) can be combined according to customers' specifications. Five enclosure sizes provide enough space for whatever modules are required: MCBs, RCDs, contactors, motor starters, over-current trips, star-delta time relays or main switches. The modules are inserted in the distribution by simple snap-on rail mounting. Thus, modules can be replaced or added quickly and reliably. Lockable actuating flaps allow operation without opening the enclosure.

Internationally approved.

**Modular slip-on
assembly**
High IP 66 protection
Snap-on components
Retrofitting





ExKO 214 600

EX-DISTRIBUTIONS FOR LIGHTING CIRCUITS

MCB distribution for lighting circuits

8.7

Technical data

MCB distribution for lighting circuits

Main switch, 4-pole, wired on terminals for connection by the customer

Marking to 94/9/EG Ex II 2 G | Ex II 2 D T80 °C

Type of protection EEx de IIC T4 - T6¹⁾

EC-type examination certificate PTB 99 ATEX 1044

Rated voltage 440 V

Rated current 180 A

Terminal cross-section up to 240 mm²

Degree of protection acc. to EN 60529 IP 66

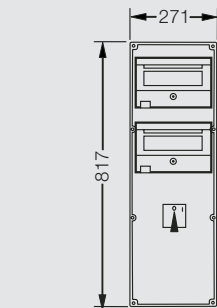
Enclosure material Glass-fibre reinforced polyester

Weight see ordering details

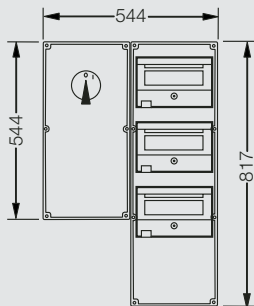
¹⁾ depending on built-in components

Ordering details

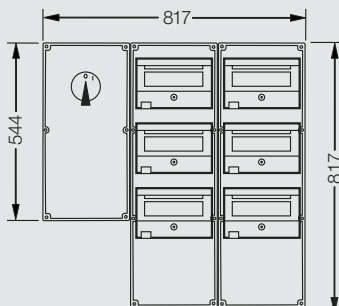
Version	Type	MCB 2-pole	Cable entries	Weight approx.	Order No.
40 A	1	8 x 16 A	1 x M40 8 x M25	20 kg	EXKO 214 600 G 0000
80 A	2	12 x 16 A	1 x M50 12 x M25	32 kg	EXKO 214 600 G 0001
80 A	3	24 x 16 A	1 x M50 24 x M25	56 kg	EXKO 214 600 G 0002



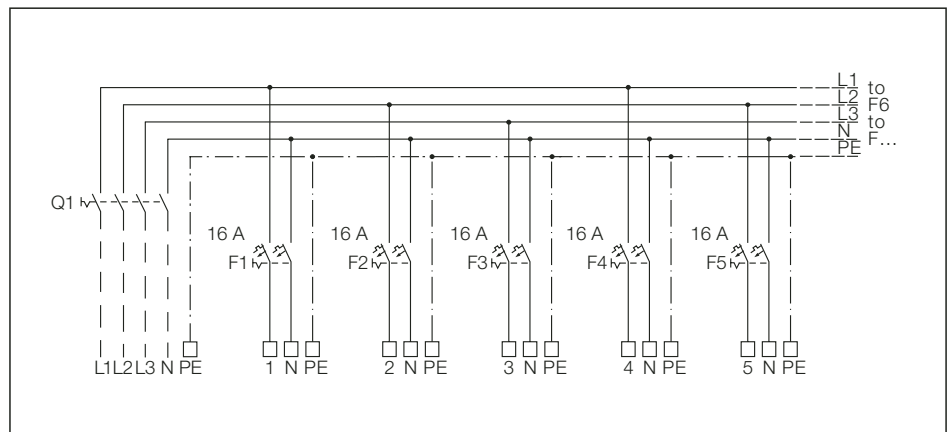
Type 1



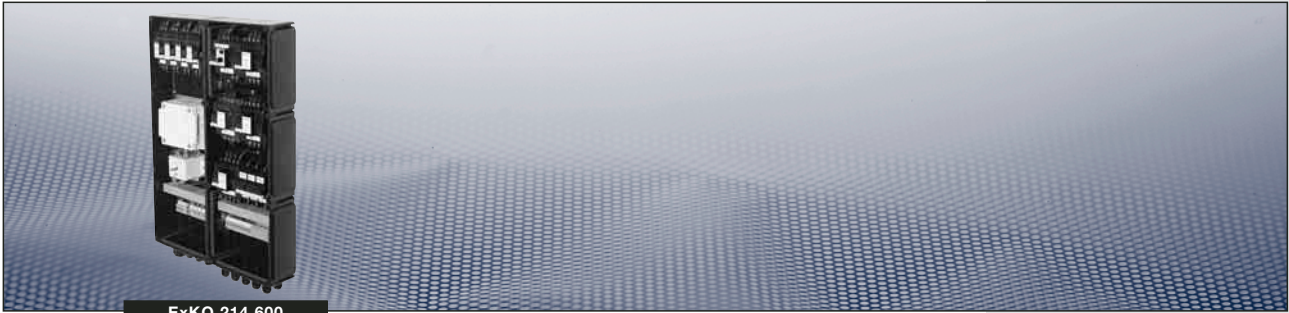
Type 2



Type 3



Dimensions in mm



ExKO 214 600

8.8

EX-DISTRIBUTIONS FOR HEATING CIRCUITS

MCB distribution for heating circuits

Technical data

MCB distribution for heating circuits

Main switch, 4-pole, wired on terminals for connection by the customer

Marking to 94/9/EG |

Type of protection EEx de IIC T4 - T6¹⁾

EC-type examination certificate PTB 99 ATEX 1044

Rated voltage 440 V

Rated current 180 A

Terminal cross-section up to 240 mm²

Degree of protection acc. to EN 60529 IP 66

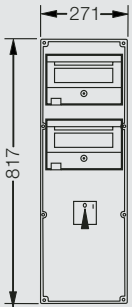
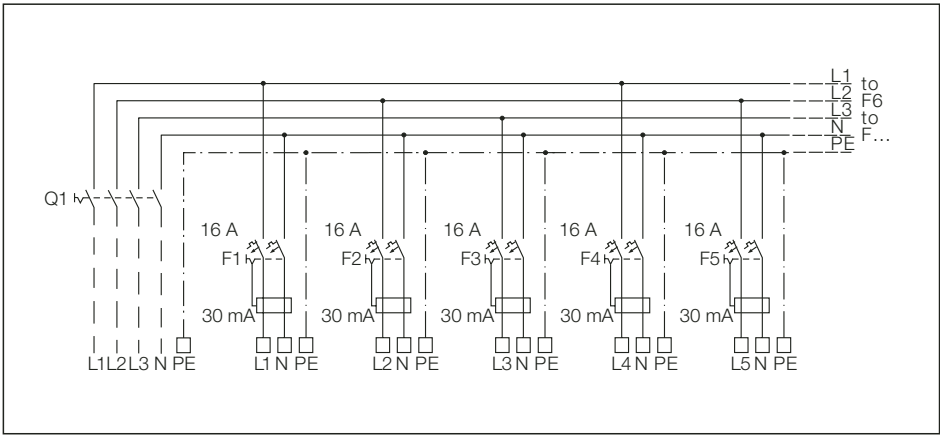
Enclosure material Glass-fibre reinforced polyester

Weight see ordering details

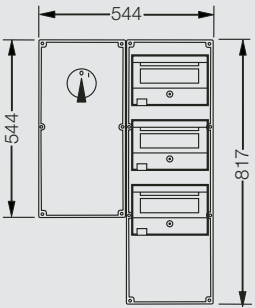
¹⁾ depending on built-in components

Ordering details

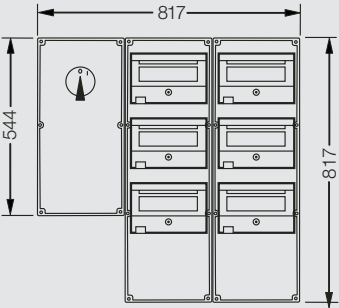
Version	Type	MCB with RCD 1 + N	Cable entries	Weight approx.	Order No.
40 A	1	8 x 16 A, 30 mA	1 x M40 8 x M25	20 kg	EXKO 214 600 G 0003
80 A	2	12 x 16 A, 30 mA	1 x M50 12 x M25	32 kg	EXKO 214 600 G 0004
80 A	3	24 x 16 A, 30 mA	1 x M50 24 x M25	56 kg	EXKO 214 600 G 0005



Type 1



Type 2



Type 3



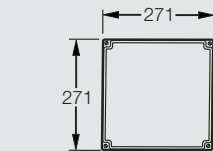
EXKO 208900 C

EXKO 208900 A

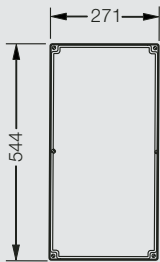
EX-STANDARD-MOTOR STARTERS MOULDED PLASTIC

Complete motor starter distributions

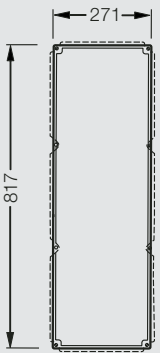
8.9



Type 1



Type 2



Type 3

Technical data

Complete motor starter distributions

Marking to 94/9/EC	Ex II 2 G Ex II 2 D T80 °C/135 °C
Type of protection	EEx ed IIC T4 / T6 dep. on built-on apparatus
EC-Type Examination Certificate	PTB 99 ATEX 1044
Degree of protection EN 60529	IP 66
Rated voltage	690 V AC
Rated current	max. 180 A
Terminal cross section	up to 240 mm²
Enclosure material	Polyester, reinforced with glass fibre (GRP)

Ordering details direct on-line starters

Type	Motorcapacity to AC 3	Cable entry	Order No.
1	4 kW	3 x M25	EXKO 208 900 A0001
2	5.5 kW	3 x M25	EXKO 208 900 A0002
2	7.5 kW	3 x M25	EXKO 208 900 A0003

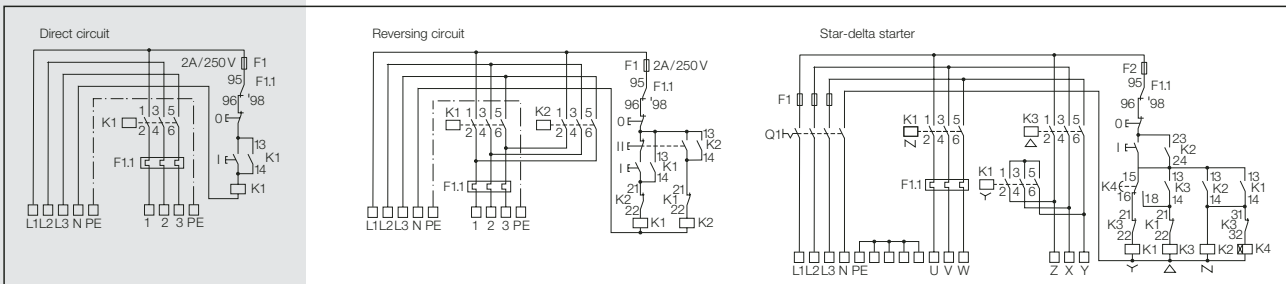
Ordering details reversing starters

Type	Motorcapacity to AC 3	Cable entry	Order No.
2	4 kW	3 x M25	EXKO 208 900 B0001
2	5.5 kW	3 x M25	EXKO 208 900 B0002
2	7.5 kW	3 x M25	EXKO 208 900 B0003

Ordering details star-delta starters

Type	Motorcapacity to AC 3	Cable entry	Order No.
2	4 kW	4 x M25	EXKO 208 900 C0001
2	5.5 kW	4 x M25	EXKO 208 900 C0002
2	7.5 kW	4 x M25	EXKO 208 900 C0003
3	11 kW	1 x M25 + 3 x M25	EXKO 208 900 C0004

The motor starters are completely wired for connection by customer (see below).



Dimensions in mm

1

2

3

4

5

6

7

8

9

EX - DISTRIBUTIONS

Stainless steel

Distributions made of stainless steel for protection against aggressive environments are used for lighting, heating, motor and socket circuits in potentially explosive atmospheres. The distributions contain components with flameproof enclosures. These flameproof components, such as MCBs, fuses etc., provide thermal and magnetic protection and can be snapped on individually on the DIN rails. The distribution systems are available in stainless steel enclosures of various sizes. On standardised wall-mounting or free-standing frameworks, the enclosures can be combined into large distribution systems. The frameworks come in standardised sizes to accommodate the enclosures and can be extended as required. MCBs, RCDs and other components can be operated via lockable actuating flaps, integrated in the enclosure cover, without opening the enclosure. CEAG fuse and MCB distributions provide cost-effective solutions. They fulfil all the requirements specified by the chemical, petro-chemical and off-shore industries.

Internationally approved.



Combinable for larger distributions

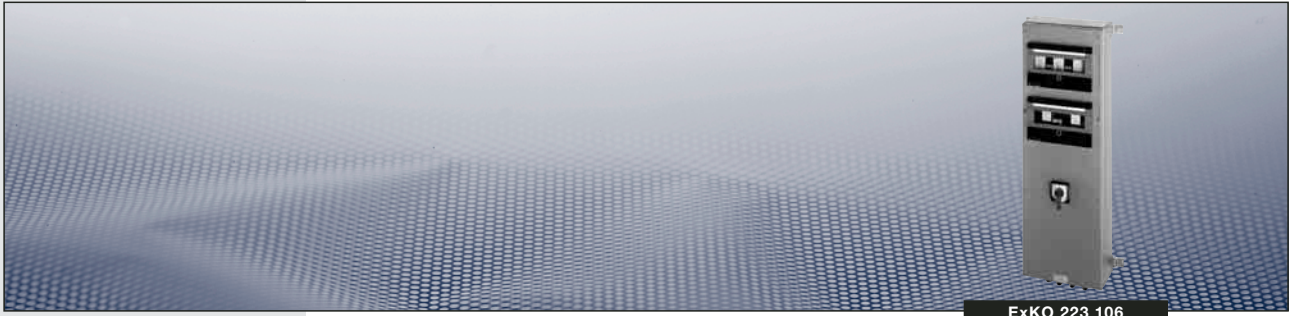
Actuating flaps

for easy operation

Snap-on components

Protection type IP 66

Retrofitting



ExKO 223 106

EX-DISTRIBUTIONS FOR LIGHTING CIRCUITS

MCB distribution for lighting circuits

8.11

Technical data

MCB distribution for lighting circuits

Main switch, 4-pole, wired on terminals for connection by the customer

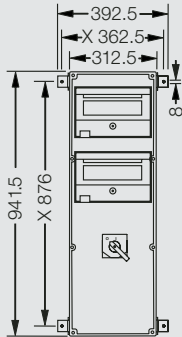
Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC T4 - T6 ¹⁾
EC-type examination certificate	PTB 99 ATEX 1044
Rated voltage	440 V
Rated current	180 A
Terminal cross-section	up to 240 mm ²
Degree of protection acc. to EN 60529	IP 66
Enclosure material	Stainless steel AISI 316 L
Weight	see ordering details

¹⁾ depending on built-in components

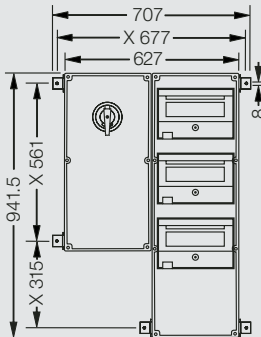
Ordering details

Version	Type	MCB 2-pole	Cable entries	Weight approx.	Order No.
40 A	1	8 x 16 A	1 x M40 8 x M25	30 kg	EXKO 223 100 Q 0000
80 A	2	12 x 16 A	1 x M50 12 x M25	47 kg	EXKO 223 100 Q 0001
80 A	3	24 x 16 A	1 x M50 24 x M25	80 kg	EXKO 223 100 Q 0002

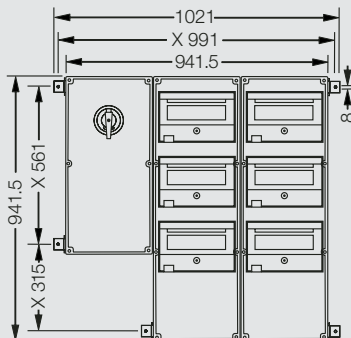
Type 1



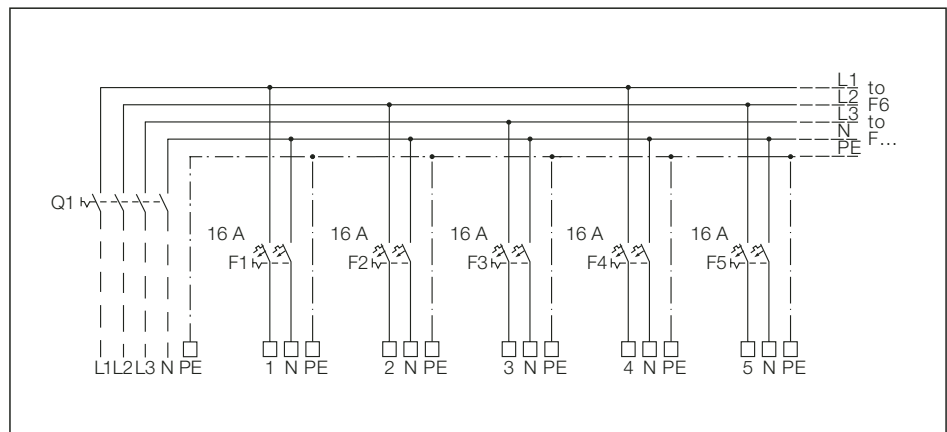
Type 2

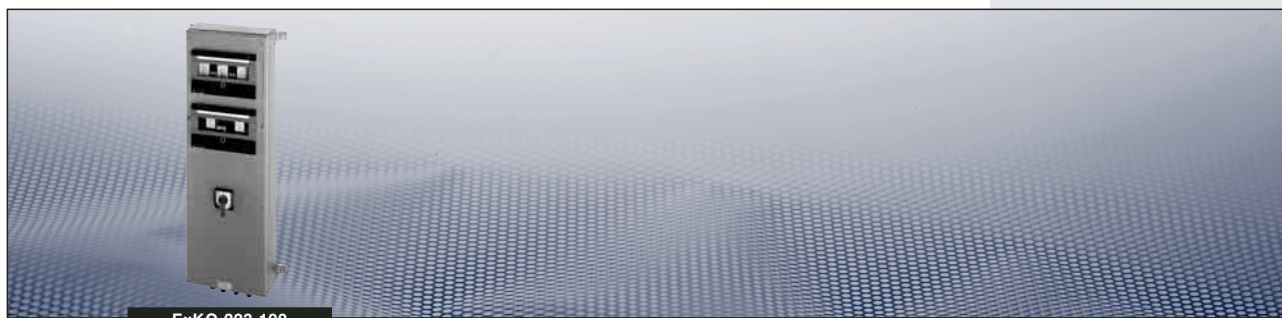


Type 3



x = mounting dimensions
Dimensions in mm





ExKO 223 100

EX-DISTRIBUTIONS FOR HEATING CIRCUITS

MCB distribution for heating circuits

Technical data

MCB distributions for heating circuits

Main switch, 4-pole, wired on terminals for connection by the customer

Marking to 94/9/EG

Ex II 2 G

Type of protection

EEx de IIC T4 - T6¹⁾

EC-type examination certificate

PTB 99 ATEX 1044

Rated voltage

440 V

Rated current

180 A

Terminal cross-section

up to 240 mm²

Degree of protection acc. to EN 60529

IP 66

Enclosure material

Stainless steel AISI 316 L

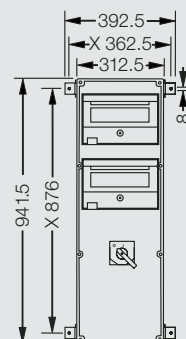
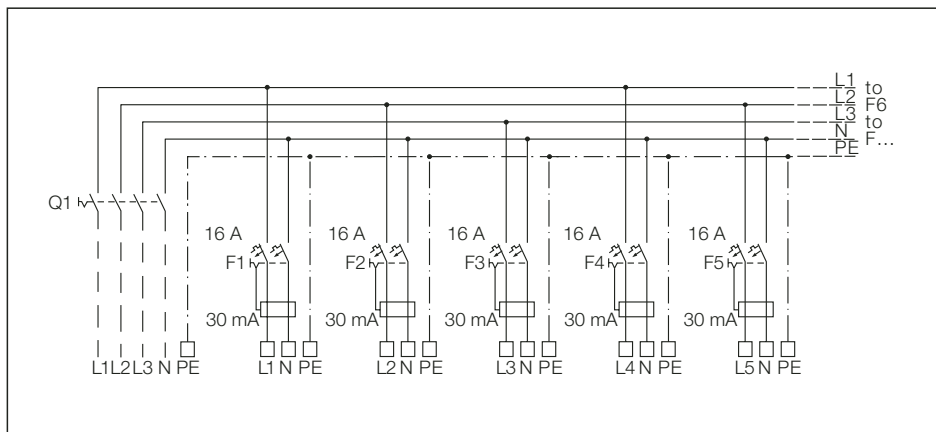
Weight

see ordering details

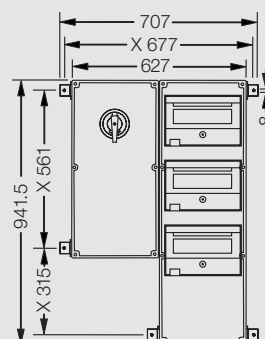
¹⁾ depending on built-in components

Ordering details

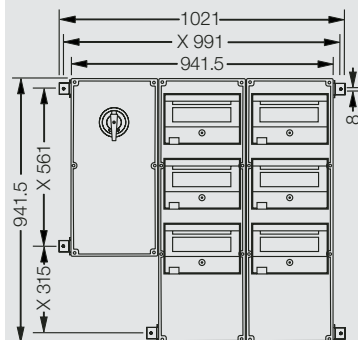
Version	Type	MCB with RCD 1-pole + N	Cable entries	Weight approx.	Order No.
40 A	1	8 x 16 A	1 x M40 8 x M25	30 kg	EXKO 223 100 G 0003
80 A	2	12 x 16 A	1 x M50 12 x M25	47 kg	EXKO 223 100 G 0004
80 A	3	24 x 16 A 24 x M25	1 x M50	80 kg	EXKO 223 100 G 0005



Type 1



Type 2

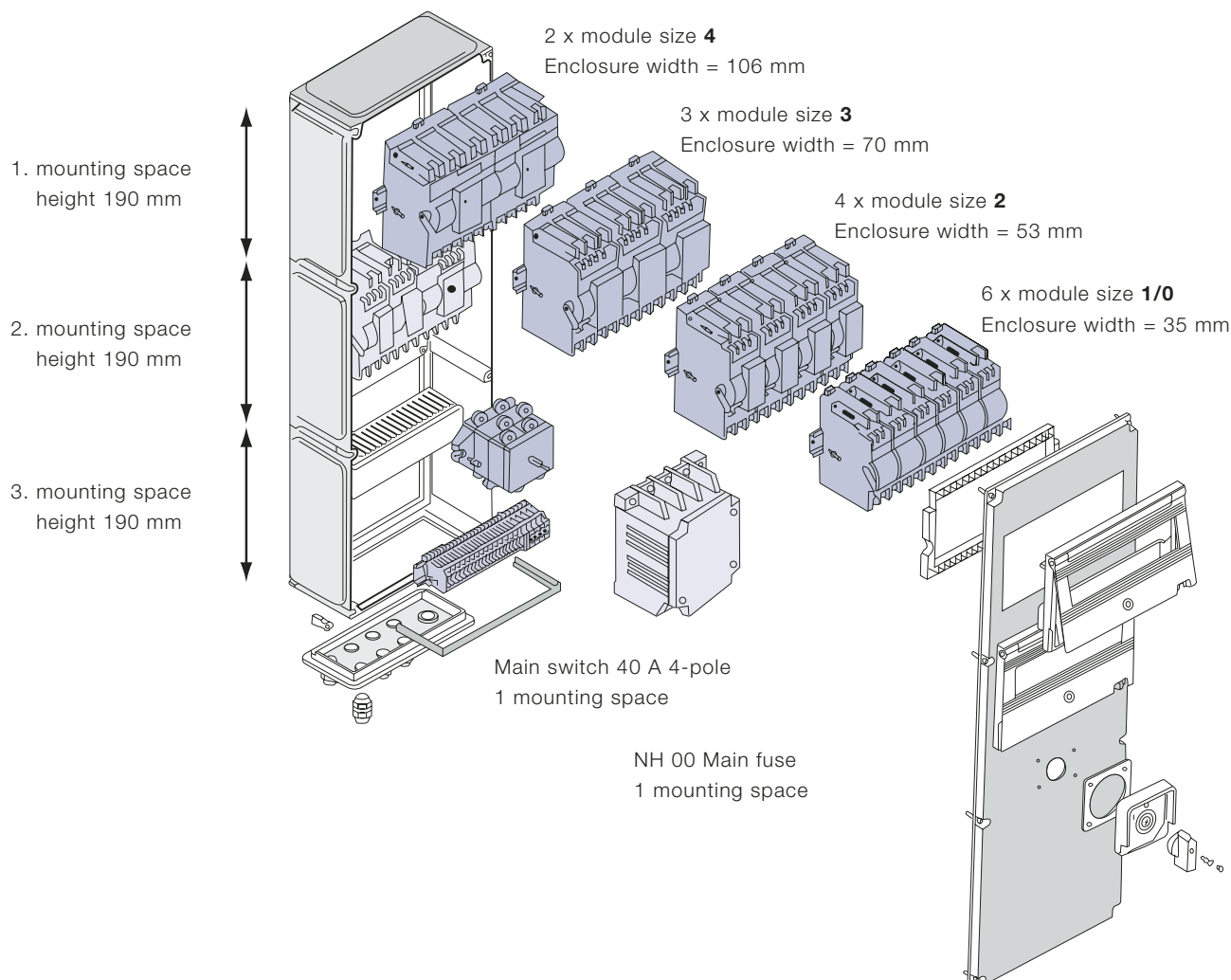


Type 3

x = mounting dimensions

Dimensions in mm

Enclosure module size 4 with 3 mounting spaces



Individual modular distributions

Cooper Crouse-Hinds GmbH explosion-protected EEx-e moulded-plastic distributions can be individually assembled and equipped with various components. Enclosure modules of size 1, 2, 3 and 4 are available for combining flameproof encapsulated modules (EEx-d) according to customers' specifications. Five enclosure sizes provide enough space for whatever

modules are required:

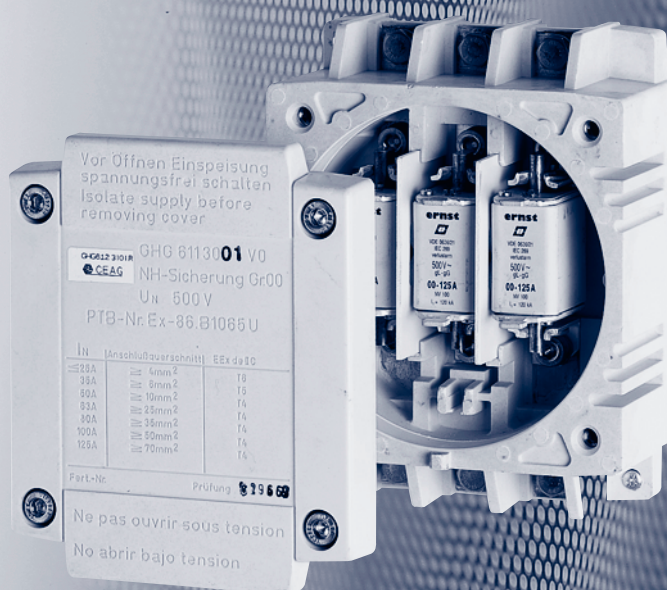
MCBs, RCDs, contactors, motor starters, over-current trips, star-delta time relays or main switches. Different module sizes can be placed side by side in one mounting space. The modules are inserted in the distribution by simple snap-on rail mounting. Thus, modules can be replaced or added quickly and reliably. Lockable actuating flaps allow easy operation without opening the enclosure.

EX-BUILT-IN COMPONENTS

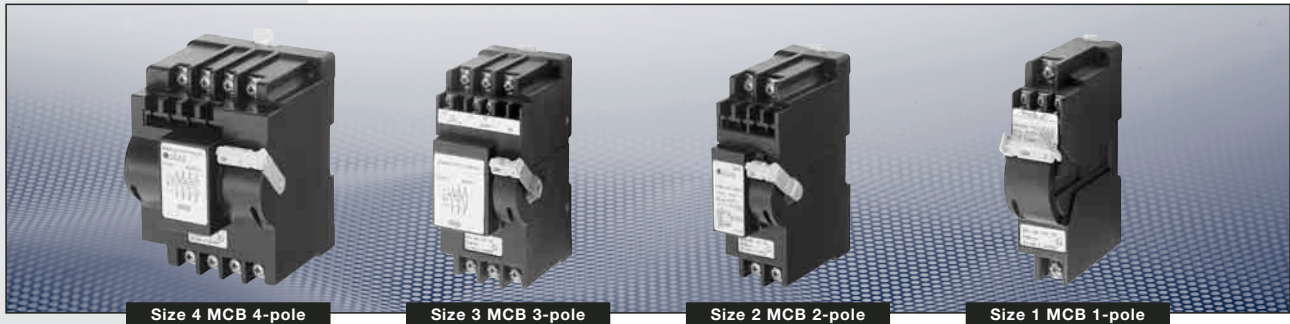
Flameproof encapsulation

If electrical apparatus is to be used in hazardous areas, i.e. potentially explosive atmospheres, where arcing or sparking can occur, it must be protected according to EN 50014 pp by special constructional measures.

The Cooper Crouse-Hinds GmbH explosion-protected apparatus, such as the modules in EEx-e distributions, derives its high degree of safety through the combination of various types of protection. Thus, flameproof encapsulated components (EEx-d), for instance, are also integrated in enclosures of the type "Increased Safety" (EEx-e). As these components are of modular design, they can be combined according to customers' requirements. Five enclosure sizes provide enough space for whatever modules are required: MCBs, RCDs, contactors, motor starters, over-current trips, star-delta time relays or main switches. Protected by a transparent flap, all modules can be conveniently monitored and operated. The modules are inserted in the distribution by simple snap-on rail mounting. Thus, modules can be replaced or added quickly and reliably. That makes servicing and extension work simpler and faster – and thus more cost-efficient. We've also provided for your personal safety: MCBs, RCDs, and power circuit breakers can be equipped with a lock in the OFF position. That protects you during your work on the system against inadvertent switching on – better safe than sorry!



Snap-on
Individually combinable
Operation via actuating flap
Optimum space utilisation
with 5 enclosure sizes



Size 4 MCB 4-pole

Size 3 MCB 3-pole

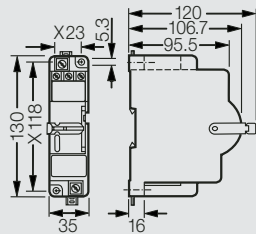
Size 2 MCB 2-pole

Size 1 MCB 1-pole

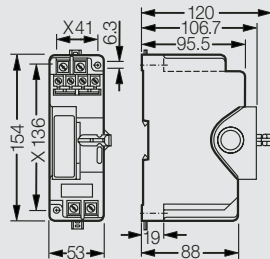
EX - BUILT - IN COMPONENTS

| MCB 0.5 A to 40 A |

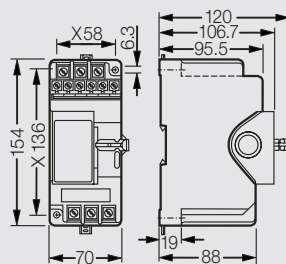
8.15



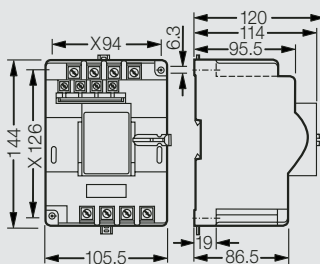
MCB 1-pole



MCB 2-pole



MCB 3-pole



MCB 4-pole

x = mounting dimensions

Dimensions in mm

Technical data

MCB 0.5 A to 40 A

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1087 U
Rated voltage	Main contact max. 440 V Auxiliary contact max. 250 V
Rated current	Main contact 0.5 A to 40 A Auxiliary contact max. 5 A
Rated switching capacity	6 kA 10 kA
Back-up fuse	depending on rated current up to 100 A
Terminal cross-section	Main contact 2 x 10 mm ² Signal contact 2 x 2.5 mm ²
Weight	1-pole 0.55 kg 2-pole 0.95 kg 3-pole 1.25 kg 4-pole 1.27 kg
Auxiliary contact	optional
Lockable	in OFF position with a commercially available padlock

Ordering details type: 1-, 2-, 3- and 4-pole

Equipped without auxiliary contact, without signal contact

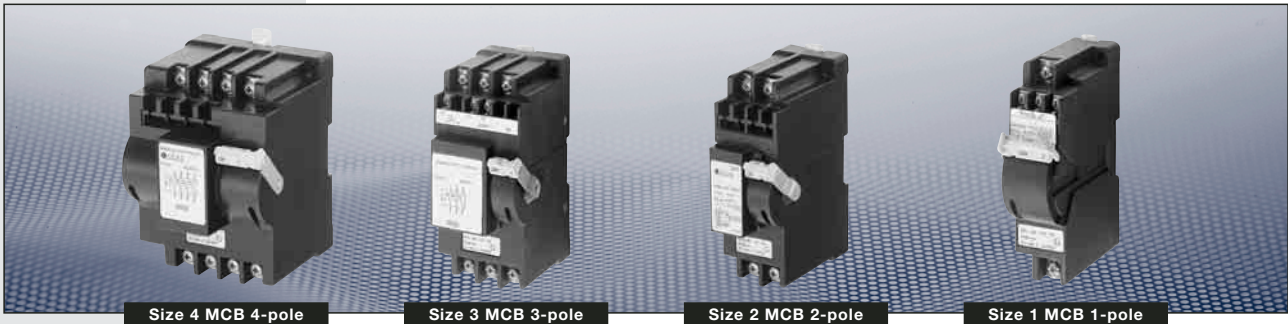
Version	Rated current ¹⁾	Mounting width	Order No.
1-pole	0.5 A - 40 A	35 mm	SIA 100 X X
2-pole	0.5 A - 40 A	53 mm	SIA 200 X X
3-pole	0.5 A - 40 A	70 mm	SIA 300 X X
4-pole	0.5 A - 40 A	106 mm	SIA 400 X X

¹⁾ Rated-current gradations:

0.5 A - 1 A - 2 A - 3 A - 4 A - 6 A - 10 A - 13 A - 16 A - 20 A - 25 A - 32 A - 40 A

XX = Please state required rated current in amperes.

Available with auxiliary contact (1 changeover) or with signal contact (1 changeover) on request.



Size 4 MCB 4-pole

Size 3 MCB 3-pole

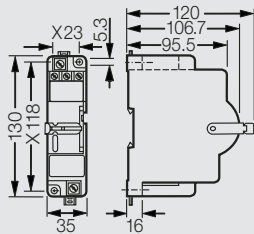
Size 2 MCB 2-pole

Size 1 MCB 1-pole

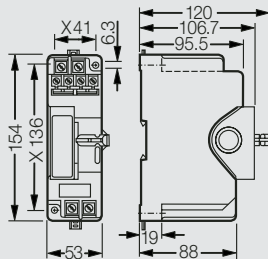
EX - BUILT - IN COMPONENTS

| MCB 0.5 A to 40 A |

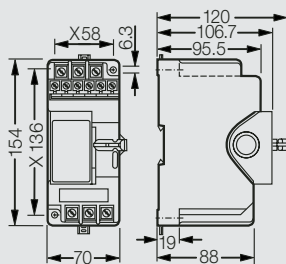
8.15



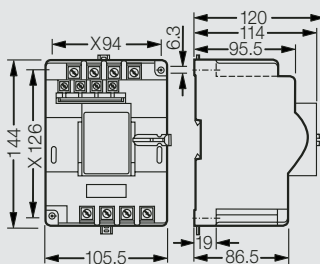
MCB 1-pole



MCB 2-pole



MCB 3-pole



MCB 4-pole

x = mounting dimensions

Dimensions in mm

Technical data

MCB 0.5 A to 40 A

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1087 U
Rated voltage	Main contact max. 440 V Auxiliary contact max. 250 V
Rated current	Main contact 0.5 A to 40 A Auxiliary contact max. 5 A
Rated switching capacity	6 kA 10 kA
Back-up fuse	depending on rated current up to 100 A
Terminal cross-section	Main contact 2 x 10 mm ² Signal contact 2 x 2.5 mm ²
Weight	1-pole 0.55 kg 2-pole 0.95 kg 3-pole 1.25 kg 4-pole 1.27 kg
Auxiliary contact	optional
Lockable	in OFF position with a commercially available padlock

Ordering details type: 1-, 2-, 3- and 4-pole

Equipped without auxiliary contact, without signal contact

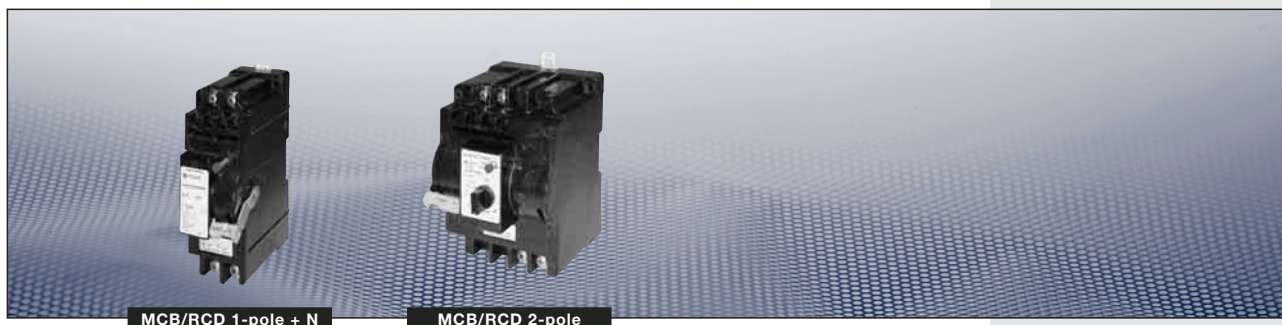
Version	Rated current ¹⁾	Mounting width	Order No.
1-pole	0.5 A - 40 A	35 mm	SIA 100 X X
2-pole	0.5 A - 40 A	53 mm	SIA 200 X X
3-pole	0.5 A - 40 A	70 mm	SIA 300 X X
4-pole	0.5 A - 40 A	106 mm	SIA 400 X X

¹⁾ Rated-current gradations:

0.5 A - 1 A - 2 A - 3 A - 4 A - 6 A - 10 A - 13 A - 16 A - 20 A - 25 A - 32 A - 40 A

XX = Please state required rated current in amperes.

Available with auxiliary contact (1 changeover) or with signal contact (1 changeover) on request.



8.16

EX - BUILT - IN COMPONENTS

| MCB 2 A to 32 A with RCD |

Technical data

MCB with RCD, as of 30 mA

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1087 U
Rated voltage	Main contact max. 440 V Auxiliary contact max. 250 V
Rated current	RCD: 25 A, 40 A Main contact 1 A to 40 A Auxiliary contact max. 5 A
Rated switching capacity	6 kA (1-pole + N) 10 kA (2-pole)
Back-up fuse	RCD 63 A gL
	MCB depending on rated current up to 100 A
Terminal cross-section	Main contact 2 x 10 mm ² Auxiliary contact 2 x 2.5 mm ²
Weight	1-pole + N 0.95 kg 2-pole 1.57 kg
Auxiliary contact	optional
Lockable	in OFF position with a commercially available padlock

Ordering details type: 1-pole + N, 2-pole

Equipped without auxiliary contact, without signal contact

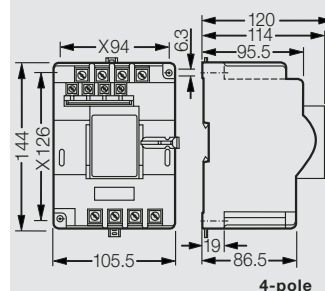
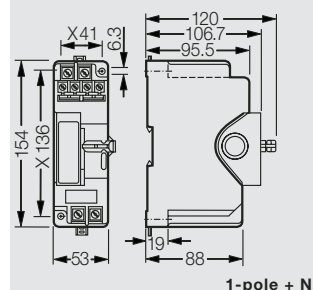
Version	Rated current ¹⁾	Mounting width	Order No.
1-pole + N, 6 kA	1 A - 40 A	53 mm	FSS 100 X X
2-pole, 10 kA	1 A - 40 A	106 mm	FSS 200 X X

¹⁾ Rated-current gradations:

2 A - 4 A - 6 A - 8 A - 10 A - 16 A - 20 A - 25 A - 32 A - 40 A

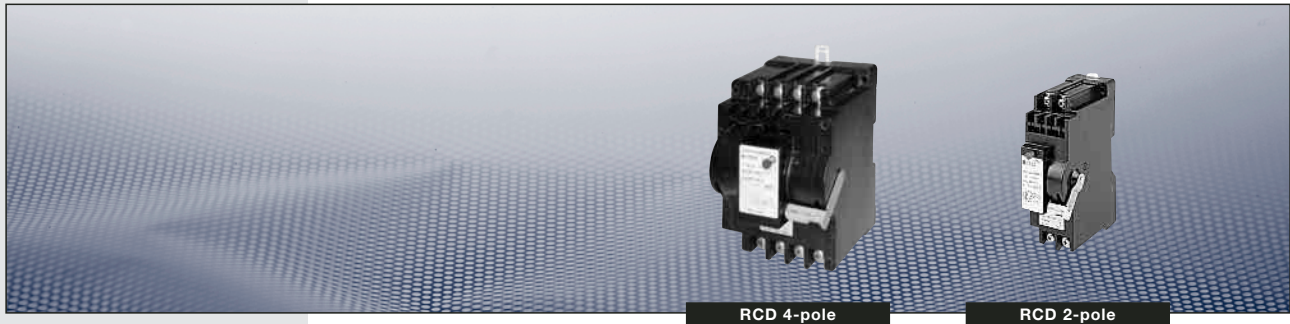
XX = Please state required rated current in Amperes.

Available with auxiliary contact (1 changeover) or with signal contact (1 changeover) on request.



x = mounting dimensions

Dimensions in mm



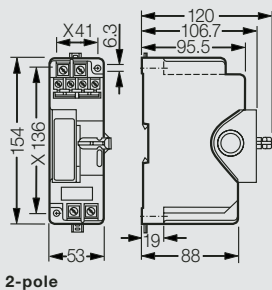
RCD 4-pole

RCD 2-pole

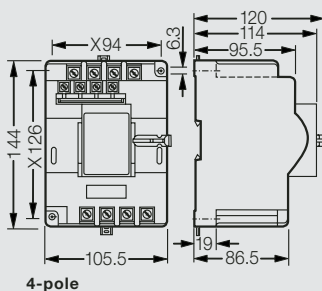
EX - BUILT-IN COMPONENTS

| RCD as of 30 mA |

8.17



2-pole



4-pole

Technical data

RCD as of 30 mA

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1087 U
Rated voltage	Main contact max. 440 V Auxiliary contact max. 250 V
Rated current	RCD: Main contact 25 A, 40 A, 63 A Auxiliary contact max. 5 A
Rated switching capacity	10 kA
Back-up fuse	63 A gL
Tripping current RCD	30 mA (other values on request)
Terminal cross-section	Main contact 2 x 10 mm ² Auxiliary contact 2 x 2.5 mm ²
Weight	2-pole 0.95 kg 4-pole 1.57 kg
Auxiliary contact	optional

Ordering details type: 2- and 4-pole Equipped without auxiliary contact

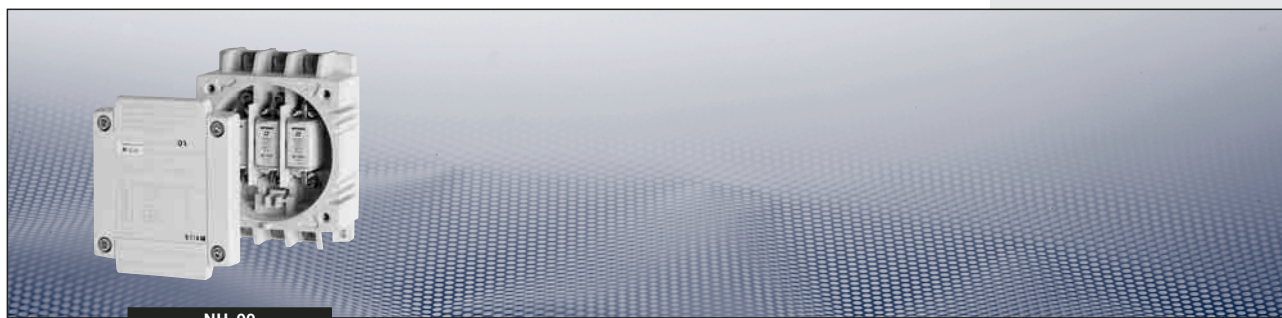
Version	Rated current	Mounting width	Order No.
2-pole	25 A - 40 A - 63 A	53 mm	FSS 200 X X
4-pole	25 A - 40 A - 63 A	106 mm	FSS 400 X X

Ordering details type: 2- and 4-pole Equipped with auxiliary contact (1 changeover)

Version	Rated current	Mounting width	Order No.
2-pole	25 A - 40 A - 63 A	53 mm	FSS 210 X X
4-pole	25 A - 40 A - 63 A	106 mm	FSS 410 X X

XX = Please state required rated current in Amperes.

x = mounting dimensions
Dimensions in mm



NH-00

EX - BUILT-IN COMPONENTS

8.18

| NH 00 Main fuse up to 125 A |

Technical data

NH 00 Main fuse up to 125 A

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 99 ATEX 1066 U
Rated voltage	690 V Signal contact max. 250 V
Rated current	2 A to 125 A
Rated switching capacity	100 kA
Terminal cross-section	up to 95 mm ² Signal contact 2 x 2.5 mm ²
Min. terminal cross-section	up to 25 A 4 mm ² up to 35 A 6 mm ² up to 50 A 10 mm ² up to 63 A 25 mm ² up to 100 A 50 mm ² up to 125 A 70 mm ²
Weight	approx. 3.5 kg (without fuse)
Signal contact	optional

Ordering details type: NH 00 3-pole

Equipped without signal contact

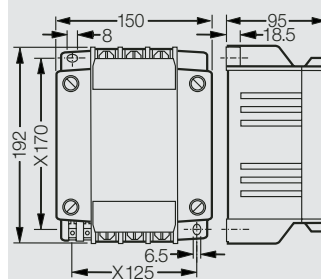
Version	Rated current	Mounting width	Order No.
3-pole	2 A - 125 A	150 mm	NH0 300 X X

Ordering details type: NH 00 3-pole

Equipped with signal contact (1 changeover)

Version	Rated current	Mounting width	Order No.
3-pole	2 A - 125 A	150 mm	NH0 301 X X

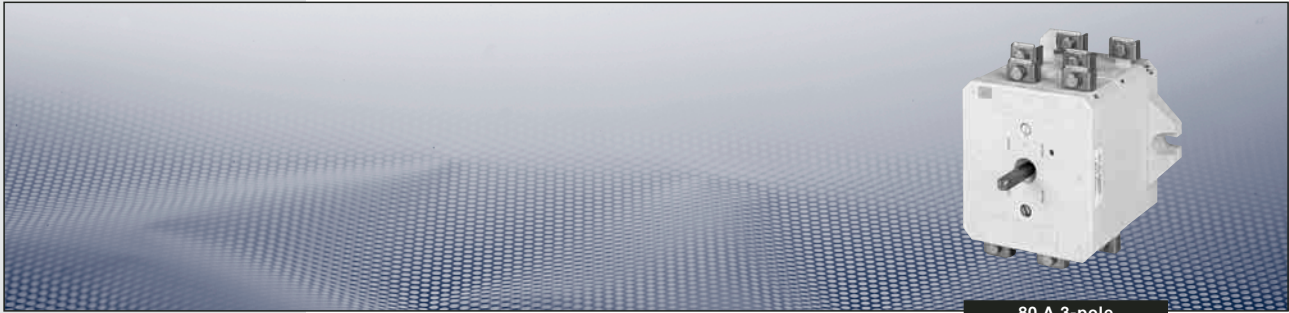
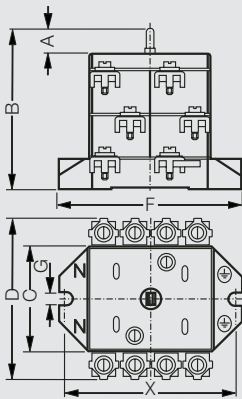
XX = Please state required rated current in Amperes.



NH 00

x = mounting dimensions

Dimensions in mm


80 A 3-pole
EX - BUILT - IN COMPONENTS
8.19
| Main switch up to 180 A |

Main switch

Dim- ensions	40A	80A	125/ 180 A
A	34	38.5	16
B	87	130	159
C	73	131	146
D	118	165	194
X	115	141	170
F	128	161	193
G	6.3	9.5	12

Technical data
Main switch up to 180 A

Marking to 94/9/EG	Ex de IIC
EC-type examination certificate	Switch 40 A: PTB 99 ATEX 1031 U Switch 80 A: PTB 00 ATEX 1069 U Switch 125 A to 180 A: PTB 99 ATEX 1062U
Rated voltage	max. 690 V
Switch	40 A 80 A 125 A 180 A
Rated current	40 A 80 A 125 A 180 A
Back-up fuse	80 A 160 A 200 A 250 A
Rated switching capacity AC-3	230 V to 400 V: 40 A 80 A 125 A 180 A 500 V: 40 A 80 A 125 A 150 A 690 V: 32 A 63 A 125 A 125 A
Terminal cross-section	Switch 40 A: 2 x 4 - 16 mm ² Switch 80 A: 2 x 4 - 25 mm ² with cable lug 1 x 35 mm ² Switch 125 A: 2 x 4 - 70 mm ² with cable lug 1 x 120 mm ² Switch 180 A: 2 x 50 - 150 mm ²
Weight	Switch 40 A 1.20 kg Switch 80 A 3.68 kg Switch 125 A 6.30 kg Switch 180 A 6.50 kg

Ordering details type: 3-pole

Version	Rated current	Order No.
3-pole	40 A	HSC 300 40
3-pole	80 A	HSC 300 80
3-pole	125 A	HSC 300 125
3-pole	180 A	HSC 300 180

Ordering details type: 4-pole

Version	Rated current	Order No.
4-pole	40 A	HSC 400 40
4-pole	80 A	HSC 400 80
4-pole	125 A	HSC 400 125
4-pole	180 A	HSC 400 180

x = mounting dimensions

Dimensions in mm


COOPER Crouse-Hinds | COOPER CROUSE-HINDS GMBH

8.19

1

2

3

4

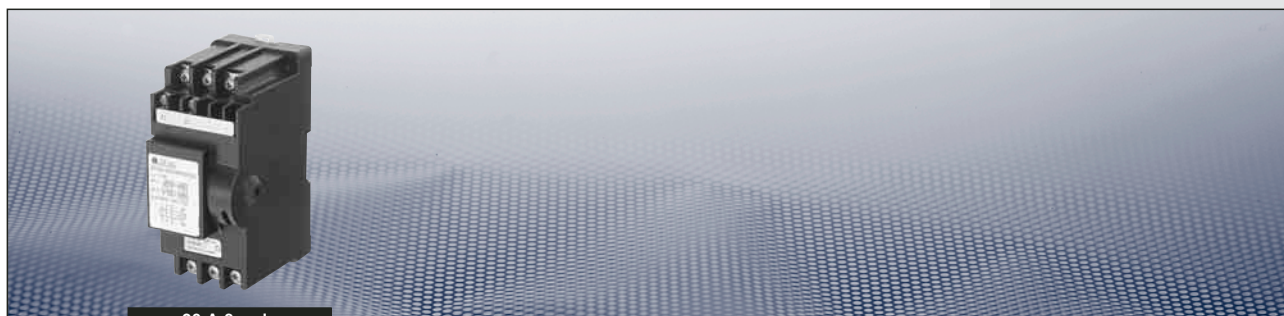
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9



20 A 3-pole

EX - BUILT-IN COMPONENTS

Air-break contactor 20 A

Technical data

Air-break contactor 20 A

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1087 U
Rated voltage	Main contact max. 690 V Auxiliary contact max. 250 V
Rated switching capacity	12 V to 690 V
Rated current	Main contact max. 20 A Auxiliary contact max. 6 A
Rated switching capacity AC-1	Main contact Auxiliary contact
	230 V 2.2 kW 4 A (AC-11)
	400 V 4 kW
	690 V 4 kW
Back-up fuse	63 A gL
Terminal cross-section	Main contact 2 x 10 mm ² Control contact 2 x 2.5 mm ²
	Auxiliary contact 2 x 2.5 mm ²
Weight	1.26 kg
Auxiliary contact	optional

Ordering details type: 3-pole

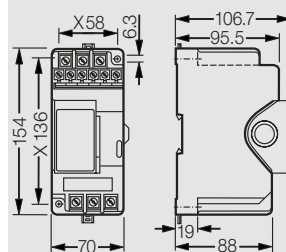
Equipped without auxiliary contact

Version	Rated current	Mounting width	Order No.
3-pole	20 A	70 mm	LUS 300 20

Ordering details type: 3-pole

Equipped with auxiliary contacts (1 NO + 1 NC)

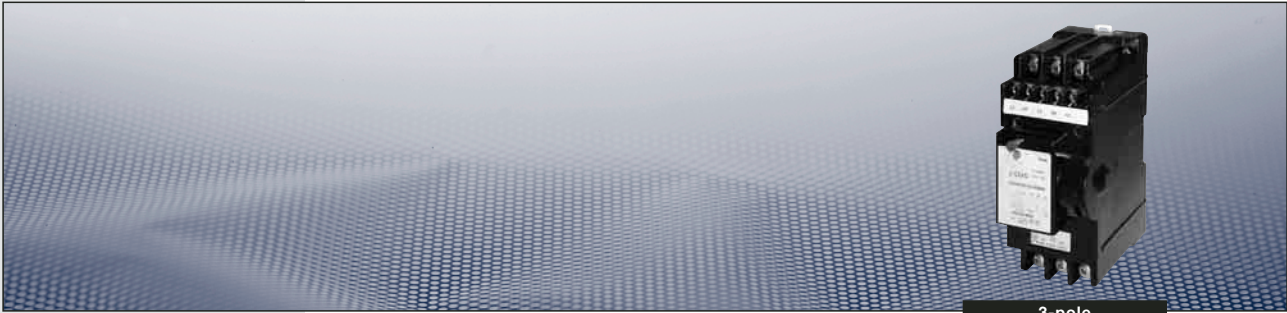
Version	Rated current	Mounting width	Order No.
3-pole	20 A	70 mm	LUS 310 20



Air-break contactor 20 A

x = mounting dimensions

Dimensions in mm

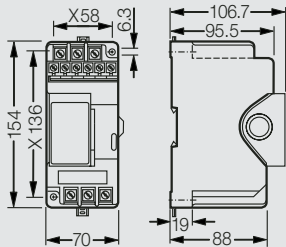


3-pole

EX - BUILT - IN COMPONENTS

| Motor starter for direct on-line starting 4 kW |

8.21



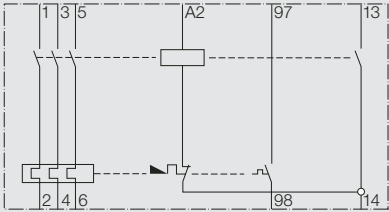
3-pole

Technical data	
Motor starter for direct on-line starting 4 kW	
Marking to 94/9/EG	II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1087 U
Rated voltage	max. 690 V AC
Control voltage	12 V to 690 V AC
Rated current	Main contact max. 20 A Auxiliary contact max. 6 A
Rated switching capacity	Main contact AC-3: 230 V/2.2 kW 400 V/690 V/4 kW Auxiliary contact AC-15: 230 V/4 A
Back-up fuse	depending on rated current up to 20 A gL
Terminal cross-section	Main contact 2 x 10 mm² Control contact 2 x 2.5 mm²
Weight	1.72 kg

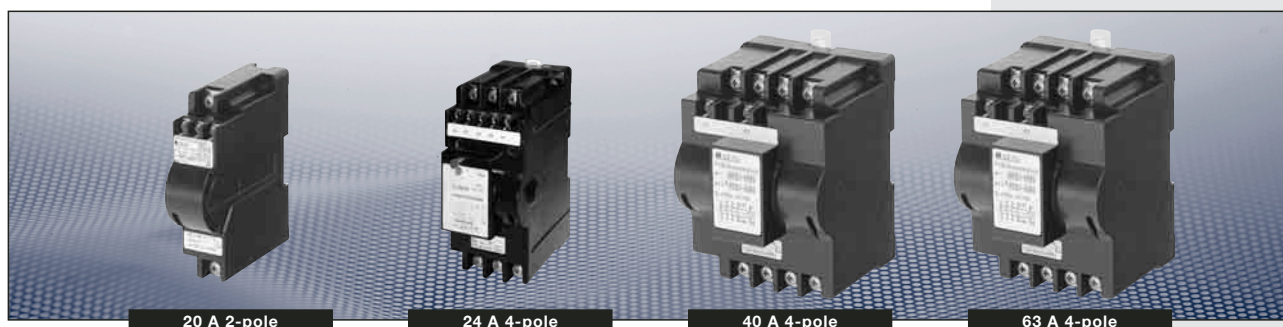
Ordering details type: 3-pole Equipped without signal contact			
Version	Tripping current ¹⁾	Mounting width	Order No.
3-pole	0.5 A - 11.5 A	70 mm	MST 300 X X

¹⁾ Tripping-current gradations:	
0.11 A - 0.16 A	1.2 A - 1.8 A
0.16 A - 0.23 A	1.8 A - 2.6 A
0.23 A - 0.36 A	2.6 A - 3.7 A
0.36 A - 0.54 A	3.7 A - 5.5 A
0.54 A - 0.80 A	5.5 A - 8.0 A
0.80 A - 1.20 A	8.0 A - 11.5 A

XX = Please state required tripping current in Amperes.



x = mounting dimensions
Dimensions in mm



20 A 2-pole

24 A 4-pole

40 A 4-pole

63 A 4-pole

EX - BUILT-IN COMPONENTS

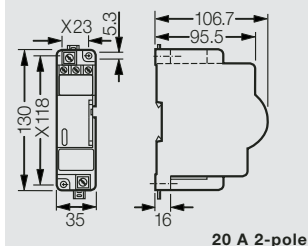
| Installation contactor 20 to 63 A |

Technical data

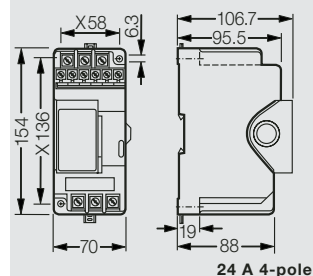
Installation contactor 20 to 63 A

Marking to 94/9/EG	Ⓔ II 2 G			
Type of protection	EEx de IIC			
EC-type examination certificate	PTB 98 ATEX 1087 U			
Installation contactor	20 A	24 A	40 A	63 A
Rated voltage				
Main contact	max. 250 V	440 V	440 V	440 V
Auxiliary contact		440 V	440 V	440 V
Rated current				
Main contact NO	20 A	24 A	40 A	63 A
Main contact N/C	20 A	24 A	32 A	32 A
Auxiliary contact	–	6 A	6 A	6 A
Back-up fuse	20 A gL	35 A gL	63 A gL	80 A gL
Rated switching capacity				
Main contacte				
AC-1 – 230 V	4.0 kW	9.0 kW	15.2 kW	24 kW
AC-1 – 400 V	–	16 kW	26 kW	41 kW
AC-3 – 230 V	1.3 kW	2.2 kW	5.5 kW	8 kW
AC-3 – 400 V	–	4.0 kW	11 kW	15 kW
DC-3 – 1 Current path 60 V/230 V	–	4 A/0.2 A	5 A/0.3 A	5.5 A/0.3 A
DC-3 – 2 Current paths	–	14 A/1.0 A	16 A/1.1 A	18 A/1.2 A
DC-3 – 3 Current paths	–	24 A/4.0 A	34 A/4.5 A	38 A/5.0 A
Auxiliary contacte				
AC-15 – 230 V	–	4 A	4 A	4 A
AC-15 – 400 V	–	3 A	3 A	3 A
Terminal cross-section	Main contact 2 x 10 mm ² Control contact 2 x 2.5 mm ² Auxiliary contact 2 x 2.5 mm ²			
Weight	0.55 kg	1.20 kg	1.65 kg	1.69 kg
Auxiliary contact	optional			

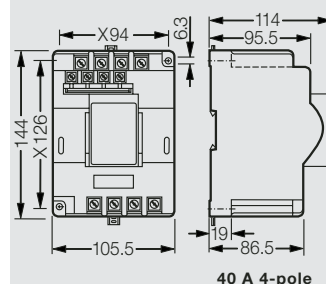
For ordering details, please see page 8.20.



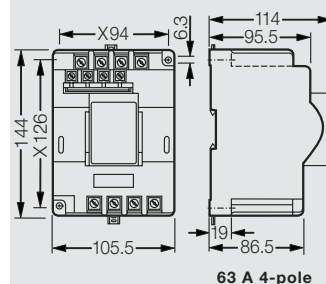
20 A 2-pole



24 A 4-pole



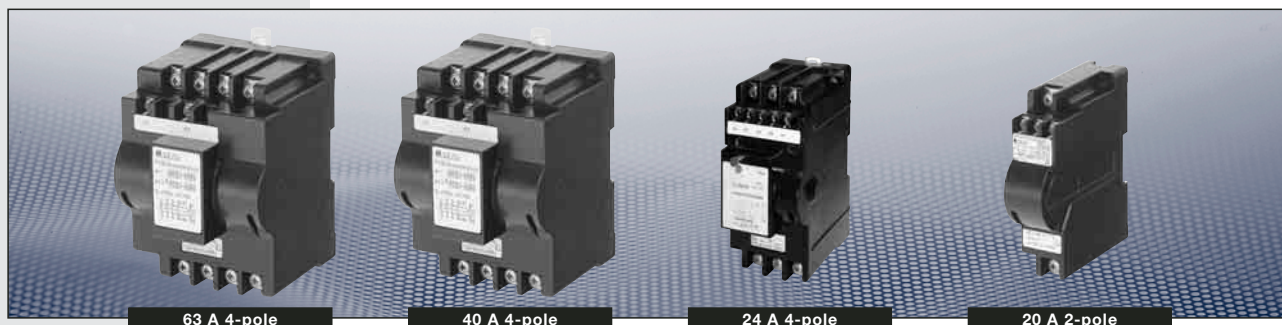
40 A 4-pole



63 A 4-pole

x = mounting dimensions

Dimensions in mm



63 A 4-pole

40 A 4-pole

24 A 4-pole

20 A 2-pole

EX - BUILT-IN COMPONENTS

8.23

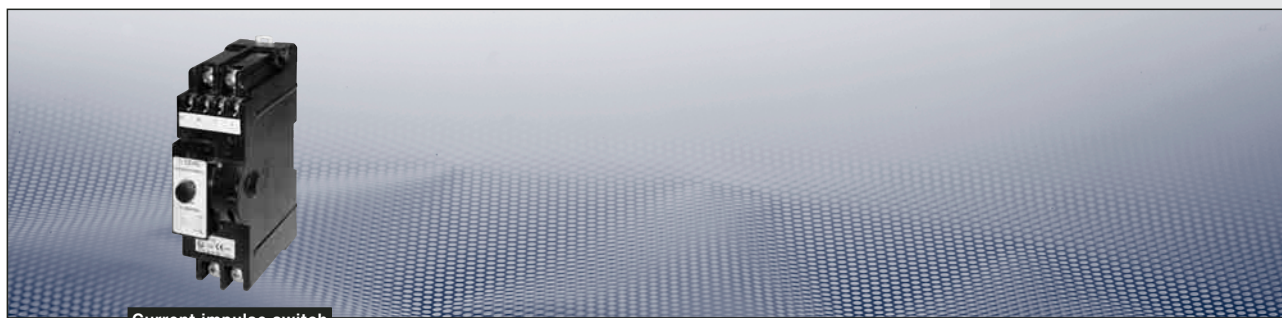
| Installation contactor 20 to 63 A |

Ordering details type: 2- and 4-pole Equipped without auxiliary contact

Version	Rated current	Mounting width	Order No.
2-pole	20 A	35 mm	IS 200 20
4-pole	24 A	70 mm	IS 400 24
4-pole	40 A	106 mm	IS 400 40
4-pole	63 A	106 mm	IS 400 63

Ordering details type: 4-pole Equipped with auxiliary contact (1 NO or 1 N/C)

Version	Rated current	Mounting width	Order No.
4-pole	24 A	70 mm	IS 410 24
4-pole	40 A	106 mm	IS 410 40
4-pole	63 A	106 mm	IS 410 63



Current impulse switch

8.24

EX - BUILT - IN COMPONENTS

| Current impulse switch up to 16 A |

Technical data

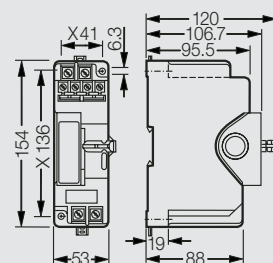
Current impulse switch up to 16 A

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
Temperature range	T6
EC-type examination certificate	PTB 98 ATEX 1087U
Rated voltage	400 V
Rated current	16 A
Rated switching capacity AC-15	250 V: 16 A 400 V: 10 A
Back-up fuse	16 A gL
Terminal cross-section	Main contact 2 x 10 mm ² Control contact 2 x 2.5 mm ²
Weight	0.55 kg

Ordering details type: 1- and 2-pole

Version with auxiliary contact

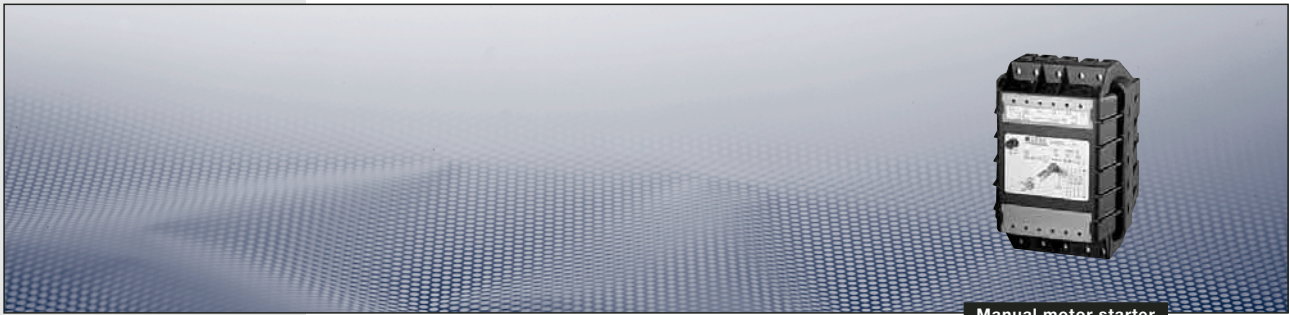
Version	Rated current	Auxiliary contact	Mounting width	Order No.
1-pole	16 A	1 NO	53 mm	STS 110 16
2-pole	16 A	2 NO	53 mm	STS 260 16
2-pole	16 A	1 S + 1 Ö	53 mm	STS 280 16



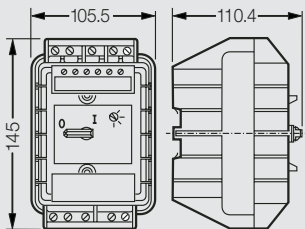
Current impulse switch 16 A

x = mounting dimensions

Dimensions in mm



Manual motor starter



Manual motor starter 25 A

Technical data

Manual motor starter 0.1 A to 25 A

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 99 ATEX 1007 U
Rated voltage	690 V, 50/60 Hz, 440 V DC
Auxiliary contact	Optional
Rated voltage	110 V, 230 V, 400 V and 500 V 50/60 Hz
Short-circuit backup fuse	not required
Terminal cross-section	2 x (0.75 to 2.5) mm ²
Rated current	max. 25 A
Rated switching capacity AC-3	25 A
Thermal tripping characteristic	T II
Tripping time at 6x I _e	≥ 5 Second
Terminal cross-section	2 x (0.75 to 4.0) mm ²
Weight	1.3 kg

Ordering details type: 3-pole,

Equipped without auxiliary contact, without undervoltage trip

Version	Rated current	Mounting width	Order No.
---------	---------------	----------------	-----------

3-pole 0.1 A - 25 A 106 mm **MSS 3HU X X**

H = 0 without auxiliary contact

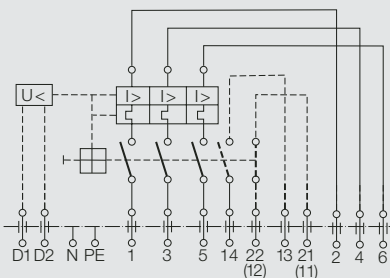
H = 1 with auxiliary contact (1 NO + 1 NC)

U = 0 without undervoltage trip

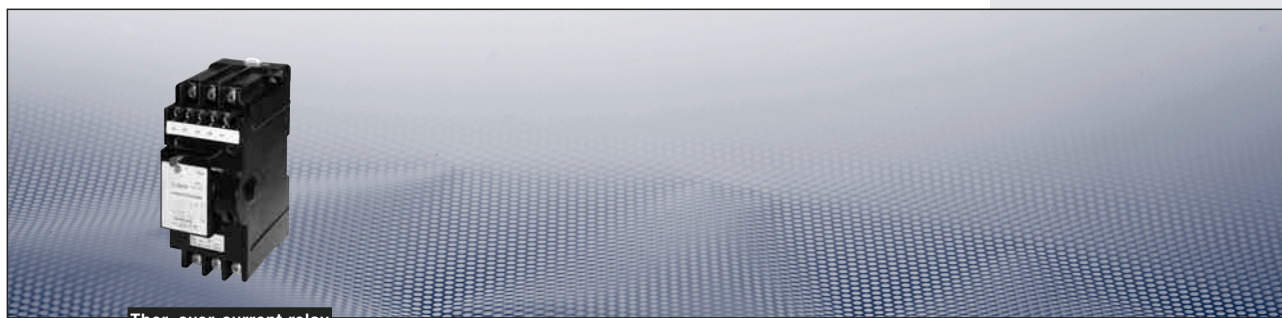
U = 5 with undervoltage trip

Short-circuit protection up to 100 kA and max. back-up fuse protection

Setting range	230 V AC		400 V AC		500 V AC		690 V AC		Temp.
	Ics	gl, aM	Ics	gl, aM	Ics	gl, aM	Ics	gl, aM	
0.1 A ... 0.16 A									T6
1.0 A ... 1.6 A									T6
1.6 A ... 2.5 A	short-circuit proof,						40	25	T6
2.5 A ... 4.0 A	no back-up fuse						10	40	T6
4.0 A ... 6.3 A	required						30	50	T6
6.3 A ... 9.0 A					30	80	3	50	T6
9.0 A ... 12.5 A			50	80	20	80	3	50	T6
12.5 A ... 16.0 A			50	100	20	100	3	50	T6
16.0 A ... 20.0 A			50	100	20	100	2	50	T5
20.0 A ... 25.0 A	50	125	50	125	20	125	2	50	T5



Dimensions in mm



Ther. over-current relay

8.26

EX - BUILT-IN COMPONENTS

| Thermal over-current relay |

Technical data

Thermal over-current relay

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1087 U
Rated voltage	max. 690 V
Rated operating voltage	max. 690 V
Tripping current	Thermal tripping with phase failure protection, manual reset
Terminal cross-section	Switching contact 2 x 10 mm ² Control contact 2 x 2,5 mm ²
Weight	1.1 kg

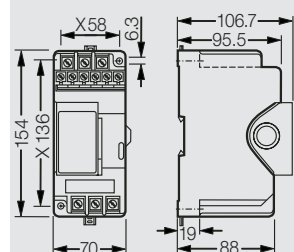
**Ordering details type: 2-pole
Equipped mit 1 NO and 1 N/C**

Version	Tripping current ¹⁾	Mounting width	Order No.
3-pole	0.16 A - 11.5 A	70 mm	TSA 280 X X

¹⁾ Tripping-current gradations:

0.11 A - 0.16 A	1.2 A - 1.8 A
0.16 A - 0.23 A	1.8 A - 2.6 A
0.23 A - 0.36 A	2.6 A - 3.7 A
0.36 A - 0.54 A	3.7 A - 5.5 A
0.54 A - 0.80 A	5.5 A - 8.0 A
0.80 A - 1.20 A	8.0 A - 11.5 A

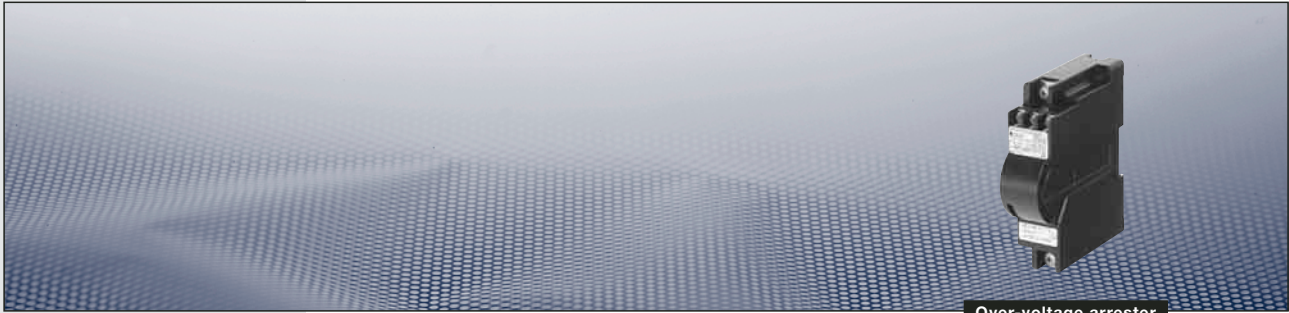
XX = Please state required tripping current in Amperes.



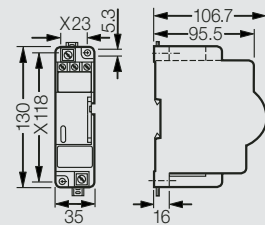
Thermal over-current relay

x = mounting dimensions

Dimensions in mm



Over-voltage arrester



Over-voltage arrester

EX - BUILT-IN COMPONENTS

8.27

Over-voltage arrester

Technical data

Over-voltage arrester

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1087 U
Rated voltage	max. 275 V
Rated discharge surge current I_{SN}	max. 5 kA
Rated forward surge current I_s	max. 25 kA
Response time	25 ns
Residual voltage at mains operating voltage	approx. 1000 V
Extinction voltage U_L to earth	280 V AC
Back-up fuse	max. 63 A gL
Tripping current of cut-off device	5 A
Short-circuit protection	25 kA eff
Terminal cross-section	Switching contact 2 x 10 mm ² Control contact 2 x 2.5 mm ²
Weight	0.52 kg
Optional tripping indication	by mark in inspection window

Ordering details type: 1-pole

Version	Mounting width	Order No.
1-pole	35 mm	FES 100

Ordering details type: 1-pole
Equipped with tripping indication

Version	Mounting width	Order No.
1-pole	35 mm	FES 101

x = mounting dimensions
Dimensions in mm

1

2

3

4

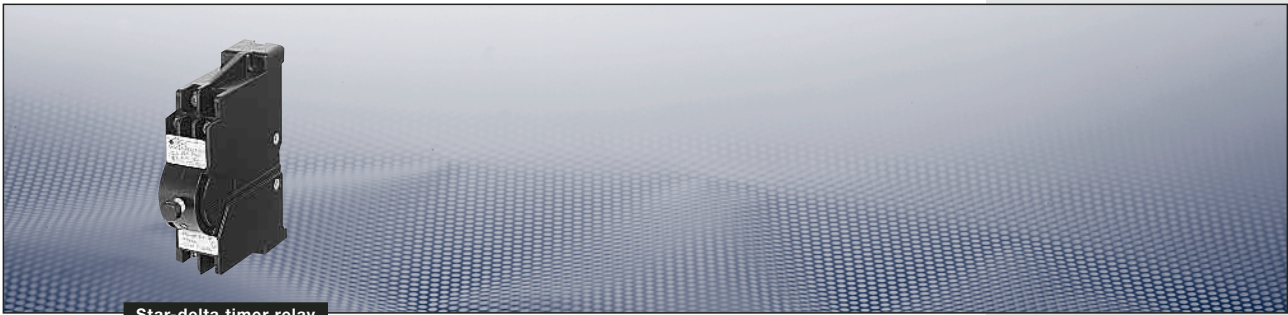
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Star-delta timer relay

EX - BUILT-IN COMPONENTS

Star-delta timer relay

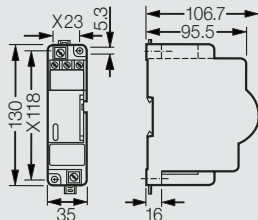
Technical data

Star-delta timer relay

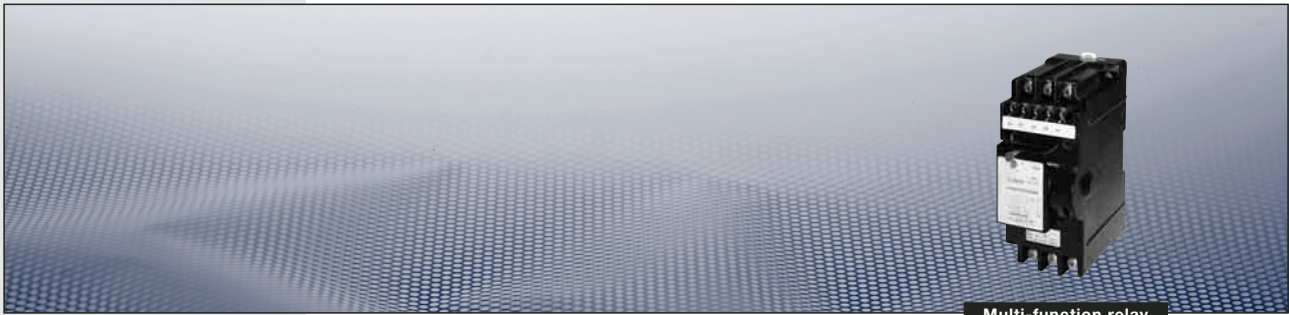
Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1087 U
Rated voltage	max. 250 V
Control voltage	110 V - 127 V AC, 220 V - 240 V AC, 24 V AC/DC
Rated continuous I _{th}	3 A
Rated switching capacity AC 15	230 V/3 A
Response time	1.5 s to 30 s, continuously externally adjustable
Terminal cross-section	Switching contact 2 x 10 mm ² Control contact 2 x 2,5 mm ²
Weight	0.53 kg

Ordering details type: 1-pole
Equipped with 1 W

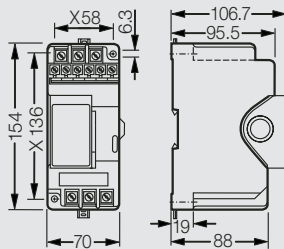
Version	Rated current	Mounting width	Order No.
1-pole	3 A	35 mm	SDZ 190 03



Star-delta timer relay



Multi-function relay



Multi-function relay

Time ranges

0.05	–	1 s
0.15	–	3 s
0.5	–	10 s
3	–	60 s
0.15	–	3 min.
0.5	–	10 min.
3	–	60 min.
0.15	–	3 h
0.5	–	10 h
3	–	60 h

x = mounting dimensions
Dimensions in mm

EX - BUILT-IN COMPONENTS

Multi-function relay

8.29

Technical data

Multi-function relay

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1087 U
Rated voltage	max. 440 V AC
Control voltage	24 V AC to 440 V AC or 24 V DC to 240 V DC
Rated current	6 A
Rated switching capacity	AC-11 440 V/3 A DC-22 24 V/1 A, 60 V/0.35 A, 220 V/0.20 A
Back-up fuse	6 A gL
Response time/time range	0.05 s to 1 s 0.15 s to 3 s 0.5 s to 10 s 3 s to 60 s 0.5 min to 10 min 3 min to 60 min 0.15 h to 3 h 0.5 h to 10 h 3 h to 60 h
Control functions	Delayed ON response 11 Delayed OFF response 12 Delayed ON and OFF response 16 With passing make contact 21 With passing break contact 22 Blinking 42
Control contact	optional
Terminal cross-section	Main contact max. 2 x 10 mm ² Control contact max. 2 x 2.5 mm ²
Weight	1.26 kg

Ordering details type: 1-pole

Equipped for functions 11, 21 or 42

Version	Response time*	Control function	Mounting width	Order No.
1 change-over contact	0.05 s to 60 h	delayed reponse	70 mm	MFR 100 11
1 change-over contact	0.05 s to 60 h	with passing make contact	70 mm	MFR 100 21
1 change-over contact	0.05 s to 60 h	blinking	70 mm	MFR 100 42

Ordering details type: 1-pole

Equipped for functions 12, 16 or 22

Version	Response time*	Control function	Mounting width	Order No.
1 change-over contact	0.05 s to 60 h	delayed OFF response	70 mm	MFR 100 12
1 change-over contact	0.05 s to 60 h	delayed ON and OFF response	70 mm	MFR 100 16
1 change-over contact	0.05 s to 60 h	with passing break contact	70 mm	MFR 100 22

Control functions and time ranges are preset.

* The time setting within the time range is performed via potentiometer (10 kΩ) to be connected eternally. Please state required time range.

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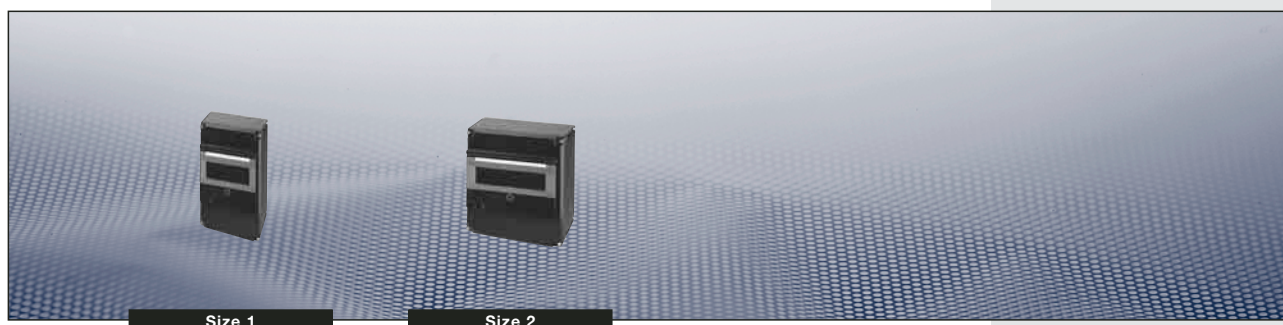
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Size 1

Size 2

EX - BUILT - IN COMPONENTS

Enclosure moulded plastic mounting space 1 x 106 mm/1 x 213 mm

Technical data

Enclosure moulded plastic mounting space 1 x 106 mm/1 x 213 mm

Marking to 94/9/EG	Ex II 2 G Ex II 2 D T 80 °C
Type of protection	EEx e IIC T4 - T6 ¹⁾
EC-type examination certificate	PTB 99 ATEX 1044
Rated voltage	max. 690 V AC
Rated current	max. 180 A
Permissible ambient temperature	- 20 °C to + 40 °C*
Degree of protection acc. to EN 60529	IP 66
Protection class acc. to EN 60598	I
Cable entry	acc. to customer specification
Enclosure material	Glass-fibre reinforced polyester
Terminal cross-section	max. 240 mm ²
Dimensions in mm (W x H x D)	Size 1 148 x 271 x 136 Size 2 285 x 271 x 136 Size 2 with deep cover 285 x 271 x 210
Weight	Size 1 1.5 kg Size 2 2.5 kg

¹⁾ depending on built-in components

Ordering details

Size 1: 1 mounting area 106 mm

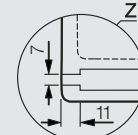
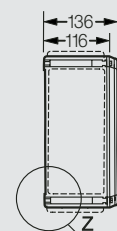
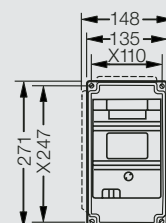
Version	Mounting width	Order No.
Cover closed	106 mm	GEH 001 00
Cover cut-out with small actuasting flap	106 mm	GEH 001 01

Ordering details

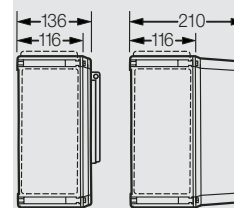
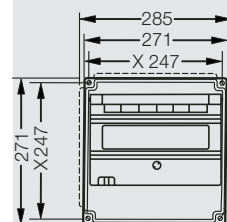
Size 2: 1 mounting area 213 mm

Version	Mounting width	Order No.
Cover closed	213 mm	GEH 002 00
Cover cut-out with 1 actuating flap	213 mm	GEH 002 01
Cover raised for insertion of main switch = 80 A		GEH 002 02

* extended temperature ranges on request



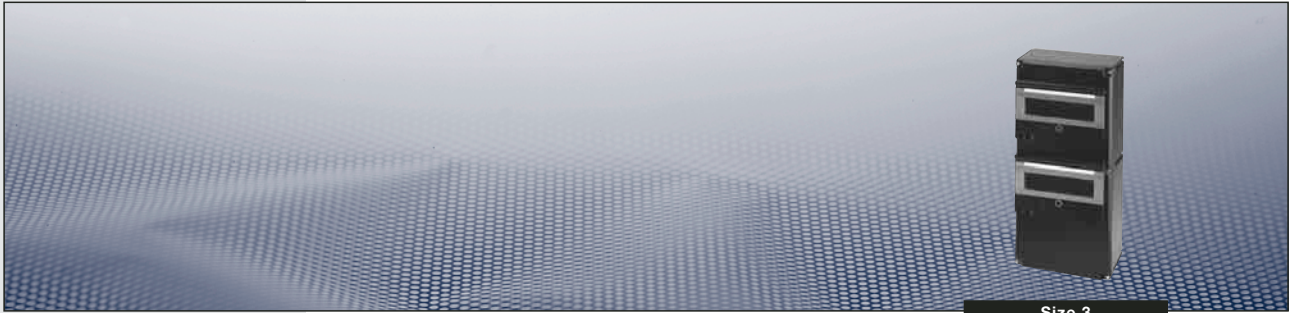
Size 1



Size 2

x = mounting dimensions

Dimensions in mm

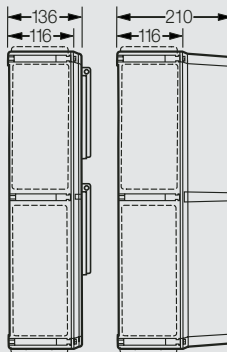
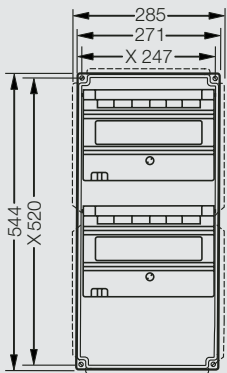


Size 3

EX - BUILT - IN C O M P O N E N T S

| Enclosure moulded plastic mounting space 2 x 213 mm |

8.31



Size 3

Technical data

Enclosure moulded plastic mounting space 2 x 213 mm

Marking to 94/9/EG	Ex II 2 G Ex II 2 D T 80 °C
Type of protection	EEx e II T4 - T6 ¹⁾
EC-type examination certificate	PTB 99 ATEX 1044
Rated voltage	max. 690 V AC
Rated current	max. 180 A
Permissible ambient temperature	- 20 °C to + 40 °C*
Degree of protection acc. to EN 60529	IP 66
Insulation class to EN 60598	I
Cable entry	acc. to customer specification
Enclosure material	Glass-fibre reinforced polyester
Terminal cross-section	max. 240 mm ²
Dimensions in mm (W x H x D)	285 x 544 x 136 with deep cover 285 x 544 x 210
Weight	3.5 kg

¹⁾ depending on built-in components

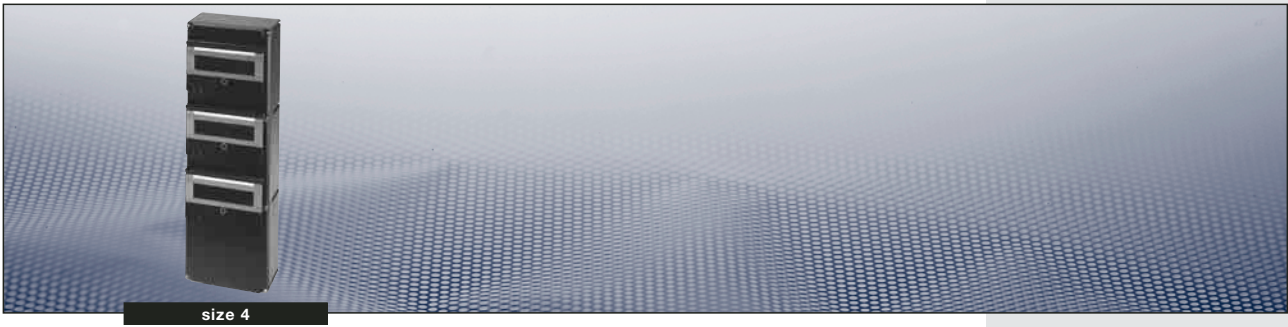
Ordering details

Size 3: 2 mounting areas 213 mm

Version	Mounting width	Order No.
Cover closed	2 x 213 mm	GEH 003 00
Cover cut-out with 1 actuating flap	2 x 213 mm	GEH 003 01
Cover cut-out with 2 actuating flaps	2 x 213 mm	GEH 003 02
Cover with 1 actuating flap and main switch ≤ 40 A	1 x 213 mm	GEH 003 03
Cover raised for insertion of main switch ≥ 80 A to 180 A		GEH 003 03

* extended temperature ranges on request

x = mounting dimensions
Dimensions in mm



8.32

EX - BUILT - IN COMPONENTS

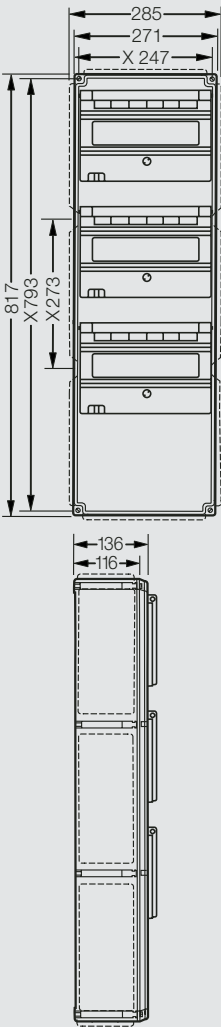
| Enclosure moulded plastic mounting space 3 x 213 mm |

Technical data		
Enclosure moulded plastic mounting 3 x 213 mm		
Marking to 94/9/EG	Ⓔ II 2 G Ⓔ II 2 D T 80 °C	
Type of protection	EEx e IIC T4 - T6 ¹⁾	
EC-type examination certificate	PTB 99 ATEX 1044	
Rated voltage	max. 690 V AC	
Rated current	max. 180 A	
Permissible ambient temperature	– 20 °C to + 40 °C*	
Degree of protection acc. to EN 60529	IP 66	
Insulation class to EN 60598	I	
Cable entry	acc. to customer specification	
Enclosure material	Glass-fibre reinforced polyester	
Terminal cross-section	max. 240 mm²	
Dimensions in mm (B x H x T)	285 x 817 x 136	
Weight	5.5 kg	

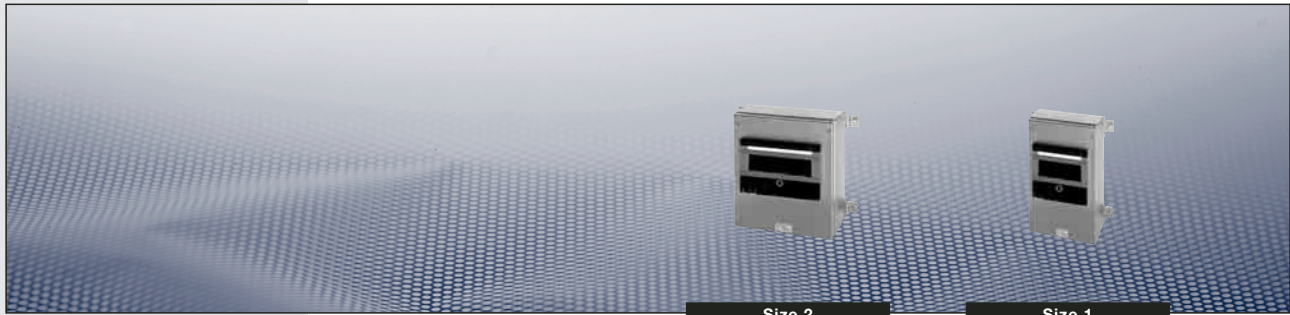
1) depending on built-in components

Ordering details		
size 4: 3 mounting area 213 mm		
Version	Mounting width	Order No.
Cover closed	3 x 213 mm	GEH 004 00
Cover cut-out with 1 actuating flap	3 x 213 mm	GEH 004 01
Cover cut-out with 2 actuating flaps	3 x 213 mm	GEH 004 02
Cover cut-out with 3 actuating flaps	3 x 213 mm	GEH 004 03
Cover with 2 actuating flaps for main switch ≤ 40 A	1 x 213 mm	GEH 004 04

* extended temperature ranges on request



Size 4



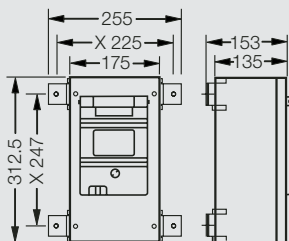
Size 2

Size 1

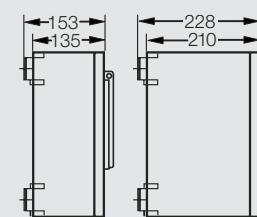
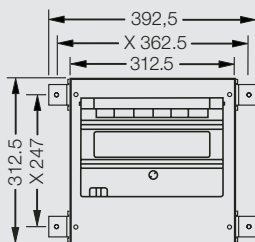
EX - BUILT - IN COMPONENTS

Stainless steel mounting space 1 x 106 mm/1 x 213 mm

8.33



Size 1



Size 2

Technical data

Stainless steel mounting space 1 x 106 mm/1 x 213 mm

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx e IIC T4 - T6 ¹⁾
EC-type examination certificate	PTB 99 ATEX 1044
Rated voltage	max. 690 V AC
Rated current	max. 180 A
Permissible ambient temperature	- 20 °C to + 40 °C*
Degree of protection acc. to EN 60529	IP 66
Insulation class to EN 60598	I
Cable entry	acc. to customer specification
Enclosure material	Stainless steel V 4A AISI 316L
Terminal cross-section	max. 240 mm ²
Dimensions ²⁾ in mm (W x H x D)	Size 1 175 x 312.5 x 135 Size 2 312.5 x 312.5 x 135 Size 2 with deep enclosure 312.5 x 312.5 x 210
Weight	Size 1 3.5 kg Size 2 7.5 kg

¹⁾ depending on built-in components

²⁾ not incl. mounting lugs

Ordering details

Size 1: 1 mounting area 106 mm

Version	Mounting width	Order No.
Cover closed	1 x 106 mm	GEH 100 00
Cover cut-out with small actuating flap	1 x 106 mm	GEH 100 01

Ordering details

Size 2: 1 mounting area 213 mm

Version	Mounting width	Order No.
Cover closed	1 x 213 mm	GEH 200 00
Cover cut-out with 1 actuating flap	1 x 213 mm	GEH 200 01
Cover raised for insertion of main switch = 80 A		GEH 200 02

* extended temperature ranges on request

x = mounting dimensions

Dimensions in mm



Crouse-Hinds

COOPER CROUSE-HINDS GMBH

8.33

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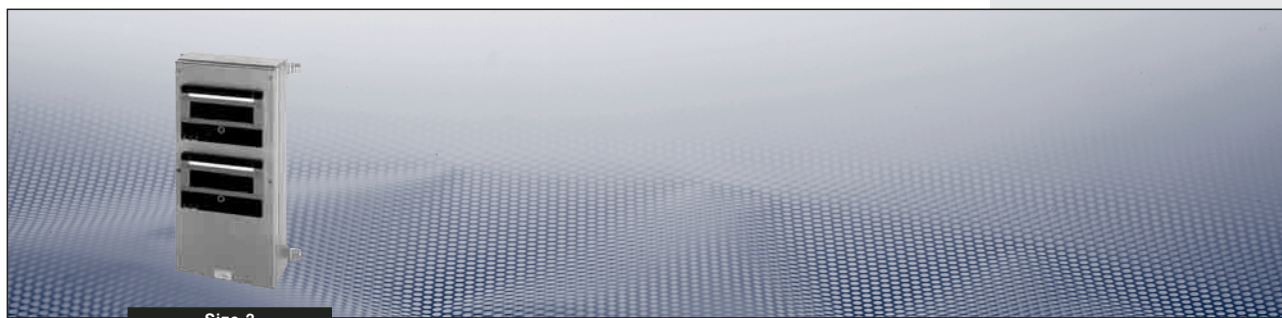
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Size 3

EX - BUILT-IN COMPONENTS

Stainless steel mounting space 2 x 213 mm

Technical data

Stainless steel mounting space 2 x 213 mm

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx e IIC T4 - T6 ¹⁾
EC-type examination certificate	PTB 99 ATEX 1044
Rated voltage	max. 690 V AC
Rated current	max. 180 A
Permissible ambient temperature	- 20 °C to + 40 °C*
Degree of protection acc. to EN 60529	IP 66
Insulation class to EN 60598	I
Cable entry	acc. to customer specification
Enclosure material	Stainless steel V 4A AISI 316L
Terminal cross-section	max. 240 mm ²
Dimensions ²⁾ in mm (W x H x D)	Size 3 312.5 x 627 x 151 with deep enclosure 312.5 x 627 x 216
Weight	Size 3 11.5 kg

¹⁾ depending on built-in components

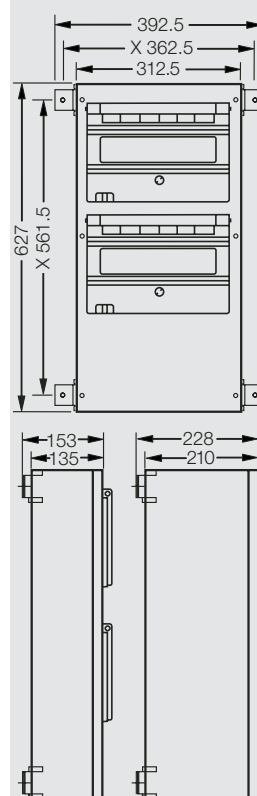
²⁾ not incl. mounting lugs

Ordering details

Size 3: 2 mounting area 213 mm

Ausführung	Mounting width	Order No.
Cover closed	2 x 213 mm	GEH 300 00
Cover cut-out with 1 actuating flap	2 x 213 mm	GEH 300 01
Cover cut-out with 2 actuating flaps	2 x 213 mm	GEH 300 02
Cover with 1 actuating flap and main switch ≤ 40 A	1 x 213 mm	GEH 300 03
Enclosure raised for insertion of main switch ≥ 80 A to 180 A		GEH 300 04

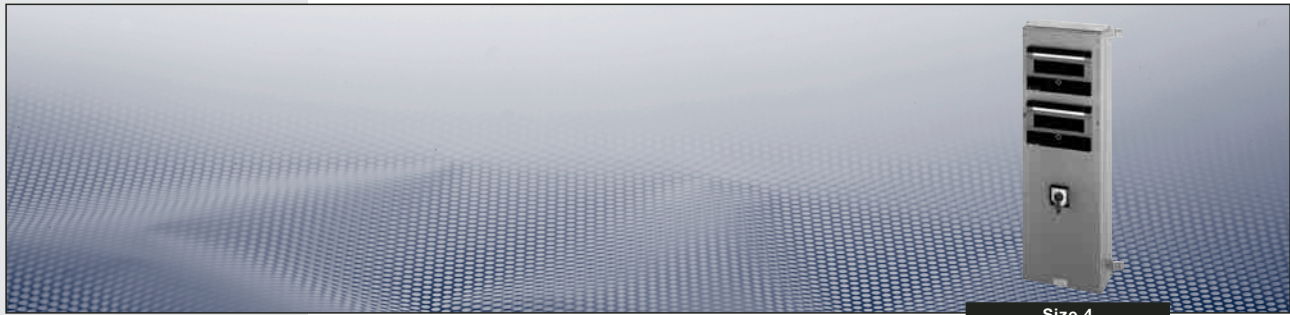
* extended temperature ranges on request



Size 3

x = mounting dimensions

Dimensions in mm

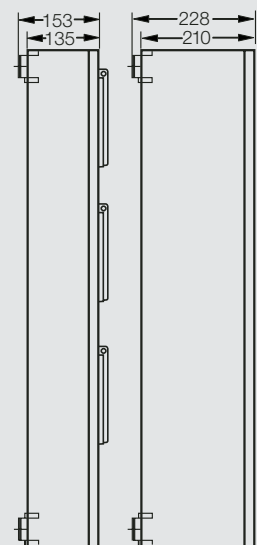
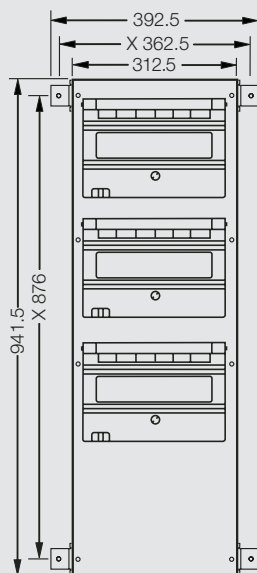


Size 4

EX - BUILT - IN COMPONENTS

Stainless steel mounting space 3 x 213 mm

8.35



Size 4

x = mounting dimensions
Dimensions in mm

Technical data

Stainless steel mounting space 3 x 213 mm

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx e IIC
Temperature range	depends on built-in components
EC-type examination certificate	PTB 99 ATEX 1044
Rated voltage	max. 690 V AC
Rated current	max. 180 A
Permissible ambient temperature	- 20 °C to + 40 °C*
Degree of protection acc. to EN 60529	IP 66
Insulation class to EN 60598	I
Cable entry	acc. to customer specification
Enclosure material	Stainless steel V 4A AISI 316L
Terminal cross-section	max. 240 mm ²
Dimensions ¹⁾ in mm (W x H x D)	Size 4 312.5 x 941.5 x 151
Weight	Size 4 16.5 kg

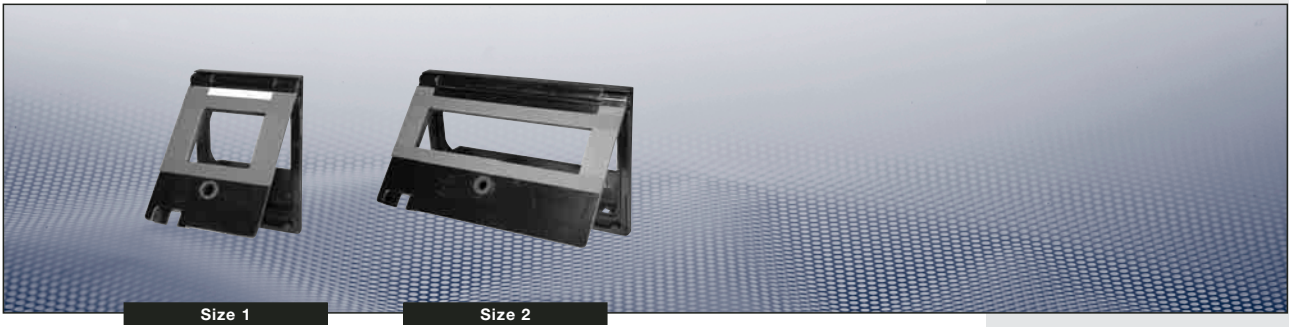
¹⁾ not incl. mounting luqs

Ordering details

Size 4: 3 mounting area 213 mm

Version	Mounting width	Order No.
Cover closed	3 x 213 mm	GEH 400 00
Cover cut-out with 1 actuating flap	3 x 213 mm	GEH 400 01
Cover cut-out with 2 actuating flaps	3 x 213 mm	GEH 400 02
Cover cut-out with 3 actuating flaps	3 x 213 mm	GEH 400 03
Cover with 2 actuating flaps and main switch ≤ 40 A	2 x 213 mm	GEH 400 04

* extended temperature ranges on request



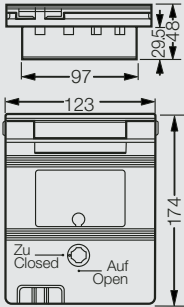
8.36 EX - BUILT-IN COMPONENTS

| Actuating flap |

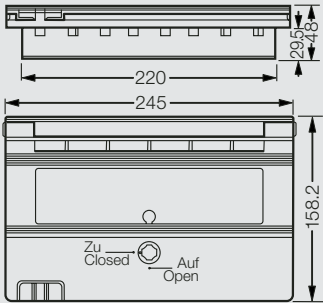
Technical data	
Actuating flap	
Type of protection	EEx e IIC
EC-type examination certificate	PTB 99 ATEX 3107U
Weight	flap size 1 0.48 kg flap size 2 0.78 kg

Ordering details		
Size 1: mounting area 106 mm		
Version	Mounting width	Order No.
Lockable	123 mm	BKL 100 00

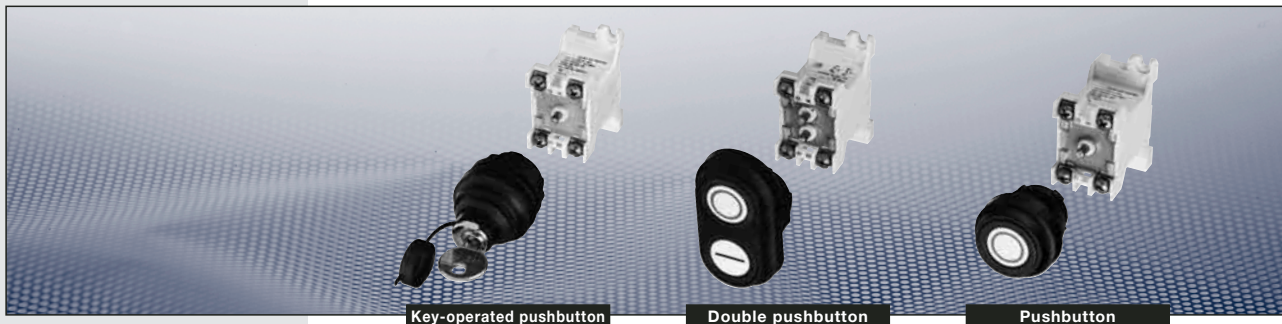
Ordering details		
Size 2: mounting area 213 mm		
Version	Mounting width	Order No.
Lockable	245 mm	BKL 200 00



Size 1



Size 2



Key-operated pushbutton

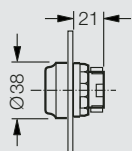
Double pushbutton

Pushbutton

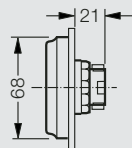
EX - BUILT - IN COMPONENTS

Key-operated pushbutton SLT | Double pushbutton DDT | Pushbutton DRT

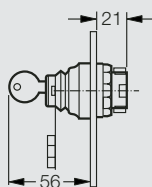
8.37



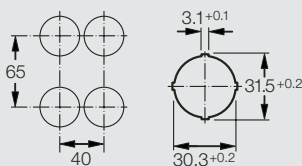
Pushbutton



Double pushbutton



Key-operated pushbutton



Minimum distances and mounting dimensions

Dimensions in mm

Technical data

Pushbutton DRT, for mounting in enclosure

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Technical data

Double pushbutton DDT, for mounting in enclosure

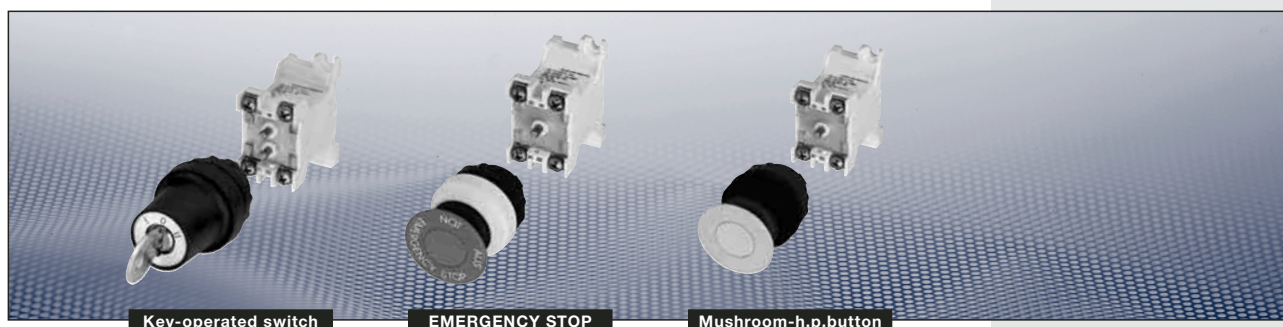
Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Connecting terminals:	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Technical data

Key-operated pushbutton SLT, for mounting in enclosure

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Latch point	CEAG 1 (other latch points on request)
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

For coding and ordering details of control and indicating elements, see chapter 6, pages 6.52 to 6.57.



8.38

EX - BUILT - IN C O M P O N E N T S

| Mushroom-h.p.button SGT | EMERGENCY STOP SGT | Mushroom-h.p.button SLS |

Technical data

Key-operated switch SLS, for mounting in enclosure

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Latch point	CEAG 1 (other latch points on request)
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Technical data

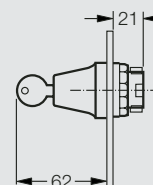
EMERGENCY STOP mushroom-head pushbutton SGT for mounting in enclosure

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Latch point	CEAG 1 (other latch points on request)
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

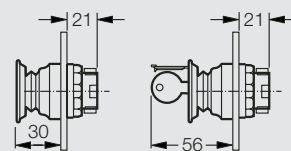
Technical data

Mushroom-head pushbutton SGT for mounting in enclosure

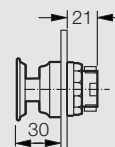
Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg



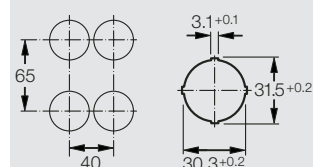
Key-operated switch



EMERGENCY STOP
mushroom-head pushbutton



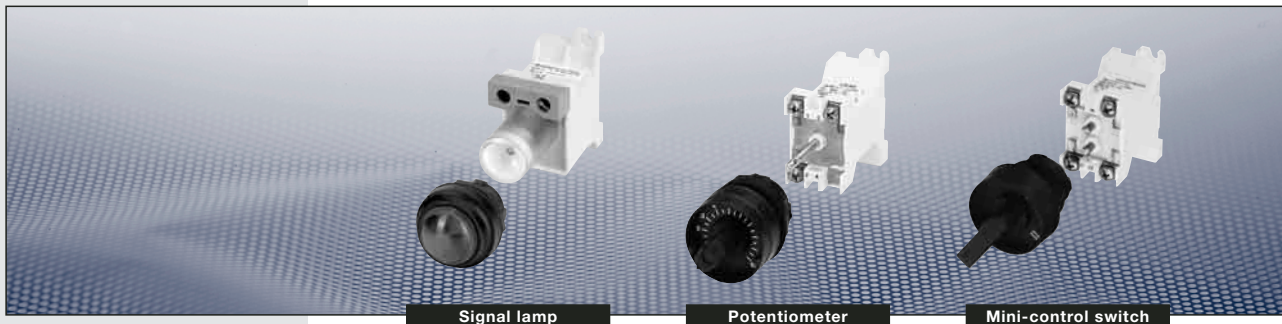
Mushroom-head pushbutton



Minimum distances and mounting
dimensions

Dimensions in mm

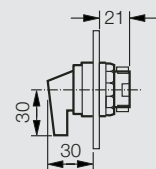
For coding and ordering details of control and indicating elements, see chapter 6, pages 6.58 to 6.63.



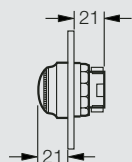
Signal lamp

Potentiometer

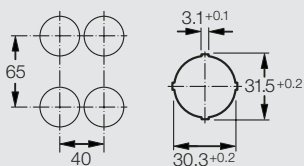
Mini-control switch



Switch/
Potentiometer



Signal lamp



Minimum distances and mounting
dimensions

Dimensions in mm

EX - BUILT - IN C O M P O N E N T S

| Signal lamp SIL | Potentiometer POT | Mini-control switch SCT |

8.39

Technical data

Mini-control switch SCT, for mounting in enclosure

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Technical data

Potentiometer POT, for mounting in enclosure

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 250 V
Power consumption	max. 1W
Resistance	100 - 10 000 Ω
Rotation range	270°
Scale	0 – 100 %
Tolerance	±20 %
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Technical data

Signal lamp SIL, for mounting in enclosure

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1081 U
Rated voltage	20V to 250 V AC/DC 18V to 30V DC
Input current IE	to approx. 10.5 mA (AC) to approx. 4.5 mA (DC)
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

For coding and ordering details of control and indicating elements, see chapter 6, pages 6.64 to 6.67.



M45

M72

EX - CONTROL AND INDICATING ELEMENTS

Measuring instrument AM 45 / AM 72 / VM45 / VM 72

Technical data

Measuring instrument AM 45/AM 72

Marking to 94/9/EG	Ex II 2 G
EC-type examination certificate	PTB 99 ATEX 2032U
Type of protection	Moving iron (EEx e IIC) Moving coil (EEx ib IIC)
Overload range	10-fold/25 s 10-fold/5 s
	25-fold/4 s
	50-fold/1 s
	indicating 1 : 1.5
Measuring range*	n / 1 A 0 - 20 mA
	0 - 25 A direct 4 - 20 mA
Weight	0.4 kg

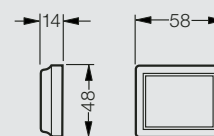
Technical data

Measuring instrument VM 45/VM 72

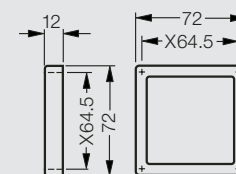
Marking to 94/9/EG	Ex II 2 G
EC-type examination certificate	PTB 99 ATEX 2032U
Type of protection	Moving iron (EEx e IIC) Moving coil (EEx ib IIC)
Movement	Moving iron (EEx e)
Overload range	indicating 1 : 1.5
Measuring range*	n / 1 A 0 - 20 mA
VM 45	6 - 415 V
VM 72	6 - 660 V
Rated power consumption	VM 45: 0.91 - 1.76 VA VM 72: 0.91 - 2.65 VA
Terminal cross-section	2 x 1.5 - 4 mm ²
Weight	0.4 kg

* Other measuring ranges on request.

For coding and ordering details of control and indicating elements, see chapter 6, pages 6.68 to 6.71.



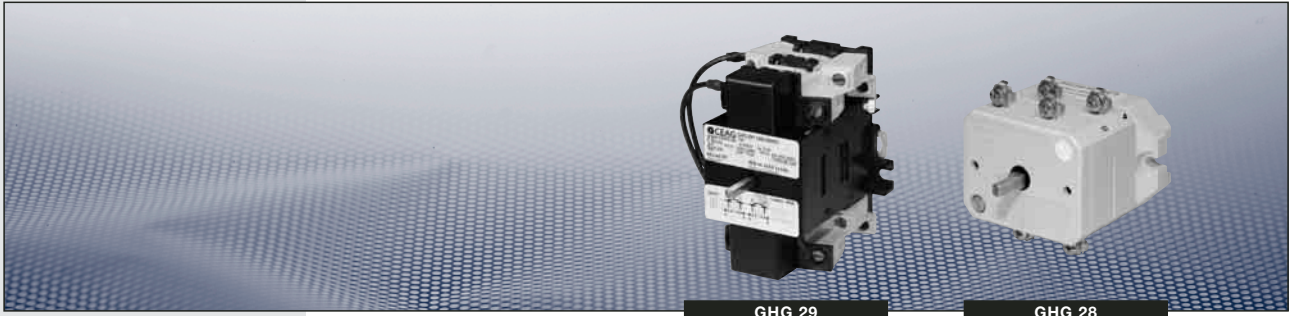
Attachement M45



Attachement M72

x = mounting dimensions

Dimensions in mm



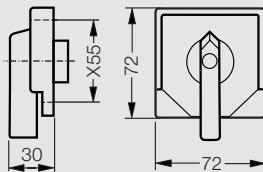
GHG 29

GHG 28

EX - CONTROL AND INDICATING ELEMENTS

| Control switch GHG 28 / GHG 29 |

8.41



Attachement Ex 28/Ex 29

Technical data

Control switch GHG 28 ER, for panel mounting type GHG 249

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx dei IIC
EC-type examination certificate	PTB 98 ATEX 1117 U
Rated voltage	to max. 690 V
Rated current	max. 20 A
Switching capacity AC-1	690 V/20 A
Switching capacity AC-3	400 V/20 A 500 V/16 A
Switching capacity AC-11	230 V/ 8 A 500 V/ 6 A
Switching capacity DC-11	24 V/ 6 A 230 V/0,4 A
with gold contact points	max. 400 mA
Connecting terminals	2 x 2.5 mm ² fine wire, 6 mm ² single wire
Weight	approx. 0.55 kg

Technical data

Control switch GHG 29, for mounting in enclosure

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 98 ATEX 1118 U
Rated voltage	to max.500 V
Rated current	max. 16 A
	for rated current ≥12 A, the cross-section of the connection cables must be ≥ 2.5 mm ²
Switching capacity AC-15	230 V/6 A 400 V/4.0 A
Switching capacity DC-13	24 V/2 A 230 V/0.5 A
Design with gold contact points	max. 400 mA
Connecting terminals	2 x 0.5 - 2.5 mm ² or 1 x 1.0 - 6.0 mm ²
Weight	1 tier approx. 0.25 kg 2 tiers approx. 0.40 kg 3 tiers approx. 0.55 kg

For coding and ordering details of control and indicating elements, see chapter 6, pages 6.72 to 6.75 or 6.100 to 6.101.

x = mounting dimensions
Dimensions in mm

EX - D DISTRIBUTIONS

with metal EJ enclosures
for gases in explosion group IIB

Apparatus which gives off arcs or sparks can be integrated in distributions at low cost using flameproof enclosures. Built-in electrical components can be actuated by means of control units mounted from the outside on the covers.

The extensive product line brand "Nortem" for use in explosion group IIB for the hazardous areas of Zones 1 and 2 fulfils the requirements of European Standards EN 50014 and EN 50018. Due to the most diverse demands, individualised distribution systems can be put together. Enclosures are connected via flameproof cable entries. The design and equipment of the distributions depends on customers' requirements.



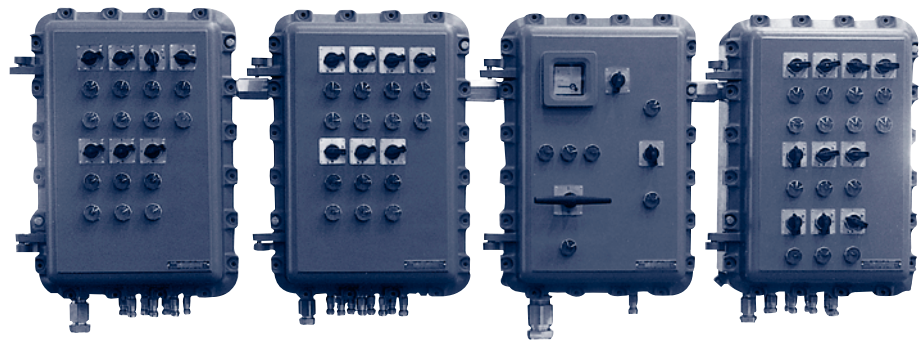
Modular design

Rated current up to 1200 A

**Suited for tropical and maritime
climates through powder coating**

Apparatus can be operated from the outside

Direct cable entries



The distributions and built-in components are combined to customers' specifications for wall-mounting or free-standing frameworks, depending on the installation site.

Free-standing frameworks are designed according to the distributions or special apparatus required and fitted with standardised U-rails. For outdoor installations, we recommend a canopy to protect the distribution from the sun and rain.

The frameworks all feature a grey epoxy-resin finish identical with that of the EJ enclosures. Hot-dip galvanised steel frameworks are available on request.

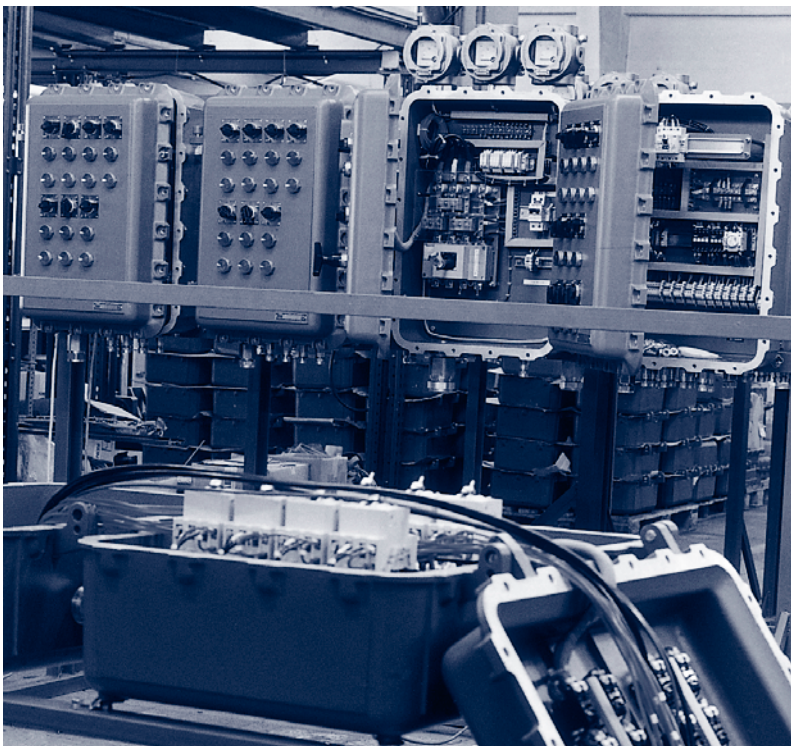
The modular design makes it possible to put together distributions and built-in components using standardised enclosure sizes.

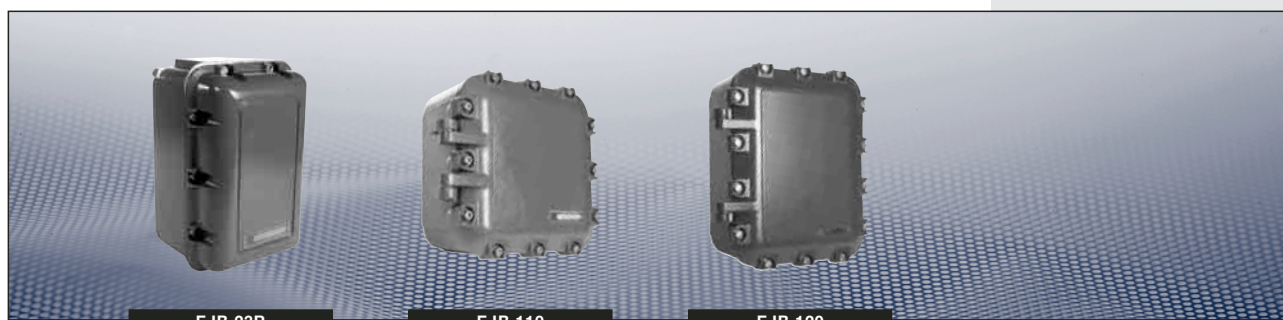
The enclosures are interconnected with cable bushings and/or bus bars and are especially designed to facilitate bus-bar allocation when putting distributions together. Electrical components built into the enclosures can be actuated from the outside via control units mounted on the front panels. Ex-d cable entries must be used where required.

EJB enclosures are made of copper-free aluminium (<0.1%) and EJW enclosures of welded steel. All enclosures are coated with a grey epoxy resin.

Covers and enclosures are mounted on a flameproof flange plate and screwed down with stainless steel screws.

Enclosures of the types EJB 12R to EJB 23R are fitted with hinges for easy opening and closing.





EJB 23R

EJB 110

EJB 120

EX - ENCLOSURE IIB

| Light alloy/steel |

Technical data

Metall enclosure

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx d IIB T6 - T4 ¹⁾
EC-type examination certificate	LOM 02 ATEX 3060U
Rated voltage	690 V
Rated current	1200 A
Protection category	IP 65
Enclosure material	EJB aluminium EJB 214 M1 and M2 cast iron EJW welded steel Front panels cast iron epoxy-resin finish, grey
Terminal cross-section	up to 240 mm ²
Weight	see ordering details

¹⁾ depending on built-in components

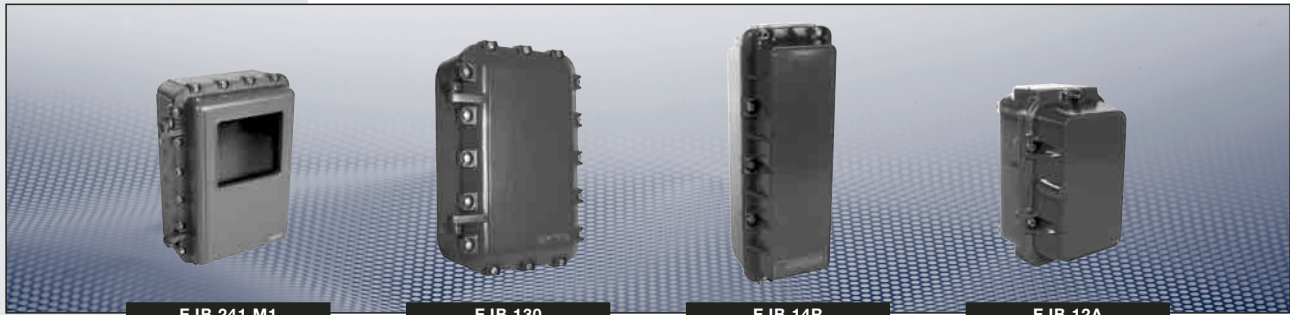
Ordering details type: Empty enclosure

Version	Power dissipation			Rated current	Weight	Order No.
	T6	T5	T4			
EJB 12 R	30	60	100 W	40 A	3.0 kg	NOR 000 001 170 438
EJB 12 A	30	60	100 W	40 A	3.6 kg	NOR 000 001 170 446
EJB 14 R	80	140	240 W	65 A	8.3 kg	NOR 000 001 170 462
EJB 23 R	60	140	240 W	100 A	11.0 kg	NOR 000 001 170 488
EJB 110	125	170	295 W	160 A	22.0 kg	NOR 000 001 170 496
EJB 120	150	270	480 W	300 A	28.5 kg	NOR 000 001 170 503
EJB 120 M3	150	270	480 W	300 A	28.5 kg	NOR 000 111 170 601
EJB 120 M4	150	270	480 W	300 A	28.5 kg	NOR 000 111 170 606
EJB 121	150	280	500 W	350 A	32.0 kg	NOR 000 001 170 511
EJB 130	200	340	590 W	450 A	35.3 kg	NOR 000 001 170 529
EJB 131	200	350	610 W	500 A	39.0 kg	NOR 000 001 170 537
EJB 240	250	400	700 W	800 A	52.3 kg	NOR 000 001 170 545
EJB 241	250	400	700 W	850 A	56.8 kg	NOR 000 001 170 553
EJB 241 M1	250	400	700 W	850 A	54.0 kg	NOR 000 111 170 469
EJB 241 M2	250	400	700 W	850 A	51.0 kg	NOR 000 111 170 451
EJW 250	250	340	560 W	1200 A	145.0 kg	NOR 000 001 190 139
EJW 251	380	520	850 W	1200 A	167.0 kg	NOR 000 001 190 197
EJW 350	380	520	850 W	1200 A	168.0 kg	NOR 000 001 190 171
EJW 351	450	600	1000 W	1200 A	175.0 kg	NOR 000 001 190 062
EJW 561	600	730	1000 W	1200 A	380.0 kg	NOR 000 001 190 064

For flameproof cable entries, see pages 6.122 pp.

Threaded holes for flameproof cable entries are provided acc. to customer requirements.

For dimensions, see page 8.46.



EJB 241 M1

EJB 130

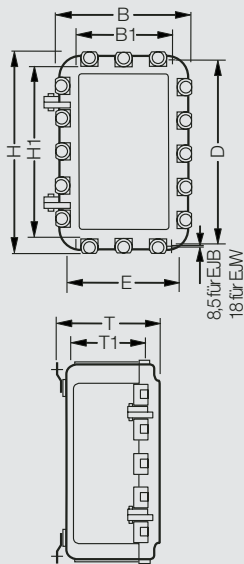
EJB 14R

EJB 12A

EX - ENCLOSURE IIB

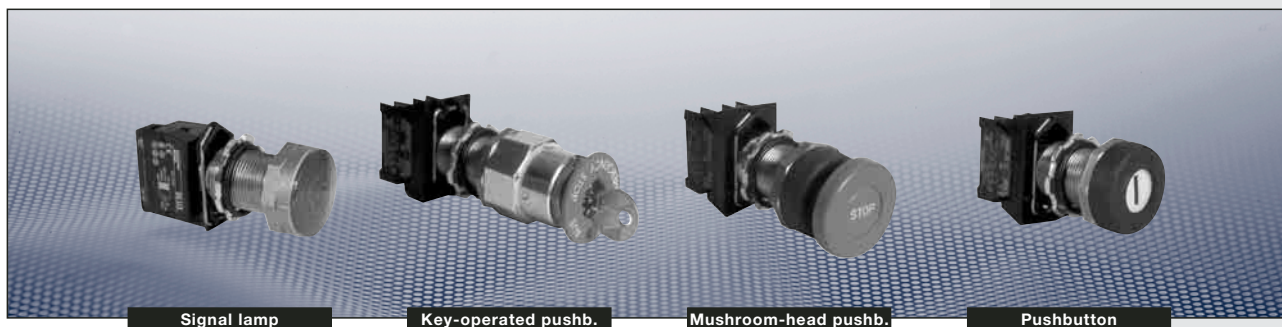
| Light alloy/steel |

8.45



Ordering details type: empty enclosure

Version	Enclosure dimensions			Mounting-space dimensions			Fitting dimensions	
	H	B	T	H1	B1	T1	D	E
EJB 12 R	215	131	102	178	89	57	242	166
EJB 12 A	215	131	162	178	89	110	242	166
EJB 14 R	412	150	143	358	103	85	436	178
EJB 23 R	336	217	212	276	163	152	354	240
EJB 110	373	373	230	305	305	162	310	310
EJB 120	474	373	230	405	305	162	414	310
EJB 120 M3	474	373	230	405	305	162	414	310
EJB 120 M4	474	373	230	405	305	162	414	310
EJB 121	474	373	295	405	305	235	414	310
EJB 130	577	373	230	518	305	162	520	310
EJB 131	577	373	295	518	305	235	520	310
EJB 240	680	474	230	619	405	162	624	414
EJB 241	680	474	295	619	405	235	624	414
EJB 241 M1	680	474	295	619	405	235	624	414
EJB 241 M2	680	474	295	619	405	235	624	414
EJW 250	890	425	280	810	345	199	852	387
EJW 251	890	425	440	810	345	320	852	387
EJW 350	890	540	322	810	460	250	852	502
EJW 351	890	540	446	810	460	375	852	502
EJW 561	1280	765	386	1200	685	325	1242	687



8.46

EX - CONTROL AND INDICATING UNITS

| Pushbutton | Mushroom-head pushb. | Key-operated pushb. | Signal lamp |

Technical data

Pushbutton/Mushroom-head pushbutton/Key-operated switch

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx d IIB T6 – T4 ¹⁾
EC-type examination certificate	LOM 02 ATEX 3060U
Rated voltage	500 V
Rated current	10 A
Protection category	IP 65
Enclosure material	Aluminium stainless-steel finish
Terminal cross-section	2 x 2.5 mm ²

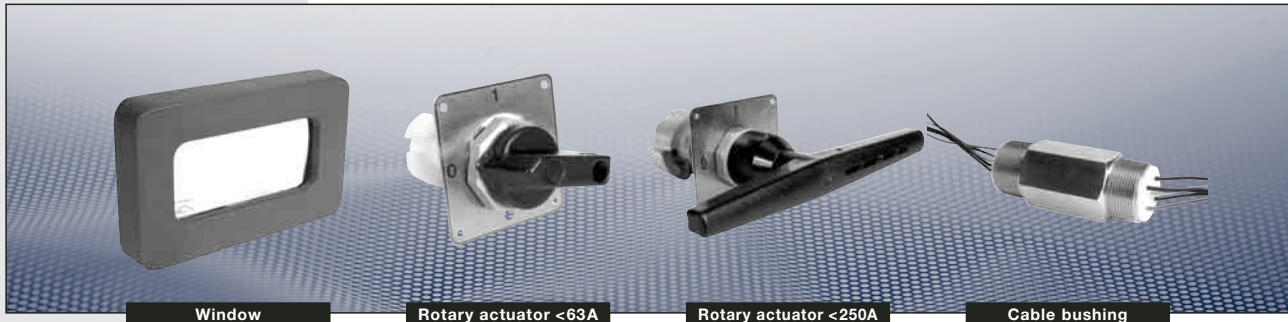
¹⁾ depending on built-in component

Technical data

Signal lamp

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx d IIB T6 - T5 ¹⁾
EC-type examination certificate	LOM 02 ATEX 3060U
Rated voltage	500 V
Rated current	3 W
Protection category	IP 65
Enclosure material	body material aluminium window material white, yellow, red or green polycarbonate
Lamp holder	Ba 9 s
Terminal cross-section	2 x 2.5 mm ²

¹⁾ depending on built-in component


Window
Rotary actuator <63A
Rotary actuator <250A
Cable bushing
EX - CONTROL AND INDICATING UNITS
| Cable bushing | Rotary actuator | Window |
8.47
Technical data
Window

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx d IIB T6 - T5 ¹⁾
EC-type examination certificate	LOM 02 ATEX 3060U
Protection category	IP 65
Material	frame material aluminium, grey epoxy resin finish window material borosilicate glass
Dimensions of window aperture	60 x 60 mm 75 x 75 mm 110 x 50 mm 110 x 75 mm

¹⁾ depending on built-in component

Technical data
Rotary actuator

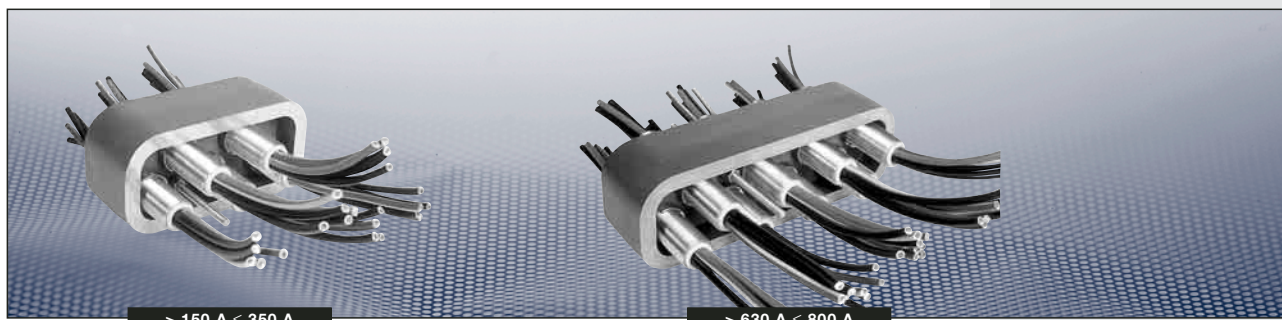
Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx d IIB T6 - T4 ¹⁾
EC-type examination certificate	LOM 03 ATEX 2004X
Rated voltage	500 V
Rated current	25 A 63 A 250 A 800 A
Protection category	IP 65
Lockable in	Locking facility for units up to 40 A on front panel, for units > 40 A on enclosure panel

¹⁾ depending on built-in component

Technical data
Cable bushing

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx d IIB T6 - T4 ¹⁾
EC-type examination certificate	LOM 02 ATEX 3060U
Rated voltage	500 V
Rated current	50 A 75 A 150 A
Protection category	IP 65
Material	bichromatised hexagonal steel
Cable sealing	high-thermal and chemical-resistant compound
Terminal cross-section	
Size 50 A	4 x 10 mm ² + 1 x 6 mm ² , to zu 9 x 1.5 mm ² + as required
Size 75 A	4 x 16 mm ² + 1 x 10 mm ² , to zu 9 x 15 mm ² + as required
Size 150 A	4 x 50 mm ² + 1 x 10 mm ² , to zu 47 x 1.5 mm ² + as required

¹⁾ depending on built-in component



8.48

EX - C A B L E B U S H I N G S I I B

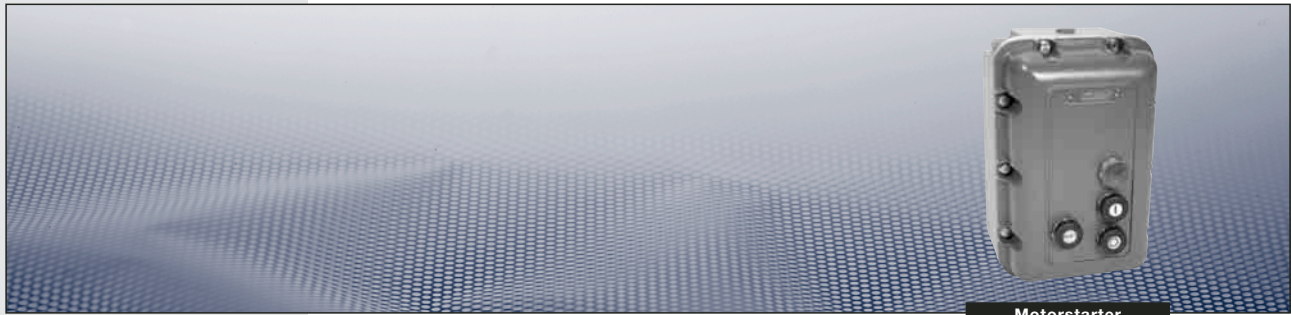
| Bus bars for interconnection of enclosures |

Technical data

Cable bushing

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx d IIB T6 - T4 ¹⁾
EC-type examination certificate	LOM 02 ATEX 3060U
Rated voltage	690 V
Rated current	150 A 350 A 500 A 800 A
Protection category	IP 65
Material	Polyester
Cable sealing	high-thermal and chemical-resistant compound
Terminal cross-section	
Size up to 150 A (3P + N + PE)	4 x 10 mm ² + 1 x 6 mm ² , up to 9 x 1.5 mm ² + as required
Size up to 350 A (3P + N + PE)	aluminium coupler 208 x 102 mm, comprising 4 bars (3 P + N) 350 A, 1 auxiliary bushing max. 19 x 1.5 mm ² 1 PE-Rail
Size up to 500 A	aluminium coupler 208 x 102 mm, comprising 4 bars (3 P + N) 500 A, 1 auxiliary bushing max. 19 x 1.5 mm ² 1 PE-Rail
Size up to 800 A	aluminium coupler 310 x 102 mm, comprising 7 bars (3 P + N) 500 A, 1 auxiliary bushing max. 19 x 1.5 mm ² 1 PE-bar

¹⁾ depending on built-in component



Motorstarter

EX-DISTRIBUTION SYSTEMS IIB

Light-alloy motor starter

8.49

Technical data

Light-alloy motor starter

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx d IIB T6
EC-type examination certificate	LOM 03 ATEX 2004X
Rated voltage	690 V
Rated current	63 A
Protection category	IP 65
Terminal cross-section	up to 240 mm²
Weight	see ordering details

Ordering details type: direct on-line starter

Motor capacity	Main switch	Cable entry	Weight	Order No.
AC-3 to 400 V				
4.0 KW	25 A	2 x M25	4.0 kg	EXKO 732 101 M
4.0 KW	25 A	2 x M25	12.0 kg	EXKO 732 102 M
5.5 KW	40 A	2 x M25	12.0 kg	EXKO 732 103 M
8.0 KW	40 A	2 x M25	16.8 kg	EXKO 732 104 M
12.5 KW	63 A	2 x M32	17.2 kg	EXKO 732 105 M
15.0 KW	63 A	2 x M32	18.8 kg	EXKO 732 106 M

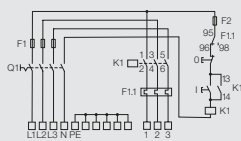
Ordering details type: reversing starter

Motor capacity	Main switch	Cable entry	Weight	Order No.
4.0 KW	25 A	2 x M25	4.0 kg	EXKO 732 107 M
4.0 KW	25 A	2 x M25	12.0 kg	EXKO 732 108 M
5.5 KW	40 A	2 x M25	12.0 kg	EXKO 732 109 M
8.0 KW	40 A	2 x M25	16.8 kg	EXKO 732 110 M
12.5 KW	63 A	2 x M32	17.2 kg	EXKO 732 111 M
15.0 KW	63 A	2 x M32	18.8 kg	EXKO 732 112 M

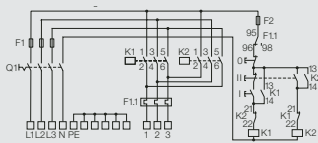
Ordering details type: star delta starter

Motor capacity	Main switch	Cable entry	Weight	Order No.
12.5 KW	40 A	2 x M25	17.2 kg	EXKO 732 113 M
18.5 KW	40 A	2 x M32	19.7 kg	EXKO 732 114 M
25 KW	40 A	2 x M32	25.3 kg	EXKO 732 115 M

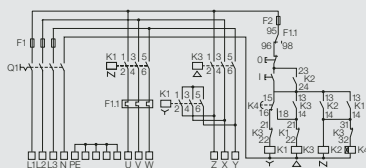
Further switching capacities on request.



Direct on-line starter



Reversing starter



Star-delta starter

Dimensions in mm

1

2

3

4

5

6

7

8

9

EX - ENCLOSURES AND DISTRIBUTIONS

**made of metal
for gases of explosion group IIC**

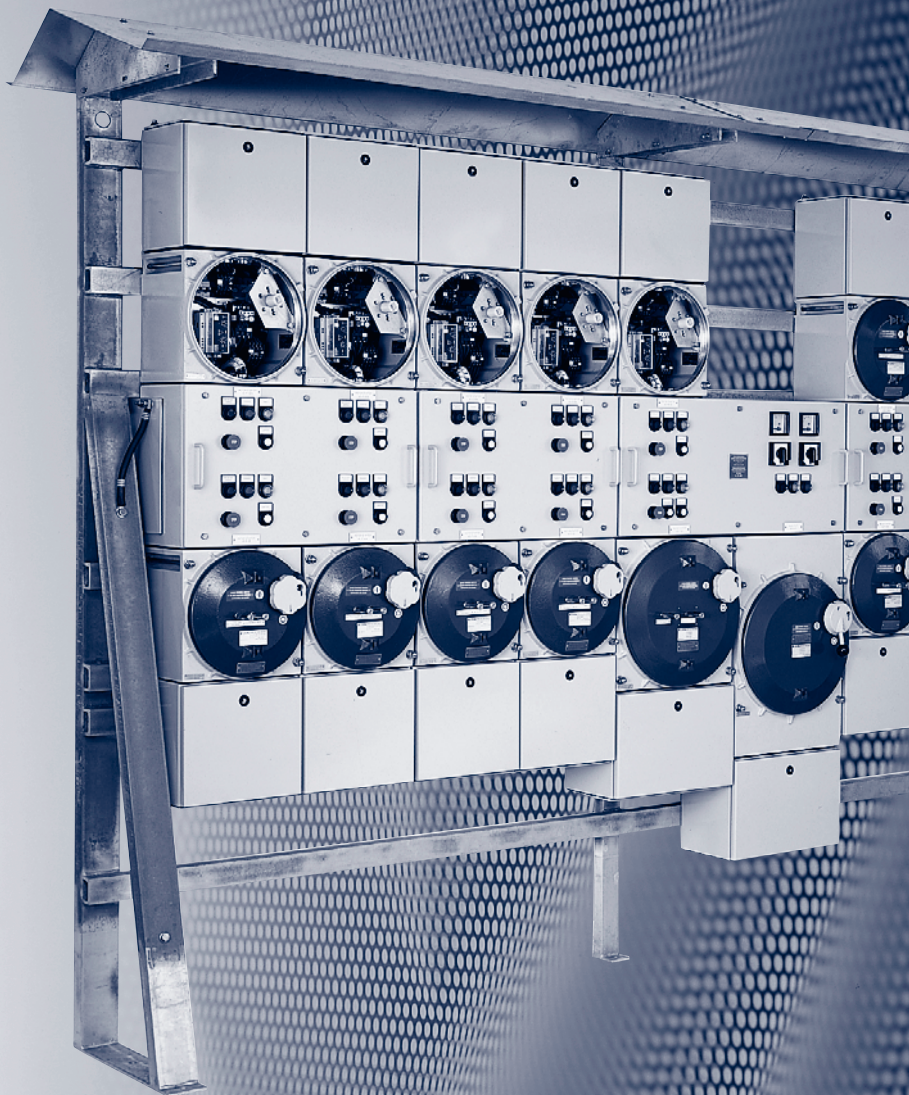
To use MCBs, fuses, contactors etc. which give off arcs in potentially hazardous areas, they must be integrated in Ex-d distributions.

For just this purpose, the Cooper Crouse-Hinds GmbH offers a distribution system comprising flameproof aluminium enclosures and Ex-e steel terminal boxes with a polyester powder coating suited for tropical and marine climates. Seven enclosure sizes can be combined into large distributions allowing integration of built-in components up to 630 A and 690 V.

To simplify the integration of large installations, bus-bar systems for up to 630 A are used.

Customer-specified distributions are planned individually, taking explosion-protection requirements into account.

Explosion-protected signal lamps, indicating and control components are built into connection and bus-bar boxes, as required. Alternatively, these boxes can be supplied as separate terminal and control boxes. CEAG explosion-protected metal distributions fulfil all the requirements specified by the chemical, petro-chemical and off-shore industries.



Modular design

Rated current up to 630 A

Generously dimensioned terminal compartment

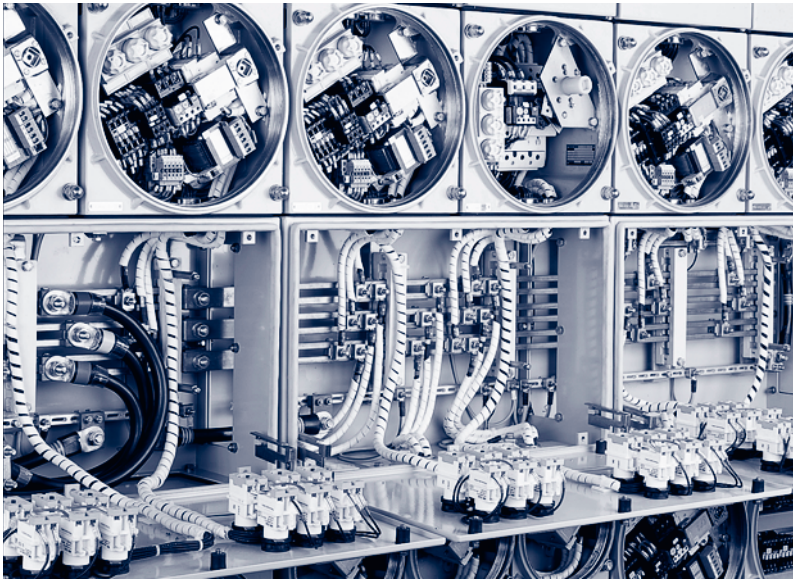
**Suited for tropical and maritime
climates through powder coating**

**Cable entries via removable
flanges**

Main switch can be actuated from outside

**Metal parts without finish are corrosion-
resistant**

Explosion group IIC



The modular design provides an economical and clearly arranged method of putting together distributions on the building-block principle using connection and bus bar boxes in the type of protection "Increased Safety". The individual flameproof distribution enclosures are joined together via the flange openings of the Ex-e connection boxes and the bus bar boxes. It is also possible to put together completely flameproof distributions by using flameproof cable entries.

The flameproof enclosures are also available as empty enclosures with and without Ex-e connection boxes as well as with and without main switches for equipping by the customer. In this case, please note that national standards require a special inspection by an authorized expert. Also single or multi-wire bushings with connectors can be mounted on the distributions, if required. Alternatively, these leads can be connected to a terminal rail.

Any conventional industrial switchgear that gives off arcs or sparks during operation can be built into these flameproof enclosures. The power dissipation must not exceed the values stated in the PTB certificate.



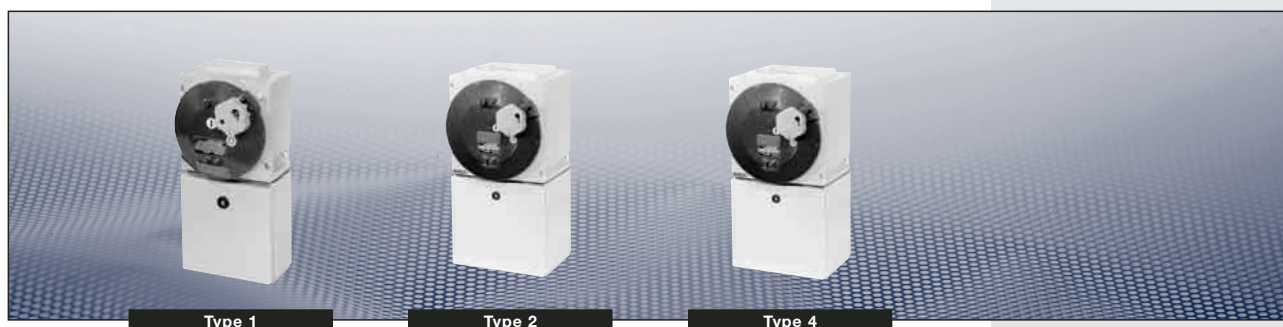
The various circuits can be connected quickly and economically via a bus-bar system.



If required, individually encapsulated control and indicating units, such as pushbuttons, control switches or Ex-e measuring instruments as well as Ex-I digital indicating instruments can be built into the Ex-e connection or bus-bar boxes.



The enclosures can be combined into large distribution system on standardised wall-mounting or free-standing frameworks. The frameworks come in standardized sizes to accommodate the enclosure modules and can be extended as required. For outdoor installations, we recommend canopies to protect the distribution system from the sun and rain. Smaller distributions are mounted on flat or U-rails. All enclosures are made of hot-dip galvanised steel.



Type 1

Type 2

Type 4

8.52

EX - d DISTRIBUTION SYSTEM IIC

| Light alloy motor starter |

Technical data

Light alloy motor starter for direct on-line starting

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC T5 - T6 ¹⁾
EC-type examination certificate	PTB 99 ATEX 1057
Rated voltage	690 V
Rated current	630 A
Degree of protection acc. to EN 60529	IP 54 (IP 65 on request)
Terminal cross-section	up to 240 mm ²
Weight	see ordering details

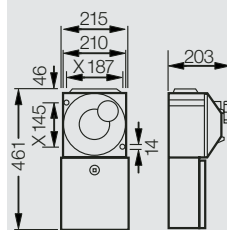
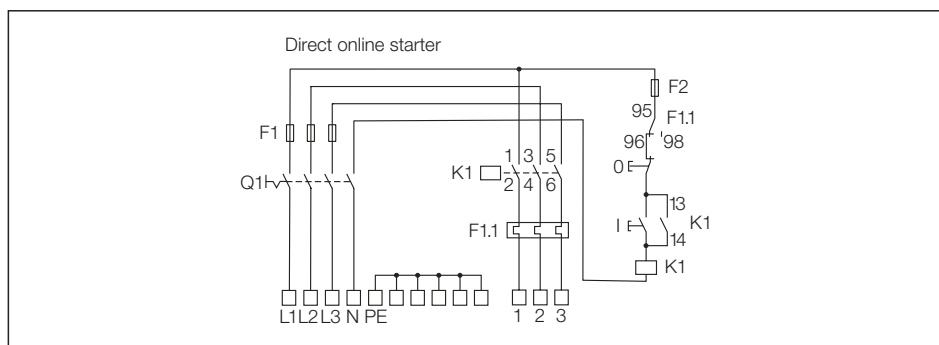
¹⁾ depending on built-in components

Ordering details type: direct on-line starter

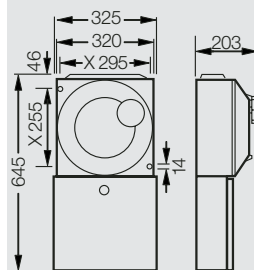
Motor capacity	Type	Main switch	Cable entry	Weight	Order No.
11 KW	1	25 A	3 x M25	14.5 kg	EXKO 71 5000 F 0000
15 KW	2	25 A	2 x M32/1 x M25	24.5 kg	EXKO 71 5000 H 0000
22 KW	4	40 A	2 x M40/1 x M25	37.5 kg	EXKO 71 5000 K 0000

Further switching capacities up to 630 A on request.

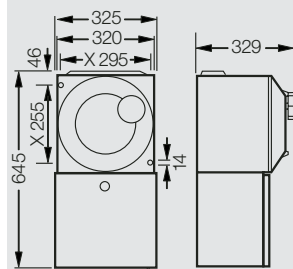
Please state motor operating voltage and rated current in your order.



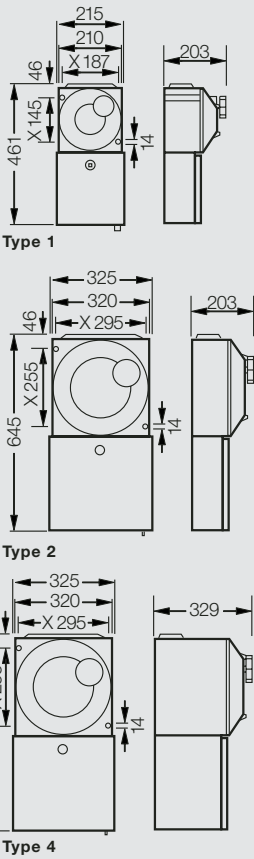
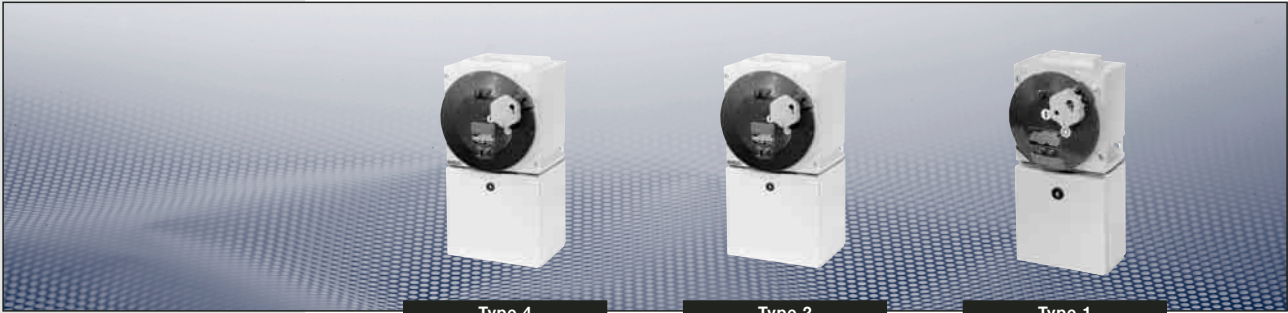
Type 1



Type 2



Type 4



EX - d DISTRIBUTION SYSTEMS IIC

Light alloy motor starter

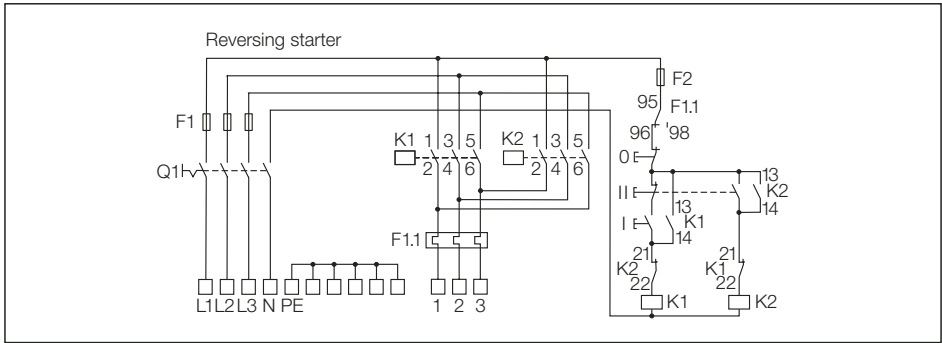
8.53

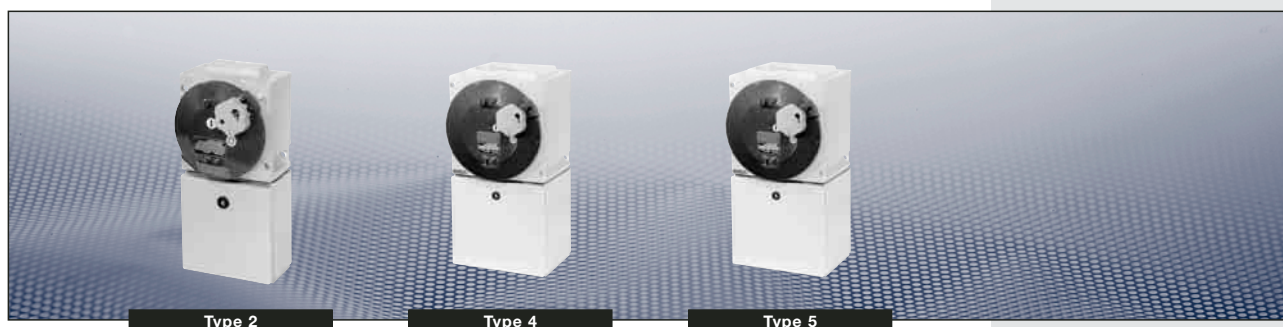
Technical data	
Light alloy motor starter	
Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC T6 - T5 ¹⁾
EC-type examination certificate	PTB 99 ATEX 1057
Rated voltage	690 V
Rated current	630 A
Degree of protection acc. to EN 60529	IP 54 (IP 65 on request)
Terminal cross-section	up to 240 mm²
Weight	see ordering details

¹⁾ depending on built-in components

Ordering details type: reversing starter					
Motor capacity	Type	Main switch	Cable entry	Weight	Order No.
11 KW	1	25 A	3 x M25	24.0 kg	EXKO 71 5100 F 0000
15 KW	2	25 A	2 x M32/1 x M25	24.5 kg	EXKO 71 5100 H 0000
22 KW	4	40 A	2 x M40/1 x M25	39.5 kg	EXKO 71 5100 K 0000

Further switching capacities up to 630 A on request.
Please state motor operating voltage and rated current in your order.





8.54

EX - d DISTRIBUTION SYSTEMS IIC

| Light alloy motor starter |

Technical data

Light alloy star-delta motor starter

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de ia/ib [ia/ib] IIC T6 - T5 ¹⁾
EC-type examination certificate	PTB 99 ATEX 1057
Rated voltage	690 V
Rated current	630 A
Degree of protection acc. to EN 60529	IP 54 (IP 65 on request)
Terminal cross-section	up to 240 mm ²
Weight	see ordering details

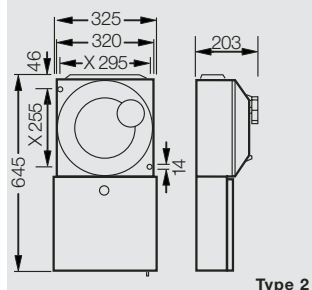
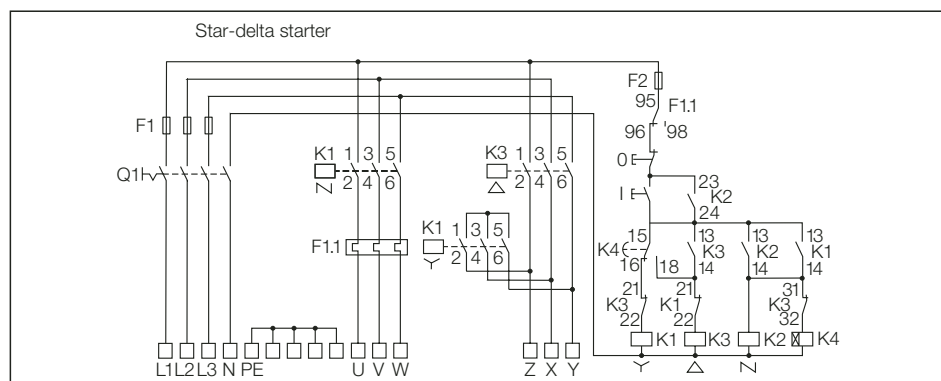
¹⁾ depending on built-in components

Ordering details type: star-delta starter

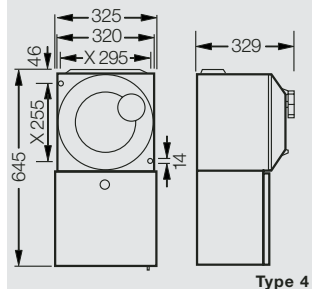
Motor capacity	Type	Main switch	Cable entry	Weight	Order No.
7.5 KW	2	40 A	4 x M25	25 kg	EXKO 71 5200 B 0000
12.5 KW	2	40 A	4 x M25	25 kg	EXKO 71 5200 D 0000
18.5 KW	4	40 A	3 x M32/1 x M25	37 kg	EXKO 71 5200 F 0000
30.0 KW	4	63 A	3 x M32/1 x M25	39 kg	EXKO 71 5200 H 0000
37.0 KW	5	100 A	1 x M40/2 x M32	64 kg	EXKO 71 5200 K 0000
55.0 KW	5	100 A	1 x M40/2 x M32	67 kg	EXKO 71 5200 M 0000

Further switching capacities up to 630 A on request.

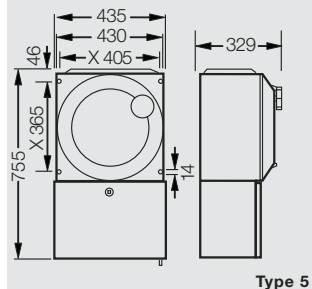
Please state motor operating voltage and rated current in your order.



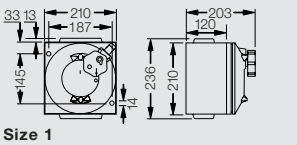
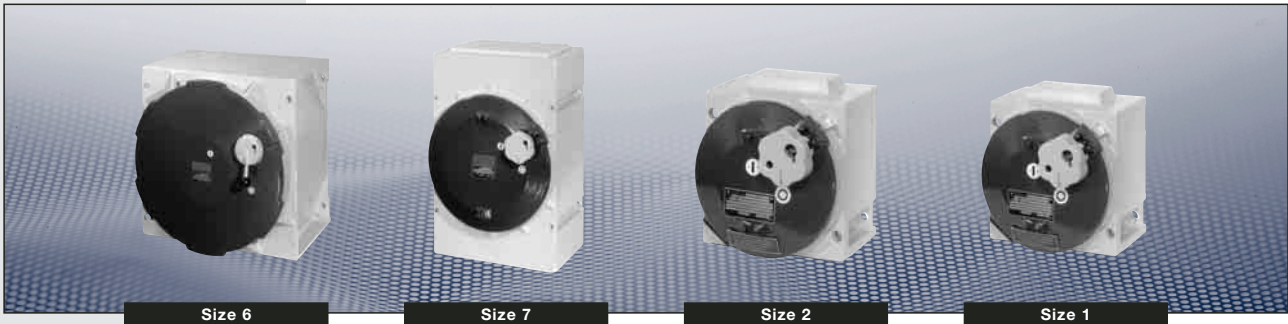
Type 2



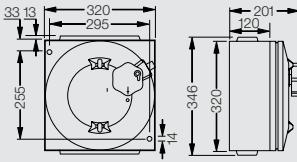
Type 4



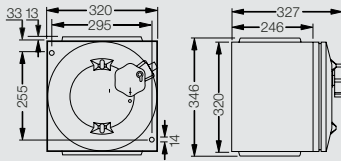
Type 5



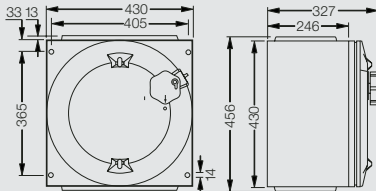
Size 1



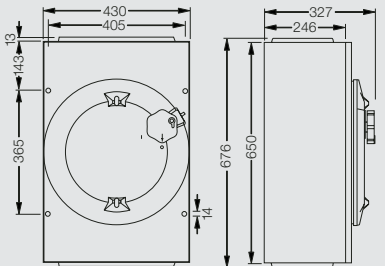
Size 2



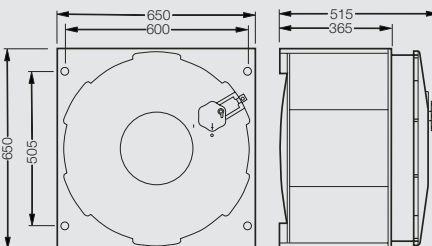
Size 4



Size 5



Size 7



Size 6

Dimensions in mm

EX - ENCLOSURE IIC

Light alloy flameproof

8.55

Technical data

Light alloy

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx d IIC T5 - T6 ¹⁾
EC-type examination certificate	PTB 99 ATEX 1057
Rated voltage	690 V
Rated current	630 A
Degree of protection acc. to EN 60529	IP 54 (IP 65 on request)
Enclosure material	light alloy pressure casting/steel, finish with polyester powder coating suited for tropical and marine climates in RAL 7032/7022
Weight	see ordering details

¹⁾ depending on built-in components

Ordering details type: empty enclosure

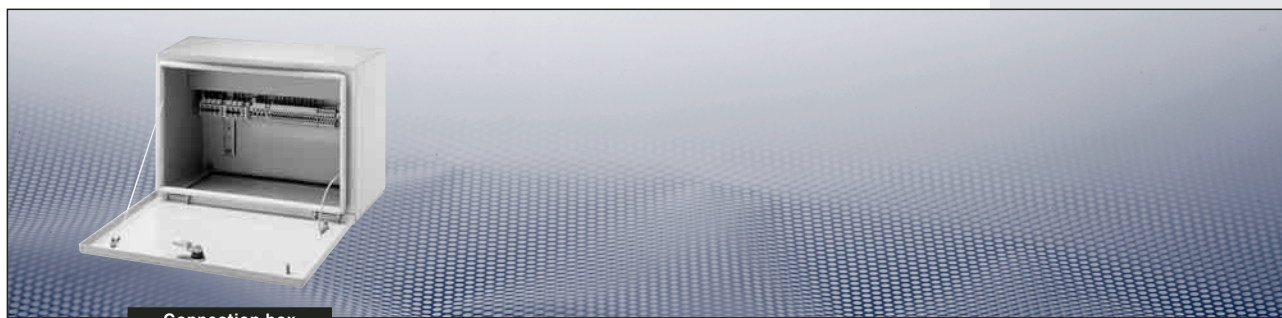
Version	Power dissipation		Rated current	Weight	Order No.
	T6	T5			
Size 1	80 W	120 W	125 A	8 kg	on request
Size 2	150 W	210 W	260 A	16 kg	on request
Size 4	210 W	280 W	400 A	23 kg	on request
Size 5	300 W	420 W	400 A	40 kg	on request
Size 7	300 W	420 W	400 A	55 kg	on request
Size 6*	700 W	975 W	630 A	195 kg	on request

Ordering details type: empty enclosure

Version	Dimensions
	Enclosure (W x H x D)
Size 1	210 x 210 x 203
Size 2	320 x 320 x 201
Size 4	320 x 320 x 327
Size 5	430 x 430 x 327
Size 7	430 x 650 x 327
Size 6	650 x 650 x 515

For flameproof cable entries, see page 5.122.

Threaded holes for flameproof cable entries are provided acc. to customer requirements.



Connection box

EX - ENCLOSURE IIC

| Steel-connection box |

Technical data

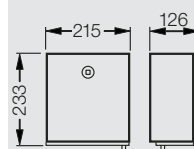
Connection box AK..

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC T5 - T6 ¹⁾
EC-type examination certificate	PTB 00 ATEX 1073
Rated voltage	690 V
Rated current	630 A
Degree of protection acc. to EN 60529	IP 54 (IP 66 on request)
Enclosure material	steel, finish polyester powder coating RAL 7032
Weight	see ordering details

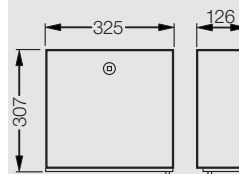
¹⁾ depending on built-in components

Ordering details type: empty enclosure as connection box

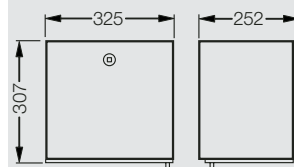
Version	Max. no of built-in control units	Length of terminal rail	Weight	Order No.
AK 1-2	4	1 x 190 mm	4.3 kg	on request
AK 2-2	15	2 x 200 mm	7.0 kg	on request
AK 4-1	15	3 x 300 mm	9.5 kg	on request
AK 5-1	21	3 x 410 mm	11.5 kg	on request
AK 6-1	52	3 x 630 mm	23.5 kg	on request



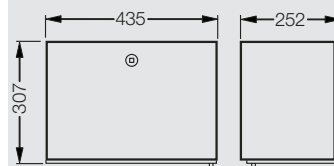
AK 1-2



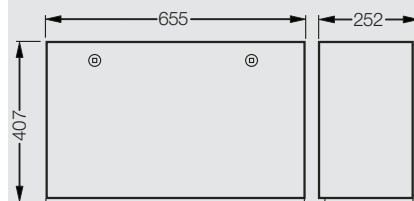
AK 2-2



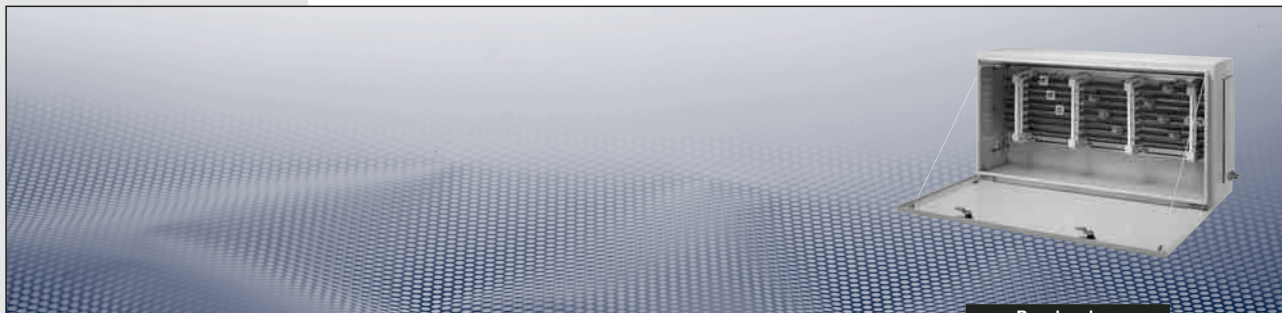
AK 4-1



AK 5-1



AK 6-1

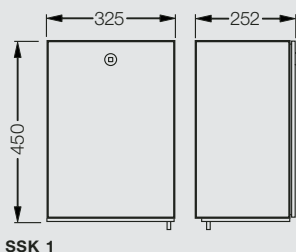


Bus-bar box

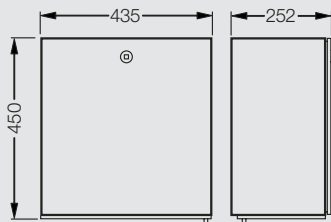
EX - ENCLOSURE IIC

Steel-bus-bar box

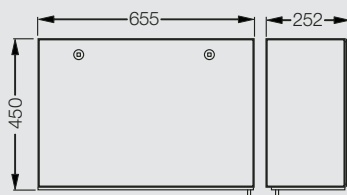
8.57



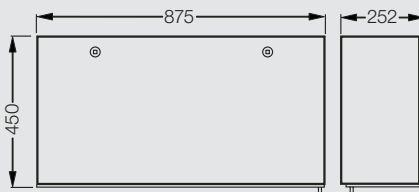
SSK 1



SSK 2



SSK 3



SSK 4

Dimensions in mm

Technical data

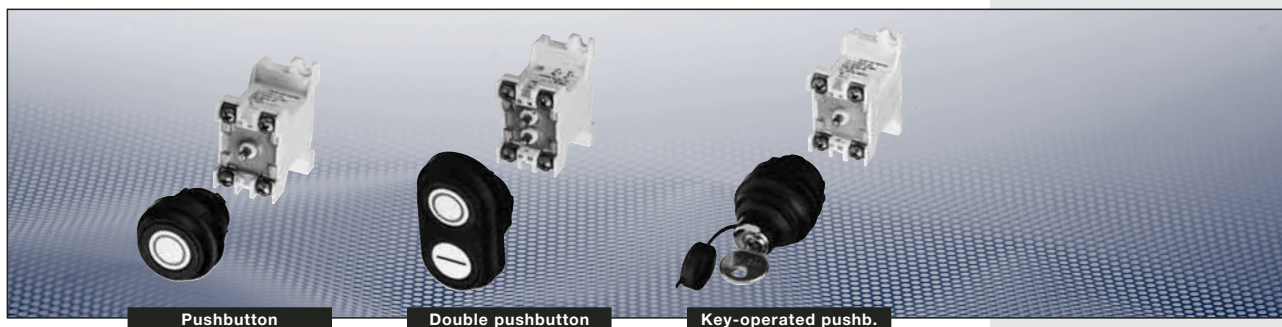
Sammelschienenkasten SSK..

Marking to 94/9/EG	Ex II 2 G		
Type of protection	EEx de IIC T5 - T6 ¹⁾		
EC-type examination certificate	PTB 00 ATEX 1073		
Rated voltage	690 V		
Rated current	250 A	400 A	630 A
Rated short-circuit current	35 kA	53 kA	85,8 kA
Rated thermal short-time current	9.4 kA (1s)	10.7 kA (1s)	13.2 kA (1s)
Degree of protection acc. to EN 60529	IP 54 (IP 66 on request)		
Enclosure material	steel, finish polyester powder coating in RAL 7032		
Weight	see ordering details		

¹⁾ depending on built-in components

Ordering details type: empty enclosure as bus-bar box

Version	Max. no. of built-in control units	Length of terminal rail	Weight	Order No.
Size 1	20	1 x 295 mm	11 kg	on request
Size 2	28	2 x 405 mm	15 kg	on request
Size 4	52	2 x 625 mm	23 kg	on request
Size 5	72	2 x 845 mm	31 kg	on request



Pushbutton

Double pushbutton

Key-operated pushb.

8.58

EX - BUILT - IN C O M P O N E N T S

| Key-operated pushb. SLT | Double pushb. DDT | Pushbutton DRT |

Technical data

Pushbutton DRT, for mounting in enclosure

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Technical data

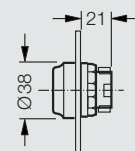
Double pushbutton DDT, for mounting in enclosure

Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Connecting terminals:	2 x 2.5 mm ²
Weight	approx. 0.15 kg

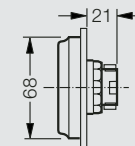
Technical data

Key-operated pushbutton SLT, for mounting in enclosure

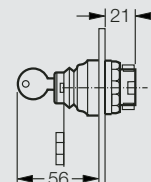
Marking to 94/9/EG	Ex II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Latch point	CEAG 1 (other latch points on request)
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg



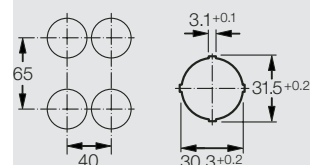
Pushbutton



Double pushbutton



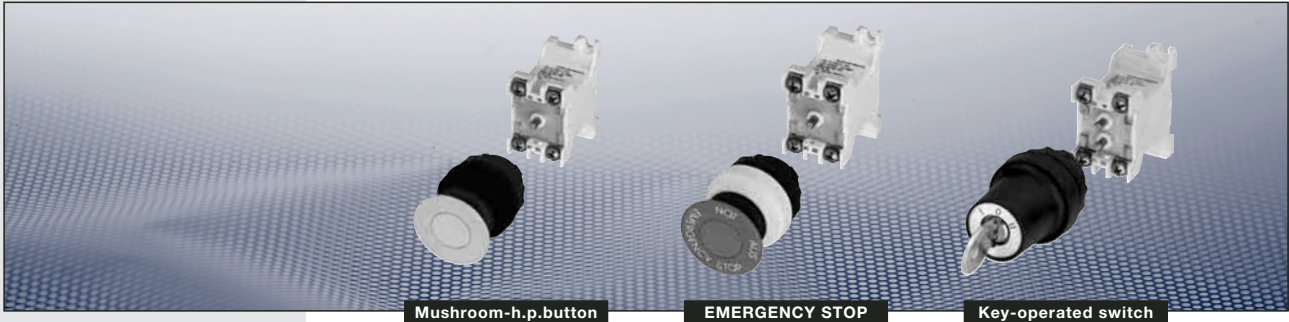
Key-operated pushbutton



Minimum distances and mounting dimensions

Dimensions in mm

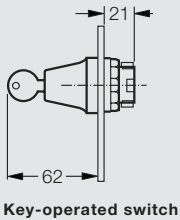
For coding and ordering details of control and indicating elements, see chapter 6, pages 6.52 to 6.57.



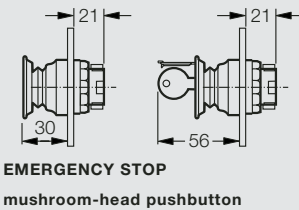
Mushroom-h.p.button

EMERGENCY STOP

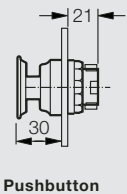
Key-operated switch



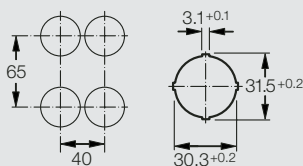
Key-operated switch



EMERGENCY STOP
mushroom-head pushbutton



Pushbutton



Minimum distances and mounting
dimensions

Dimensions in mm Dimensions in mm

EX - BUILT - IN COMPONENTS

Mushroom-h.p.button SGT | EMERGENCY STOP SGT | Key-operated switch SLS |

8.59

Technical data

Key-operated switch SLS, for mounting in enclosure

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contacts	max. 400 mA
Latch point	CEAG 1 (other latch points on request)
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Technical data

EMERGENCY STOP mushroom-head pushbutton SGT for mounting in enclosure

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contacts	max. 400 mA
Latch point	CEAG 1 (other latch points on request)
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Technical data

Mushroom-head pushbutton SGT for mounting in enclosure

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	to max. 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contacts	max. 400 mA
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

For coding and ordering details of control and indicating elements, see chapter 6, pages 6.58 to 6.63.

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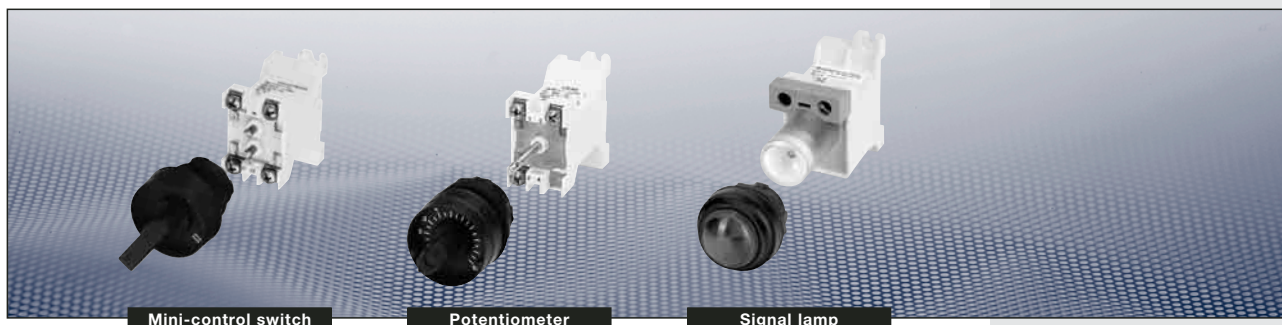
5

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Mini-control switch

Potentiometer

Signal lamp

8.60

EX - BUILT - IN COMPONENTS

| Signal lamp SIL | Potentiometer POT | Mini-control switch SCT |

Technical data

Mini-control switch SCT, for mounting in enclosure

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	up to 500 V
Rated current	max. 16 A
Switching capacity AC-1	400 V/16 A
Switching capacity AC-11	400 V/ 4 A
with gold contact points	max. 400 mA
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

Technical data

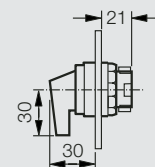
Potentiometer POT, for mounting in enclosure

Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	up to 250 V
Power consumption	max. 1W
Resistance	100 - 10 000 Ω
Rotation range	270°
Scale	0 – 100 %
Tolerance	±20 %
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg

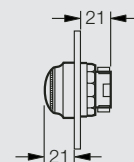
Technical data

Signal lamp SIL, for mounting in enclosure

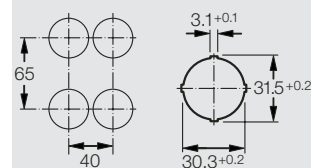
Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx de IIC
EC-type examination certificate	PTB 97 ATEX 1081 U
Rated voltage	20V to 250 V AC/DC 18V to 30V DC
Input current IE	up to approx. 10.5 mA (AC) to approx. 4.5 mA (DC)
Connecting terminals	2 x 2.5 mm ²
Weight	approx. 0.15 kg



Mini-control switch/
Potentiometer



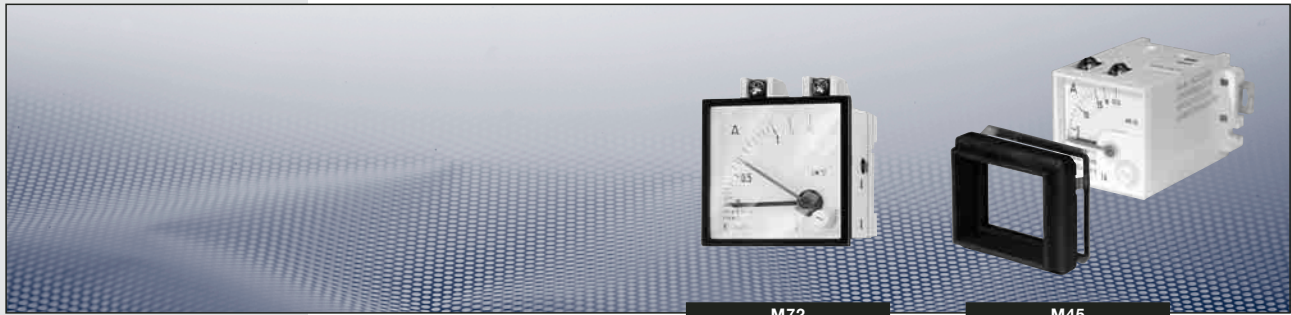
Signal lamp



Minimum distances and mounting
dimensions

Dimensions in mm

For coding and ordering details of control and indicating elements, see chapter 6, pages 6.64 to 6.67.



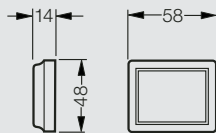
M72

M45

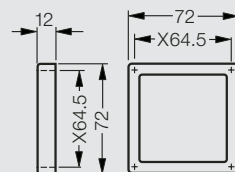
EX - CONTROL AND INDICATING UNITS

Measuring instrument AM 45 / AM 72 / VM45 / VM 72

8.61



Attachment M45



Attachment M72

Technical data

Measuring instrument AM 45/AM 72

Marking to 94/9/EG	Ex II 2 G
Type of protection	Moving iron (EEx e IIC) Moving coil (EEx ib IIC)
EC-type examination certificate	PTB 99 ATEX 2032U
Overload range	10-fold/25 s 25-fold/4 s 50-fold/1 s indicating 1 : 1.5
Measuring range*	n / 1 A 0 - 25 A direct 0 - 20 mA 4 - 20 mA
Weight	0.4 kg

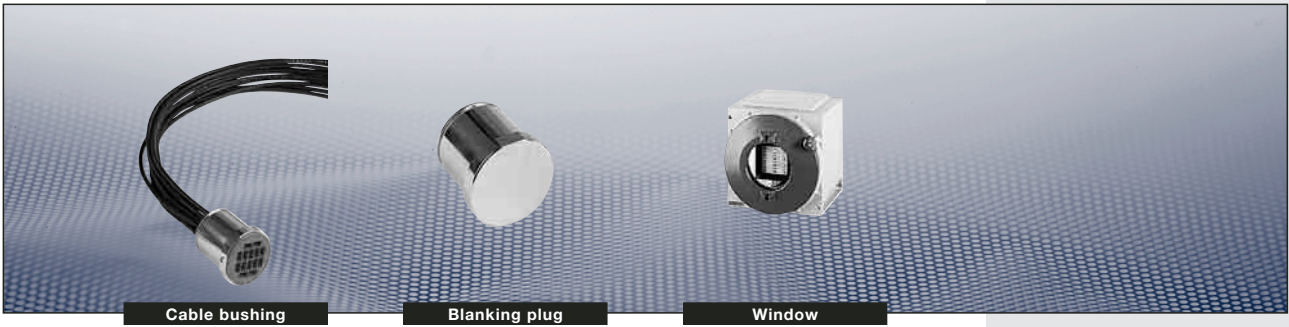
Technical data

Measuring instrument VM 45/VM 72

Marking to 94/9/EG	Ex II 2 G
Type of protection	Moving iron (EEx e IIC) Moving coil (EEx ib IIC)
EC-type examination certificate	PTB 99 ATEX 2032U
Movement	Moving iron (EEx e)
Overload range	indicating 1 : 1.5
Measuring range*	n / 1 A 0 - 20 mA
VM 45	6 - 415 V
VM 72	6 - 660 V
Rated power consumption	VM 45: 0.91 - 1.76 VA VM 72: 0.91 - 2.65 VA
Terminal cross-section	2 x 1.5 - 4 mm ²
Weight	0.4 kg

* Other measuring ranges on request.

For coding and ordering details of control and indicating elements, see chapter 6, pages 6.68 to 6.71.



8.62

EX - BUILT - IN COMPONENTS

| Cable bushing | Blanking plug | Window |

Technical data	
Flameproof cable bushing/blanking plug/window	
Marking to 94/9/EG	Ⓔ II 2 G
Type of protection	EEx d II
EC-type examination certificate	PTB 98 ATEX 1017U
Rated voltage	up to 690 V
Rated current	
at 0.75 mm²	10.0 A
at 1.00 mm²	12.0 A
at 1.50 mm²	15.0 A
at 2.50 mm²	21.0 A
at 4.00 mm²	28.0 A
at 6.00 mm²	36.0 A
Rated cross-section	0.75 mm² to 6.00 mm²
Permissible ambient temperature	-20 °C to +40 °C
Permissible temperature on cable	max. 80 °C
Permissible storage temperature	
in original packaging	-50 °C to +80 °C
Weight without cables	approx. 0.20 kg

Size of wall-mounting and free-standing units as well as canopies for distribution systems will be determined according to the number of enclosures.

WHAT IS THE NEW STANDARD YOU HAVE TO OBSERVE INSTEAD OF IEC AND NEC?

(SPEC ONE: AS OF PAGE 9.2ff)



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EX - PROTECTION WORLDWIDE

IEC - NEC - CSA

Together with Cooper Crouse-Hinds Syracuse, USA, we are the leading supplier of explosion-protected equipment worldwide.

Besides IEC approval for most of its products, the Cooper Crouse-Hinds GmbH provides national approvals for many countries.

The continuous expansion of our product range demands constant new national and international approvals, certificates and supplements.

Therefore our worldwide subsidiaries and our Internet sites make current approval documents available to you.

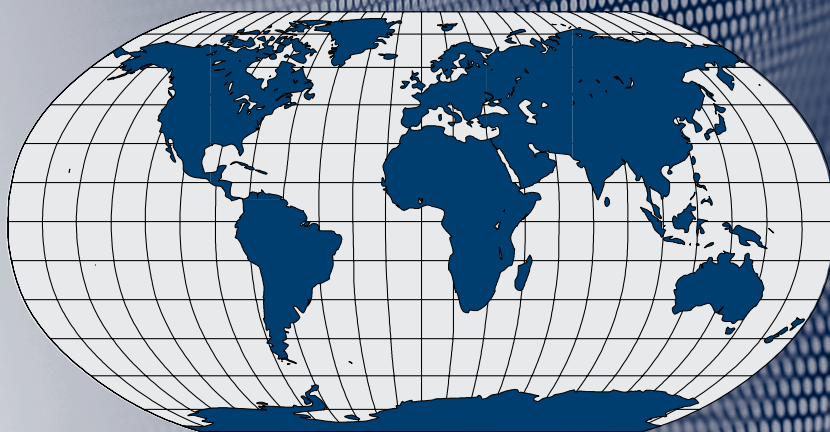
You can find certification documents as well as interesting contributions on explosion protection at

www.ceag.de

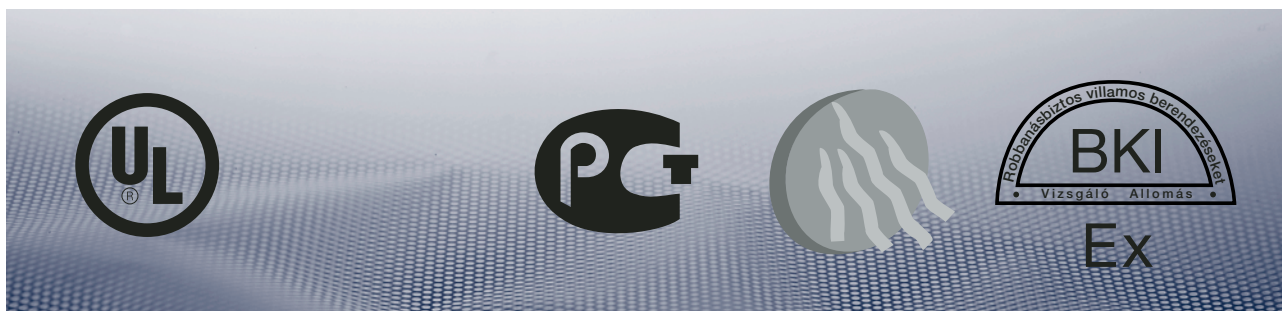
or

www.crouse-hinds.com.

The following pages provide a brief overview of our comprehensive range of explosion-protected equipment for use according to IEC **and** NEC requirements.



Internationally approved
Can be used in just about any country
in the world



The overview of international approvals below shows an extract of our product range.

You can obtain relevant certificates with detailed data at our local representations or per email at info-ex@ceag.de.

9.3

National Approvals						
Series	Brazil CEPEL	VR China NEPSI	Australia SIMTARS	Hungary BKI	Poland	Russia
Stabex mini	X	X		X		X
Stabex HF	X	X		X		X
Stabex M0		X				X
HE 8		X		X		X
SEB 8		X				X
eLLK 92		X		X	X	X
nLLK 98	X	X	X	X		X
dTLS 85250	X	X	X			X
Floodlight Series PX		X				X
Floodlight Series						
NVMV Zone 2		X	X			X
Switches GHG 273	X	X			X	X
Plugs and sockets	X	X	X	X	X	X
Junction boxes	X	X	X		X	X
Terminal boxes	X	X	X	X	X	X
Control units						
GHG 41./43	X	X	X	X	X	X
Control units/stations	X	X			X	X
Control switches						
GHG 29	X	X	X		X	X
Safety switches						
GHG 26		X		X	X	X
Distributions						
GHG 61	X	X	X	X		X

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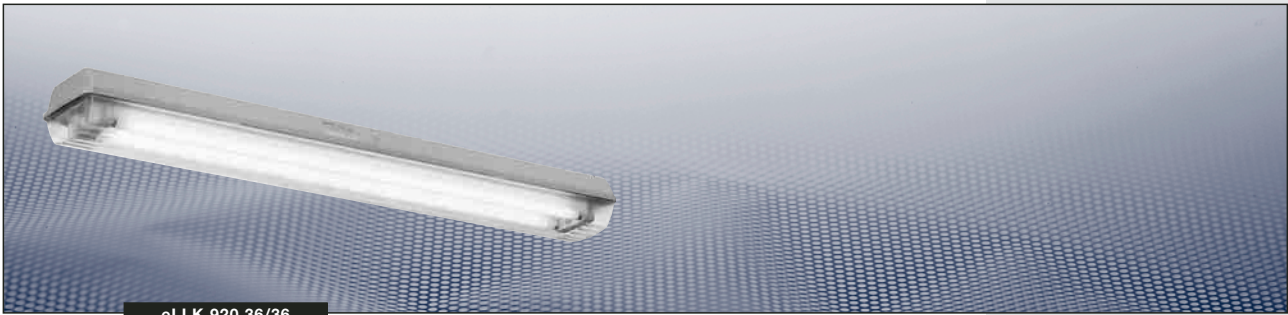
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eLLK 920 36/36

9.4

E X - L I G H T F I T T I N G S

| Series eLLK 92 |

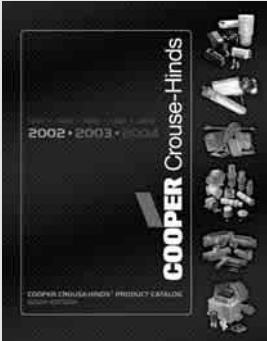
Approvals

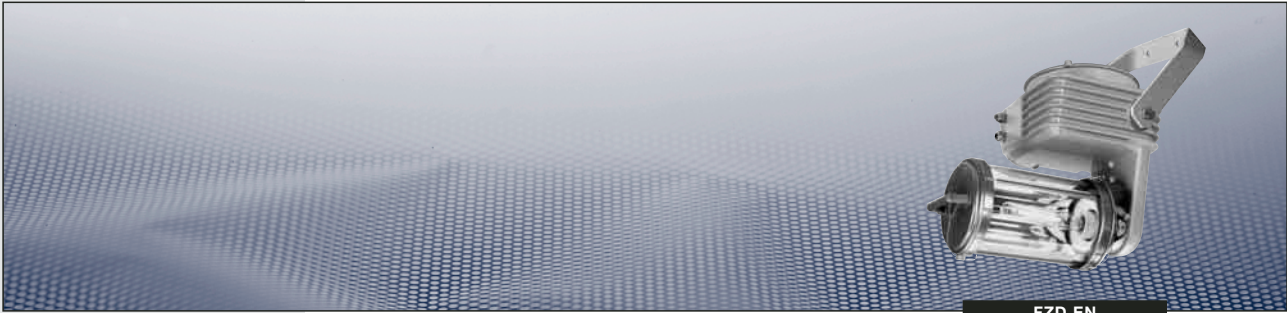
UL/cUL listed	Class I, Division 2, Groups B, C, D
	Class I, Zone 1, Group IIC
	Class II, Division 1 Groups E, F, G (Canada)
	Class II, Division 2 Groups F, G (US)
	Class III, Simultaneous Presence
UL Standards	Wet Locations 3.3R4
	2279 Hazardous (Classified) Locations
	1598 Luminaires
CSA Standards	E79 Series
CENELEC	PTB 96 ATEX 2144
	EEx ed IIC T4
NEMA	4X
	IP 66

For details and technical data on

NEC: refer to the Cooper Crouse-Hinds Product Catalogue 6000 Edition, as of page 832

IEC: refer to Chapter 2 of this catalogue, as of page 2.10





FZD EN

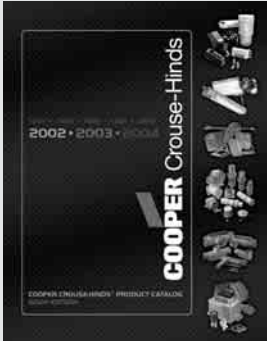
E X - F L O O D L I G H T S

9.5

| FZD Series |

Approvals	
UL/cUL listed	Class I, Division 1, Groups C and D
	Class I, Zone 1 for ANSI lamps
	Wet Locations, Marine Locations
CENELEC	PTB 02 ATEX 1158
	EEx ed II C T4 – 250 W, T3 – 400 W
NEMA	4X
	IP 66

For details and technical data on
NEC: refer to the Cooper Crouse-Hinds Product Catalogue 6000 Edition, as of page 858
IEC: refer to Chapter 4 of this catalogue, as of page 4.16



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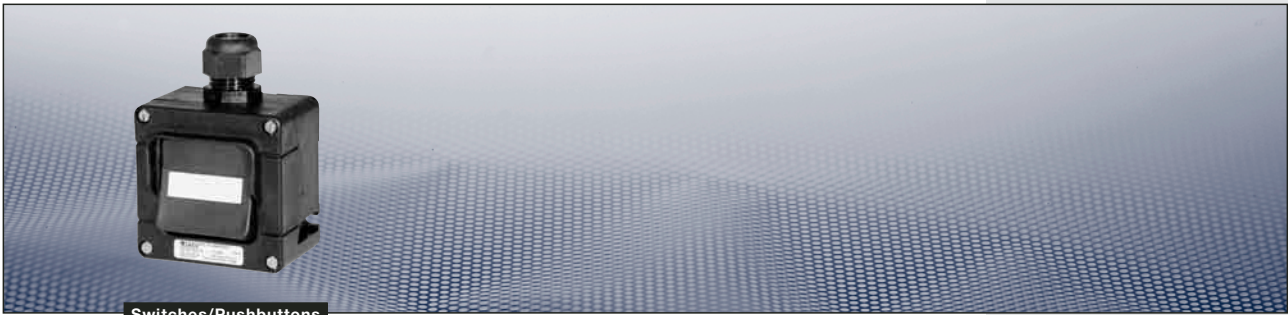
5

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Switches/Pushbuttons

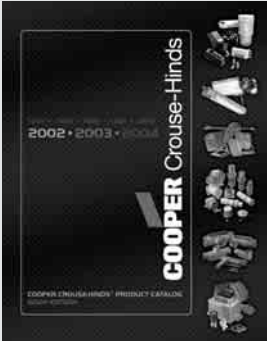
9.6

EX - INSTALLATIONS SWITCHES

| Series GHG 273 |

Approvals	
UL/cUL listed	Class I, Division 2, Groups A, B, C, D
	Class I, Zones 1 and 2, EEx de IIC T6
	Class I, Zones 1 and 2, AEx de IIC T6
CENELEC	PTB 98 ATEX 3121
	EEx de IIC T6, Zones 1 and 2
	EEx de IIC T6, Zones 21 and 22
NEMA	4X
	IP 66

For details and technical data on
NEC: refer to the Cooper Crouse-Hinds Product Catalogue 6000 Edition, as of page 545
IEC: refer to Chapter 5 of this catalogue, as of page 5.8



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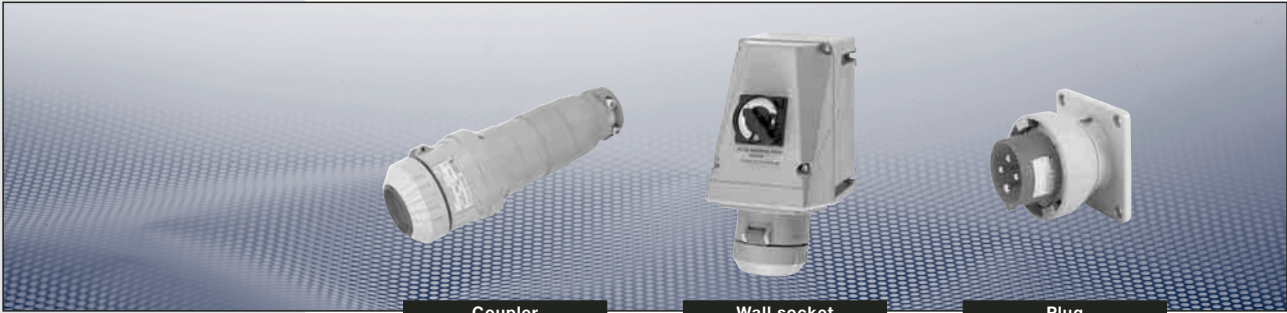
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Coupler

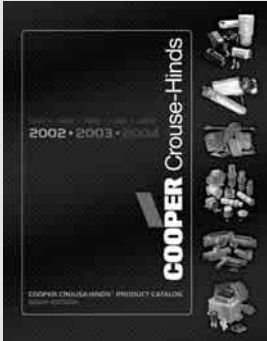
Wall socket

Plug

EXPLOSION-PROTECTED PLUGS AND SOCKETS

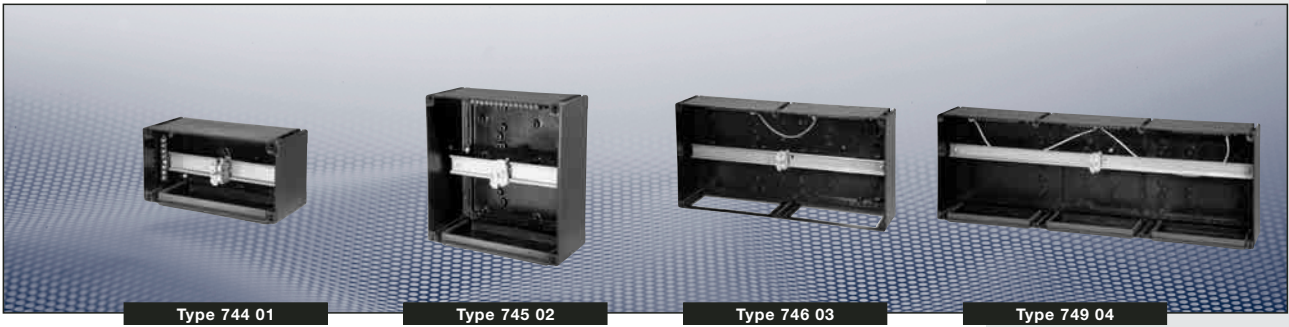
IEC 309

9.7



Approvals	
UL/cUL listed	Class I, Division 2, Groups A, B, C, D Class I, Zones 1 and 2, AEx de IIC T6
Series	20 A, 30 A, 60 A, 100 A acc. to IEC 309-1/2 Series 2
CENELEC	EEx ed IIC T6 Zone 1, 2, 21 and 22
NEMA	4X IP 66

For details and technical data on
NEC: refer to the Cooper Crouse-Hinds Product Catalogue 6000 Edition, as of page1039
IEC: refer to Chapter 5 of this catalogue, as of page 5.10



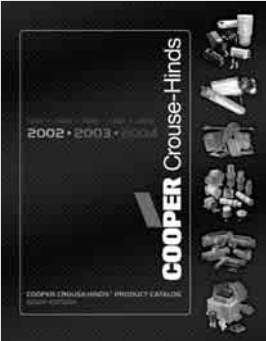
9.8

EX - T E R M I N A L B O X E S

| Series GHG 744, 745, 746, 749 |

Approvals	
UL/cUL listed	Class I, Division 2, Groups A, B, C, D
	Class I, Zones 1 and 2, AEx de IIB +H2, T6
	Class II, Division 1, Groups E, F, G (cUL)
CENELEC	PTB 99 ATEX 1044
	EEx e IIC, T6, Zones 1 and 2
	EEx e IIC, T6 Zones 21 and 22
NEMA	4X
	IP66

For details and technical data on
NEC: refer to the Cooper Crouse-Hinds Product Catalogue 6000 Edition, as of page 162
IEC: refer to Chapter 5 of this catalogue, as of page 5.74





Type 432...01

Type 432...02

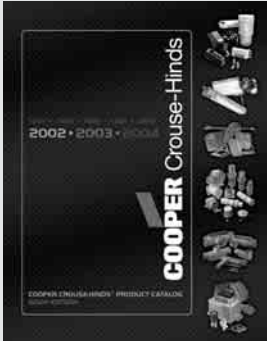
Type 432...03

Type 432...05

EX - CONTROL STATIONS

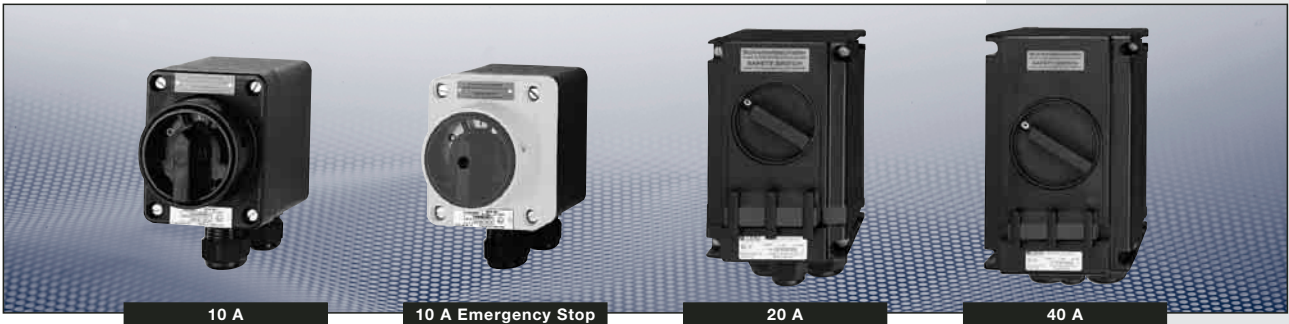
| Series 432 |

9.9



Approvals	
UL/cUL listed	Class I, Division 2, Groups A, B, C, D
	Class I, Zones 1 and 2, (A)Ex de IIB +H2 T6
	Class II, Division 1, Groups E, F, G (cUL)
CENELEC	PTB 00 ATEX 3117
	EEx de IIC, T6, Zones 1 and 2
	EEx de IIC, T6, Zones 21 and 22
NEMA	4X
	IP 66

For details and technical data on
NEC: refer to the Cooper Crouse-Hinds Product Catalogue 6000 Edition, as of page 598
IEC: refer to Chapter 6 of this catalogue, as of page 6.2



9.10

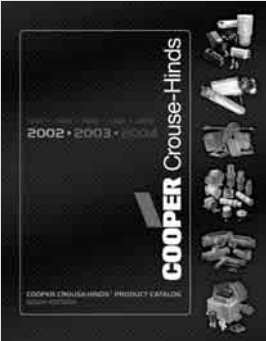
EX - SAFETY SWITCHES

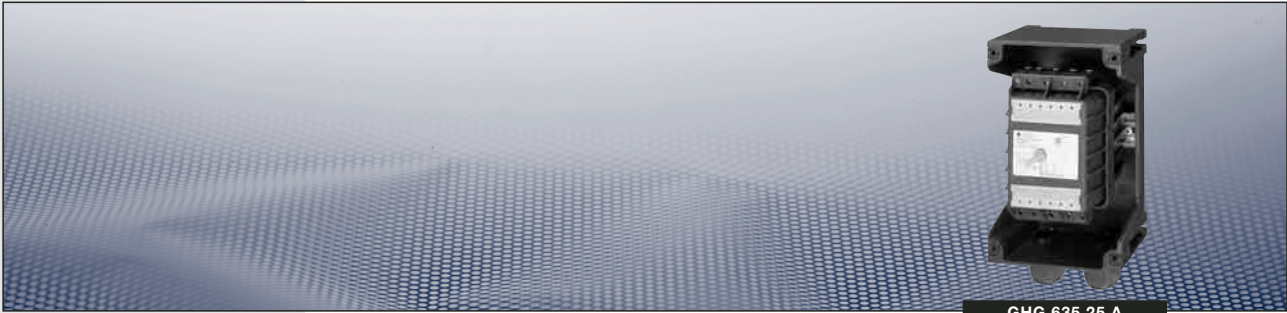
| 10, 20, 40, 80, 125 and 180 Amp / 600 V AC |

Approvals

UL/cUL listed	Class I, Division 2, Groups A, B, C, D
	Class I, Zones 1 and 2, AEx de IIB ... H2, T6
	Class II, Division 1, Groups E, F, G (cUL)
CSA Standard	C22.2 No. 14
CENELEC	PTB approved
	EEx de IIC, T6, Zones 1 and 2
	EEx de IIC, T6, Zones 21 and 22
NEMA	4X
	IP 66

For details and technical data on
NEC: refer to the Cooper Crouse-Hinds Product Catalogue 6000 Edition, as of page 538
IEC: refer to the Chapter 7 of this catalogue, as of page 7.4

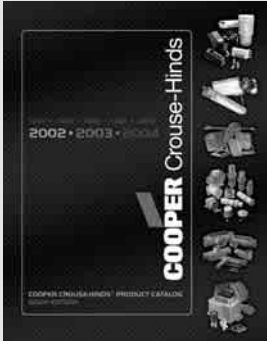




EX - MANUAL MOTOR STARTER

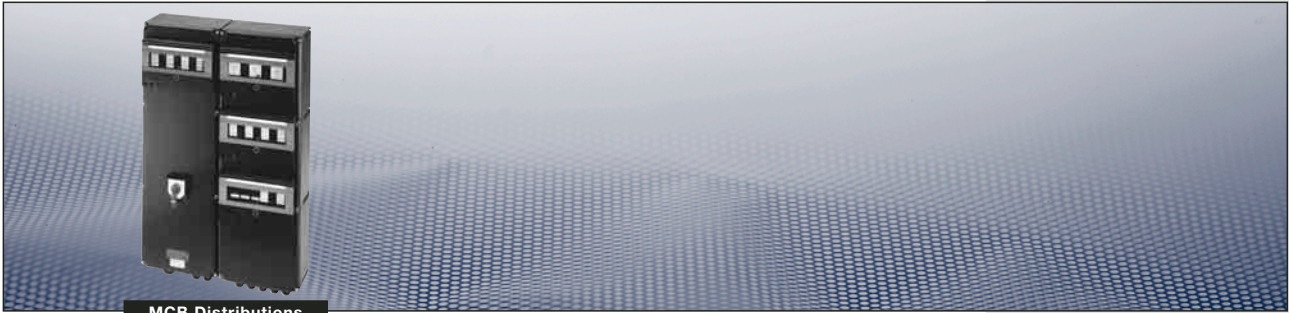
| 25 A, 690 V AC |

9.11



Approvals	
UL/cUL listed	Class I, Division 2, Groups A, B, C, D
	Class I, Zones 1 and 2, AEx de HB +H2, T5, T6
	Class II, Division 1, Groups E, F, G (cUL)
CENELEC	PTB 99 ATEX 1162
	EEx de IIC, T5-T6, Zones 1 and 2
	EEx de IIC, T5-T6, Zones 21 and 22
NEMA	4X
	IP 66

For details and technical data on
NEC: refer to the Cooper Crouse-Hinds Product Catalogue 6000 Edition, as of page 341
IEC: refer to Chapter 7 of this catalogue, as of page 7.40



MCB Distributions

9.12

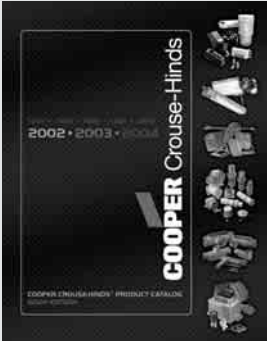
MCB DISTRIBUTIONS

| D2Z Zone 1 Division 2 moulded plastic |

Approvals

UL/cUL listed	Class I, Division 2, Groups A, B, C, D
	Class I, Zone 1, Groups A, B, C, D
	Class II, Division 1, Groups E, F, G
	AEx de II C T4, T6
UL Standards	67, 877
CSA Standards	C22.2 Nos. 29 & 30
CENELEC	PTB 99 ATEX 1044
NEMA	EEx ed IIC T4, T6
	4X
	IP 66

For details and technical data on
NEC: refer to the Cooper Crouse-Hinds Product Catalogue 6000 Edition, as of page 517
IEC: refer to Chapter 8 of this catalogue, as of page 8.2



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Order No.	Page	Order No.	Page	Order No.	Page
1 1118 000 001	1.15	1 2261 879 101	2.20	1 2342 000 101	4.31
1 1118 000 010	1.15	1 2261 879 103	2.20	1 2342 000 102	4.31
1 1118 000 050	1.13	1 2261 879 111	2.20	1 2342 000 103	4.31
1 1125 000 111	1.11	1 2263 875 101	2.12	1 2342 000 104	4.31
1 1145 000 792	1.17	1 2263 875 103	2.12	1 2342 000 105	4.31
1 1145 000 792	1.21	1 2263 875 125	2.12	1 2346 000 001	4.33
1 1145 000 795	1.17	1 2264 875 101	2.13	1 2346 000 002	4.33
1 1145 000 795	1.21	1 2264 875 103	2.13	1 2346 000 003	4.33
1 1147 000 001	1.21	1 2264 875 111	2.13	1 2346 000 004	4.33
1 1147 000 002	1.21	1 2265 875 101	2.11	1 2346 000 005	4.33
1 1147 000 200	1.21	1 2265 875 103	2.11	1 2346 000 006	4.33
1 1147 080 000	1.27	1 2265 875 109	2.11	1 3032 000 001	1.25
1 1229 000 416	1.23	1 2265 875 111	2.11	1 3041 000 011	4.36
1 1350 000 001	1.9	1 2265 875 126	2.11	1 3041 000 012	4.36
1 1358 000 001	1.7	1 2265 881 103	2.11	1 3041 120 011	4.17
1 1359 000 001	1.7	1 2265 881 111	2.11	1 3041 120 012	4.17
1 1359 000 010	1.7	1 2266 875 101	2.12	1 3041 120 012	4.17
1 1359 000 070	1.27	1 2266 875 103	2.12	1 3041 205 011	4.17
1 1518 000 111	1.15	1 2266 875 109	2.12	1 3041 205 012	4.17
1 1540 000 443	1.17	1 2266 875 111	2.12	1 3041 210 011	4.17
1 1540 000 443	1.21	1 2266 881 103	2.12	1 3041 210 012	4.17
1 1540 000 483	1.13	1 2266 881 111	2.12	1 3465 136 001	2.38
1 1540 000 493	1.7	1 2267 875 101	2.13	1 3465 136 011	2.38
1 2035 000 300	1.27	1 2267 875 103	2.13	1 3465 136 021	2.38
1 2035 000 520	1.27	1 2267 875 111	2.13	1 3465 158 001	2.39
1 2041 000 450	1.27	1 2267 881 103	2.13	1 3465 158 011	2.39
1 2041 000 810	1.27	1 2267 881 211	2.13	1 3465 158 021	2.39
1 2041 000 820	1.27	1 2268 875 101	2.15	1 3465 218 001	2.37
1 2061 000 040	1.27	1 2269 875 101	2.15	1 3465 218 011	2.37
1 2073 000 160	1.27	1 2273 879 101	2.21	1 3465 218 021	2.37
1 2190 218 001	2.23	1 2341 000 001	4.29	1 3465 218 912	2.37
1 2190 218 002	2.28	1 2341 000 002	4.29	1 3465 218 922	2.37
1 2190 218 101	2.23	1 2341 000 003	4.29	1 3465 236 001	2.38
1 2190 218 102	2.28	1 2341 000 004	4.29	1 3465 236 011	2.38
1 2190 218 703	2.23	1 2341 000 005	4.29	1 3465 236 021	2.38
1 2190 218 713	2.23	1 2341 000 051	4.29	1 3465 236 912	2.38
1 2190 236 001	2.24	1 2341 000 052	4.29	1 3465 236 922	2.38
1 2190 236 002	2.29	1 2341 000 053	4.29	1 3465 258 001	2.39
1 2190 236 101	2.24	1 2341 000 054	4.29	1 3465 258 011	2.39
1 2190 236 102	2.29	1 2341 000 055	4.29	1 3465 258 021	2.39
1 2190 236 703	2.24	1 2341 000 101	4.29	1 3465 258 912	2.39
1 2190 236 713	2.24	1 2341 000 102	4.29	1 3465 258 922	2.39
1 2190 258 001	2.25	1 2341 000 103	4.29	1 3467 000 001	2.41
1 2190 258 101	2.25	1 2341 000 104	4.29	183 134	5.133
1 2190 258 703	2.25	1 2341 000 105	4.29	183 144	5.133
1 2190 258 713	2.25	1 2342 000 001	4.31	183 154	5.133
1 2191 000 001	3.5	1 2342 000 002	4.31	183 164	5.133
1 2191 000 002	3.5	1 2342 000 003	4.31	183 174	5.133
1 2191 000 003	3.5	1 2342 000 004	4.31	183 184	5.133
1 2191 020 001	3.5	1 2342 000 005	4.31	183 194	5.133
1 2191 020 002	3.5	1 2342 000 051	4.31	190 124	5.129
1 2191 020 003	3.5	1 2342 000 052	4.31	190 164	5.129
1 2260 879 101	2.19	1 2342 000 053	4.31	190 194	5.135
1 2260 879 103	2.19	1 2342 000 054	4.31	190 204	5.129
1 2260 879 111	2.19	1 2342 000 055	4.31	190 254	5.129

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190 294	5.135	2 2480 536 002	2.45	280 184	5.136
190 324	5.129	2 2483 027 000	2.46	280 194	5.136
190 394	5.135	2 2710 904 000	2.47	280 204	5.136
190 404	5.129	221 004	5.127	280 214	5.136
190 494	5.135	221 204	5.127	3 0231 001 011	1.27
190 504	5.129	221 249	5.122	3 0601 035 000	3.15
190 594	5.135	221 249	5.130	3 1350 001 024	1.27
190 634	5.129	221 294	5.130	3 1358 001 070	1.27
190 694	5.135	221 604	5.127	3 2341 001 001	4.37
190 794	5.135	221 649	5.122	3 2342 001 001	4.37
190 894	5.135	221 649	5.130	3 2346 001 002	4.37
190 994	5.135	221 694	5.130	3 2369 100 001	4.40
191 094	5.135	222 004	5.127	3 2369 100 002	4.40
191 194	5.135	222 049	5.122	3 2475 900 081	2.48
191 294	5.135	222 049	5.130	3 2475 900 082	2.48
2 1118 020 000	1.27	222 094	5.130	3 2475 900 083	2.48
2 1118 024 000	1.27	222 504	5.127	3 2480 000 122	2.46
2 1145 017 000	1.27	222 549	5.122	3 2485 000 005	2.47
2 1145 585 000	1.27	222 549	5.130	4 0018 031 358	1.27
2 1147 300 000	1.27	222 594	5.130	4 0040 004 623	3.15
2 1147 400 000	1.27	223 204	5.127	4 0071 344 115	3.15
2 1147 701 000	1.27	223 249	5.122	4 0071 348 530	1.17
2 1229 456 000	1.27	223 249	5.130	4 0071 348 531	1.17
2 1261 191 000	1.27	223 294	5.130	4 0071 349 520	3.13
2 1359 200 000	1.27	224 004	5.127	4 0071 349 523	3.13
2 2061 080 000	1.27	224 049	5.122	506 050	5.137
2 2218 602 000	2.47	224 049	5.130	506 060	5.137
2 2480 002 000	2.46	224 094	5.130	506 070	5.137
2 2480 054 000	2.46	225 004	5.127	506 080	5.137
2 2480 092 000	2.46	225 049	5.122	506 090	5.137
2 2480 092 000	3.15	225 049	5.130	506 100	5.137
2 2480 462 000	2.46	225 094	5.130	506 110	5.137
2 2480 464 000	2.46	226 304	5.127	506 120	5.137
2 2480 472 000	2.46	226 349	5.122	506 130	5.137
2 2480 482 000	2.46	226 349	5.130	560 530	5.137
2 2480 510 001	2.43	226 394	5.130	560 630	5.137
2 2480 510 002	2.43	229 010	5.136	560 730	5.137
2 2480 510 003	2.43	229 012	5.136	560 830	5.137
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2 2480 510 006	2.45	229 034	5.136	561 130	5.137
2 2480 510 007	2.45	229 038	5.136	561 230	5.137
2 2480 510 008	2.45	229 112	5.136	561 330	5.137
2 2480 510 009	2.45	229 114	5.136	567 024	5.130
2 2480 510 010	2.45	229 212	5.136	567 034	5.130
2 2480 510 011	2.45	229 300	5.136	567 054	5.130
2 2480 510 012	2.45	229 312	5.136	567 074	5.130
2 2480 510 013	2.43	280 104	5.136	567 094	5.130
2 2480 510 014	2.43	280 114	5.136	567 124	5.130
2 2480 510 015	2.43	280 124	5.136	567 154	5.130
2 2480 510 016	2.43	280 134	5.136	567 184	5.130
2 2480 510 017	2.46	280 144	5.136	740 024	5.128
2 2480 518 001	2.45	280 154	5.136	740 034	5.128
2 2480 518 002	2.45	280 164	5.136	740 294	5.128
2 2480 536 001	2.45	280 174	5.136	740 304	5.128

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740 454	5.135	745 974	5.134	819 004	5.131
740 564	5.128	746 044	5.129	819 094	5.131
740 574	5.128	746 054	5.129	819 204	5.131
740 714	5.135	746 234	5.134	819 294	5.131
740 724	5.135	746 244	5.134	819 404	5.131
740 834	5.128	746 314	5.129	819 494	5.131
740 844	5.128	746 504	5.134	819 504	5.131
740 864	5.128	746 834	5.134	819 594	5.131
740 984	5.135	810 534	5.137	819 604	5.131
740 994	5.135	810 634	5.137	819 694	5.131
741 104	5.128	810 734	5.137	846 404	5.126
741 114	5.128	810 834	5.137	846 504	5.126
741 124	5.128	810 934	5.137	846 594	5.126
741 254	5.135	811 034	5.137	846 604	5.126
741 264	5.135	811 134	5.137	846 674	5.126
741 374	5.128	811 234	5.137	846 694	5.126
741 384	5.128	811 334	5.137	846 704	5.126
741 524	5.135	816 404	5.125	846 774	5.126
741 534	5.135	816 504	5.125	846 794	5.126
741 644	5.128	816 594	5.125	846 804	5.126
741 794	5.135	816 604	5.125	846 894	5.126
741 804	5.135	816 674	5.125	846 904	5.126
744 704	5.129	816 694	5.125	846 994	5.126
744 884	5.134	816 704	5.125	847 004	5.126
744 894	5.134	816 774	5.125	847 094	5.126
744 964	5.129	816 794	5.125	847 204	5.126
744 974	5.129	816 804	5.125	847 294	5.126
745 154	5.134	816 894	5.125	847 304	5.126
745 164	5.134	816 904	5.125	847 394	5.126
745 234	5.129	816 994	5.125	847 404	5.126
745 244	5.129	817 004	5.125	847 494	5.126
745 424	5.134	817 094	5.125	847 504	5.126
745 434	5.134	817 204	5.125	847 574	5.126
745 444	5.134	817 294	5.125	847 594	5.126
745 504	5.129	817 304	5.125	848 404	5.132
745 514	5.129	817 394	5.125	848 504	5.132
745 574	5.134	817 404	5.125	848 594	5.132
745 584	5.134	817 494	5.125	848 604	5.132
745 594	5.134	817 504	5.125	848 674	5.132
745 604	5.134	817 594	5.125	848 694	5.132
745 654	5.134	817 604	5.125	848 704	5.132
745 664	5.134	817 694	5.125	848 774	5.132
745 694	5.134	818 404	5.131	848 794	5.132
745 704	5.134	818 504	5.131	848 804	5.132
745 734	5.134	818 594	5.131	848 894	5.132
745 774	5.129	818 604	5.131	848 904	5.132
745 834	5.128	818 674	5.131	848 994	5.132
745 844	5.128	818 694	5.131	849 004	5.132
745 854	5.128	818 704	5.131	849 094	5.132
745 864	5.128	818 774	5.131	849 204	5.132
745 874	5.128	818 794	5.131	849 294	5.132
745 914	5.128	818 804	5.131	849 404	5.132
745 924	5.128	818 894	5.131	849 494	5.132
745 934	5.128	818 904	5.131	849 504	5.132
745 964	5.134	818 994	5.131	849 594	5.132

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AM45 1 02	6.69	EXKO 223 100 G 0004	8.12	EXKO73 1814 F 0001	7.38
AM45 1 05	6.69	EXKO 223 100 G 0005	8.12	FES 100	8.27
AM45 1 33	6.69	EXKO 223 100 Q 0000	8.11	FES 101	8.27
AM45 5 33	6.69	EXKO 223 100 Q 0001	8.11	FSS 100 X X	8.16
AM45 6 33	6.69	EXKO 223 100 Q 0002	8.11	FSS 200 X X	8.16
AM45 7 33	6.69	EXKO 715 000 F 0000	8.52	FSS 200 X X	8.17
AM45 8 33	6.69	EXKO 715 000 H 0000	8.52	FSS 210 X X	8.17
AM72 1 02	6.71	EXKO 715 000 K 0000	8.52	FSS 400 X X	8.17
AM72 1 03	6.71	EXKO 715 100 F 0000	8.53	FSS 410 X X	8.17
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AM72 1 05	6.71	EXKO 715 100 K 0000	8.53	GEH 001 01	8.30
AM72 1 07	6.71	EXKO 715 200 B 0000	8.54	GEH 002 00	8.30
AM72 1 33	6.71	EXKO 715 200 D 0000	8.54	GEH 002 01	8.30
AM72 5 33	6.71	EXKO 715 200 F 0000	8.54	GEH 002 02	8.30
AM72 6 33	6.71	EXKO 715 200 H 0000	8.54	GEH 003 00	8.31
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BKL 200 00	8.36	EXKO 715 200 M 0000	8.54	GEH 003 02	8.31
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CGS 123 8588 P1002	4.21	EXKO 731713 V0001	7.14	GEH 004 01	8.32
CGS 123 8688 P0001	4.19	EXKO 731716 S0001	7.11	GEH 004 02	8.32
CGS 123 8688 P1001	4.19	EXKO 731716 T0001	7.12	GEH 004 03	8.32
CGS 123 8688 P2001	4.19	EXKO 731723 S0001	7.11	GEH 004 04	8.32
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CGS 123 8788 P0001	4.19	EXKO 731723 U0001	7.13	GEH 100 01	8.33
CGS 123 8788 P1001	4.19	EXKO 731723 V0001	7.14	GEH 200 00	8.33
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GHG 516 4304 R0001	5.31	GHG 518 4406 R0001	5.37	GHG 521 8306 R0001	5.41
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GHG 516 4407 R3001	5.33	GHG 518 7406 R0001	5.37	GHG 521 9406 R0001	5.42
GHG 516 4409 R0001	5.33	GHG 518 7407 R0001	5.37	GHG 521 9407 R0001	5.42
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GHG 516 7409 R0001	5.33	GHG 519 4409 R0001	5.39	GHG 522 3406 R0001	5.44
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NOR 000 003 230 086	5.29	NOR 000 005 110 901	4.35	NOR 000 115 110 292	4.6
NOR 000 005 060 300	2.31	NOR 000 005 110 935	4.35	NOR 000 115 110 320	4.6
NOR 000 005 060 301	2.31	NOR 000 005 110 941	4.11	NOR 000 115 110 321	4.6
NOR 000 005 060 308	2.31	NOR 000 005 110 942	4.11	NOR 000 115 110 850	4.15
NOR 000 005 060 309	2.31	NOR 000 005 110 943	4.35	NOR 000 115 110 851	4.15
NOR 000 005 060 316	2.31	NOR 000 005 110 951	4.35	NOR 000 115 110 852	4.15
NOR 000 005 060 317	2.31	NOR 000 005 120 124	4.5	NOR 000 115 110 853	4.15
NOR 000 005 060 346	2.32	NOR 000 005 120 125	4.5	NOR 000 115 110 854	4.15
NOR 000 005 060 347	2.32	NOR 000 005 120 139	4.35	NOR 000 115 110 855	4.15
NOR 000 005 060 354	2.32	NOR 000 005 140 701	4.27	NOR 000 115 110 856	4.15
NOR 000 005 060 355	2.32	NOR 000 005 140 897	4.27	NOR 000 115 110 857	4.15
NOR 000 005 060 362	2.32	NOR 000 005 140 898	4.27	NOR 000 115 110 858	4.15
NOR 000 005 060 363	2.32	NOR 000 005 140 917	4.27	NOR 000 115 110 859	4.15
NOR 000 005 060 403	2.47	NOR 000 005 160 012	3.9	NOR 000 115 110 879	4.13
NOR 000 005 060 411	2.47	NOR 000 005 160 013	3.9	NOR 000 115 110 880	4.13
NOR 000 005 060 429	2.47	NOR 000 005 160 014	3.9	NOR 000 115 110 881	4.13
NOR 000 005 060 479	2.47	NOR 000 005 160 015	3.9	NOR 000 115 110 882	4.13
NOR 000 005 060 487	2.47	NOR 000 005 170 583	4.36	NOR 000 115 110 883	4.13
NOR 000 005 060 495	2.47	NOR 000 005 170 715	4.36	NOR 000 115 110 941	4.11
NOR 000 005 060 669	2.32	NOR 000 111 150 001	5.94	NOR 000 115 110 942	4.11
NOR 000 005 060 670	2.32	NOR 000 111 150 002	5.94	NOR 000 115 110 945	4.13
NOR 000 005 060 820	3.7	NOR 000 111 150 003	5.94	NOR 000 115 170 209	4.24
NOR 000 005 060 837	3.7	NOR 000 111 150 004	5.94	NOR 000 115 170 215	4.24
NOR 000 005 070 022	2.34	NOR 000 111 150 005	5.94	NOR 000 115 170 221	4.24
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NOR 000 005 070 031	2.34	NOR 000 111 170 451	8.44	NOR 000 115 170 230	4.24
NOR 000 005 070 064	2.34	NOR 000 111 170 469	8.44	NOR 000 115 170 233	4.24
NOR 000 005 070 065	2.34	NOR 000 111 170 601	8.44	NOR 000 115 170 243	4.24
NOR 000 005 070 300	2.33	NOR 000 111 170 606	8.44	NOR 000 115 170 244	4.24
NOR 000 005 070 301	2.33	NOR 000 112 260 409	5.141	NOR 000 115 170 245	4.24
NOR 000 005 070 308	2.33	NOR 000 112 260 417	5.140	NOR 000 115 170 246	4.24
NOR 000 005 070 309	2.33	NOR 000 112 260 433	5.141	NOR 000 115 170 248	4.24
NOR 000 005 070 316	2.33	NOR 000 112 260 441	5.140	NOR 000 222 260 331	5.140
NOR 000 005 070 317	2.33	NOR 000 112 260 467	5.141	NOR 000 222 260 414	5.141
NOR 000 005 070 328	2.33	NOR 000 112 260 590	5.139	NOR 000 222 260 422	5.140
NOR 000 005 070 329	2.33	NOR 000 112 260 607	5.138	NOR 000 222 260 430	5.140
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NOR 000 005 070 335	2.33	NOR 000 112 260 631	5.138	NOR 000 222 260 472	5.140
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NOR 000 005 070 403	2.34	NOR 000 112 260 706	5.141	NOR 000 222 260 555	5.141
NOR 000 005 070 428	2.34	NOR 000 112 260 722	5.141	NOR 000 222 260 563	5.141
NOR 000 005 070 429	2.34	NOR 000 112 260 748	5.141	NOR 000 222 260 571	5.141
NOR 000 005 110 745	4.6	NOR 000 112 260 764	5.141	NOR 000 222 260 589	5.140
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NOR 000 005 110 754	4.11	NOR 000 112 260 798	5.140	NOR 000 222 260 662	5.138
NOR 000 005 110 761	4.11	NOR 000 112 260 805	5.140	NOR 000 222 260 745	5.139
NOR 000 005 110 762	4.11	NOR 000 112 260 813	5.140	NOR 000 222 260 753	5.138
NOR 000 005 110 828	4.35	NOR 000 115 110 046	4.13	NOR 000 222 260 761	5.138
NOR 000 005 110 836	4.35	NOR 000 115 110 079	4.13	NOR 000 222 260 779	5.138
NOR 000 005 110 852	4.35	NOR 000 115 110 080	4.13	NOR 000 222 260 787	5.138

Order No.	Page	Order No.	Page	Order No.	Page
NOR 000 222 260 852	5.139	SLT 0 14 10	6.57		
NOR 000 222 260 860	5.139	SLT 0 14 11	6.57		
NOR 000 222 260 878	5.139	SLT 0 15 10	6.57		
NOR 000 222 260 886	5.139	SLT 0 15 11	6.57		
NOR 000 222 260 894	5.138	SLT 0 16 10	6.57		
NOR 000 222 260 927	5.139	SLT 0 17 10	6.57		
NXT S22 1513 R0001	5.101	SLT 0 18 10	6.57		
NXT S26 2616 R0001	5.101	STB 100 0000 R0001	5.99		
NXT S26 2620 R0001	5.101	STB 200 0000 R0001	5.99		
NXT S30 3020 R0001	5.101	STB 300 0000 R0001	5.99		
NXT S45 3820 R0001	5.101	STB 500 0000 R0001	5.99		
SCT 4 04 07	6.65	STB 600 0000 R0001	5.99		
SCT 4 14 07	6.65	STS 110 16	8.24		
SCT 5 05 07	6.65	STS 260 16	8.24		
SCT 5 15 07	6.65	STS 280 16	8.24		
SCT 6 01 02	6.65	TSA 280 X X	8.26		
SCT 6 02 02	6.65				
SCT 6 03 01	6.65				
SCT 6 11 02	6.65				
SCT 6 12 02	6.65				
SCT 6 13 01	6.65				
SCT 7 07 01	6.65				
SCT 7 17 01	6.65				
SDZ 190 03	8.28				
SGT 0 13 1 1 2	6.61				
SGT 0 13 1 1 3	6.61				
SGT 0 13 1 2 1	6.63				
SGT 0 13 1 3 1	6.63				
SGT 0 14 1 1 2	6.61				
SGT 0 14 1 1 3	6.61				
SGT 0 14 1 2 1	6.63				
SGT 0 14 1 3 1	6.63				
SGT 0 15 1 1 2	6.61				
SGT 0 15 1 1 3	6.61				
SGT 0 15 1 2 1	6.63				
SGT 0 15 1 3 1	6.63				
SGT 0 16 1 1 2	6.61				
SGT 0 16 1 3 1	6.63				
SGT 0 17 1 1 2	6.61				
SGT 0 17 1 3 1	6.63				
SGT 0 18 1 1 2	6.61				
SGT 0 18 1 3 1	6.63				
SIA 100 X X	8.15				
SIA 200 X X	8.15				
SIA 300 X X	8.15				
SIA 400 X X	8.15				
SIL 1 10	6.67				
SIL 3 11	6.67				
SIL 4 34	6.67				
SLS 5 04 01	6.59				
SLS 5 05 01	6.59				
SLS 5 14 03	6.59				
SLS 5 15 03	6.59				
SLT 0 13 10	6.57				
SLT 0 13 11	6.57				

**A U D I O / V I S U A L - S I G N A L L I N G :
I N F O R M A T I O N F O R Y O U R S A F E T Y**



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ALARM, SIGNAL AND CONTROLL EQUIPMENT FOR HAZARDOUS AREAS

A new Member of the Cooper Crouse-Hinds Group: MEDC Ltd.



Designers and manufacturers of Alarm, Signal and Control Equipment since 1975, MEDC have developed a range of products specifically designed for use in areas where **harsh environmental conditions** prevail and where there is a **risk of explosion** due to the presence of flammable atmospheres.

MEDC are renowned throughout the world for their exacting quality standards and reliability as **a leading manufacturer of Explosion Proof Equipment.**

MEDC has also recently developed a range of equipment for use in industrial, marine, commercial and leisure applications.

MEDC specialises in custom finished products to specific requirements. The full product range totals over 100 items, all of which are appropriately certified to internationally recognised standards, eg **ATEX/CENELEC, UL, CSA, FM, SGS, GOST R & K, SAA, Chinese (CQST), PTB.**

MEDC holds the **International Quality Assurance Standard, ISO9001**, which covers all company activities from design and development, to manufacture, sales and after sales service.

In addition to the above certification, MEDC products have **approval from The Ministry of Defence, British Gas and UK Coal Mining.**

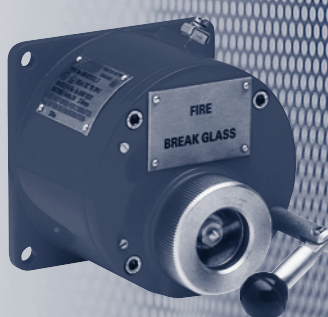
- International Certifications
ATEX/CENELEC, UL, CSA, FM, GOST R & K, SAA, Chinese (CQST), PTB
- Highest degree of protection
IP 66/IP 67

new Member of the Cooper Crouse-Hinds Group: MEDC Ltd.

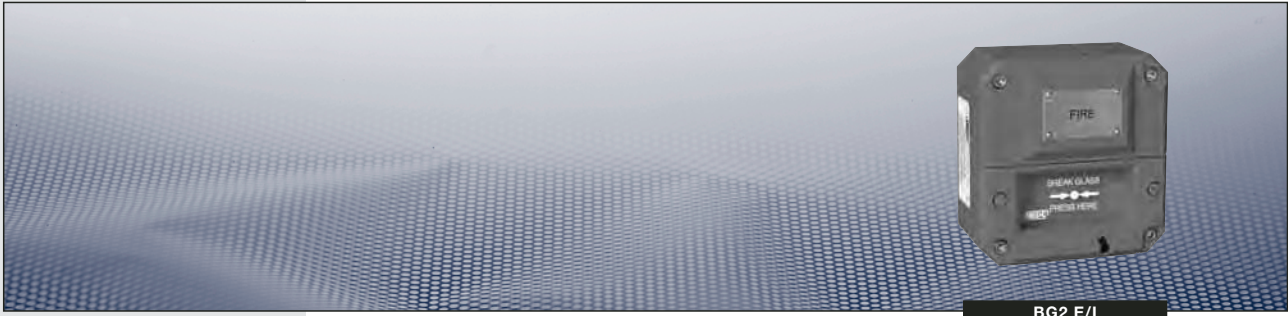
MANUAL ALARM CALL POINTS

Explosion protected units for Zone 0, 1, 2, 22, Class I and Div 1 & 2

The BG3 manual fire alarm call point is designed in accordance with the latest draft European Call Point Standard (EN54-11). Weatherproof to IP66 and IP67 and available certified intrinsically safe, simple apparatus or uncertified, the units are manufactured from glass reinforced polyester (GRP) which provides a robust, corrosion free construction and ensures effective and reliable operation in harsh industrial and offshore environments. Units are supplied in self coloured GRP or painted to customer specification. The BG3 'Burning House' duty label is provided as standard, other duty and tag labels may be supplied to customer specification.



- Zone 0, 1, 2, 21 and Zone 22 use
- Chinese (CQST) certified
- Designed in accordance with EN54-11
- IP66 and IP67
- Certified temperature -55°C to +55°C
- Corrosion free GRP
- Optional in line/end of line resistors/diodes
- Optional LED indicator
- Optional lift flap
- Optional flush installation
- Optional glass substitute element
- Key operated test facility
- Various body colours available

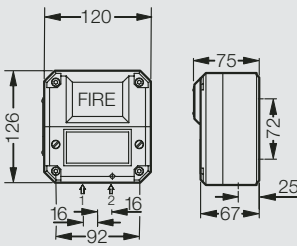


BG2 E/I

EX - BREAK GLASS CALL POINT

| BG2 E/I |

11.5



Technical data

Type BG2 E/I

EC-Type Examination Certificate

BG2 E BAS 02 ATEX 2105 X

BG2 I Baseefa 03 ATEX 0084 X

Marking to 94/9/EC

BG2 E II 2G/D EEx edm IIC T4 T135 °C

II 2G/D EEx ed IIC T6 T85 °C

BG2 I II 1G/D EEx ia IIC T4 T135 °C

Enclosure material

U.V. resistant glass reinforced polyester

Finish

Self coloured red

Optional indicator

A red high intensity LED can be fitted for alarm indication

Rated voltage

BG2 E up to 250 V (switch only)/up to 24 V (resist. + switch)

BG2 I

up to 28 V (IS)

Rated current only BG 2E

DC 0- 30 V: 5 A (resistive)/3 A (inductive)

DC 30- 50 V: 1 A

AC 0-250 V: 5 A

Circuits

Switch only | End of Line Resistor/Diode

In Line Resistor/Diode | In Line & End of Line Resistor/Diode

Entries

2 x M20 bottom

Weight

1.2 kg

Rated terminal cross section

6 x 2.5 mm²

Protection category to EN 60529

IP 66/IP 67

Permissible ambient temperature

-20 °C to +50 °C (BG2 E) | -40 °C to +50 °C (BG2 I)

Resistor values

470 Ω min./39 kΩ max. (DC and IS only)

Ordering details

Catalogue No.	Certification	Description	Ordering Code
BG2EDC1N	ATEX Ex II 2GD	Explosion protected, Zone 0, 1 & 2, DC, 2 x M20 bottom entries, single break glass switch latching, red finish	PX 800004
BG2INN1N	ATEX Ex II 1GD	Explosion protected, Zone 0, 1 & 2, DC, 2 x M20 bottom entries, single break glass switch latching, red finish	PX 800005

Ordering Options*

Unit Type	Model	Code	Wiring Diagram	Code	Lift Flap	Code	Finish	Code
BG2	BG2W – AC or DC	BG2WNN	Switch only	1	Fitted	F	Natural red	N
	BG2I – Up to 28 V (I.S.)	BG2INN	End of line resistor	2	Not fitted	N	Red Painted	R
	BG2E – DC	BG2EDC	In line resistor	3				
	BG2E – AC	BG2EAC	In line and end of line resistor	4				
			Diode (specify location & value)	5				

* For more options see www.medc.com or contact your local representative



PB.../BG...

EX - BREAK GLASS / PB CALL POINT

| BGI, PBI, BGE, PBE, BGUL, PBUL |

Technical data

Type BGE, PBE

EC-Type Examination Certificate	BAS 02 ATEX 2105 X
Marking to 94/9/EC	II 2G/D EEx edm IIC T4 T135 °C (switch only) II 2G/D EEx ed IIC T6 T85 °C (other versions)
GOST 'R' Certification	Ex edm IIC T6 (switch only) Ex edm IIC T4 (other version) Russian Fire Approved (VNIPO)
Chinese Certification	CQST Ex ed IIC T6 (switch only) CQST Ex edm IIC T4 (other versions)
Rated voltage	up to 250 V
Permissible ambient temperature	-20 °C to +50 °C

Type BGI, PBI

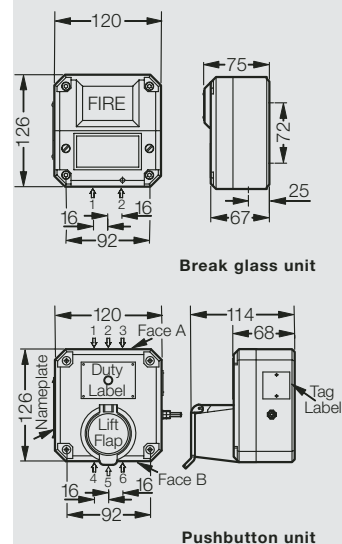
EC-Type Examination Certificate	BAS 03 ATEX 0084 X
Marking to 94/9/EC	II 1G/D EEx ia IIC T4 T135 °C
CSA Certification to C22.2 (PBI only)	Nos. 0-M, 0.4-M, 25, 30-M, 94, 142-M1987, 157-M1987, 157-92, Enclosure Type 4. T4A Class I Groups A, B, C & D
Cert. No.	79120
GOST 'R' Certification (PBI & BGI)	Ex ia IIC Russian Fire Approved (VNIPO)
GOST 'K' Certification (PBI only)	Ex ia IIC T4
Chinese Certification (PBI & BGI)	CQST - Ex ia IIC T4
Rated voltage	up to 28 V (IS)
Permissible ambient temperature	ATEX -40 °C to +70 °C (PBI) ATEX -40 °C to +50 °C (BGI) CSA -50 °C to +40 °C (PBI only)

Type BGUL, PBUL

UL-Listed	Class I, Div 2, Groups A-D
Listing No.	E186629
Rated voltage	up to 240 V
Permissible ambient temperature	-25 °C to +55 °C

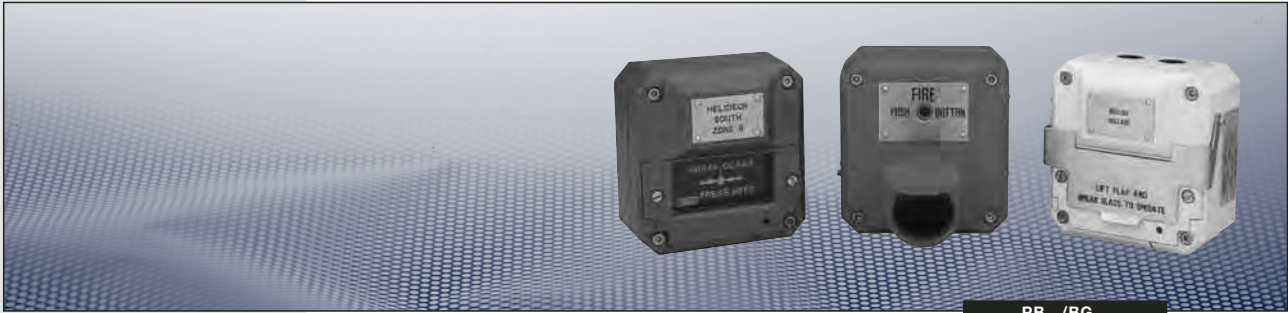
Type BGE, PBE, BGI, PBI, BGUL, PBUL

Enclosure material	anti static U.V. resistant glass reinforced polyester
Finish	Red epoxy painted finish as standard
Optional indicator	A red high intensity LED can be fitted to indicate operation on versions up to 24 V and all "IS" versions
Rated current only BG/PB E	DC 0- 30 V: 5 A (resistive)/3 A (inductive) DC 30- 50 V: 1 A AC 0-250 V: 5 A
Circuits	single changeover or double changeover
Entries	Up to 4 entries, M16 or M20 top and bottom 1/2" NPT
Weight	1.2 kg (varies with model & entries)
Rated terminal cross section	7 x 2.5 mm ² /9 x 2.5 mm ² optional u to 60 V only
Protection category to EN 60529	IP 66/IP 67
Resistor values	Various configurations available on versions up to 24 V and all "IS" versions (min. value 470 Ω)



Break glass unit

Pushbutton unit



PB.../BG...

EX - BREAK GLASS / PB CALL POINT

| BGI, PBI, BGE, PBE, BGUL, PBUL |

11.7

Ordering details

Catalogue No.	Certification	Description	Ordering Code
BGEB4B6B1DSN6R	ATEX Ex II 2GD	Explosion protected Ex II 2GD, EExed, IIC, T6, Zone 1 & 2, DC, 2 x M20 bottom entries, single break glass switch latching, red finish	PX 800003
BGIB4B6B1DSN6R	ATEX Ex II 1GD	Explosion protected, Zone 0, 1 & 2, DC, 2 x M20 bottom entries, single break glass switch latching, single switch, red finish	PX 800002
BGUL4C6C1DSN6R	UL Listed, Class I, Div 2, Groups A, B, C, D, Zone 2	Explosion protected, 2 x 1/2" NPT bottom entries, single break glass switch latching, painted red GRP finish	PX 869101

Ordering Options*

Unit Type	Certification	Code	Entries	Code	Labels	Code	Switches	Code	Features	Code	Terminals	Code	Finish	Code	
BG	ATEX – EExe	EB	16 mm	A ²⁾	None	0	Single	None	N	7 x 2.5 mm ²	7	Red (Standard)	R		
PB	ATEX – EExi	IB	20 mm	B ²⁾	Glass label	1	changeover	S ³⁾	LED	A	9 x 2.5 mm ²	9	Natural Black	N	
	CSA – Exi		1/2" NPT	C ²⁾	Glass label	2	Double		Lift flap				Blue	B	
	(PBI only)	IC			Glass label	3	changeover	D ³⁾	(BG only)	B			Yellow	Y	
	UL – Class I, Div 2	UL			Duty label				Resistor Series	C ⁴⁾			Grey	G	
	GOST 'R' ¹⁾ – Exi	IG			reqd.	4			Resistor EOL	D ⁴⁾			Yellow/Black		
	GOST 'R' ¹⁾ – Exe	EG			Tag label	5			Diode†	E			Stripes	X	
	GOST 'K' – Exi								Earth Continuity	F			Other specify	S	
	(PBI only)	IK							Turn & Push						
	Chinese – Exe	EQ							(PB only)	T					
	Chinese – Exi	IQ							Self reset						
								(PB only)	M						
								Resistor							
								Series & EOL †	S ⁴⁾						
								Plastic element replaces Break glass	P						

* For more options see www.medc.com or contact your local representative

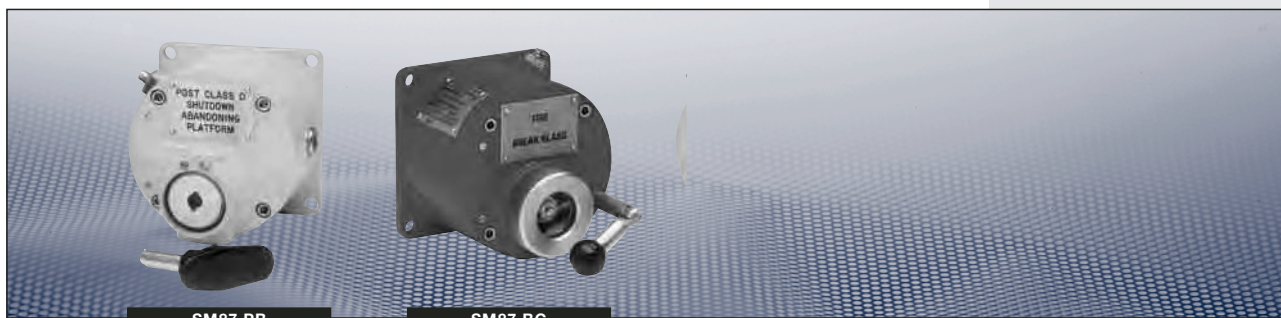
¹⁾ VNIPO approved as standard.

²⁾ Prefix entry size (see diagram above) with entry position code e.g. 1A, 2A.
 UL & CSA versions only available with 1/2" NPT entries.

³⁾ Prefix with voltage A for A.C. – D for D.C. except for BGI.

⁴⁾ Specify values

†Not available for UL/CSA



SM87 PB

SM87 BG

EX - BREAK GLASS / PB CALL POINT

SM87 BG | SM87 PB

Technical data

Type SM87 BG/PB

EC-Type Examination Certificate

EEx "i" Baseefa 02 ATEX 0152 X

EEx "d" Baseefa 03 ATEX 0075

Marking to 94/9/EC EEx "i" II 1G EEx ia IIC T4

EEx "d" II 2G/D EEx d IIC T5/T6

UL listed Class I, Div 1 Groups C & D (PBL only)

Listing No. 186629

CSA Certification Class I Groups A-D (I.S. version only PBI)

Class I, Div 1 & 2, Group D (Ex-d PB, BG only)

GOST 'R' Certification 1 Ex ib IIC T4 | 1 Ex d IIC T4 | Russian Fire Approved (VNIPO)

GOST 'K' Certification Ex ib IIC T4

Chinese Certification CQST Ex ia IIC T4 | Ex d IIC T5/T6

Enclosure material Grade 316 ANC4B Stainless Steel or LM 25 TF Marine Grade Alloy

Finish Epoxy paint finish as standard or to customer's specification

Optional indicator A red high intensity LED can be fitted for alarm indication

Rated voltage EEx d: 24 V AC/DC | EEx i: 28 V

Rated current 2 A

Switches 2 pole c/o wired to terminals, optional up to 4 pole

Entries up to 4 x 20 mm or 25 mm ISO | up to 4 x 1/2" or 3/4" NPT

Weight 3.8 kg (steel) | 2.5 kg (alloy)

Rated terminal cross section 2 - 5 mm²

Protection category to EN 60529 IP 66/IP 67/IP 68 (SM87 PB)

Insulation class I

Permissible ambient temperature EEx d/Ex-i* -55 °C to +70 °C

LED version* -20 °C to +55 °C

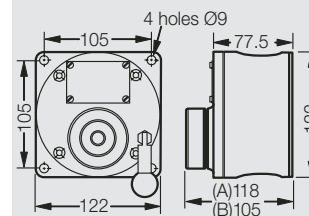
UL -55 °C to +70 °C

UL LED version -20 °C to +55 °C

CSA Exd -50 °C to +55 °C

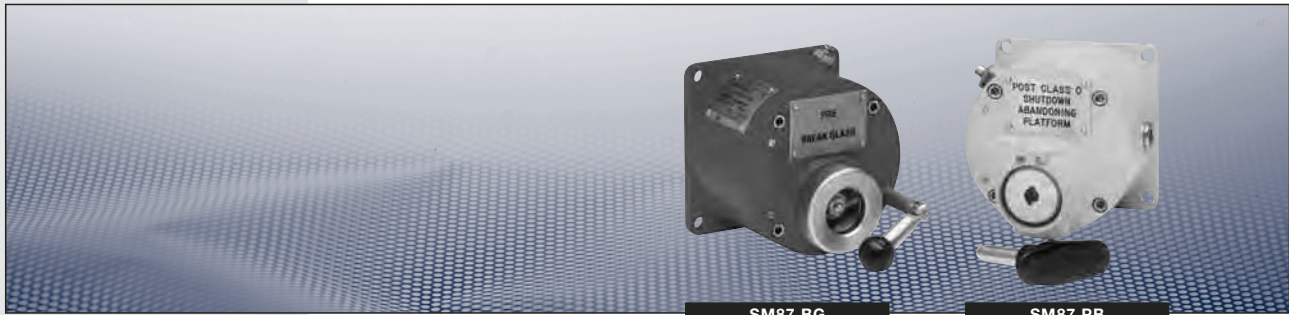
CSA Exe -50 °C to +40 °C

Resistor values 470 Ω minimum (DC and IS only)



(A) Pushbutton Version
(B) Breakglass Version

* includes ATEX, GOST and Chinese



SM87 BG

SM87 PB

EX - MANUAL CALL POINTS

| SM87 BG | SM87 PB |

11.9

Ordering details

Catalogue No.	Certification	Description	Ordering Code
SM87BGLAD1B1NNR	ATEX Ex II 2GD	Break glass call point, Ex II 2GD, EExd IIC T6, IP 66 & 67, 1 x M20 bottom entries, duty label, "Fire Breakglass", alloy material, red finish	PX 16200174
SM87PBLAUL3T3B3NNR	UL, CSA, Class I, Div 1, Groups C & D, Zone 1	Explosion protected, 2 x 1/2" NPT entries, duty label "Fire-Press Here", single push button switch-latching, marine grade alloy, red finish	PX 36200102

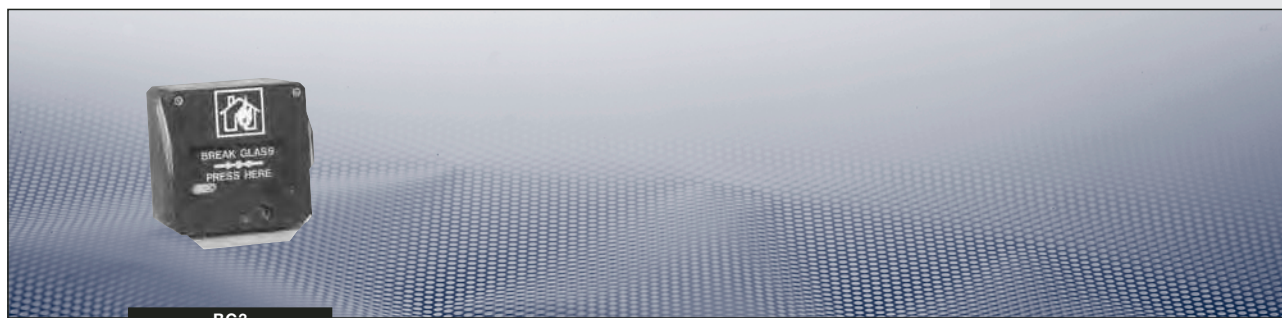
Ordering Options*

Unit	Model	Code	Material	Code	Cert.	Code	Entries	Code	Duty	Code	Tag	Code	Features	Code	Finish	Code
Type									label		label					
SM 87	Breakglass		SS 316	S	EEx ia IIC T4	I	20 mm	1	Fire-Break-		required	Y	Not required	N	Red	R
	unit, latching	BGL	Alloy	A	EEx d IIC T6	D	25 mm	2	glass	1	not		LED	A	Blue	B
	Lift flap				UL	UL	1/2" NPT	3	Push-		required	N	Resistor		Yellow	Y
	Breakglass				CSA - Exd	DC	3/4" NPT	4	Button	2			Series	X	Yellow/	
	latching	LBGL			CSA - Exi	IC	Top	T ¹⁾	Button	3			Resistor		Black	
	Push Button				GOST 'K' Exi	IK	Bottom	B ¹⁾	Fire-push				EOL	H	Stripes	X
	Latching				GOST 'R' Exi	IG	RHS	R ¹⁾	Button	4			Diode	D ²⁾	Special	
	key reset	PBL			GOST 'R' Exd	DG	LHS	L ¹⁾	Other	O			3 pole c/o		Finish	S
	Push Button				Chinese Exi	IQ			None	N			switch	T		
	self reset	PBM			Chinese Exd	DQ							4 pole c/o	F		

¹⁾ prefix position with size code (1T, 1B, 1R, 1L) i.e. 1T 1B = 20 mm Top and Bottom

²⁾ Specify values

* For more options see www.medc.com or contact your local representative



BG3

11.10

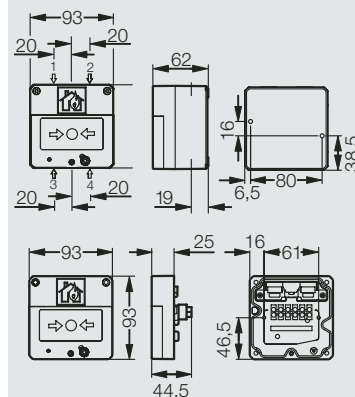
Ex - BREAK GLASS CALL POINT

| BG3 |

Technical data

Type BG3


EC-Type Examination Certificate	BAS 00 ATEX 1067X
Marking to 94/9/EC	II 1G EEx ia IIC T4
Chinese Certification	CQST Ex ia IIC T4
Enclosure material	UV resistant glass reinforced polyester
Finish	Natural Red GRP or painted*
Optional indicator	A red high intensity LED can be fitted to indicate operation on versions up to 24 V and all "IS" versions
Rated voltage	up to 28 V (IS)
Entries	2 x M20 bottom
Weight	0.5 kg
Rated terminal cross section	6 x 4.0 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature	-55 °C to +55 °C (BGE)
Resistor values	470 Ω min.



Ordering details

Catalogue No.	Certification	Description	Ordering Code
BG3I1NBN	ATEX Ex II 1G	Explosion protected, Zone 0, 1 & 2, DC, standard models are surface mount version, have 2 x M20 bottom entries, single break glass switch latching, duty label "Burning House", red GRP finish	PX 800007

Ordering Options*

Model	Certification	Code	Labels type ¹⁾	Code	Features	Code	Entries	Code	Body colour	Code
BG3I	EEx ia	I	Fire break glass		None	N	2 x 20 mm		Natural Red*	N
	CQST	Q	"Press here"	1	Resistor series	S	(bottom)	B²⁾	Red Paint	R
			Break glass		Resistor EOL	E	2 x 20 mm		Blue	B
			"Press here"	2	Diode	D	(top)	T²⁾	Green	G
			Special	3	Polycarbonat Lift Lap	F			White	W
			European		Stainless steel Lift Lap	C			Yellow	Y
			Standard (draft)		LED	L			Special	S
			⇌○⇌	4	Double changeover	T				
			Duty label (special)		Flush Mounting (weatherproof only)	M				
			(Burning house )		Glass substitute (for use during inst.)	G				
			as standard)	5	Plastic Element					
			Tag label	6	(replaces break glass)	P				

³⁾ Specify wording on '3', '5' & '6'

²⁾ For blanking plugs add "P" to code.

* For more options see www.medic.com or contact your local representative

S T A T U S L A M P S

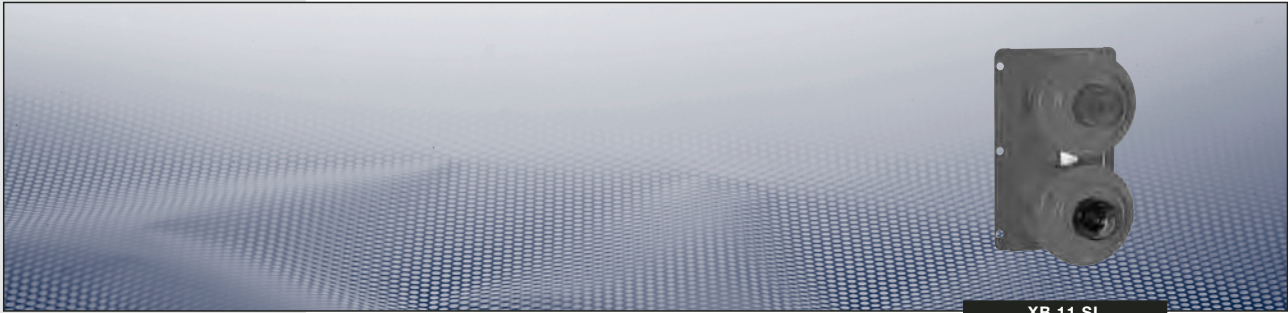
Explosion protected units for Zone 0, 1, 2 and 22

These ranges of versatile status lights have been designed to suit various offshore and onshore applications. Available as LED, xenon, filament and fluorescent beacons. The SM87 SL range is manufactured in marine grade alloy and the XB11/XB 12 SL in corrosion-free GRP to provide a wide range of status lights to suit clients' requirements. All units can be supplied as 1, 2, 3, 4 or 5 way.

A long life, high intensity, LED version is now available.



Zone 1 and Zone 2 use
BASEEFA certified
UL listed for USA and Canada –
Class I, Div. 1 & 2, Groups C & D. –
Class I, Zone 1, AExd IIB T6
CSA certified
GOST 'R' & 'K' certified
Chinese (CQST) certified
IP66 & 67
Certified temperature –55°C to +70°C
LED, xenon, fluorescent, filament
Marine grade alloy or GRP
Close-coupled and pre-wired to
customer's requirements

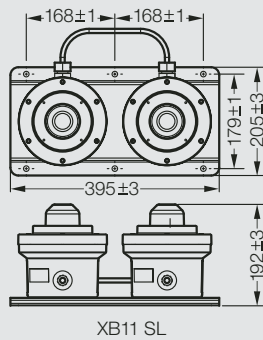


XB 11 SL

E X - S T A T U S L A M P S

11.13

XB 11 SL Range



XB11 SL

Technical data

Type XB 11 SL Range

EC-Type Examination Certificate	BAS 99 ATEX 2195X
Marking to 94/9/EC	Ex II 2G/D EEx d IIB T*
UL Listed for USA and Canada	Class I, Div 2, Groups C & D Class I, Zones 1 & 2
Listing No.	E187894
Chinese Certified	Ex d IIB T5/T6
Enclosure material	UV stable, glass reinforced polyester
Finish	Natural Black or Epoxy paint to customers specification
Lens	Glass
Lamp types	Xenon 5 joules maximum Fluorescent 10 W or 5 W Filament 10 W maximum
Rated voltage	Xenon 24 V DC/110, 240 V AC Filament Voltages 24, 48 V DC/110, 220, 240, 254 V AC Fluorescent Voltages 24 V DC, 240 V AC
Lamp Colours	Red, amber, yellow, green, blue or clear
Light module	1 to 5 ways
Entries	1 x M20
Rated terminal cross section	max. 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Insulation class	I
Permissible ambient temperature	-55 °C to +70 °C

* see table below

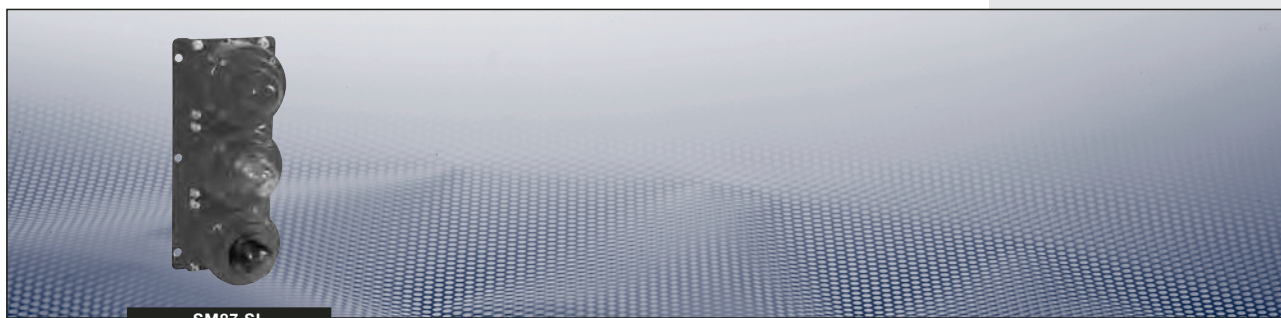
Ordering details*

Catalogue No.	Certification	Description	Ordering Code
XB11SL3	UL Listed, Class I, Div 2, Groups C & D	Explosion protected, 3 stack, one 1/2" NPT entry on bottom, 24V DC, green incandescent on top, yellow xenon flashing in middle, red xenon flashing on bottom, no lens guards, red finish	PX 42500005

Temperature classifications

Type ...	Lamp	Ambient temperature	Temperature Classification (G/D) at Tamb.			
		-55 °C	-20 °C	+40 °C	+55 °C	+70 °C
XB11SL	Filament	X	X	T6/T 85 °C	T5/T 100 °C	–
XB11SL	Fluorescent	–	X	T5/T 100 °C	T4/T 135 °C	–
XB11SL	Xenon	X	X	T6/T 85 °C	T5/T 100 °C	T4/T 135 °C

* For more options see www.medc.com or contact your local representative



SM87 SL

11.14

E X - S T A T U S | L A M P S

| SM87 SL |

Technical data

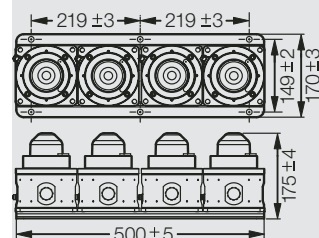
Type SM87 SL

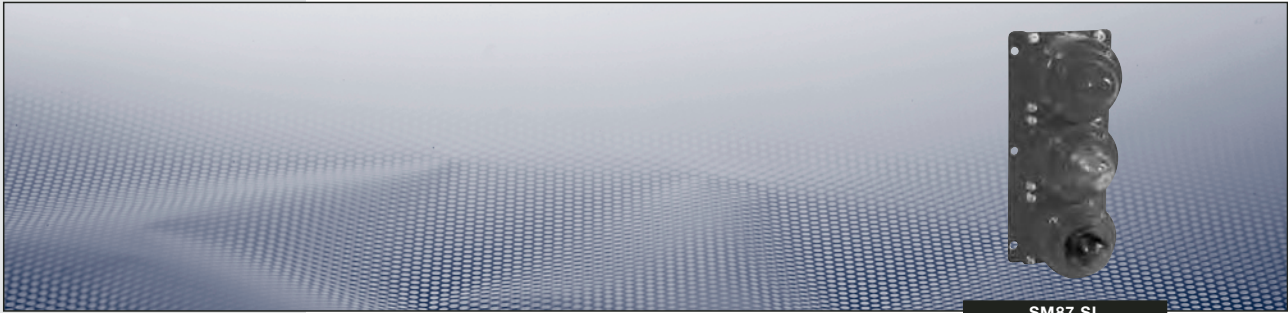
EC-Type Examination Certificate	Baseefa 03 ATEX 0222X
Marking to 94/9/EC	Ⓔ II 2G/D EEx d IIC T*
UL Listed	Class I, Div 1, Groups C & D Class I, Zone 1, AExd IIB T6
Listing No.	E187894
CSA Certified	Class I, Div 1
GOST 'R' & 'K'	Certified – Zones 1 & 2 IP 66 & 67
NEMA	4 x 6
Enclosure material	LM 25 TF Marine Grade Alloy
Finish	Epoxy paint finish as standard or to customer's specification
Lens	Glass
Lamp types	Xenon 5 joules maximum Fluorescent 10 W or 5 W Filament 40 W maximum
Rated voltage	Xenon 24, 48 V DC/110, 120, 240, 254 V AC Filament Voltages 12, 24, 48 V DC/110, 220, 240, 254 V AC Fluorescent Voltages 12, 24, 48 V, 220, 240, 254 V AC
Lamp Colours	Red, amber, yellow, green, blue or clear
Light module	1 to 5 ways
Entries	Up to 3 x M20 or M25 3 x 1/2" or 3/4" NPT
Rated terminal cross section	max. 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature	LED and fluorescent -25 °C to +55 °C* Xenon & filament -55 °C to +70 °C

* see table below

Temperature classifications

Type	Lamp	Voltage	Watts	Temperature Classification (G/D) at Tamb. -25 °C to +... °C		
				+40 °C	+55 °C	+70 °C
SM 87 SL	Filament	240 AC	48	T4/T 135 °C	T3/T 200 °C	–
SM 87 SL	Fluorescent	254 AC	10	T5/T 100 °C	T4/T 135 °C	–
		240 AC				
		110/120 AC	5	T6/T 85 °C	T5/T 100 °C	–
		12, 24, 48 DC				
SM 87 SL	Xenon	110, 240, 254 AC	11	T6/T 85 °C	T4/T 135 °C	T4/T 135 °C
		12, 24, 30, 48 DC				





SM87 SL

E X - S T A T U S L A M P S

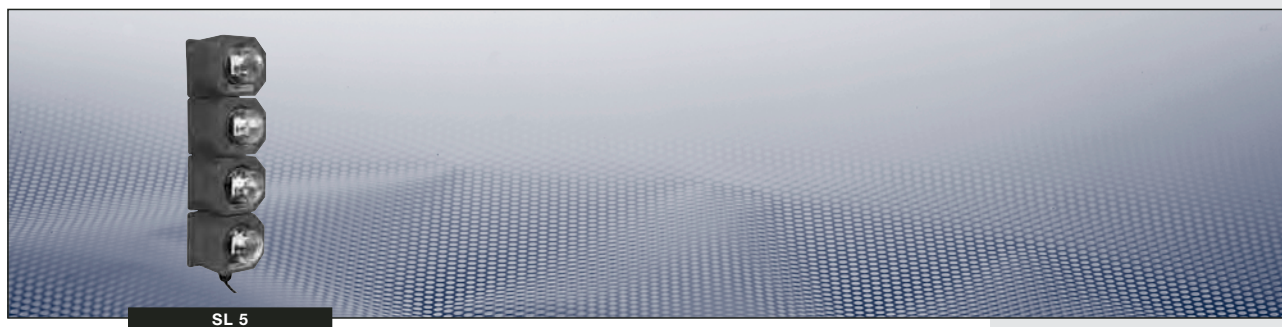
11.15

SM87 SL

Ordering details*

Catalogue No.	Certification	Description	Ordering Code
SM87SL2	UL, cUL Listed, Class I, Div 1, Groups C & D	Xenon status lamp, two stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200055
SM87SL2	UL, cUL Listed, Class I, Div 1, Groups C & D	Incandescent status lamp, two stack 40 watt beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200056
SM87SL2	UL, cUL Listed, Class I, Div 1, Groups C & D	Fluorescent status lamp, two stack 5 watt beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200057
SM87SL2	UL, cUL Listed, Class I, Div 1, Groups C & D	Xenon status lamp, two stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200058
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Explosion protected, 3 stack, one 1/2" NPT entry on bottom, no lens guards, xenon strobe with red, green, and clear lens	PX 26200043
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Xenon status lamp, three stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200059
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Incandescent status lamp, three stack 40 watt beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200060
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Fluorescent status lamp, three stack 5 watt beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200061
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Xenon status lamp, three stack 5 joule beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200062
SM87SL3	UL, cUL Listed, Class I, Div 1, Groups C & D	Fluorescent status lamp, three stack 5 watt beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, one 1/2" NPT entry in the bottom unit for customer connection	PX 26200063

* For more options see www.medc.com or contact your local representative



SL 5

11.16

E X - S T A T U S L A M P S

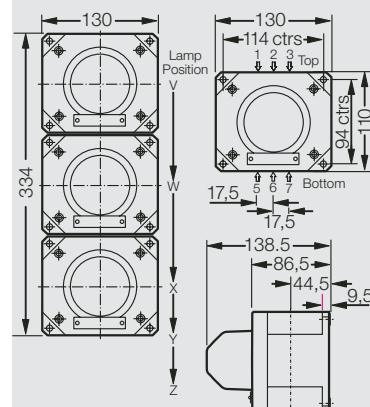
| SL 5 |

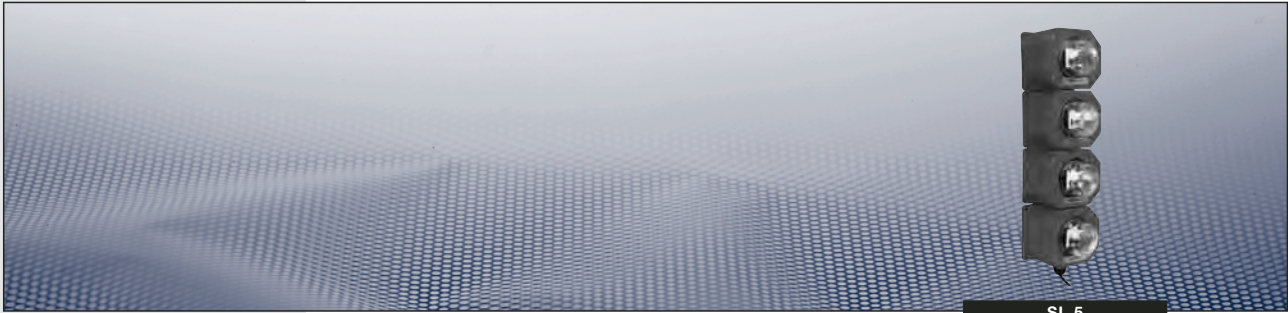
Technical data

Type SL 5

EC-Type Examination Certificate	BAS 02 ATEX 2108X
Marking to 94/9/EC	Ⓔ II 2G EEx e*
Chinese (CQST)	Exem II T4, LED Exe II T3, Filament Exem II T4, Xenon
Enclosure material	UV stable, glass reinforced polyester
Finish	Body natural black or painted to client specifications
Lens	Polycarbonate
Lamp types	Xenon 1 joules maximum Fluorescent 2 x 5 W Filament 400 W maximum
Rated voltage	Xenon 24, 48 V DC Filament Voltages 12, 24, 48 V DC/110, 220, 240, 254, 260 V AC LED 12, 24 V AC
Lamp Colours	Filament and Xenon Red, amber, yellow, green, blue or clear LED Red, amber or green
Light module	1 to 5 ways
Entries	max. 2 x M16 or M20/max. 1 x M20/M32
Rated terminal cross section	max. 12 x 4 mm ² /16 x 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Insulation class	I
Permissible ambient temperature	LED -40 °C to +45 °C* Xenon & filament -40 °C to +55 °C

* see table temperature classifications page 3.17





SL 5

E x - S T A T U S L A M P S

11.17

| SL 5 |

Temperature classifications

Type	Lamp	Voltage	Watts	Temperature Classification (G/D) at Tamb. -25 °C to +... °C		
				+40 °C	+55 °C	+70 °C
SL 5	Filament	240 AC	48	T4/T 135 °C	T3/T 200 °C	–
SL 5	Fluorescent	254 AC	10	T5/T 100 °C	T4/T 135 °C	–
		240 AC	10	T5/T 100 °C	T4/T 135 °C	–
		110/120 AC	5	T6/T 85 °C	T5/T 100 °C	–
		12, 24, 48 DC	5	T6/T 85 °C	T6/T 85 °C	–
SL 5	Xenon	24, 48 DC	11	T6/T 85 °C	T4/T 135 °C	T4/T 135 °C
SL 5	LED	24, 48 DC	4	T6/T 85 °C	T4/T 135 °C	–
	LED blue	24, 48 DC	5, 6	T6/T 85 °C	T4/T 135 °C	–

Ordering Options *

Unit	Type	Code	Lamp Type Position ¹⁾	Code	Voltage	Code	Cable entries	Code	Duty/Tag label	Code	Finish	Code
			V W X Y V Z									
SL5	EExe(m)	E	Filament	1	12 V DC	012	M16	A ²⁾	Duty label	D ³⁾	Natural Black	N
	Chinese		Xenon	2	24 V DC	024	M20	B ²⁾	Tag	T ³⁾	Special	S ⁴⁾
	(CQST)	Q	LED	3	48 V DC	048	M25	C ²⁾	None	N ³⁾		
			LED flashing	4	110 V DC	110	M32	D ²⁾				
			Suffixed by colour required		220 V DC	220						
			Red	R	240 V AC	240						
			Amber	A	254 V AC	254						
			Yellow	Y	260 V AC	260						
			Blue	B								
			Green	G								
			Clear	C								

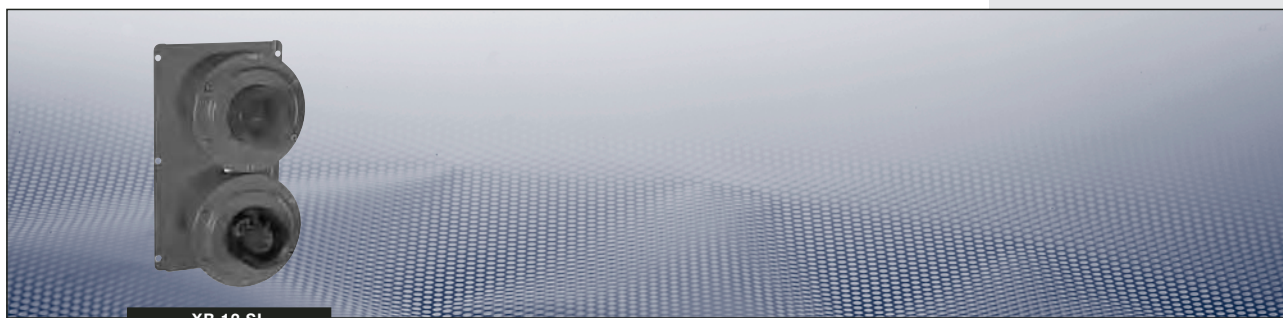
¹⁾ Select lamp type and lens colour for each position e.g. ☐ V ☐ W ☐ X ☐ Y ☐ V ☐ Z
2R 2G 2Y -- --

²⁾ Prefix with cable entry position

³⁾ Specify wording

⁴⁾ Please specify

* For more options see www.medc.com or contact your local representative



XB 12 SL

11.18

E X - S T A T U S L A M P S

| XB 12 SL Range |

Technical data

Type XB 12 SL Range

EC-Type Examination Certificate	BAS 99 ATEX 2196
Marking to 94/9/EC	⊕ II 2G EEx d IIB T*
UL Listed for USA and Canada	Class I, Div 2, Groups C & D Class I, Zones 1 & 2 AExd IIB T4/T5
Listing No.	E187894
Enclosure material	UV stable, glass reinforced polyester
Finish	Natural Black or Epoxy paint to customers specification
Lens	Glass
Lamp types	Xenon 21 joules maximum Filament 60 W maximum
Rated voltage Xenon	24 V DC/110, 240 V AC
Filament Voltages	110, 240 V AC
Lamp Colours	Red, amber, yellow, green, blue or clear
Light module	1 to 5 ways
Entries	2 x M20 1 x 1/2" NPT
Rated terminal cross section	max. 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Insulation class	I
Permissible ambient temperature	-55 °C to +70 °C

* see table below

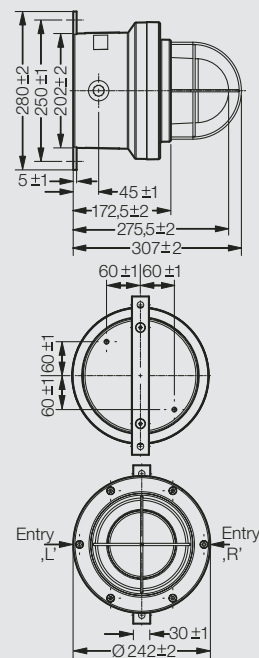
Ordering details*

Catalogue No.	Certification	Description	Ordering Code
XB12SL2	UL Listed, Class I, Div 2, Groups C & D	24V DC xenon status lamp, two stack 21 joule beacons interconnected on a painted red stainless steel baseplate, one red and one green lens color, 1/2" NPT entry	PX 42600007
XB12SL3	UL Listed, Class I, Div 2, Groups C & D	110V AC, explosion protected, three stack, one 1/2" NPT entries, red xenon flashing on top, amber xenon flashing in middle, clear xenon flashing on bottom; no lens guards, red finish	PX 42600001
XB12SL3	UL Listed, Class I, Div 2, Groups C & D	24V DC xenon status lamp, three stack 21 joule beacons interconnected on a painted red stainless steel baseplate, one red, one amber and one green lens color, 1/2" NPT	PX 42600009

Temperature classifications

Type ...	Lamp	Ambient temperature		Temperature Classification (G/D) at Tamb.		
		-55 °C	-20 °C	+40 °C	+55 °C	+70 °C
XB12SL	Filament	X	X	T5	T4	—
XB12SL	Xenon	X	X	T5	T5	T4

* For more options see www.medc.com or contact your local representative



BEACONS AND STROBES

Explosion protected units for Zone 0, 1, 2, 22, Class I and Div 1 & 2

These certified beacons have been designed for use in harsh environmental conditions. The stainless steel or marine grade alloy enclosures are suitable for use offshore or onshore, where light weight combined with corrosion resistance and strength is required.

The glass reinforced polyester enclosures are suitable for use offshore or onshore, where light weight combined with corrosion resistance is required.

Units can be painted to customer specification and fitted with identification labels. LED version available, offering extended lifetimes.

Stainless Steel screws and mounting bracket are incorporated ensuring a totally corrosion free unit. Units can be painted to customer specification and supplied with identification labels.



IP66 and IP67

Certified Temperature -55°C to +55°C

Corrosion Free GRP

UL Listed for USA and Canada –

Hazardous locations: Class I, Div 1 & 2, Groups C & D. Class I, Zones 1 & 2,

AExd IIB T4/T5. – Ordinary locations:

Visual-Signal Device

Australian (SAA) certified

Chinese (CQST) certified

NEMA 4x, & 6

Various lens colours

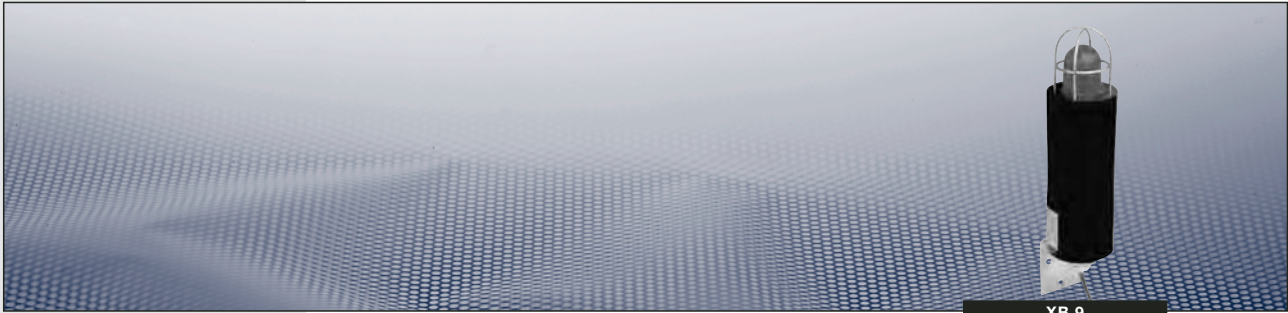
Optional lens guard

Optional gland plus cable tail

Stainless steel mounting

bracket on request

Replaceable tube

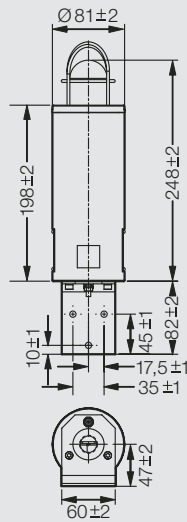


XB 9

E x - 5 J O U L E F L A S H I N G X E N O N

| XB 9 |

11.21



Technical data

Type XB 9

EC-Type Examination Certificate	BAS 00 ATEX 2031
Marking to 94/9/EC	Ⓔ II 2G/D EEx d IIC T5/T6 T100 °C/T 135 °C
Enclosure material	Corrosion-free GRP
Lens material	Thougened glass
Finish	Natural black or painted to customer specification
Rated voltage	12 - 48 V DC/110 - 254 V AC 50/60 Hz
Power consumption	DC 12 V 9 mA DC 24 V 8 mA DC 48 V 9 mA AC 110 V 11 mA AC 240 V 15 mA AC 254 V 15 mA
Flash rate	1 Hz
Entries	1 entry, M20
Weight	1.6 kg
Rated terminal cross section	3 x 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Insulation class	I
Permissible ambient temperature	from -55 °C to +55 °C

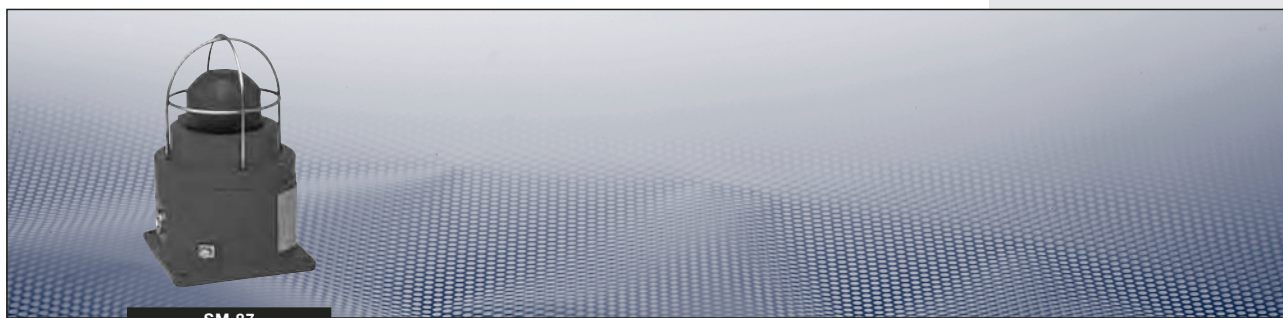
Ordering details

Catalogue No.	Certification	Description	Ordering Code
XB9D02406RYNCBN	ATEX Approved Ex II 2G, EExd, IIC, T5	5 joules, 24 V DC, red lens, lens guard, S/S mounting bracket, GRP body, 1 x M20 entry + 3 m cable, 60 flashes/min., no labels	PX 819105
XB9D02406AYNCBN	ATEX Approved Ex II 2G, EExd, IIC, T5	5 joules, 24 V DC, amber lens, lens guard, S/S mounting bracket, GRP body, 1 x M20 entry + 3 m cable, 60 flashes/min., no labels	PX 819106
XB9D24006RYNCBN	ATEX Approved Ex II 2G, EExd, IIC, T5	5 joules, 240 V DC, red lens, lens guard, S/S mounting bracket, GRP body, 1 x M20 entry + 3 m cable, 60 flashes/min., no labels	PX 819107
XB9D24006AYNCBN	ATEX Approved Ex II 2G, EExd, IIC, T5	5 joules, 240 V DC, amber lens, lens guard, S/S mounting bracket, GRP body, 1 x M20 entry + 3 m cable, 60 flashes/min., no labels	PX 819108

Ordering Options*

Model	Voltage	Code	Flash rate	Code	Lens colour	Code	Lens guard	Code	Tag/Duty label	Code	Entries/cable tail	Code	Finish	Code
XB9D	DC 12 V	012	60/min.	06	Red	R	None	N	None	N	1 x M20	1B	Natural Black	N
	DC 24 V	024			Blue	B	Yes	Y	Yes	Y	1 x PG 13.5	1P	Red	R
	DC 48 V	048			Green	G					3 m cable	CB	Blue	B
	AC 110 V	110			Yellow	Y							Yellow	Y
	AC 240 V	240			Amber	A							Grey	G
	AC 254 V	254			Clear	C							White	W
													Special finish	S

* For more options see www.medc.com or contact your local representative



SM 87

11.22

E x - 5 J O U L E F L A S H I N G X E N O N

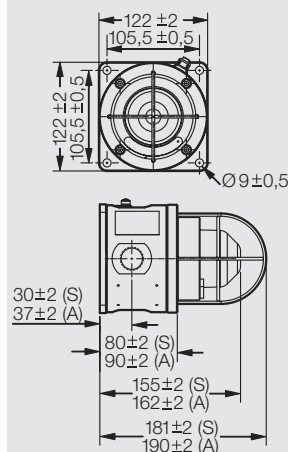
| SM 87 |

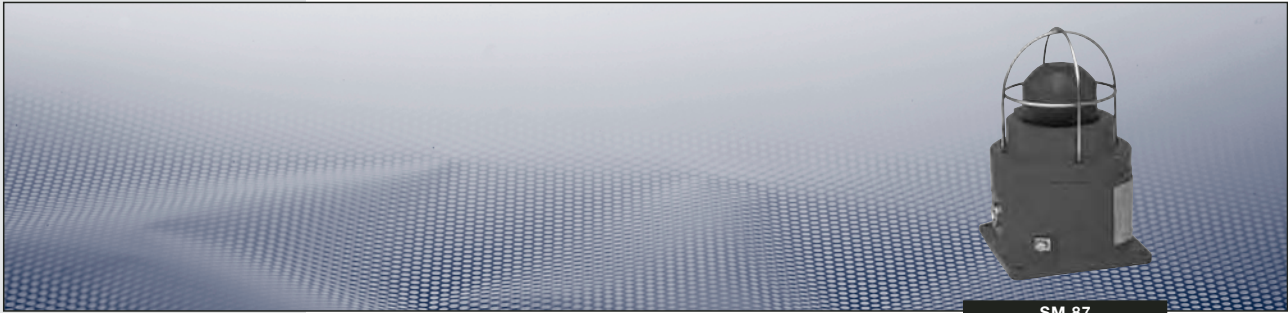
Technical data

Type SM 87

EC-Type Examination Certificate	Baseefa 03 ATEX 0222		
Marking to 94/9/EC	II 2G/D EEx d IIC T4/T6 T85 °C/T 135 °C		
CSA Certification to	C22.2 Nos. 0, 0.4, 0.5, 9, 30-M1986, 94-M91, 137-M-1981 Class I, Div 1, Group D, Enclosure 3/4		
Cert. No.	96406 (HXB only)		
UL Listed for USA & Canada	Class I, Div 1, Groups C & D Class I, Zone 1 (HXB & XBT only)		
Listing No.	E187894		
GOST 'R' Certification	1Exd IIC T4 (HXB only) Russian Fire Approved (VNIIPO)		
GOST 'K' Certification	Exd IIC T4		
Chinese (CQST) Certification	Exd IIC T4/T6 (HXB only)		
Enclosure material	Marine Grade Alloy or Stainless Steel		
Lens material	Glass*		
Finish	Red epoxy painted finish as standard		
Rated voltage	24 V - 48 V DC/110 - 254 V AC 50/60 Hz		
Power consumption	DC 24 V 7.2 W DC 48 V 7.6 W		
tube 5 joule	AC 110 V 25 W AC 120 V 27 W AC 220 V 25 W AC 240 V 27 W AC 254 V 35 W		
Initiation	Telephone or relays initiated		
Entries	up to 4 entries, M20 or M25 up to 4 x 1/2" or 3/4" NPP		
Rated terminal cross section	6 x 2.5 mm ²		
Protection category to EN 60529	IP 66/IP 67		
Insulation class	I		
Permissible ambient temperature	ATEX	HXB	-55 °C to +70 °C
		LED	-20 °C to +40 °C
		XBT (High temp.)	-40 °C to +85 °C
	CSA Certified		-50 °C to +40 °C
	UL	HXB	-55 °C to +70 °C
		XBT (High temp.)	-40 °C to +85 °C
	GOST 'R'	HXB	-55 °C to +55 °C

* Optional with lens guard





SM 87

E x - 5 J O U L E F L A S H I N G X E N O N

| SM 87 |

11.23

11

Ordering details

Catalogue No.	Certification	Description	Ordering Code
SM87HXBAB024AN1R1LNNR	ATEX EX II 2GD EEx d IIC	5 joules, 24 V DC, amber lens, 2 x M20 Entries, 29 Cd	PX 813006
SM87HXBAB024RN1R1LNNR	ATEX EX II 2GD EEx d IIC	5 joules, 24 V DC, red lens, 2 x M20 Entries, 29 Cd	PX 813005
SM87HXBAB240AN1R1LNNR	ATEX EX II 2GD EEx d IIC	7 joules, 240 V AC, amber lens, 2 x M20 Entries, 39 Cd	PX 813008
SM87HXBAB240RN1R1LNNR	ATEX EX II 2GD EEx d IIC	7 joules, 240 V AC, red lens, 2 x M20 Entries, 39 Cd	PX 813007
SM87LEDAB024RN1R1LNNR	ATEX EX II 2GD	24 V DC, red lens, 2 x M20 entries, 192 Cd	PX 813009
SM87HXBAUL024AN3R3LNNR	UL, cUL Listed, Class I, Div 1, Groups C & D	Standard models are in alloy, red body color, no tag or duty labels, 2 x 1/2" NPT entries, 29 Cd	PX 869162
SM87HXBAUL024RN3R3LNNR	UL, cUL Listed, Class I, Div 1, Groups C & D	Standard models are in alloy, red body color, no tag or duty labels, 24 V DC, red lens, 2 x 1/2" NPT entries, 29 Cd, 60 flashes per minute	PX 869161
SM87HXBAUL110AN3R3LNNR	UL, cUL Listed, Class I, Div 1, Groups C & D	Standard models are in alloy, red body color, no tag or duty labels, 110 V AC, amber lens, 2 x 1/2" NPT entries, 32 Cd, AExd IIB	PX 869166
SM87HXBAUL110RN3R3LNNR	UL, cUL Listed, Class I, Div 1, Groups C & D	Standard models are in alloy, red body color, no tag or duty labels, 110 V AC, red lens, 2 x 1/2" NPT entries, 32 Cd, AExd IIB	PX 869165

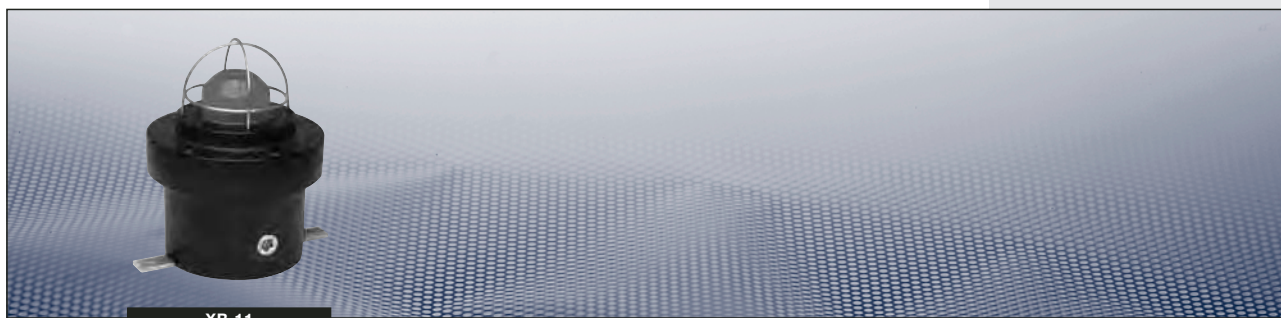
Ordering Options*

Model	Code	Certi- fication	Code	Voltage	Code	Lens colour	Code	Lens guard	Code	Entries	Code	Tag/ duty label	Code	Initiate Option	Code	Finish	Code
SM87																	
Xenon		ATEX	B	DC 24 V	024	Red	R	None	N	20 mm	1	None	N	Telephone	T	Red	R
(stainless steel)		UL	UL	DC 48 V	048	Blue	B	Yes	Y	25 mm	2	Yes	Y	Relay	R	Blue	B
	HXBS	CSA	C	AC 110 V	110	Green	G			1/2" NPT	3			EOL		Yellow	Y
Xenon (alloy)	HXBA	GOST 'R' ¹⁾	G	AC 120 V	120	Amber	A			3/4" NPT	4			Resistor	E	Yellow/	
Xenon High Temp. (alloy)	XBTA	GOST 'K'	K	AC 230 V	230	Yellow				Top (only on HXB)	T²⁾			None	N	Black	
Xenon High Temp. (stainless steel)	XBTS	Chinese (CQST)	Q	AC 240 V	240	(not LED)	Y			Bottom	B²⁾					stripe	X
				AC 254 V	254	Clear				RHS	R²⁾					Grey	G
						(not LED)	C			LHS	L²⁾					White	W
LED EEx d (stainless steel)	LEDS															Special finish	S
LED EEx d (alloy)	LEDA																

¹⁾ Only HXBS is available CSA certified. Only HXBA & XBTA is available UL certified.

²⁾ Prefix position with entry size code. e.g. 1R1B = 20 mm Right and Bottom entries.

* For more options see www.medc.com or contact your local representative



XB 11

11.24

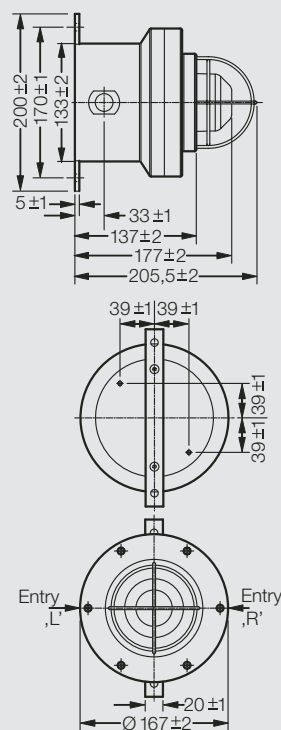
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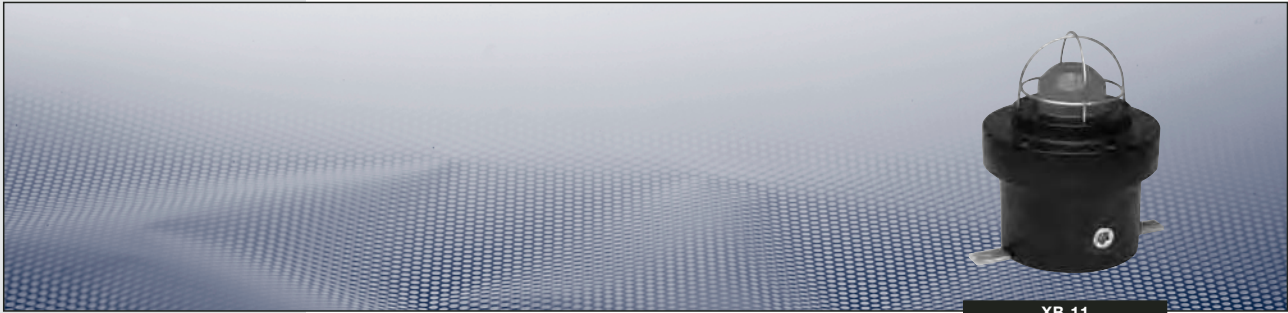
| XB 11 |

Technical data

Type XB 11

EC-Type Examination Certificate	BAS 99 ATEX 2195X/3
Marking to 94/9/EC	Ⓔ II 2G/D EEx d IIB T4*
UL Listed for USA and Canada	Class I, Div 2, Groups C & D Class I, Zones 1 & 2 AExd IIB T4/T5
UL Listing No	E187894
GOST 'R' Certification	1Exd IIB T4/T5//T6
Chinese (CSQT) Certification	Exd IIB T5/T6
Enclosure material	Corrosion-free GRP
Lens material	Glass
Finish	Natural black or painted to customer specification
Rated voltage	24 V DC/110 - 240 V AC 50/60 Hz
Power consumption tube 5 joule	DC 24 V 8 W AC 110 V 11 W AC 240 V 18 W
Initiation	Optional telephone or relays initiated
Entries	up to 2 x M20 up to 2 x 1/2" NPT
Weight	2.5 kg
Rated terminal cross section	6 x 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature*	T6 T85 °C: -55 °C to +40 °C T5 T100 °C: -55 °C to +55 °C T4 T135 °C: -55 °C to +70 °C





XB 11

E x - 5 J O U L E F L A S H I N G X E N O N

| XB 11 |

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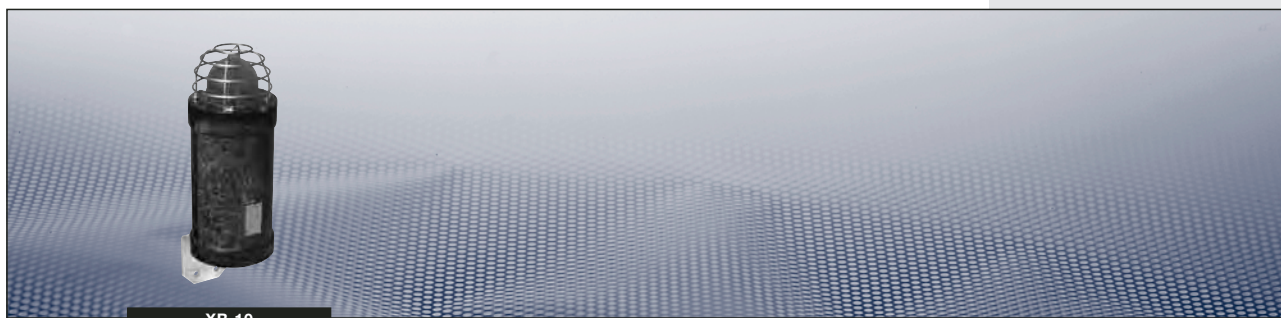
Ordering details

Catalogue No.	Certification	Description	Ordering Code
XB11B02406ANBNNNN	ATEX EX II 2GD EEx d IIB	GRP, natural black body, no tag or duty labels, backstrap mounting, 24 V DC, amber lens 2 x M20 entries, 60 flashes per minute	PX 811102
XB11B02406RNBNNNN	ATEX EX II 2GD EEx d IIB	GRP, natural black body, no tag or duty labels, backstrap mounting, 240 AC, red lens, 2 x M20 entries, 60 flashes per minute	PX 811101
XB11B24006ANBNNNN	ATEX EX II 2GD EEx d IIB	GRP, natural black body, no tag or duty labels, backstrap mounting, 240 V AC, amber lens, 2 x M20 entries, 60 flashes per minute	PX 811104
XB11UL02406ANBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	No tag or duty labels, , 24 V DC, amber lens, 2 x 1/2" NPT entries, 60 flashes per minute, black finish	PX 869172
XB11UL02406CNBNNNN	UL, cUL Listed, Class I, Div 2, Groups C & D	No tag or duty labels, 24 V DC, clear lens, 2 x 1/2" NPT entries, 60 flashes per minute, black finish	PX 869173
XB11UL02406CNBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	No tag or duty labels, 24 V DC, clear lens, 2 x 1/2" NPT entries, 60 flashes per minute, red finish	PX 869174
XB11UL02406RNBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	No tag or duty labels, 24 V DC, red lens, 2 x 1/2" NPT entries, 60 flashes per minute, red finish	PX 869171
XB11UL11006RNBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	No tag or duty labels, 110 V AC, red lens, 2 x 1/2" NPT entries, 60 flashes per minute, red finish	PX 869175

Ordering Options*

Model	Certifi- cation	Code Voltage	Code Flash rate	Code Lens colour	Code Lens guard	Code Unit fixing	Code Earth conti- nuity	Code Tag/ Duty label	Code Options	Code Finish	Code
XB11	ATEX	B	DC 24 V 024	60/min. 06	Red R	None N	Direct	None N	Telephone	Natural	
	UL	UL	DC 48 V 048	Blue B	Yes Y	mounting D	Yes Y	Yes Y	initiate T	Black N	
	ATEX/UL		AC 110 V 110	Green G		Backstrap B			Blanking	Red R	
	Dual Listed	AU	AC 230 V 230	Amber A					plug P	Blue B	
	GOST 'R'	G	AC 240 V 240	Yellow Y					None N	Yellow Y	
	Chinese			Clear C						Grey G	
	(CQST)	Q								White W	
										Special	
										finish S	

* For more options see www.medc.com or contact your local representative



XB 10

11.26

E x - 1 0 / 1 5 J O U L E F L A S H I N G X E N O N

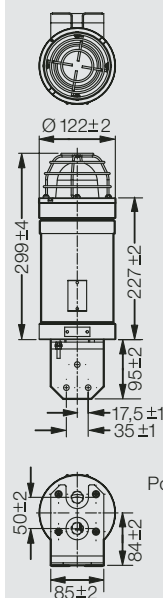
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Technical data

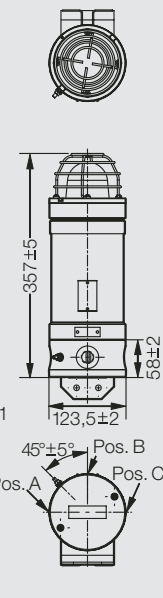
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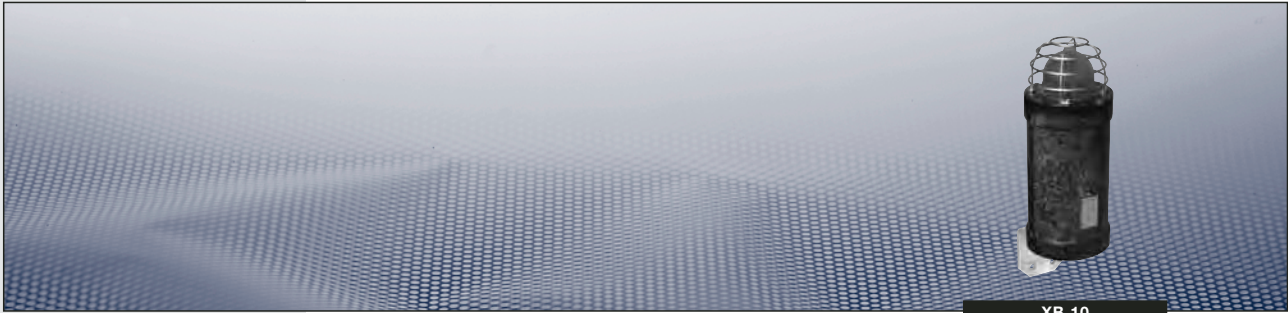
EC-Type Examination Certificate	BAS 00 ATEX 2204X (Ex d) BAS 00 ATEX 2226X (Ex ed)
Marking to 94/9/EC	II 2G EEx d IIB T4 II 2G EEx de IIB T4
GOST 'R' Certification	1Exd IIB T4/2Exde IIB T4 Russian Fire Alarm Approved (VNIPO)
Enclosure material	Corrosion-free GRP
Lens material	Thougened glass with lens guard
Finish	Natural black or painted to customer specification
Rated voltage	24 - 48 V DC/110 - 254 V AC 50/60 Hz
Power consumption	DC 24 V 16.8 mA DC 48 V 26.8 mA
(tube energy 15 joule)	AC 110 V 33 mADC AC 220 - 254 V 34.8 mA
Initiation	Optional telephone or relays initiated
Flash rate	1 Hz
Entries	2 entries, M20 (EEx d)/3 entries, M20 (EEx de)
Weight	2.8 kg (EEx d)/3.6 kg (EEx de)
Rated terminal cross section	4 x 2.5 mm ² (DC)/6 x 2.5 mm ² (AC)
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature	from -55 °C to +40 °C (EEx d)/from -50 °C to +40 °C (EEx de)

EExd Version



EExde Version





XB 10

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| XB 10 |

11.27

Ordering details

Catalogue No.	Certification	Description	Ordering Code
XB10D024FRNN2BN	ATEX Approved Ex II 2G, EExd, IIB, T5	15 joules, 24 V DC, red lens, bracket mounting, 2 x M20 Entries, black body, GRP body, 60 flashes/min., no labels	PX 811050
XB10D024FANN2BN	ATEX Approved Ex II 2G, EExd, IIB, T5	15 joules, 24 V DC, amber lens, bracket mounting, 2 x M20 Entries, black body, GRP body, 60 flashes/min., no labels	PX 811051
XB10D240FRNN2BN	ATEX Approved Ex II 2G, EExd, IIB, T5	15 joules, 240 V DC, red lens, bracket mounting, 2 x M20 Entries, black body, GRP body, 60 flashes/min., no labels	PX 811052
XB10D240FANN2BN	ATEX Approved Ex II 2G, EExd, IIB, T5	15 joules, 240 V DC, amber lens, bracket mounting, 2 x M20 Entries, black body, GRP body, 60 flashes/min., no labels	PX 811053

Ordering Options*

Model	Certification	Code	Voltage	Code	Power	Code	Lens	Code	Labels	Code	Options	Code	Entries	Code	Finish	Code
Colour																
XB10	EEx d	D	DC 24 V	024	10J	T	Red	R	None	N	Telephone		1 x M20	1B	Natural Black	N
	EEx de	E	DC 48 V	048	15J	F	Blue	B	Yes	Y	Initiate	T	1 x PG13.5	1P	Red	R
	GOST 'R' Exd	DG*	AC 110 V	110			Green	G			Earth		2 x M20	2B	Blue	B
	GOST 'R' Exe	EG*	AC 220 V	220			Yellow	Y			continuity	E	3 x M20	3B	Yellow	Y
			AC 240 V	240			Amber	A			3 m cable				Grey	G
			AC 254 V	254			Clear	C			tail	G			White	W
											None	N			Special finish	S

* For more options see www.medc.com or contact your local representative

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11.28

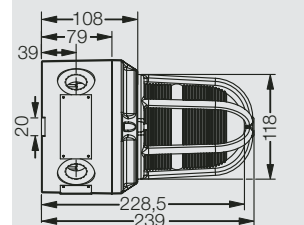
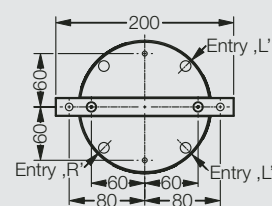
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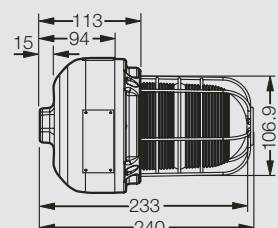
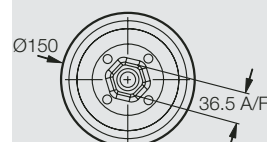
Technical data

Type XB 15

EC-Type Examination Certificate	Baseefa 04 ATEX 0009X		
Marking to 94/9/EC	Ⓔ II 2G/D EEx d IIC T*		
UL Listed for USA and Canada	Class I, Div 2, Groups A, B, C & D Class I, Zone 1, AExd IIC T4/T5		
UL listing No.	E187894		
Enclosure material	Corrosion-free GRP		
Lens material	Glass		
Finish	Natural black or painted to customer specification		
Rated voltage	24 - 48 V DC/110 - 254 V AC 50/60 Hz		
Rated current	DC 12 V	1.4 A	
(tube energy 15 joule)	DC 24 V	1.1 A	
	DC 48 V	0.4 A	
	AC 110 - 120 V	0.4 A	
	AC 230 - 240 V	0.2 A	
	AC 254 V	0.17 A	
Initiation	Optional telephone or relays initiated		
Flash rate	60 fpm, 80 fpm, 120 fpm		
Entries	2 entries M20 (standard) up to 2 x 1/2" or 3/4" NPT		
Weight	3.0 kg		
Rated terminal cross section	12 x 2.5 mm ² (direct mount)/8 x 2.5 mm ² (pipe mount)		
Protection category to EN 60529	IP 66/IP 67		
Insulation class	I		
Permissible ambient temperature*	T6 T85 °C: -55 °C to +40 °C		
	T5 T100 °C: -55 °C to +55 °C		
	T4 T135 °C: -55 °C to +70 °C		



Direct mounting

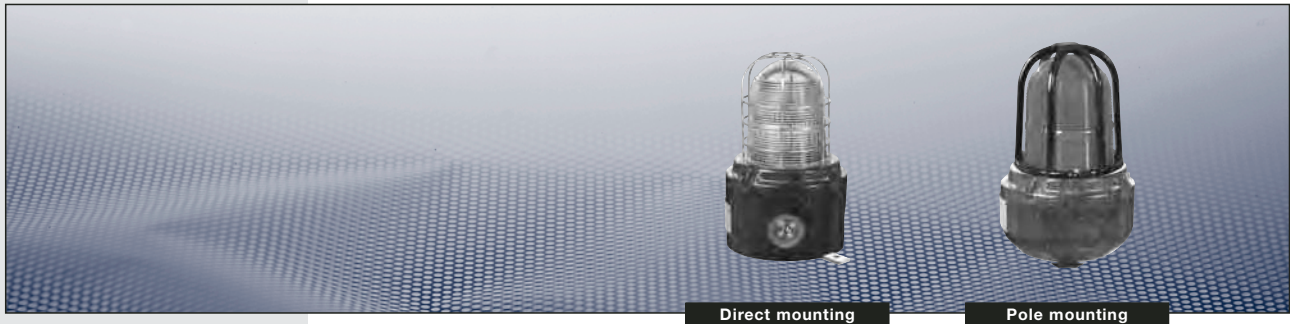


Pole mounting

Ordering Options*

Model	Certification	Code	Voltage	Code	Lens	Code	Lens	Code	Unit	Code	Fixing	Code	Unit	Code	Finish	Code
					flashlight		colour		guard					options		
XB 15	ATEX UL	B UL	DC 12 V	012	60	06	Red	R	None	N	Pipe mount	P	None	N	Natural black	N
			DC 24 V	024	80	08	Blue	B	Cast	C	Direct mount	D	Tag label	T	Red	R
			DC 48 V	048	120	12	Green	G	Wire	W	Direct w.		Duty label	D	Blue	B
			AC 110 V	110			Amber	A			backstrap	B	Relay initiate	R	Yellow	Y
			AC 120 V	120			Yellow	Y					Telephone		Green	G
			AC 230 V	230			Clear	C					initiate	I	White	W
			AC 240 V	240									Blanking		Special finish	S
			AC 254 V	254									plug	P		

* For more options see www.medic.com or contact your local representative



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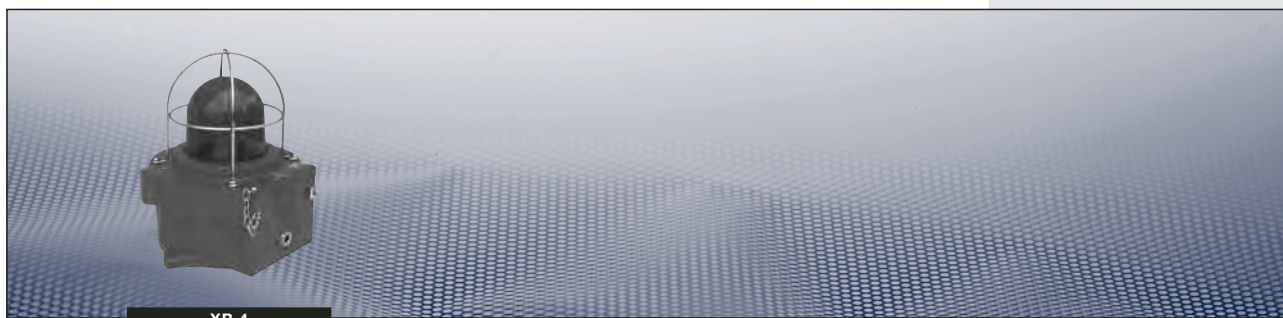
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11.29

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Ordering details

Catalogue No.	Certification	Description	Ordering Code
XB15UL02406AWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, amber lens	PX 27600046
XB15UL02406AWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, amber lens	PX 27600051
XB15UL02406BWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, blue lens	PX 27600044
XB15UL02406BWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, blue lens	PX 27600049
XB15UL02406CWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, clear lens	PX 27600042
XB15UL02406CWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, clear lens	PX 27600047
XB15UL02406GWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, green lens	PX 27600043
XB15UL02406GWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, green lens	PX 27600048
XB15UL02406RWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, red lens	PX 27600045
XB15UL02406RWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	24 V DC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, red lens	PX 27600050
XB15UL12006AWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, amber lens	PX 27600056
XB15UL12006AWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, amber lens	PX 27600060
XB15UL12006BWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, blue lens	PX 27600054
XB15UL12006BWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, blue lens	PX 27600059
XB15UL12006CWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, clear lens	PX 27600052
XB15UL12006CWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, clear lens	PX 27600057
XB15UL12006GWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, green lens	PX 27600053
XB15UL12006GWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, green lens	PX 27600058
XB15UL12006RWBNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, backstrap, 2 x 1/2" NPT entries, natural black enclosure, red lens	PX 27600055
XB15UL12006RWPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 60 flashes per minute, wire guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure, red lens	PX 27600029



XB 4

11.30

E x - 2 1 J O U L E F L A S H I N G X E N O N

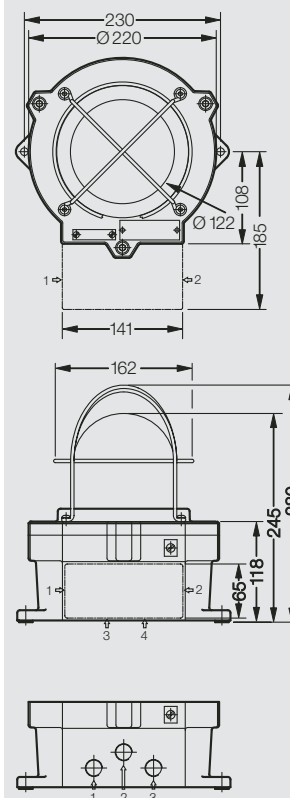
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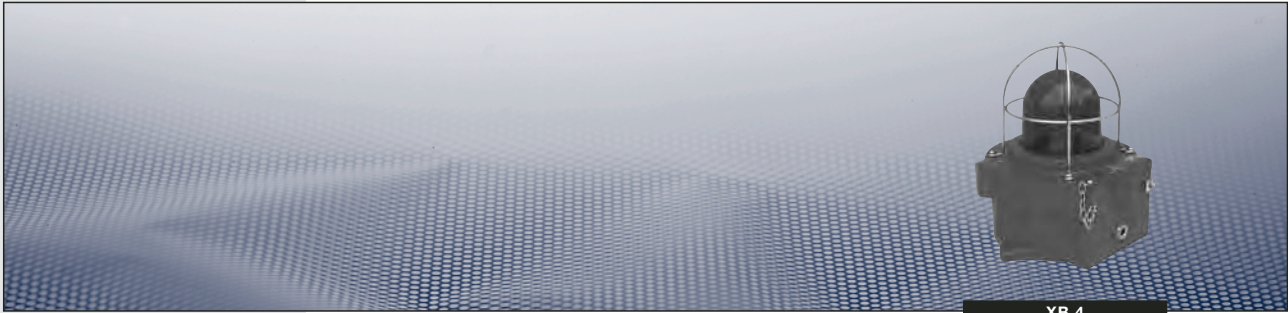
Technical data

Type XB 4

EC-Type Examination Certificate	Baseefa 02 ATEX 0224X
Marking to 94/9/EC	Ⓔ II 2G EEx d IIC T5
UL Listed for USA and Canada	Class I, Div 1, Groups C-D Class I, Zone 1
Listing No.	E187894
GOST 'R' Certification	1 Exd IIC T4 Russian Fire Approved (VNIIPO)
Enclosure material	Marine grade alloy or stainless steel
Lens material	Thougened glass
Finish	Red epoxy painted finish as standard
Rated voltage	24 - 110 V DC/110 - 254 V AC 50/60 Hz
Rated current	DC 24 V 1.4 A
(tube energy 21 joule)	DC 48 V 0.54 A
	DC 110 V 0.24 A
	AC 110 V 0.35 A
	AC 120 V 0.45 A
	AC 220 V 0.24 A
	AC 240 V 0.185 A
	AC 254 V 0.21 A
Initiation	Optional telephone or relays initiated
Flash rate	60 fpm, 120 fpm, 240 fpm
Entries	up to 3 entries, M20 or 2 entries M25 1/2" or 3/4" NPT
Weight	6.6 kg
Rated terminal cross section	8 x 10 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature	UL -25 °C to +70 °C ATEX & GOST -50 °C to +55 °C (EExde) -55 °C to +55 °C (EExd)

* Optional with lens guard





XB 4

E x - 2 1 J O U L E F L A S H I N G X E N O N

| XB 4 |

11.31

Ordering details

Catalogue No.	Certification	Description	Ordering Code
XB4BB8D2B3B06AN0RN1R	ATEX Approved Ex II 2G	21 joules, 24 V DC, red lens, 2 x M20 entries, 355Cd, 60 flashes per minute, no labels, red finish	PX 814001
XB4BH8D2B3B06AN0RN1R	ATEX Approved Ex II 2G	21 joules, 240 V AC, red lens, 2 x M20 entries, 355Cd, 60 flashes per minute, no labels, red finish	PX 814002
XB4ULB8D2E3E06ANAN1R	UL, cUL Listed, Class I, Div 1, Groups C & D	Marine grade alloy, 24 V DC, amber lens, 2 x 3/4" NPT entries, no lens guard, 60 flashes per minute, red finish	PX 869122
XB4ULB8D2E3E06ANRN1R	UL, cUL Listed, Class I, Div 1, Groups C & D	Marine grade alloy, 24 V DC, red lens, 2 x 3/4" NPT entries, no lens guard, 60 flashes per minute, red finish	PX 869121
XB4ULE8D2E3E06ANAN1R	UL, cUL Listed, Class I, Div 1, Groups C & D	Marine grade alloy, 110 V AC, amber lens, 2 x 3/4" NPT entries, no lens guard, 60 flashes per minute, red finish	PX 869126
XB4ULE8D2E3E06ANRN1R	UL, cUL Listed, Class I, Div 1, Groups C & D	Marine grade alloy, 110 V AC, red lens, 2 x 3/4" NPT entries, no lens guard, 60 flashes per minute, red finish	PX 869125

Ordering Options*

Model	Certification	Code	Voltage	Code	Terminals	Code	Cable entries	Code	Lens flashrate	Code	Initiate options	Code
XB 04	ATEX	B	DC 24 V	B	6 x 6 mm ²	6E	20 mm	B	60	06	None	A
	UL	UL¹⁾	DC 48 V	C	8 x 10 mm ²	8D	25 mm		80	08	Telephone	B
	GOST 'R'	G	DC 110 V	D			1/2" NPT	D²⁾	120	12	Telephone & 2. beacon	
			AC 110 V	E			3/4" NPT	E²⁾			Relay	D
			AC 120 V	F							Relay & 2. beacon	E
			AC 230 V	G								
			AC 240 V	H								
			AC 254 V	J								

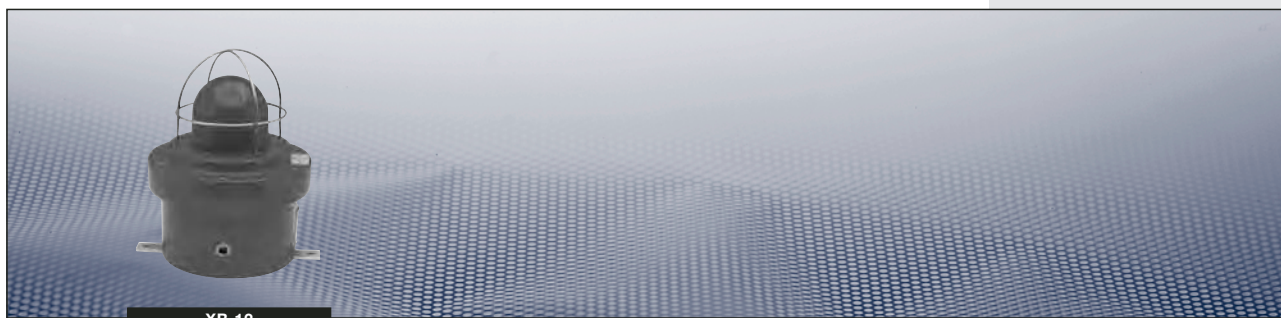
Ordering Options*

Lens colour	Code	Tag/duty label	Code	Material	Code	Finish	Code
Red	R	None	N	Stainless steel	0	Red	R
Blue	B	Yes	Y	Alloy	1	Blue	B
Green	G					Yellow	Y
Amber	A					Green	G
Yellow	Y					White	W
Clear	C					Special finish	S

* For more options see www.medc.com or contact your local representative

¹⁾ UL – available alloy or stainless steel. 24V DC, 110 V AC; 240 V AC only.

²⁾ Prefix entry size with entry position code e.g. 1B2B.



XB 12

11.32

E x - 2 1 J O U L E F L A S H I N G X E N O N

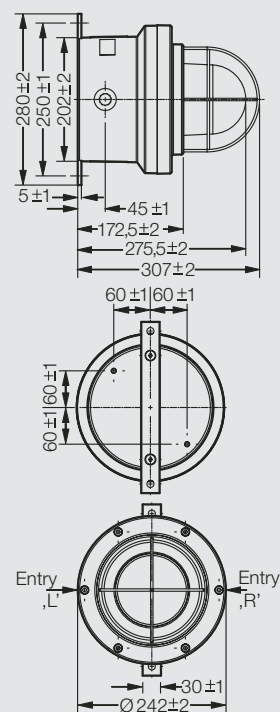
| XB 12 |

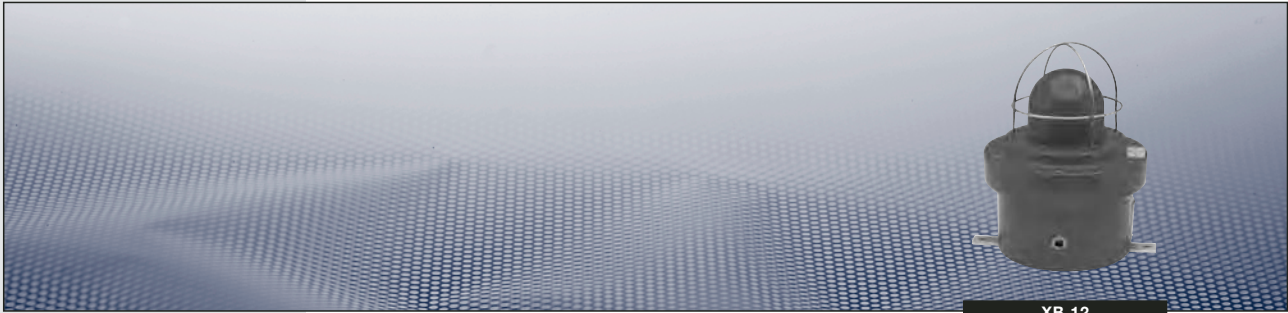
Technical data

Type XB 12

EC-Type Examination Certificate	BAS 99 ATEX 2196/3
Marking to 94/9/EC	Ⓔ II 2G EEx d IIB T4/T5 T135 °C/T100 °C
UL Listed for USA and Canada	Class I, Div 2, Groups C & D Class I, Zones 1 & 2 AExd IIB T4 & T5
UL Listing No.	E187894
GOST 'R' Certification	1Exd IIB T4/T5
GOST 'K' Certification	Ex d IIB T4/T5
Chinese (CQST) Certification	Ex d IIB T4/T5
Enclosure material	Corrosion-free GRP
Lens material	Glass
Finish	Natural black or painted to customer specification
Rated voltage	24 V DC/110 - 240 V AC 50/60 Hz
Rated current tube 21 joule	DC 24 V 1.4 A AC 48 V 0.35 A AC 240 V 0.185 A
Initiation	Optional telephone or relays initiated
Flash rate	60 fpm
Entries	up to 2 entries M20 1/2" NPT
Weight	7 kg
Rated terminal cross section	6 x 6 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature	Certified EExd -55 °C to +70 °C (T4) -55 °C to +40 °C (T5) Temperature UL -55 °C to +70 °C

¹⁾ Optional with lens guard





XB 12

E x - 2 1 J O U L E F L A S H I N G X E N O N

| XB 12 |

11.33

11

Ordering details

Catalogue No.	Certification	Description	Ordering Code
XB12B02406ANBNNNN	ATEX Approved Ex II 2G	24 V DC, 60 flashes per minute, amber lens, no wire guard, backstrap mounting, no labels, black body	PX 812102
XB12B02406RBNBNNNN	ATEX Approved Ex II 2G	24 V CD, 60 flashes per minute, red lens, no wire guard, backstrap mounting, no labels, black body	PX 812101
XB12B24006ANBNNNN	ATEX Approved Ex II 2G	240 V AC, 60 flashes per minute, amber lens, no wire guard, backstrap mounting, no labels, black body	PX 812104
XB12B24006RBNBNNNN	ATEX Approved Ex II 2G	240 V AC, 60 flashes per minute, red lens, no wire guard, backstrap mounting, no labels, black body	PX 812103
XB12UL02406ANBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	24 V DC, 60 flashes per minute, amber lens, no wire guard, backstrap mounting, no labels, red painted GRP	PX 869182
XB12UL02406RBNBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	24 V DC, 60 flashes per minute, amber lens, no wire guard, backstrap mounting, no labels, red painted GRP	PX 869181
XB12UL11006ANBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	110 V AC, 60 flashes per minute, amber lens, no wire guard, backstrap mounting, no labels, red painted GRP	PX 869186
XB12UL11006RBNBNNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	110 V AC, 60 flashes per minute, red lens, no wire guard, backstrap mounting, no labels, red painted GRP	PX 869185

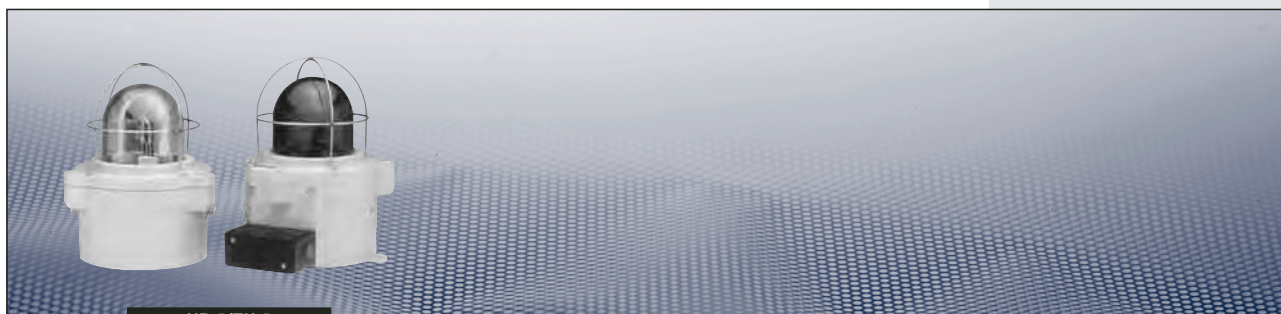
Ordering Options*

Model	Certification	Code	Voltage	Code	Lens	Code	Lens	Code	Lens	Code	Unit	Code	Earth	Code
					Flash rate		Colour		Guard		fixing		continuity	
XB 12	ATEX	B	DC 24 V	24	60	06	Red	R	None	N	Direct		None	N
	UL	UL	AC 110 V	110			Blue	B	Yes	Y	mounting	D	Yes	Y
	GOST 'R'	G	AC 240 V	240			Green	G			Backstrap	B		
	GOST 'K'	K					Amber	A						
	Chinese						Yellow	Y						
	(CQST)	Q					Clear	C						

Ordering Options*

Tag/Duty label	Code	Options	Code	Finish	Code
None	N	Telephone	T	Natural black	N
Yes	Y	Blanking plug	P	Red	R
		None	N	Blue	B
				Yellow	Y
				Green	G
				White	W
				Special finish	S

* For more options see www.medc.com or contact your local representative



XB 5/TH 5

11.34

EX - 5 JOULE SEQUENCED AND 70 W ROTATING

XB 5 | TH 5 |

Technical data

Type XB 5/TH 5

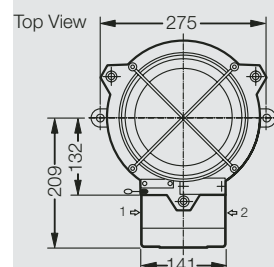
EC-Type Examination Certificate	Baseefa 00 ATEX 0225X
Marking to 94/9/EC	II 2G EEx d IIB T* II 2G EEx de IIB T*
Enclosure material	Marine grade alloy and GRP (EEx e terminal chamber)
Lens material	Thougened glass ¹⁾
Finish	Epoxy paint finish as standard or specified
Rated voltage	
XB 5 (5 W flashing Xenon tubes)	24 - 110 V DC; 110 - 254 V AC 50/60 Hz
TH 5 (55/70 W rotating mirror)	12 - 24 V DC; 110 - 240 V AC 50/60 Hz
Peak current consumption XB 5 (5 W flashing Xenon tube)	DC 24 V 1.3 A DC 48 V 0.65 A DC 110 V 0.3 A AC 110 V 0.5 A AC 120 V 0.45 A AC 220 V 0.24 A AC 240 V 0.23 A AC 254 V 0.21 A
Power consumption TH 5	DC 12 V 55 W
Rotating mirror	DC 24 V 70 W DC 110 - 240 V 70 W
Entries	up to 3 x M20 or 2 x M25 (EEx d) or up to 4 x M20 or M25 (EEx e)
Weight	XB 5 (EEx d) 14.6 kg XB 5 (EEx de) 15.6 kg TH 5 (EEx d) 14.9 kg TH 5 (EEx de) 15.9 kg
Rated terminal cross section	6 x 6 mm ² (EEx e & EEx d)
Protection category to EN 60529	IP 66/IP 67/IP 68
Insulation class	I
Permissible ambient temperature*	
	XB5 T6 -20 °C to +40 °C
	TH5 T4 -20 °C to +55 °C

¹⁾ Optional with lens guard

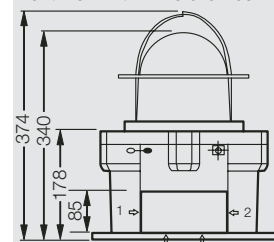
Ordering Options*

Model	Speed	Code	Terminal chamber	Code	Voltage	Code	Cable entries	Code	Lens colour	Code	Tag label	Code	Guard	Code	Finish	Code
XB 5	60 rpm	1	EEx d	D	12 V DC	A	20 mm	B	Red	R	None	N	None	0	Grey	G
TH 5	120 rpm	2	EEx e	E	24 V DC	B	25 mm	C	Blue	B	Yes	Y	Guard	1	Red	R
	180 rpm	3			48 V DC	C			Green	G					Blue	B
					110 V DC	D			Yellow	Y					Yellow	Y
					110 V AC	E			Amber	A					White	W
					120 V AC	F			Clear	C					Special finish	S
					220 V AC	G										
					240 V AC	H										
					254 V AC	J										

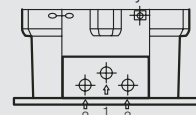
* For more options see www.mec.com or contact your local representative

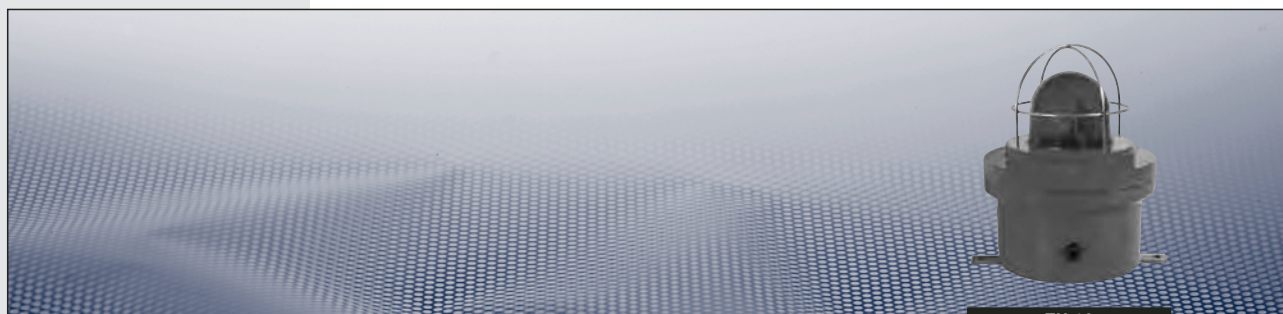


Front View with EEx chamber

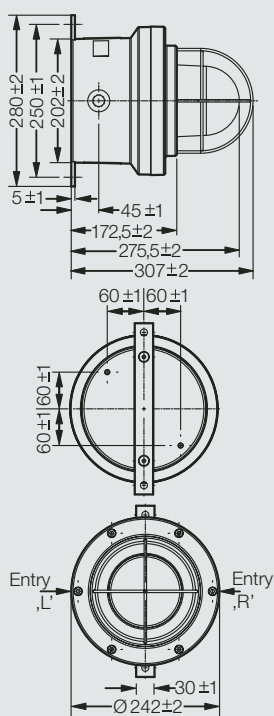


Part Front View EExd only





TH 12



EX - 55 / 70 W ROTATING BEACON

TH 12

11.35

Technical data

Type TH 12

EC-Type Examination Certificate	Baseefa 99 ATEX 2196/3
Marking to 94/9/EC	Ex II 2G EEx d IIB T4/T5 T135 °C/T100 °C*
GOST 'R' Certified	1Exd IIB T4/T5
Enclosure material	Corrosion-free GRP
Lens material	Glass ¹⁾
Finish	Natural black or painted to customer specification
Rated voltage	12 - 24 V DC/110 - 240 V AC 50/60 Hz
Rated wattage	DC 12 V 55 W H1 tungsten halogen bulb DC 24 V 70 W H1 tungsten halogen bulb AC 110 V 70 W H1 tungsten halogen bulb AC 240 V 70 W H1 tungsten halogen bulb
Rotating beacon speed	60 r.p.m., 120 r.p.m., 180 r.p.m.
Entries	up to 2 x M20
Weight	7.6 kg
Rated terminal cross section	6 x 6 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature*	T4: from -55 °C to +70 °C T5: from -55 °C to +40 °C

¹⁾ Optional with lens guard

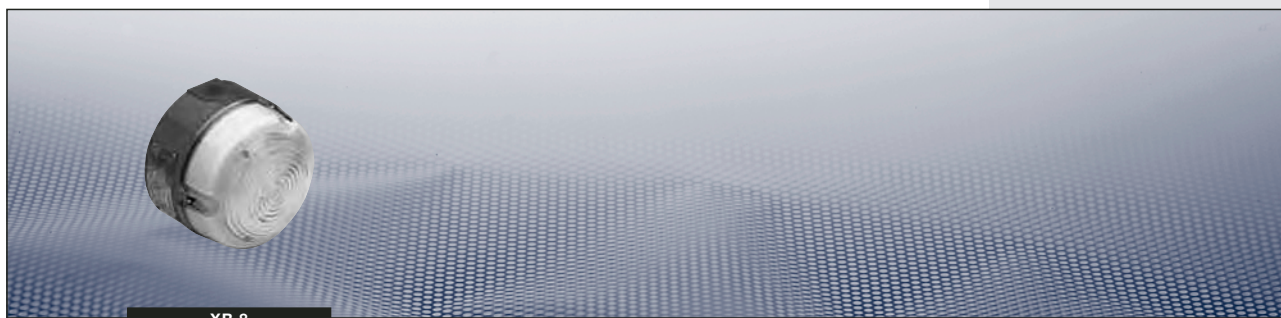
Ordering details

Catalogue No.	Certification	Description	Ordering Code
TH12B024RNBNN	ATEX Approved Ex II 2G, EEx d IIB T4/T5, Zone 1 & 2	GRP Body black, 70W Rotating Tungsten Halogen Lamp, 60 rpm., 24V DC, 503 Cd, Red lens, no lens guard Backstrap mounting	PX 815010

Ordering Options*

Model	Certification	Code	Speed	Code	Voltage	Code	Lens colour	Code	Lens guard	Code	Unit fixing	Code	Options	Code	Finish	Code
TH 12	ATEX	B	60 rpm	A	DC 12 V	012	Red	R	None	N	Direct		Tag label	T	Natural black	N
	GOST 'R'	G	120 rpm	B	DC 24 V	024	Blue	B	Yes	Y	mounting	D	Duty label	D	Red	R
			180 rpm	C	AC 110 V	110	Green	G			Backstrap	B	Earth		Blue	B
					AC 240 V	240	Amber	A					continuity	E	Yellow	Y
							Yellow	Y					None	N	Green	G
							Clear	C							White	W
															Special finish	S

* For more options see www.medc.com or contact your local representative



XB 8

11.36

Ex - 0.5 JOULE FLASHING XENON

| XB 8 |

Technical data

Type XB 8

EC-Type Examination Certificate	BAS 00 ATEX 1258X
Marking to 94/9/EC	Ⓔ II 1G EEx ia IIB or Ex II 1G EEx ia IIC T4
GOST 'R' Certification	0EX ia IIB T4 0Ex ia IIC T4
Cert. No.	A-0757
Enclosure material	Corrosion-free GRP
Lens material	Polycarbonate, clear
Finish	Natural red
Rated voltage	12 - 24 V DC via suitable barrier
Power consumption	DC 12 V 52 mA max. nom. (IIB & IIC)
(tube energy 0.5 joule)	DC 24 V 55 mA max. nom. (IIC)/71 mA max. nom. (IIB)
Flash rate	1 Hz
Entries	3 entry, M20 via knockouts
Weight	1.4 kg
Rated terminal cross section	8 x 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Insulation class	
Permissible ambient temperature	from -55 °C to +60 °C

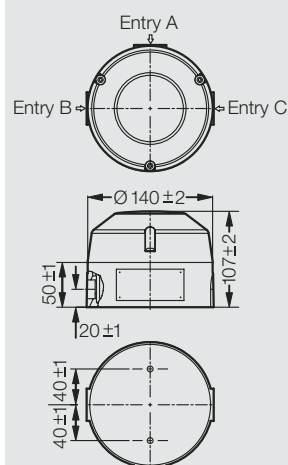
Ordering details

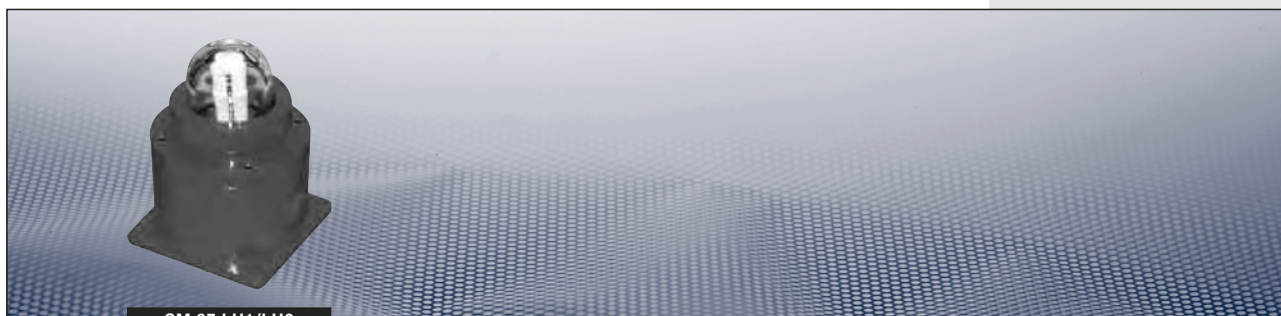
Type	Description	Order No.
XB8CNR	Intrinsic safe IIB, 24 V DC, lens colour clear	818002

Ordering Options*

Model	Certification	Code	Voltage	Code	Lens colour	Code	Tag/duty label	Code	Finish	Code
XB 8	ATEX IIB	BB	12 V	12	Clear	Code	Duty	D	Natural red	N
	ATEX IIC	BC	24 V	24	Special	S	Tag	T	Special	S
	GOST 'R' IIB	GB					None	N		
	GOST 'R' IIC	GC								

* For more options see www.medc.com or contact your local representative





SM 87 LU1/LU3

11.38

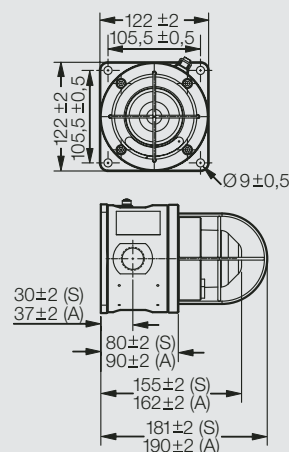
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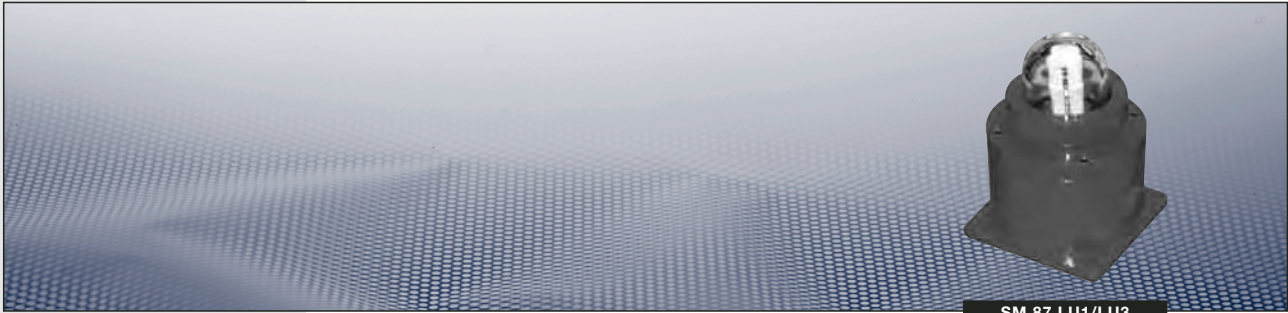
| SM 87 LU1/LU3 |

Technical data

Type SM 87 LU1/LU3

EC-Type Examination Certificate	Baseefa 03 ATEX 0222
Marking to 94/9/EC	Ⓔ II 2G/D EEx d IIC ¹⁾
UL Listed for USA & Canada	Class I, Div. 1, Groups C & D Class I, Zone 1
Listing No.	E187894
SM87LU1 & LU3 – CSA Certified	Class 1, Div. 1 & 2, Group D
Certification No.	96406
CSA Certification to C22.2	Nos. 0, 0.4, 0.5, 9, 30–M1986, 94–M91, 137–M1981, Class 1, Group D, Enclosure 3/4
Cert. No.	96406
GOST 'R' Certification	1 Exd IIC T4
Certification No.	A-0756 (SM87 Alloy only)
Chinese (CQST) Certification	Exd IIC T4/T5/T6 (LU1 & LU3 only)
Enclosure material	Marine grade alloy or stainless steel
Lens material	Glass
Finish	Red epoxy painted finish as standard
Rated voltage	24 - 48 V DC/110 - 254 V AC 50/60 Hz
Power consumption LU3	10 W (Filament lamp)
Power consumption LU1	DC 24 V - 110 V 5 W (Fluorescent lamp) AC 240 V - 254 V 10 W (Fluorescent lamp)
Initiation	Telephone or relays initiated
Entries	LU3: up to 4 x M20 or M25/LU1: up to 3 x M20 or M25
Weight	Alloy: 2.5 kg Stainless steel: 3.8 kg
Rated terminal cross section	4 x 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature ¹⁾	LU3 T4 (135 °C) -55 °C to +40 °C T3 (200 °C) -55 °C to +55 °C LU1 T6 (85 °C) -55 °C to +40 °C T5 (5 W) -55 °C to +55 °C T4 (10 W) -55 °C to +55 °C





SM 87 LU1/LU3

Ex - 10 W STEADY FILAMENT/FLUORESCENT

| SM 87 LU1/LU3 |

11.39

Ordering details

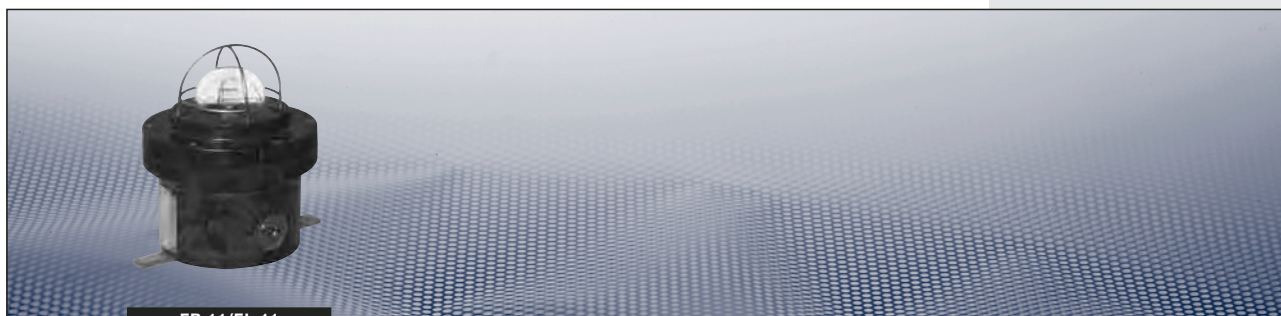
Catalogue No.	Certification	Description	Ordering Code
SM87LU1AUL024GN4T4BNR	UL, cUL Listed, Class I, Div 1, Groups C & D	24V DC, green lens, 10 W fluorescent bulb, marine grade alloy, red finish	PX 46200052
SM87LU1AUL024RN4T4BNR	UL, cUL Listed, Class I, Div 2, Groups C & D	24V DC, red lens, 2 x 3/4" NPT entries, no labels, red finish	PX 46200054
SM87LU3AUL024GN3T3BNR	UL, cUL Listed, Class I, Div 1, Groups C & D	24V DC, green lens, 10 W incandescent bulb, marine grade alloy, red finish	PX 46200096
SM87LU3AUL024RN3R3LNR	UL, cUL Listed, Class I, Div 2, Groups C & D	24V DC, red lens, 2 x 1/2" NPT entries, no labels, red finish	PX 762311

Ordering Options*

Model	Code	Certification	Code	Voltage	Code	Lens colour	Code	Lens guard	Code	Cable entries	Code	Tag/duty label	Code	Finish	Code
SM 87...															
Fluorescent EEx d	LU1A	ATEX	B	DC 24 V	024	Red	R	None	N	20 mm	1	None	N	Red	R
Fluorescent EEx d		UL Listed	UL	DC 48 V	048	Blue	B	Yes	Y	25 mm	2	Yes	Y	Blue	B
(Stainless steel)	LU1S	CSA Certified	C	AC 110 V	120	Green	G			Other	3			Yellow	Y
Filament EEx d	LU3A	GOST 'R'		AC 220 V	220	Amber	A			Top	T			Yellow/	
(Alloy)		Certified	G	AC 240 V	240	Yellow	Y			Bottom	B			black stripes	X
Filament EEx d		Chinese (CQST)	Q	AC 254 V	254	Clear	C			RHS	R			Green	G
(Stainless steel)	LU3S									LHS	L			White	W
														Special finish	S

* For more options see www.medc.com or contact your local representative

11



FB 11/FL 11

11.40

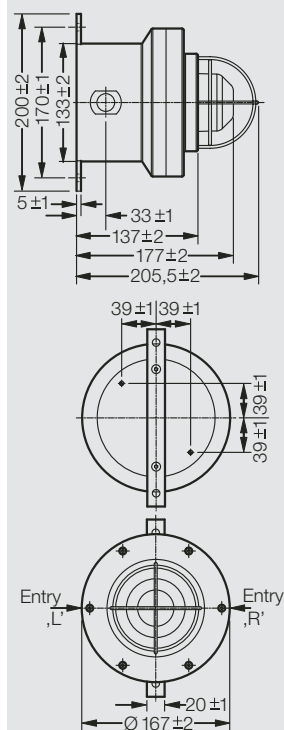
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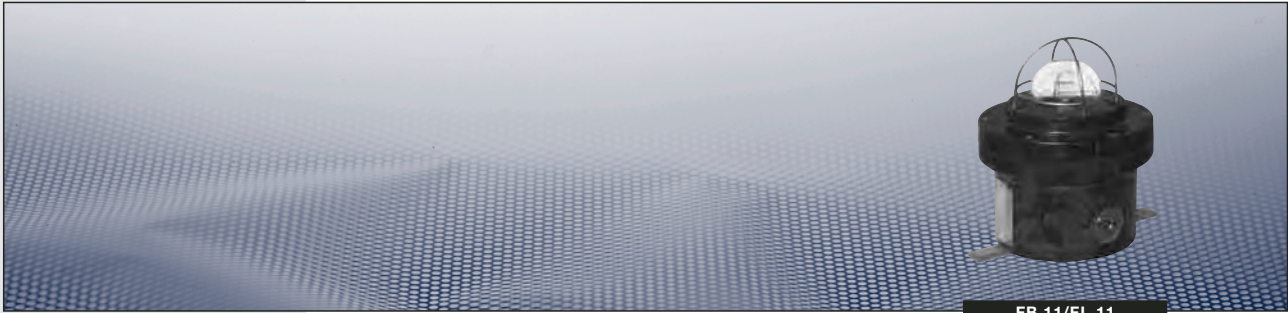
| FL 11 | FB 11 |

Technical data

Type FB 11/FL 11

EC-Type Examination Certificate	BAS 99 ATEX 2195X
Marking to 94/9/EC	Ⓔ II 2G/D EEx d IIB T ¹⁾
UL Listed for USA and Canada (FB only)	Class I, Div. 2, Groups C & D and Class I, Zone 1, AExd IIB T4/T5
UL Listing No.	E187814
GOST 'R'	1Ex d IIB (for T ratings see table)
Enclosure material	Corrosion-free GRP
Lens material	Glass
Finish	Natural black or painted to customer specification
Rated voltage	24 - 48 V DC/110 - 240 V AC 50/60 Hz
Rated lamp type	FB 11 10 W (Filament lamp)
Rated lamp type	FL 11 DC 24 V 5 W lamp AC 254 V 10 W lamp
Entries	up to 2 x M20 2 x 1/2" NPT
Weight	2.5 kg
Rated terminal cross section	4 x 2.5 mm ² (FL 11 AC)/6 x 2.5 mm ² (FL 11 DC & FB 11)
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature ¹⁾	FB 11 (T100 °C) T5 -55 °C to +40 °C (T135 °C) T4 -55 °C to +55 °C FL 11 (T100 °C) T5 -20 °C to +40 °C (T135 °C) T4 -20 °C to +55 °C





FB 11/FL 11

Ex - 10 W STEADY FILAMENT/FLUORESCENT

| FL 11 | FB 11 |

11.41

Ordering details

Catalogue No.	Certification	Description	Ordering Code
FB11B02410RNBNNN	ATEX	24 V DC, 10 W bulb, red lens, mounting bracket, natural black finish	PX 32500004
FB11UL02410GNBNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	10 W incandescent beacon, 24 V DC, green lens, no lens guard, 2 x 1/2" NPT entries, painted red enclosure	PX 32500028
FB11UL11010GNBNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	10 W incandescent beacon, 110 V AC, green lens, no lens guard, 2 x 1/2" NPT, painted red enclosure	PX 32500029

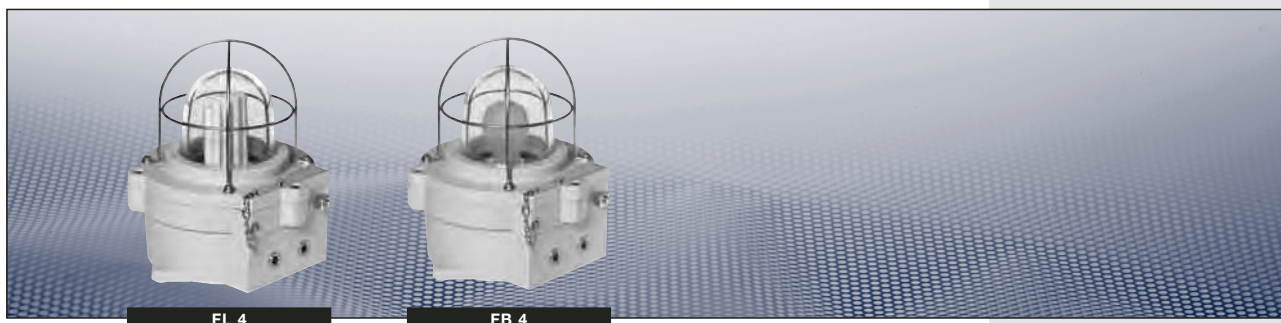
Ordering Options*

Model	Certi- fication	Code	Voltage	Code	Lamp wattage	Code	Lens colour	Code	Lens guard	Code	Unit fixing	Code	Earth conti- nuity	Code	Tag/ duty label	Code	Finish	Code
FB 11	ATEX	B	DC 24 V	024	FL 5 W DC	5	Red	R	None	N	Direct	None	N	None	N	Red	R	
FL 11	UL		DC 48 V	048	FL 10 W AC	10	Blue	B	Yes	Y	mounting	D	Yes	Y	Yes	Blue	B	
	Listed ¹⁾	UL	AC 110 V	120	FB 10 W AC	10	Green	G			Backstrap	B				Yellow	Y	
			AC 120 V	120			Amber	A								Yellow/black		
			AC 220 V	220			Yellow	Y								stripes	X	
			AC 240 V	240			Clear	C								Green	G	
			AC 254 V	254												White	W	
																Special finish	S	

* For more options see www.medic.com or contact your local representative

¹⁾ UL listed only available FB11

11



11.42

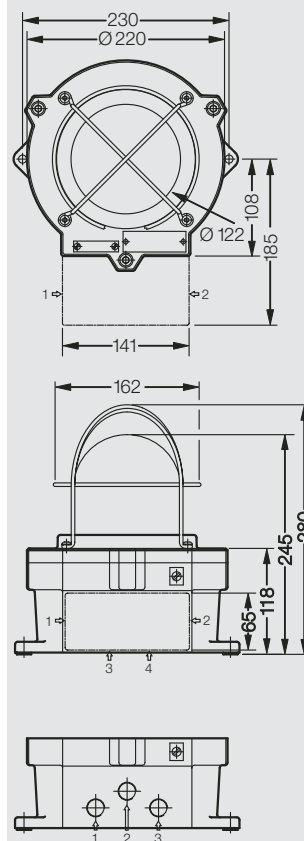
Ex - 100 W STEADY FILAMENT AND 39 W FLUORESCENT

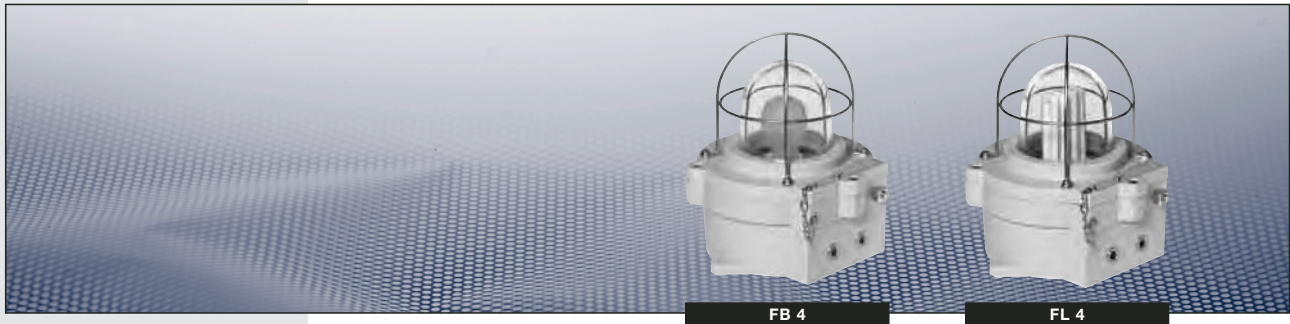
| FB 4 | FL 4 |

Technical data

Type FB 4 / FL 4

EC-Type Examination Certificate		Baseefa 02 ATEX 0224X
Marking to 94/9/EC		<div>Ex</div> II 2G EEx d IIC T ¹⁾
		<div>Ex</div> II 2G EEx e IIC T ¹⁾
UL Listed for USA and Canada		Class I, Div. 1, Groups C & D Class I, Zone 1 AExd IIB T4/T5
Listing No.		E187894
GOST 'R' Certified		1Ex d IIC T3/T4/T5
Enclosure material		Marine grade alloy or stainless steel and GRP (EEx e terminal chamber)
Lens material		Thougened glass
Finish		Grey epoxy paint finish as standard
Rated voltage		24 - 110 V DC/110 - 254 V AC 50/60 Hz
Lamps	FL 4	up to 3 x 13 W PL compact fluorescent lamps
	FB 4	up to 100 W GLS filament lamps, E 27 holder as standard
	Entries	up to 3 x M20 (EEx d) or up to 4 x M20 (EEx e)
Weight	FL 4 (EEx d)	Alloy: 6.5 - 7.9 kg Stainless steel: add. 8.4 kg
	FL 4 (EEx de)	Alloy: 7.5 - 8.9 kg Stainless steel: add. 8.4 kg
	FB 4 (EEx d)	Alloy: 6.4 kg Stainless steel: add. 8.4 kg
	FB 4 (EEx de)	Alloy: 7.4 kg Stainless steel: add. 8.4 kg
Rated terminal cross section		6 x 6 mm ² or 10 x 2.5 mm ² (EEx e), 8 x 10 mm ² (EEx d)
Protection category to EN 60529		IP 66/IP 67
Permissible ambient temperature ¹⁾	FL 4 DC T5	-20 °C to +55 °C
	AC T4	-20 °C to +55 °C
	FB 4 60 W T4	-55 °C to +40 °C (EEx d) -50 °C to +40 °C (EEx e)
	100 W T3	-55 °C to +55 °C (EEx d) -50 °C to +40 °C (EEx e)





FB 4

FL 4

Ex - 100 W STEADY FILAMENT AND 39 W FLUORESCENT

| FB 4 | FL 4 |

11.43

Ordering details

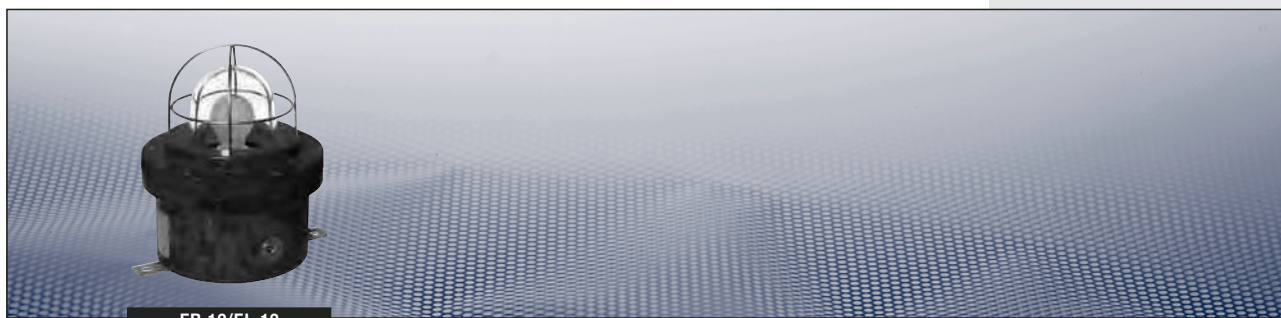
Catalogue No.	Certification	Description	Ordering Code
FB4EUL8U1N100B1N1G	UL, cUL Listed, Class I, Div 2, Groups C & D	Marine grade alloy, 120 V AC, 100 W bulb (not included), blue lens, lens guard, no labels, gray finish	PX 17800002
FL4BUL8U2M3M13R1N1RZ	UL Listed, Class I, Div 2, Groups C & D	Marine grade alloy, 24 V DC, 2 x 1/2" NPT entries, 13W tube (not included), red lens, lens guard, red finish, one certified plug	PX 27800006

Ordering Options*

Model	Certi- fication	Code Voltage	Code Terminals	Code Cable entries	Code Lamp wattage	Code Lens colour	Code Guard	Code Options	Code Material	Code Finish
FB 4	ATEX B	DC 24 V BB	6 x 6 mm ² 6E	20 mm B	FL 4	Red R	None 0	Duty D	Stainless	Grey G
FL 4	UL UL	DC 48 V CB	8 x 10 mm ² 8D	25 mm C	1 x 13 W 13	Blue B	Guard Y	Tag T	steel 0	Red R
	GOST 'R' G	DC 110 V DB		1/2" NPT M	2 x 13 W 26	Green G		None N	Alloy 1	Blue B
		AC 110 V EB		3/4" NPT N	3 x 13 W 39	Amber A				Yellow Y
		AC 120 V FB			FB 4	Yellow Y				White W
		AC 230 V GB			60 W 60	Clear C				Special
		AC 240 V HB			100 W 100					finish S
		AC 254 V IB								

* For more options see www.medic.com or contact your local representative

11



FB 12/FL 12

11.44

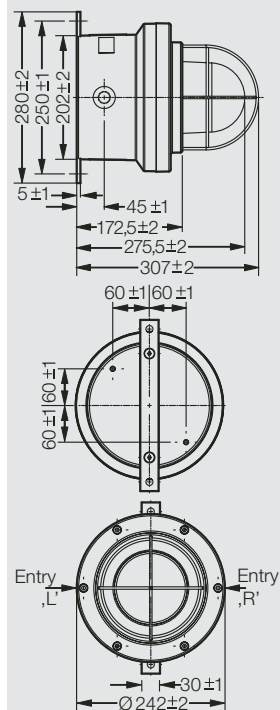
Ex-100 W STEADY FILAMENT AND 39 W FLUORESCENT

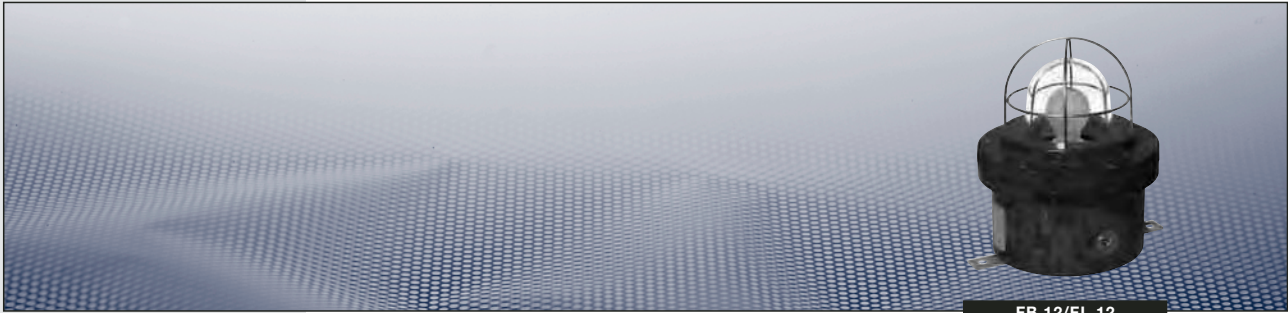
| FL 12 | FB 12 |

Technical data

Type FB 12/FL 12

EC-Type Examination Certificate	BAS 99 ATEX 2196
Marking to 94/9/EC	Ⓔ II 2G/D EEx d IIB T ¹⁾
UL Listed for USA and Canada (FB12 only)	Class I, Div. 2, Groups C & D and Class I, Zone 1, AExd IIB T4/T5
UL Listing No.	E187814
GOST 'R'	1Exd IIB (for T ratings see table)
Enclosure material	Corrosion-free GRP
Lens material	Glass ¹⁾
Finish	Natural black or painted to customer specification
Rated voltage	24 V DC/110 - 240 V AC 50/60 Hz
Rated lamp type	FB 12 60 W filament lamp 100 W filament lamp
Rated lamp type	FL 12 13 W fluorescent lamp
Entries	up to 2 entries, M20 2 x 1/2" NPT
Weight	7.2 kg (FL 12) 7.6 kg (FB 12)
Rated terminal cross section	6 x 6 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature ¹⁾	
FB 12 60 W T5:	-55 °C to +40 °C
T4:	-55 °C to +55 °C
100 W T3:	-55 °C to +30 °C
FL 12 13 W AC/DC T6:	-20 °C to +40 °C
13 W AC T5:	-20 °C to +55 °C
26 W AC T5:	-20 °C to +40 °C
16 W AC T4:	-20 °C to +55 °C
39 W AC T4:	-20 °C to +40 °C





FB 12/FL 12

Ex - 100 W STEADY FILAMENT AND 39 W FLUORESCENT

| FL 12 | FB 12 |

11.45

Ordering details

Catalogue No.	Certification	Description	Ordering Code
FB12UL02460GNBNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	60W incandescent beacon, 24V DC, green lens, no lens guard, 2 x 1/2" NPT entries, painted red enclosure	PX 32600036
FB12UL120100GNBNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	100W incandescent beacon, 24V DC, green lens, no lens guard, 2 x 1/2" NPT entries, painted red enclosure	PX 32600037
FB12UL12060CNBNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	120V AC, 60W bulb, clear lens, mounting bracket, no labels, natural black finish	PX 326023
FB12UL12060GNBNNR	UL, cUL Listed, Class I, Div 2, Groups C & D	60W incandescent beacon, 120V AC, green lens, no lens guard, 2 x 1/2" NPT entries in a painted red enclosure	PX 32600035

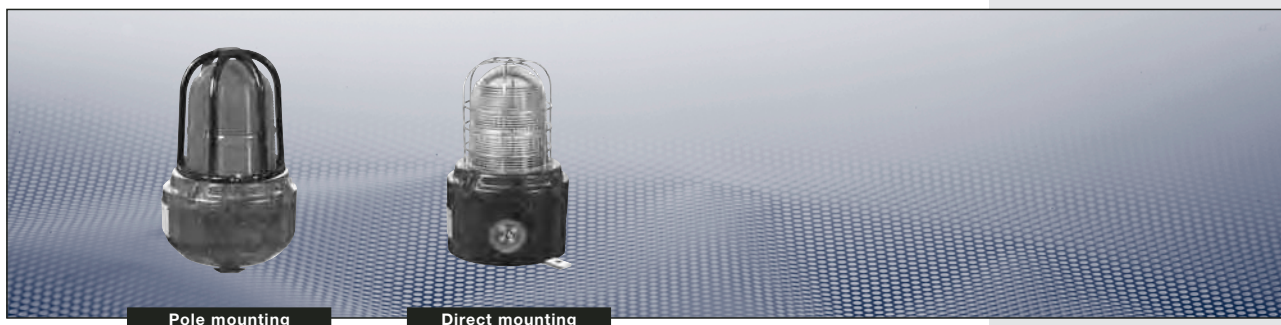
Ordering Options*

Model	Certification	Code	Voltage	Code	Lamp wattage	Code	Lens colour	Code	Lens guard	Code	Unit fixing	Code	Earth continuity	Code	Tag/duty label	Code	Finish	Code
FB 12	ATEX	B	DC 24 V	024	FL 1 x 13 W	5	Red	R	None	N	Direct	None	N	None	N	Red	R	
FL 12	UL		DC 48 V	048	FL 2 x 13 W	10	Blue	B	Yes	N	mounting	D	Yes	Y	Yes	Y	Blue	B
	Listed ¹⁾	UL	AC 110 V	120	FL 3 x 13 W	10	Green	G			Backstrap	B				Yellow	Y	
			AC 120 V	120	FB 60 W		Amber	A								Yellow/black		
			AC 220 V	220	FB 100 W		Yellow	Y								stripes	X	
			AC 240 V	240			Clear	C								Green	G	
			AC 254 V	254												White	W	
																Special finish	S	

* For more options see www.medic.com or contact your local representative

¹⁾ UL Listed only available FB12

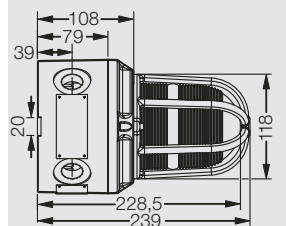
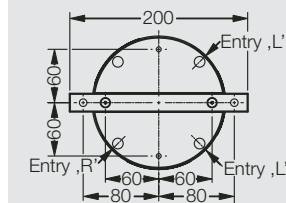
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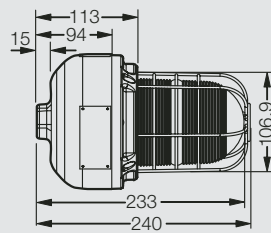
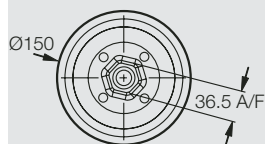
11.46 **E x - 6 0 / 1 0 0 W S T E A D Y F I L A M E N T** **| FB 15 |**

Technical data	
Type FB 15	
EC-Type Examination Certificate	BAS 04 ATEX 0009X
Marking to 94/9/EC	Ⓔ II 2G/D EEx d IIC T ¹⁾
UL Listed for USA and Canada	Class I, Div 2, Groups A, B, C & D Class I, Zone 1 AExd IIC T3/T4
UL listing No.	E187894
Enclosure material	Corrosion-free GRP
Lens material	Glass ¹⁾
Finish	Natural black or painted to customer specification
Rated voltage	24 - 48 V DC/110 - 254 V AC 50/60 Hz
Power consumption	60 W/100 W filament
Entries	up to 3 x M20 or M25 (standard = 2 x M20)
Weight	3.0 kg
Rated terminal cross section	12 x 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature	
60 W (T135 °C)	T4 -55 °C to +55 °C
60 W (T200 °C)	T3 -55 °C to +70 °C
100 W (T135 °C)	T4 -55 °C to +40 °C

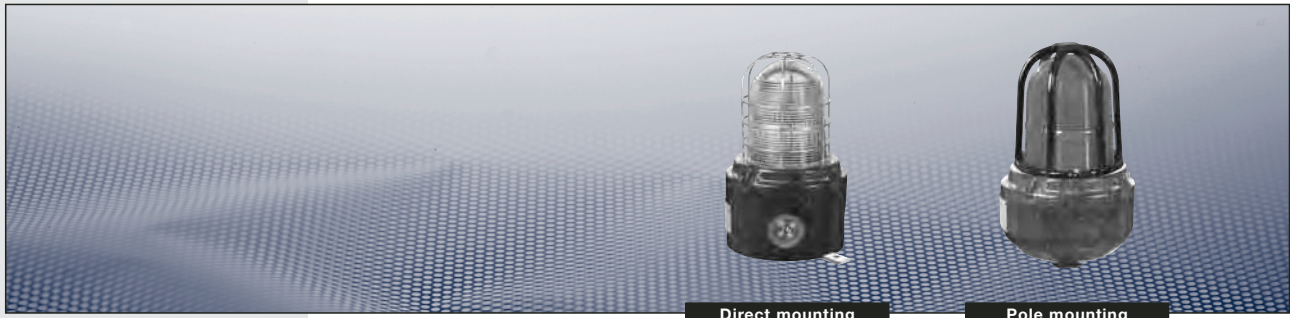
¹⁾ Optional with lens guard



Direct mounting



Pole mounting



E x - 6 0 / 1 0 0 W S T E A D Y F I L A M E N T

| FB 15 |

11.47

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Ordering details

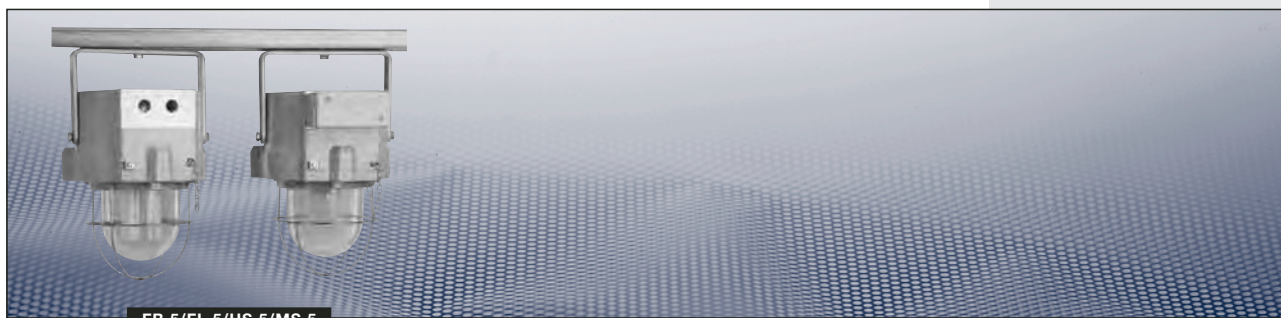
Catalogue No.	Certification	Description	Ordering Code
FB15UL024100ANPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 24 V DC, amber lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600025
FB15UL024100BNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 24 V DC, blue lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600029
FB15UL024100CNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 24 V DC, clear lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600028
FB15UL024100GNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 24 V DC, green lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600027
FB15UL024100RNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 24 V DC, red lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600026
FB15UL120100ANPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 120 V AC, amber lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600020
FB15UL120100BNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 120 V AC, blue lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600024
FB15UL120100CNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 120 V AC, clear lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600023
FB15UL120100GNANR	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	120 V AC, 100W bulb, green lens, mounting bracket, no labels, red finish	PX 47600001
FB15UL120100GNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 120 V AC, green lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600022
FB15UL120100RNPNN	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	100 W incandescent beacon, 120 V AC, red lens, no lens guard, pipe mounting, 1 x 3/4" NPT entry, natural black enclosure	PX 47600021

Ordering Options*

Model	Certi- fication	Code	Voltage	Code	Lamp wattage	Code	Lens colour	Code	Lens guard	Code	Unit fixing	Code	Tag/duty label	Code	Finish	Code
FB 15	ATEX UL	B UL	DC 24 V	024	60 W	60	Red	R	None	N	Pipe mount	P ¹⁾	None	N	Natural	
			DC 48 V	048	100 W	100	Blue	B	Cast	C	Direct		Tag label	T	black	N
			AC 110 V	120			Green	G	Wire	W	mount	D	Duty label	D	Red	R
			AC 120 V	120			Amber	A			Direct w/		Blanking plug	P	Blue	B
			AC 220 V	220			Yellow	Y			backstrap	B			Yellow	Y
			AC 240 V	240			Clear	C							Green	G
			AC 254 V	254											White	W
															Special finish	S

* For more options see www.medic.com or contact your local representative

¹⁾ Not available on ATEX version



FB 5/FL 5/HS 5/MS 5

11.48

Ex-200 W STEADY FILAMENT AND 52 W FLUORESCENT

| FB 5 | FL 5 | HS 5 | MS 5 |

Technical data

Type FB 5/FL 5/HS 5/ MS 5

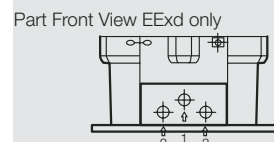
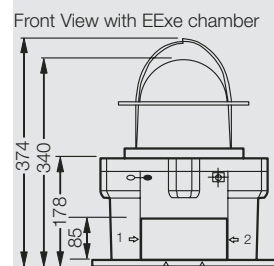
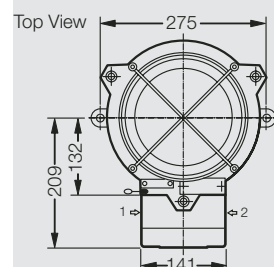
EC-Type Examination Certificate	Baseefa 02 ATEX 0225X
Marking to 94/9/EC	Ex II 2G EEx d IIB ¹⁾ Ex II 2G EEx de IIB ¹⁾
CSA certified	Class I, Zone 1 Ex d IIB T4
CSA certification to	E79-0-95, E-79-1-95, C22.2 Nos. 9.0-96
Certification No.	LR96406 (HS5 only)
Enclosure material	Marine grade alloy or stainless steel and GRP (EEx e terminal chamber)
Lens material	Thougened glass (coloured if required)
Finish	Grey epoxy paint finish as standard
Rated voltage	220 - 254 V AC 50/60 Hz
Lamps	FL 5 up to 4 x 13 W PL compact fluorescent lamps FB 5 up to 200 W GLS filament lamps, E 27 cap as standard MF 5 up to 80 W mercury fluorescent lamp HS 5 up to 70 W high pressure sodium lamp Entries up to 3 x M20 or M25 (EEx d) or up to 4 x M20 or M25 (EEx e)
Weight	FL 4 (EEx d) Alloy: 6.5 - 7.9 kg Stainless steel: add. 8.4 kg FL 4 (EEx de) Alloy: 7.5 - 8.9 kg Stainless steel: add. 8.4 kg FB 4 (EEx d) Alloy: 6.4 kg Stainless steel: add. 8.4 kg FB 4 (EEx de) Alloy: 7.4 kg Stainless steel: add. 8.4 kg
Rated terminal cross section	6 x 6 mm ² (EEx de), 8 x 10 mm ² (EEx d)
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature ¹⁾	FL5 T4: -20 °C to +50 °C FB5 T3: -20 °C to +30 °C MF5 T3: -20 °C to +40 °C HS5 T4: -20 °C to +40 °C

¹⁾ Optional with lens guard

Ordering Options*

Model	Terminal chamber	Code	Terminal Voltage	Code	Fixing	Code	Cable entries	Code	Lens guard	Code	Tag label	Code	Material	Code	Finish	Code
FB 5	EEx d	D	220 V AC	G	Backstrap	B	20 mm	B	None	0	None	N	Stainless steel	0	Grey	G
LB 5	EEx de	E	240 V AC	H	Stirrup	S	25 mm	C	Guard	1	Yes	Y	Alloy	1	Red	R
MF 5			254 V AC	J											Blue	B
HS 5															Yellow	Y
															White	W
															Special finish	S

* For more options see www.medc.com or contact your local representative



S O U N D E R S A N D H O R N S

Explosion protected units for Zone 0, 1, 2, 22, Class I, Div 1 & 2, GOST 'R' & 'K'

This range of light weight, flameproof Sounders has been designed with a high weatherproof rating to cope with the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

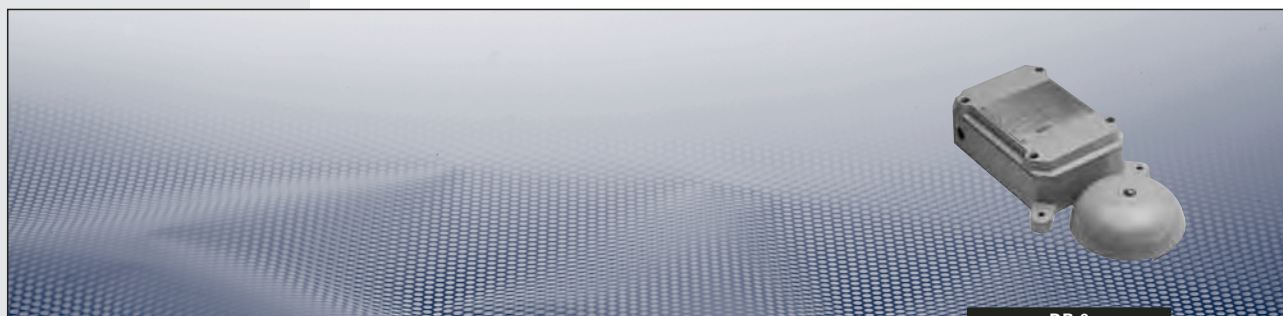
New electronic circuitry allows the DB1P and DB1HP to be switched between two selectable tones by either reversing the supply polarity, or connecting a second voltage supply. The higher output DB1H and DB1HP are particularly suitable for noisy environments.

The flamepaths, flare and the body, are manufactured completely from a UV stable glass reinforced polyester. Stainless steel screws and sinter are incorporated thus ensuring a corrosion free product. A tapered flamepath is used to overcome the problems of assembly of parallel spigot flamepaths. An optional Ex e terminal chamber is available.

Optional Exe terminal chamber
UL Listed for USA and Canada –
Hazardous locations:
Class I, Div 2, Groups A-D. Class I,
Zones 1 & 2, AExd IIC T4.
– Ordinary locations: Audible-Signal
Device.
GOST 'R' & 'K' certified
Chinese (CQST) certified
Australian (SAA) certified
IP66 and IP67
Certified temperature –55°C to +70°C
All GRP corrosion free flamepaths
Up to 118dBA output

11.50



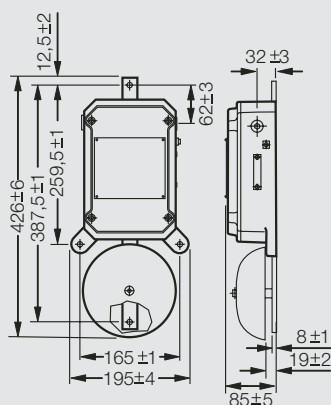


DB 6

E x - 1 0 9 d B (A) B e l l

11.51

| DB 6 |



Technical data

Type DB 6

EC-Type Examination Certificate	Baseefa 03 ATEX 0257
Marking to 94/9/EC	II 2G EEx d IIB T5
Enclosure material	Cast iron
Contact spring	Phosphor bronze
Contacts	Silver
Coil	Bakelite former
Magnet	Laminated iron
Finish	Grey epoxy paint finish as standard or to customer's specification
Max. sound levels	24 V DC 98 ± 3 db(A) 200/254 V AC 106 ± 3 db(A)
Rated voltage and Rated current	24 V DC 8 mA 200/254 V AC 3/5 mA 40 Hz/60 Hz
Entries	2 x M20 mm ISO with one EEx d blank fitted
Weight	11 kg
Rated terminal cross section	4 x 4 mm ²
Protection category to EN 60529	IP 65
Permissible ambient temperature	-20 °C to +55 °C

Ordering details

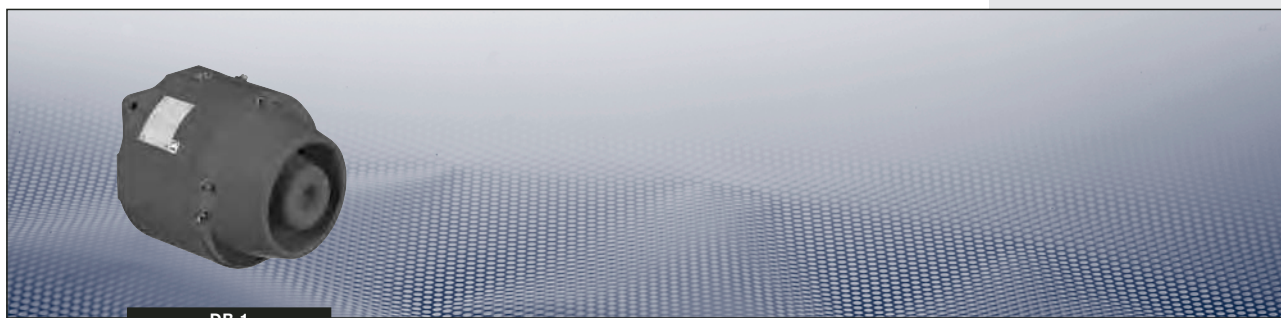
Type	Description	Order No.
DB6BNR	Cast iron 98 dB(A) outpart, red	PX806003

Ordering Options*

Unit Type	Voltage	Code	Label	Code	Finish	Code
DB 6	24 V DC	B	None	N	Red	R
	240 V AC	H	Yes	Y	Grey	G
					Special finish	S ¹⁾

¹⁾ Please specify

* For more options see www.mcdc.com or contact your local representative



DB 1

11.52

Ex - 1 1 3 d B (A) S o u n d e r

| DB 1 |


Technical data

Type DB 1

EC-Type Examination Certificate

DB 1 (P) Baseefa 02 ATEX 0207

DB 1 H (P) Baseefa 02 ATEX 0209

Marking to 94/9/EC  II 2G EEx d IIB T3

UL Listing Class I, Div. 1, Groups C & D

Listing No. E187688

GOST 'R' Certification 1Exd IIB T4 (DB1 & DB1P only)

Enclosure material Stainless Steel or corrosion resistant alloy, ABS flaire

Finish Epoxy paint finish as standard or to customer's specification

Max. sound levels 103 ± 3 db(A) DB1 (P)

96 ± 3 db(A) DB1 (P) 12 V

110 ± 3 db(A) at 1 m.¹⁾ DB1 H (P)

Rated voltage and Rated current

DC

AC

DB 1 (P) 12 V 24 V 48 V 120 V 240 V

DB 1 H (P) 125 mA 250 mA 250 mA 60 mA 50 mA

900 mA 700 mA – 200 mA 100 mA

Entries up to 3 x 20 mm or 25 mm ISO

Weight DB1 & DB1P 3.5 kg (alloy), 8.3 kg (stainless)

DB1 H & DB1HP 5.6 kg (alloy), 12.7 kg (stainless)

Rated terminal cross section up to 4 mm²

Protection category to EN 60529 IP 66

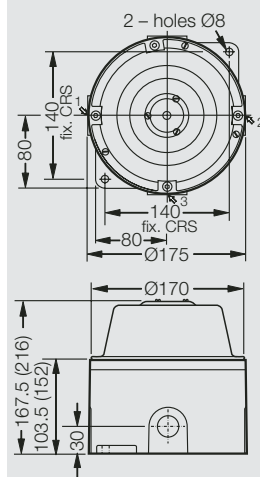
Permissible ambient temperature

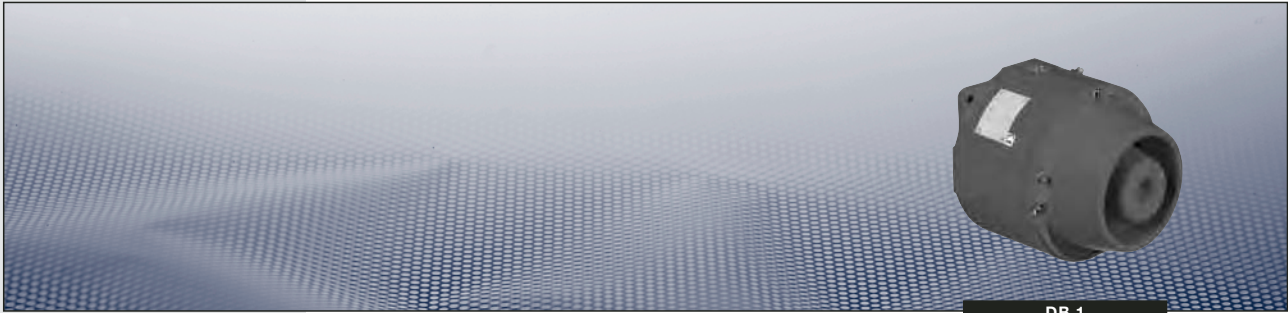
DB1 & DB1P -20 °C to +55 °C

DB1 H & DB1HP -20 °C to +70 °C

Resistor values 470 Ω minimum (DC only)

¹⁾ Sound level is dependant upon the tone selection





DB 1

Ex - 1 1 3 d B (A) S o u n d e r

| DB 1 |

11.53

Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB1BA024A1A3NNNR	ATEX approved Ex II 2GD	103 dB(A), 24 V DC, 2 x M20 entries, choice of 6 tones, red body finish	PX 801001
DB1HPULA024D1D2NNNR	UL Listed, Class I, Div 2, Groups C & D	Up to 103dB(A) at 10ft., two-stage alarms, with 26 tones, 24 V DC, alloy, red body finish, no tag or duty labels, 2 x 3/4" NPT entries	PX 869115
DB1PULA024D1D2NNNR	UL Listed, Class I, Div 2, Groups C & D	Up to 96dB(A) at 10ft., two-stage alarms, with 26 tones, 24 V DC, alloy, red body finish, no tag or duty labels, 2 x 3/4" NPT entries	PX 869111
DB1PULA110C1C3NNNR	UL Listed, Class I, Div 2, Groups C & D	Up to 96 dB(A) at 10ft., sounder, 110 V AC, 2 x 1/2" NPT entries, red body finish	PX 17300108

Ordering Options*

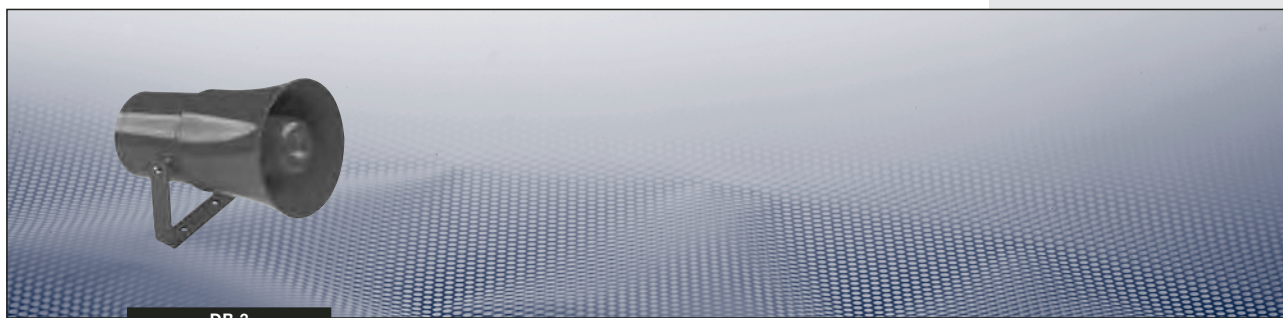
Unit Type	Certification	Code	Material Code	Voltage	Code	Entries ²⁾	Code Duty label	Code Tag label	Code Features	Code Finish	Code
DB 1	ATEX/CENELEX	B	SS 316 S	12 V DC	012	20 mm	A	None N	Required T	Not required N	Red R
DB 1 H	UL		Alloy A	24 V DC	024	25 mm	B	Required D	Not	Telephone	Grey G
DB 1 P	(DBIP & IHP only)	UL		48 V DC	048	1/2" NPT			required N	initiate	Special
DB 1 P2	GOST 'R'			110 V DC	110	(UL only)	C			Relay initiate	R
DB 1 HP	(DBI & DBIP only)	G		240 V DC	240	3/4" NPT				Remote	S
						(UL only)	D			End of line	
						LHS	1			resistor	E³⁾
						RHS	2				
						Bottom	3				

¹⁾ UL – Available Alloy only

²⁾ Prefix position with size code i.e. 1T 1B = 20 mm Top and Bottom e.g. A1A3 = 20 mm left and bottom entries

³⁾ Features not available on DB1P and DB1 HP

* For more options see www.medc.com or contact your local representative



DB 3

11.54

E x - 1 1 8 d B (A) S o u n d e r

| DB 3 |

Technical data

Type DB 3

EC-Type Examination Certificate

Type DB 3/DB 4 EEx d IIC Baseefa 00 ATEX 2097X

Type DB 3/DB 4 EEx de IIC Baseefa 00 ATEX 2098X

Marking to 94/9/EC

⊕ II 2G/D EEx d IIC T¹⁾

⊕ II 2G EEx de IIC T¹⁾

UL Listed for USA and Canada

Class I, Div. 2, Groups A-D

Class I, Zones 1 & 2, AExd IIC T4

Listing No.

E203310

GOST 'R' Certification

1Ex d IIC T4 & 1Exde IIC T4

Russian Fire Alarm (VNIPO) Approved

GOST 'K' Certification

Ex d IIC T4

Chinese (CQST) Certification

Ex d IIC T4

Enclosure material Body and horn

glass reinforced polyester

Swivel bracket

stainless steel

Finish

Epoxy paint finish as standard or to customer's specification

Max. sound levels Long flare

= 115 ± 3 db(A) (tone dependant)

Short flare

= 108 ± 3 db(A) (tone dependant)

Rated voltage and Rated current

12 V DC 760 mA | 24 V DC 380 mA | 48 V DC 190 mA

110 V AC 135 mA | 120 V AC 124 mA | 220 V AC 68 mA

230 V AC 65 mA | 240 V AC 62 mA | 254 V AC 59 mA

Entries

up to 2 x 20 mm | up to 2 x 1/2" NPT

Weight

EEx d IIC: 6.0 kg | EEx de IIC: 6.5 kg

Rated terminal cross section

4 x 2.5 mm² (AC) | 6 x 2.5 mm² (DC)

Protection category to EN 60529

IP 66 and IP 67

Permissible ambient temperature¹⁾

EEx d

EEx de

DB3 & DB3P -20 °C to +70 °C (T4)

-20 °C to +45 °C (T5/T100 °C)

DB3 L & DB3LP -55 °C to +55 °C (T5)

-55 °C to +70 °C (T4/T135 °C)

UL

GOST 'R' (Ex d)

DB3 & DB3P -55 °C to +70 °C

-20 °C to +50 °C

DB3 L & DB3LP n/a

-55 °C to +55 °C

GOST 'R' (Ex de)

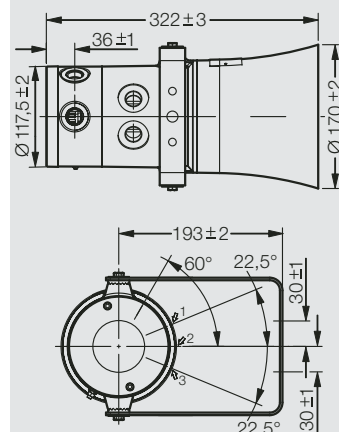
CQST

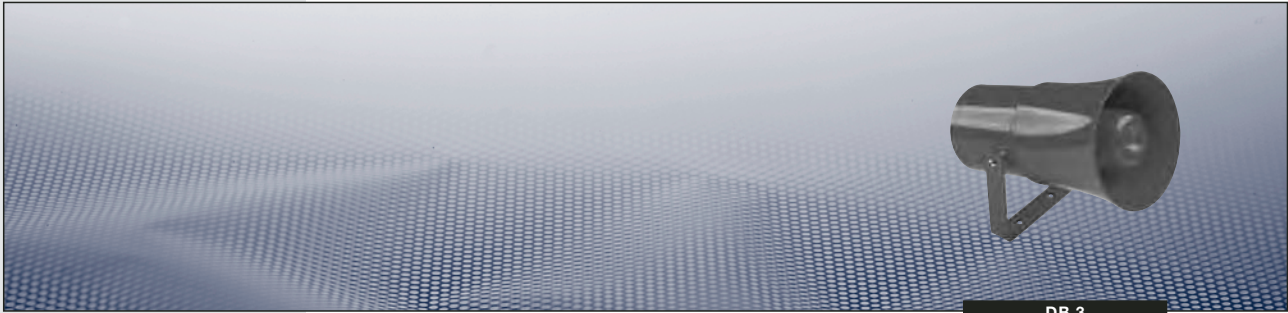
DB3 & DB3P -20 °C to +40 °C

-20 °C to +55 °C

DB3 L & DB3LP -55 °C to +55 °C

n/a





DB 3

E x - 1 1 8 d B (A) S o u n d e r

| DB 3 |

11.55

Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB3D048N2BNRZ	ATEX Ex II 2GD	27 tones, no tag or duty labels, 12-48 V DC, 2 x M20 entries with one certified plug fitted, red finish	PX 803123
DB3PD048N2BNNZ	ATEX Ex II 2GD	27 tones, no tag or duty labels, 12-48 V DC, 2 x M20 entries with one certified plug fitted, black finish	PX 803121
DB3D240N2BNNZ	ATEX Ex II 2GD	27 tones, no tag or duty labels, 240 V AC, 2 x M20 entries with one certified plug fitted, black finish	PX 803122
DB3D240N2BNRZ	ATEX Ex II 2GD	27 tones, no tag or duty labels, 240 V AC, 2 x M20 entries with one certified plug fitted, red finish	PX 803124
DB3PUL048N2CNRZ	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	27 tones, two stage, no tag or duty labels, 108 dB(A) output, NEMA 4X & 6, 12-48 V DC, 2 x 1/2" NPT entries with certified plug, red finish	PX 869132
DB3UL048N2CNRZ	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	27 tones, no tag or duty labels, 108 dB(A) output, NEMA 4X & 6, 12-48 V DC, 2 x 1/2" NPT entries with certified plug, red finish	PX 869131
DB3UL110N2CNRZ	UL, cUL Listed, Class I, Div 2, Groups A, B, C, D	27 tones, no tag or duty labels, 108 dB(A) output, NEMA 4X & 6, 110 V AC, 2 x 1/2" NPT entries with certified plug, red finish	PX 869135

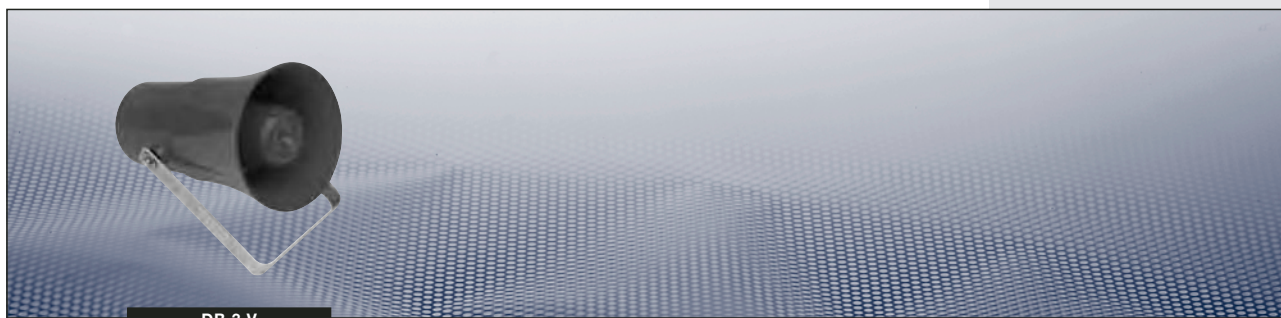
11

Ordering Options*

Unit Type	Details	Certification	Code	Voltage	Code	Label	Code	Entries	Code	Features	Code	Finish	Code
DB 3	Standard unit	EEx d	D	12 - 48 V DC	048	Duty	D	1 x 20 mm		Not required	N	Natural	
DB 3 P	Two stage (DC only)	EEx de	E	110 V AC	110	Tag	T	(EEx d)	1B	End of line resistor	E	Black	N
DB 3 L*	Low temp. standard unit	UL Listed	UL	120 V AC	120	None	N	2 x 20 mm				Red	R
DB 3 LP*	Low temp. two stage (DC only)	ATEX/UL		220 V AC	220			(EEx d/EEx de)	2B	Special tone	S	Special finish	S ¹⁾
		Dual Listed	AU	230 V AC	230			1 x 1/2" NPT					
		GOST 'R' Exd	DG	240 V AC	240			(UL only)	1C				
		GOST 'R' Exde	EG	254 V AC	254			2 x 1/2" NPT					
		GOST 'K' Exd	DK					(UL only)	2C				
		Chinese (CQST)	Q										

¹⁾ Customer to specify

* For more options see www.mcdc.com or contact your local representative



DB 3 V

11.56

Ex - 1 1 0 d B (A) V O I C E S O U N D E R

| DB 3 V |

Technical data

Type DB 3 V

EC-Type Examination Certificate

Type DB 3/DB 4 EEx d IIC Baseefa 00 ATEX 2097X

Type DB 3/DB 4 EEx de IIC Baseefa 00 ATEX 2098X

Marking to 94/9/EC

II 2G/D EEx d IIC T¹⁾

II 2G EEx de IIC T¹⁾

GOST 'R' Certification

1Ex d IIC T4 & 1Ex de IIC T4

Russian Fire Alarm (VNIIPO) Approved

GOST 'K' Certification

Ex d IIC T4

Chinese (CQST) Certification

Ex d IIC T4

Enclosure material Body and horn

glass reinforced polyester

Swivel bracket

stainless steel

Finish

Epoxy paint finish as standard or to customer's specification

Max. sound levels

= 110 ± 3 db(A) (tone dependant)

(controlled by potentiometer)

Voice recording

up to 20 sec.

Rated voltage and Rated current

12 V DC 1200 mA

24 V DC 600 mA

48 V DC 300 mA

Entries

up to 2 x 20 mm

Weight

6.0 kg

Rated terminal cross section

6 x 2.5 mm² (DC)

Protection category to EN 60529

IP 66 and IP 67

Permissible ambient temperature¹⁾

DB3 V

EEx d

EEx de

DB3 LV

-20 °C to +70 °C (T4)

-20 °C to +45 °C (T5/T100 °C)

-55 °C to +55 °C (T5)

-55 °C to +70 °C (T4/T135 °C)

DB3 V

GOST 'R' & 'K' Exd

GOST 'R' Exde

DB3 LV

-20 °C to +55 °C

-20 °C to +40 °C

-55 °C to +55 °C

-55 °C to +55 °C

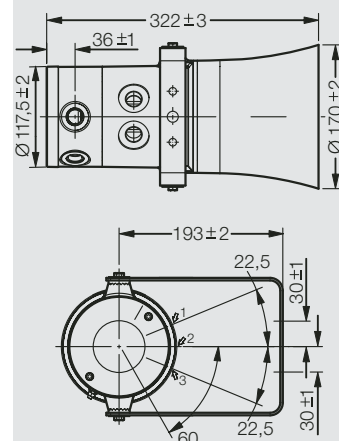
DB3 V

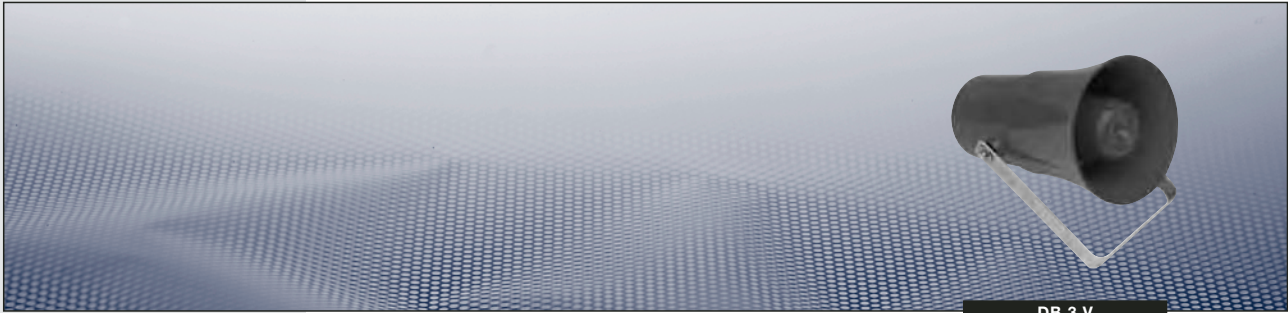
Chinese Exd

-20 °C to +55 °C

DB3 LV

n/a





DB 3 V

Ex - 110 dB(A) VOICE SOUNDER

| DB 3 V |

11.57

Ordering Options*

Unit Type	Details	Certification	Code	Label	Code	Entries	Code	Finish	Code
DB 3 V	Voice unit	ATEX EEx d	D	Duty	D²⁾	1 x 20 mm (EEx d)	1B	Natural Black	N
DB 3 LV¹⁾	Low temp. voice unit	ATEX EEx de	E	Tag	T²⁾	2 x 20 mm (EEx d/EEx de)	2B	Red	R
		GOST 'R'	DG	End of resistor	E³⁾			Special finish	S⁴⁾
		GOST 'K'	DK	Message	M				
		Chinese		Bell tone	O				
		(CQST)	Q	None	N				

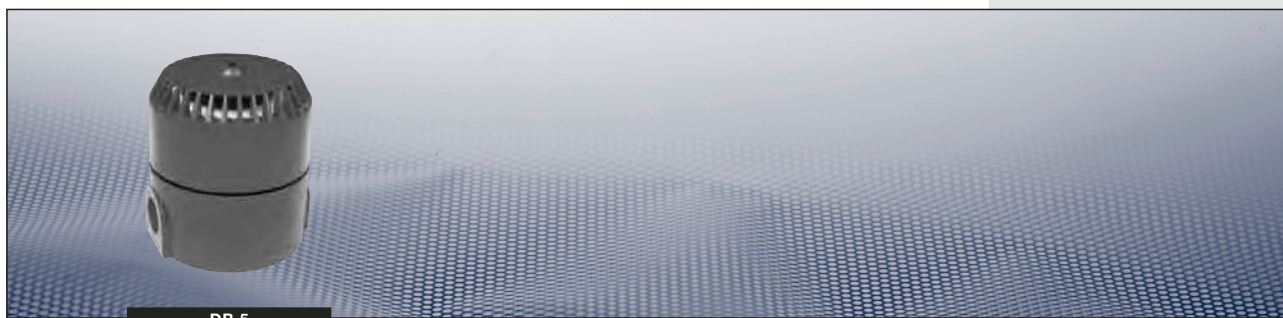
¹⁾ Available unpainted only

²⁾ Please specify wording

³⁾ _ state value

⁴⁾ Please specify

* For more options see www.medc.com or contact your local representative



DB 5

11.58

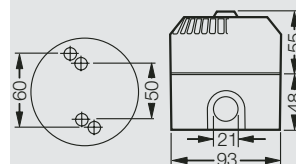
E x - 1 0 3 d B (A) S o u n d e r

| DB 5 |

Technical data

Type DB 5

EC-Type Examination Certificate	Baseefa 00 ATEX 1259
Marking to 94/9/EC	Ex II 1G EEx ia IIC T4
HSE(M) to EN50014, EN50020 and EN50303	EEx ia 1
Cert. No.	MECS01ATEX4260 (unit) and 94Y7095 (system)
FM Approved	Class I, Div. 1 groups A, B, C, and D. J.I. 3008604
CSA to	C22.2 Nos. 0, 0.4, 0.5, 25, 30, 205 Class 1, Groups A, B, C and D
Enclosure material	Acrylonitrile butadiene styrene
Finish	Red as standard
Max. sound levels	100 ± 3 db(A) (tone dependant)
Rated voltage and Rated current	
DB5B012NR	12 V DC 12 mA
DB5B024NR	24 V DC 14 mA
Entries	up to 1 x 21 mm each side or 1 x 21 mm rear
Weight	0.3 kg
Rated terminal cross section	6 x 2.5 mm ² (DC)
Protection category to EN 60529	IP 65
Permissible ambient temperature	-20 °C to +55 °C



Ordering details

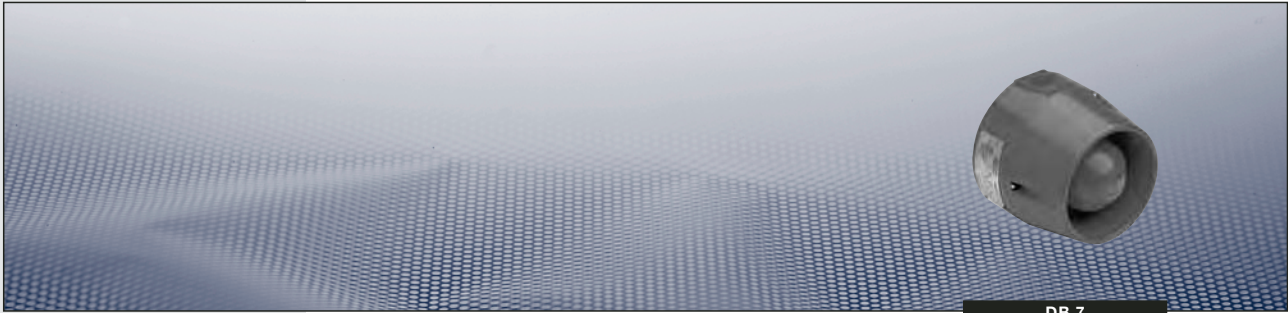
Catalogue No.	Certification	Description	Ordering Code
DB5B012NR	ATEX Approved Ex II 1G	Intrinsically safe, 26 tones, 93 dB(A) output, 12 V DC, up to 3 x M20 entries via knockouts, no labels, natural red finish	PX 805001
DB5B024NR	ATEX Approved Ex II 1G	Intrinsically safe, up to 3 x M20 entries via knockouts, 24 V DC up to 3 x M20 entries via knockouts, no labels, natural red finish	PX 805002
DB5FM024NR	FM Approved for Class I, Div 1 & 2, Groups A, B, C, D	Intrinsically safe, 26 tones, 93 dB(A) output, no tag or duty labels, 24 V DC, 2 x 13/16" entries via knockouts, natural red finish	PX 869150

Ordering Options*

Unit Type	Certification	Code	Voltage	Code	Label	Code	Finish	Code
DB 5	BASEEFA GP 1 (12 V only)	M	12 V	012	None	N	Red	R
	BASEEFA GP 2	B	24 V	024	Yes	Y	Special finish	S¹⁾
	FM	FM						

¹⁾ Please specify

* For more options see www.medc.com or contact your local representative

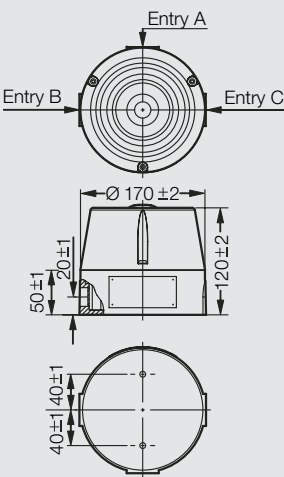


DB 7

Ex - 118 dB (A) Sounder

11.59

DB 7



Technical data

Type DB 7

EC-Type Examination Certificate	Baseefa 00 ATEX 1260
Marking to 94/9/EC	Ex II 1G EEx ia IIB T4 Ex II 1G EEx ia IIC T4
GOST 'R' Certification	0Exia IIC T4, 0Exia IIB T4
Enclosure material	Glass reinforced polyester
Finish	Self coloured red as standard or epoxy coated to customer's specification
Max. sound levels	12 V/24 V IIB 107 ± 3 db(A) at 1 metre 12 V/24 V IIC 103 ± 3 db(A) at 1 metre
Rated voltage and Rated current	12 V DC 25 mA to 55 mA 24 V DC 34 mA to 68 mA
Entries	up to 3 x M20
Weight	1.0 kg
Rated terminal cross section	8 x 2.5 mm ²
Protection category to EN 60529	IP 65
Permissible ambient temperature	-55 °C to +70 °C

Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB7PBB024NR	ATEX Approved Ex II 1G, EExia, IIB & IIC, T4	110 dB(A) output, GRP, 24 V DC, up to 3 x M20 entries via knockouts, no labels, choice of 26 tones, natural red	PX 807006

Ordering Options*

Unit Type	Certification	Code	Voltage	Code	Label	Code	Finish	Code
DB 7P	ATEX IIB	BB	12 V	012	Duty	D ¹⁾	Red	R
	ATEX IIC	BC	24 V	024	Tag	T ¹⁾	Special finish	S
	GOST 'R' IIB	GB			None	N		
	GOST 'R' IIC	GC						

¹⁾ Please specify

* For more options see www.medc.com or contact your local representative

S P E A K E R S

Explosion protected units for Zone 0, 1, 2, 22, Class I, Div 2, GOST

This range of loudspeakers, intended for use in potentially explosive gas and dust atmospheres, can have a power rating of up to 30 watts and is suitable for use in all gas groups including hydrogen. The flamepaths, are and the body, are manufactured completely from a UV stable glass reinforced polyester. Stainless steel screws and sinter are incorporated thus ensuring a corrosion free product. A tapered flamepath is used to overcome the problems of assembly of parallel spigot flamepaths. An optional Ex-e terminal chamber is available on some units. An uncertified version is available for use in non-explosive atmospheres. Models compliant to BS 5839, part 8 are available.

UL listed for USA and Canada:

– Class I, Div 2, Groups A-D –
Class I, Zones 1 & 2, AECd IIC, T4
GOST 'R' & 'K' certified.

Australian (SAA) certified.

Optional Ex-e terminal chamber
IP 66 and IP 67

Certified temperature -55 °C to +70 °C

GRP corrosion-free flamepaths

Up to 122 dBA at 30 watts at 1 metre
BS 5839, part 8 compliant versions
available

Addressable capability

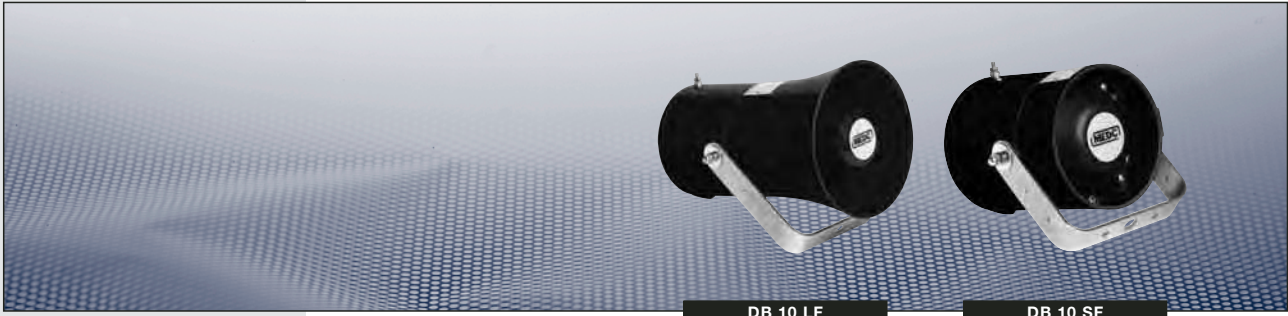
Power tapings, via integral
transformer

Ratcheted swivel bracket

Stainless steel sinter

Stainless steel mounting bracket





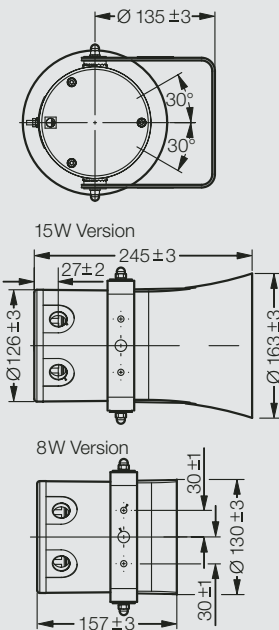
DB 10 LF

DB 10 SF

E X - 8 / 1 5 W A T T S P E A K E R

11.61

| DB 10 |



Technical data

Type DB 10

EC-Type Examination Certificate	BAS 02 ATEX 2086X
Marking to 94/9/EC	II 2G EEx d IIB +H ₂ T ¹⁾
GOST 'R' Certification	2 Exde IIB + H ₂ T4/T5/T6
GOST 'K' Certification	Exde IIB + H ₂ T4/T5/T6
Chinese (CQST) Certification	Exde IIB + H ₂ T4/T5/T6
Enclosure material	Anti-static, UV stable, glass reinforced polyester, mounting stirrup and fixtures in stainless steel
Finish	All natural or body and horn can be painted to client's requirements
Rated power	8 or 15 W RMS continuous at +25 °C
Output	long flare (15 W) maximum output at 1 W/1 m at 2 kHz is 105 dBA maximum output at 15 W/1 m at 2 kHz is 115 dBA short flare (8 W) maximum output at 1 W/1 m at 2 kHz is 98 dBA maximum output at 8 W/1 m at 2 kHz is 107 dBA
Frequency range	400 Hz to 8 kHz
Voice coil impedance	8 Ω
Transformer	100 V line as standard
Entries	1 x M20 EEx d/2 x M20 ISO EEx e
Weight	15 W 3.0 kg 8 W 2.5 kg
Rated terminal cross section	8 x 2.5 mm ² or 4 x 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature ¹⁾	T6 T5 T4 -55 °C to +40 °C -55 °C to +55 °C -55 °C to +70 °C

11

Ordering details

Type	Description	Order No.
DB108XN2BPN	8 Watt (short flare), 100 V transformer, 2 x M20 entries with 1 certified plug fitted, natural black	PX 807915
DB1015XN2BPN	15 Watt (short flare), 100 V transformer, 2 x M20 entries with 1 certified plug fitted, natural black	PX 807908

Ordering Options*

Unit Type	Certification	Code	max. rated Power	Code	Transformer	Code	Options	Code	Entries	Code	Colour	Code
DB 10 ¹⁾	ATEX	B	8 W	8	Yes	X ²⁾	Duty	D	1 x M20	1B	Natural black	N
	GOST 'R'	R	15 W	15	8 Ω version	N	Tag	T	2 x M20	2B	Red	R
	GOST 'K'	K					None	N	2 x M20 entries	2BP ³⁾	Special	S
	Chinese (CQST)	Q										

¹⁾ For more options see www.medc.com or contact your local representative.

²⁾ Std. 100 V, other values are available

³⁾ With one certified plug fitted.

* For more options see www.medc.com or contact your local representative



DB 4L

DB 4

11.62

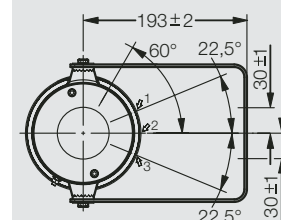
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| DB 4 | DB 4L |

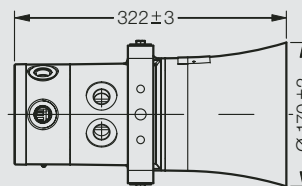
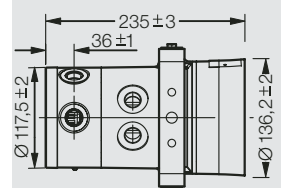
Technical data

Type DB 4/DB 4L

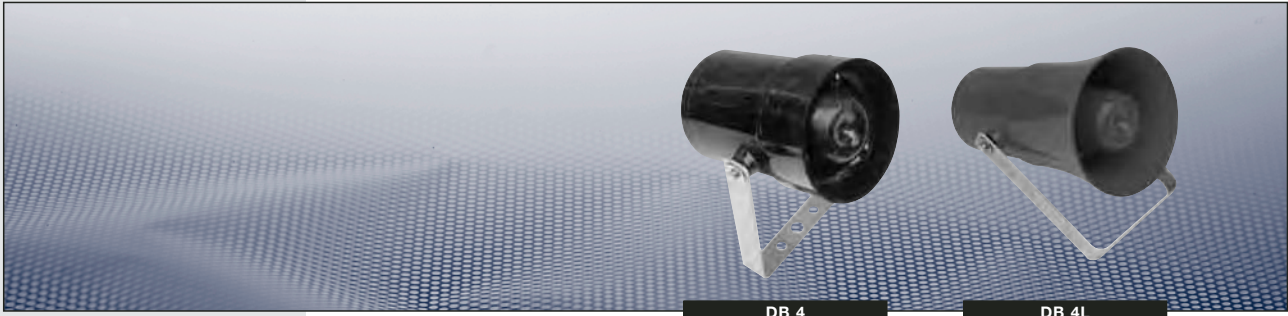
EC-Type Examination	EEx d BAS 00 ATEX 2097X
Certificate	EEx ed BAS 00 ATEX 2098X
Marking to 94/9/EC	II 2G/D EEx d IIC T4 T135 °C
UL listed for USA and Canada	Class I, Div 2, Groups A-D Class I, Zones 1 & 2, AExd IIC T4
GOST 'R' Certification	1Exd IIC T4 & 1Exde IIC T4 Russian Fire Alarm (VNIPO) approved
GOST 'K' Certification	Exd IIC T4
Enclosure material	Anti-static, UV stable, glass reinforced polyester; swivel bracket in stainless steel; captive cover screws in stainless steel
Finish	All natural or body and horn can be painted to client's requirements
Rated power	8 W, 15 W, 20 W or 25 W RMS continuous at +25 °C
Output	long flare (>8 W)
	maximum output at 1 W/1 m is 107 dBA
	maximum output at 25 W/1 m is 119 dBA
	short flare (8 W)
	maximum output at 1 W/1 m is 100 dBA
	maximum output at 8 W/1 m is 109 dBA
Frequency range	400 Hz to 8 kHz
Voice coil impedance	8 Ω
Transformer	100 V line as standard
Entries	max. 2 x M20 EEx d/2 x M20 into EEx e chamber
Weight	EEx d 5.0 kg dependet on model
	EEx de +0.5 kg
Rated terminal cross section	8 x 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature	
	DB 4 ≤ 15 W -20 °C to +70 °C
	DB 4 > 15 W -20 °C to +55 °C
	DB 4L ≤ 15 W -55 °C to +70 °C
	DB 4L > 15 W -55 °C to +55 °C



DB 4



DB 4L



DB 4

DB 4L

E x - 8 / 2 5 W A T T S P E A K E R

| DB 4 | DB 4L |

11.63

Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB415DXN2BNZ	ATEX Approved Ex II 1G	15 watt 100 V line transformer, no labels, 2 x M20, one certified plug, flameproof enclosure, natural black finish	PX 804215
DB425DXN2BNZ	ATEX Approved Ex II 1G	25 watt 100 V line transformer, no labels, 2 x M20, one certified plug, flameproof enclosure, natural black finish	PX 804225
DB425ULNT2CRZ	UL, cUL Listed Class I, Div 2, Groups A, B, C, D	25 watt high-output version, direct connection 8 Ohm, Label = ABS Approved, 2 x 1/2" NPT entries, red finish	PX 869145
DB425ULXN2CR	UL, cUL Listed Class I, Div 2, Groups A, B, C, D	25 watt 100 V line transformer, no labels, 2 x 1/2" NPT entries, red finish	PX 869142
DB425ULXN2CR	UL, cUL Listed Class I, Div 2, Groups A, B, C, D	25 watt 70 V line transformer, no labels, 2 x 1/2" NPT entries, red finish	PX 869144

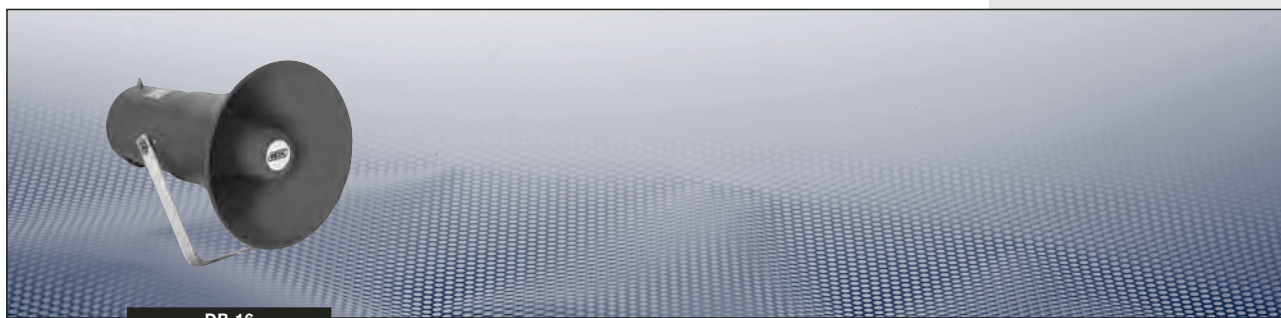
Ordering Options*

Unit Type	max. rated Power	Code	Certification	Code	Transformer	Code	Options	Code	Entries	Code	Colour	Code
DB 4	8 W	8	EEx d	D	Yes	X¹⁾	Duty	D	1 x M20 EEx d	1B	Natural Black	N
DB 4L	15 W	15	EEx de	E	8 Ω version	N	Tag	T	2 x M20 EEx d/		Red	R
	20 W	20	UL listed	UL			Earth continuity	E	EEx e	2B	Special	S²⁾
	25 W	25	EExd BS 5839 part 8	D8			None	N				
			GOST 'R' Exd	GD								
			GOST 'R' Exde	GE								
			GOST 'K' Exd	KD								

¹⁾ Std. 100 V, other values are available

²⁾ Please specify

* For more options see www.medc.com or contact your local representative



DB 16

11.64

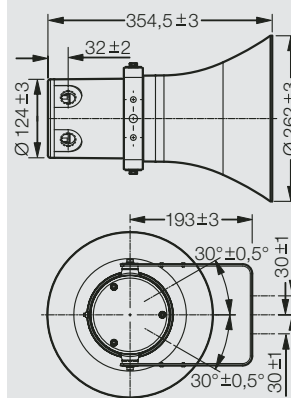
E x - 2 5 / 3 0 W A T T S P E A K E R

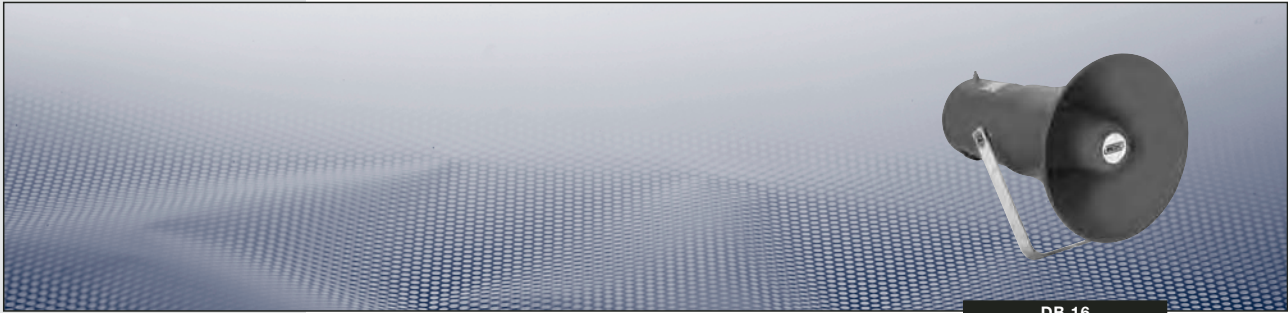
| DB 16 |

Technical data

Type DB 16

EC-Type Examination	EEx IIB	Baseefa 04 ATEX 0167X
Certificate	EEx IIC	Baseefa 04 ATEX 0166X
Marking to 94/9/EC	EEx IIB	II 2G EEx de IIB T3
	EEx IIC	II 2G/D EEx de IIC T4 T110 °C IP 6X
UL Listed for USA and Canada		Class I, Div 2, Groups C & D
		Class I, Zone 1
		AExde IIB T3
		Class I, Div 2, Groups A-D
		Class I, Zone 1
		AExde IIC T110 °C
GOST 'K' Certification		1Exde IIC T4/IIB T3
Enclosure material		Body & horn in anti-static, UV stable, glass reinforced polyester Mounting stirrup and fixtures in stainless steel
Finish		All natural or body and horn can be painted to client's requirements
Rated power		30 W RMS continuous at +25 °C
Output	IIB version	maximum output at 1 W/1 m is 117 dBA
		maximum output at 25 W/1 m is 121 dBA
		maximum output at 30 W/1 m is 122 dBA
	IIC version	maximum output at 1 W/1 m is 107 dBA
		maximum output at 25 W/1 m is 118 dBA maximum output at 30 W/1 m is 119 dBA
Frequency range		370 Hz to 8 kHz
Voice coil impedance		8 Ω
Transformer		100 V line as standard
Entries		max. 2 x M20/2 x M25 into EEx e chamber
Weight		5.5 kg approx.
Rated terminal cross section		8 x 2.5 mm ²
Protection category to EN 60529		IP 66/IP 67
Permissible ambient temperature	30 W version	-50 °C to +40 °C
	25 W version	-50 °C to +65 °C





DB 16

E x - 2 5 / 3 0 W A T T S P E A K E R

| DB 16 |

11.65

Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB16UCXN2MPN	UL, cUL Listed, Class I, Div 2, Groups C & D	Unit suitable for gas Groups A, B, C, D, 70V line transformer, 2 x 1/2" NPT, one certified plug, natural black finish	PX 28600006

Ordering Options*

Unit Type	Certification	Code	max. rated Power	Code	Transformer	Code	Options	Code	Entries	Code	Colour	Code
DB 16	ATEX IIB	BB	25 W	25	Yes	X³⁾	Duty	D	1 x M20	1B⁴⁾	Natural black	N
	ATEX IIC	BC	30 W	30	8 Ω version	N	Tag	T	2 x M20	2B⁴⁾	Red	R
	UL (C & D) ¹⁾	UB					Earth continuity	E	1 x M25	1C⁴⁾	Special	S⁵⁾
	UL (A-D) ²⁾	UC					Earth stud	B	2 x M25	2C⁴⁾		
	GOST 'K' IIB	KB					None	N				
	GOST 'K' IIC	KC										

¹⁾ Suitable for gas groups C & D

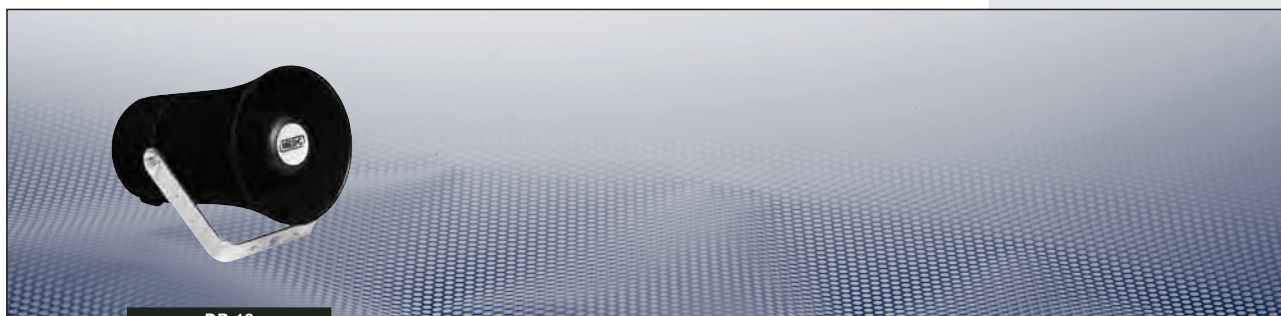
²⁾ Suitable for gas groups A – D

³⁾ Std. 100 V, other values are available

⁴⁾ To specify certified plug, suffix appropriate code with "P"

⁵⁾ Please specify

* For more options see www.medc.com or contact your local representative



DB 18

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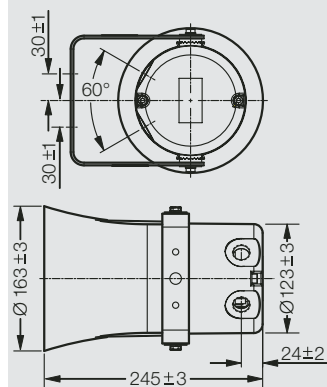
E x - 1 5 W A T T S P E A K E R

| DB 18 |

Technical data

Type DB 18

Compliance	GENELEC EN 50014, EN 50021
Marking to 94/9/EC	Ex II 3G/D EEx nA II T135 °C
Enclosure material	Anti-static, UV stable, glass reinforced polyester; swivel bracket in stainless steel; captive cover screws in stainless steel
Finish	All natural or body and horn can be painted to client's requirements
Rated power	15 W RMS continuous at +25 °C
Output	maximum output at 1 W/1 m at 900 Hz is 107 dBA maximum output at 15 W/1 m at 900 Hz is 117 dBA
Frequency range	400 Hz to 7 kHz
Voice coil impedance	8 Ω
Transformer	100 V line as standard
Entries	max. 2 x M20 EEx d/1 x M20 into EEx e chamber
Weight	2.6 kg
Rated terminal cross section	8 x 2.5 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature	-55 °C to +55 °C



Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB18XNN	ATEX approved Ex II 3G/D	15 Watt, 100 V line transformer, 2 x M20 entries, natural black finish	PX 808401

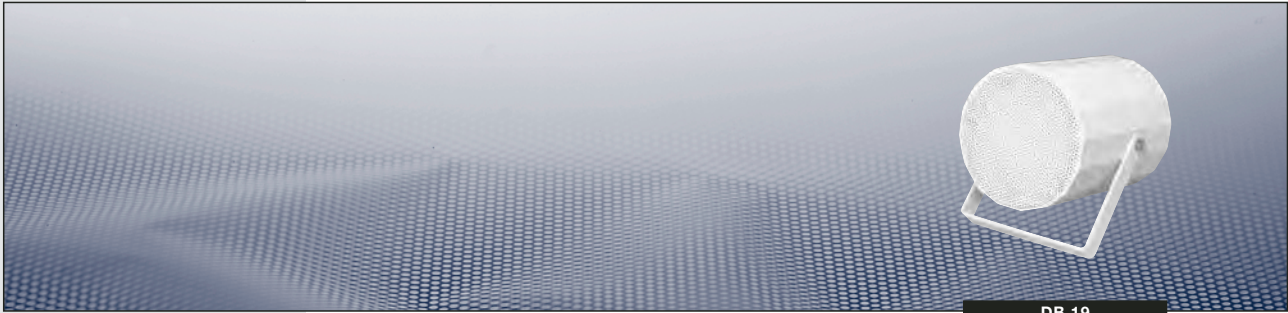
Ordering Options*

Unit Type	Transformer	Code	Options	Code	Entries	Code	Colour	Code
DB 18	Yes	X ¹⁾	Duty	D	1 x M20 EEx d	1B	Natural black	N
	Transf. and 8 Ω terminals	X8	Tag	T	2 x M20 EEx d/EEx e	2B	Red	R
	8 Ω version	N	Earth continuity	E			Special	S ²⁾
			Blanking plug	P				
			None	N				

¹⁾ Std. 100 V, other values are available

²⁾ Please specify

* For more options see www.medc.com or contact your local representative

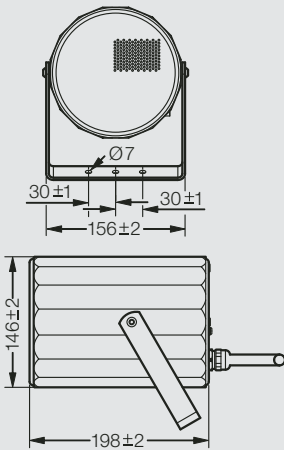


DB 19

Ex - 15 WATT PROJECTOR SPEAKER

| DB 19 |

11.67



Technical data

Type DB 19

Compliance	GENELEC EN 50014, EN 50021
Marking to 94/9/EC	Ex II 3G/D EEx nA II T135 °C
Enclosure material	Body in aluminium Mounting stirrup and fixtures in stainless steel
Finish	Powder coated white to RAL 9010 as standard – can be painted to clients requirements
Rated power	15 W RMS continuous at +25 °C
Output	maximum output at 1 W/1 m at 900 Hz is 92 dBA maximum output at 15 W/1 m at 900 Hz is 104 dBA
Frequency range	120 Hz to 20 kHz
Voice coil impedance	12.5 k, 7.7 k, 3.7 k, 2.5 k, 1.3 kΩ, 666 Ω
Transformer	100 V line as standard
Entries	M20 gland
Weight	2.6 kg
Rated terminal cross section	4 x 2.5 mm ²
Protection category to EN 60529	IP 54
Permissible ambient temperature	-55 °C to +55 °C

Ordering details

Catalogue No.	Certification	Description	Ordering Code
DB19XNN	ATEX approved Ex II 3G/D	15 Watt, 100 V line transformer, white to RAL 9010	PX 808501

Ordering Options*

Unit Type	Transformer	Code	Colour	Code
DB 19	Yes	X ¹⁾	Natural black	N
	8 Ω version	N	Red	R
			Special	S ²⁾

¹⁾ Std. 100 V, other values are available

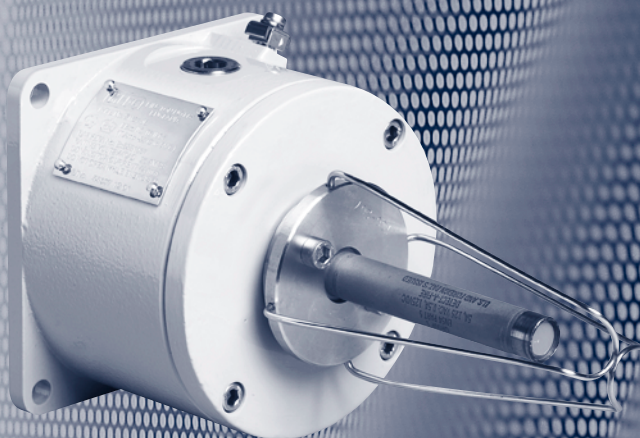
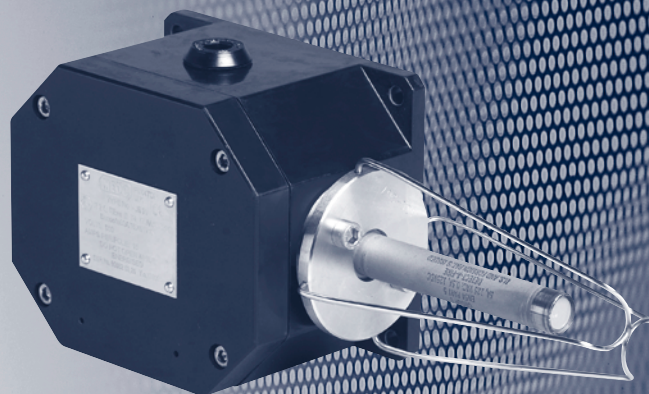
²⁾ Please specify

* For more options see www.medc.com or contact your local representative

H E A T D E T E C T O R

Explosion protected units for Zone 0, 1, 2 and 22

The MEDC-Hawco heat detector has been designed for use in hazardous environments. These units are suitable for fire alarm and/or suppression systems in offshore and onshore applications including paint spray booths, flammable material stores, turbine rooms, extract ductwork and other hazardous areas throughout the oil & gas, petrochemical and process industries. Comprising a Fenwal rate-compensated detector with all-stainless steel external construction, mounted to either a type SM87 marine grade alloy enclosure (EEx d version) or JB10 corrosion-free GRP enclosure (EEx ia, EEx em/UL versions). The contact in the detector CLOSSES at alarm temperature.



UL listed for USA and Canada

– Class I, Div 2, Groups A-D

GOST 'R' & 'K' certified.

Chinese (CQST) certified.

IP66 & IP67

Certified temperature:

–20°C to +125°C (EExd).

–20°C to +55°C (EExem/UL).

–55°C to +55°C (EExia)

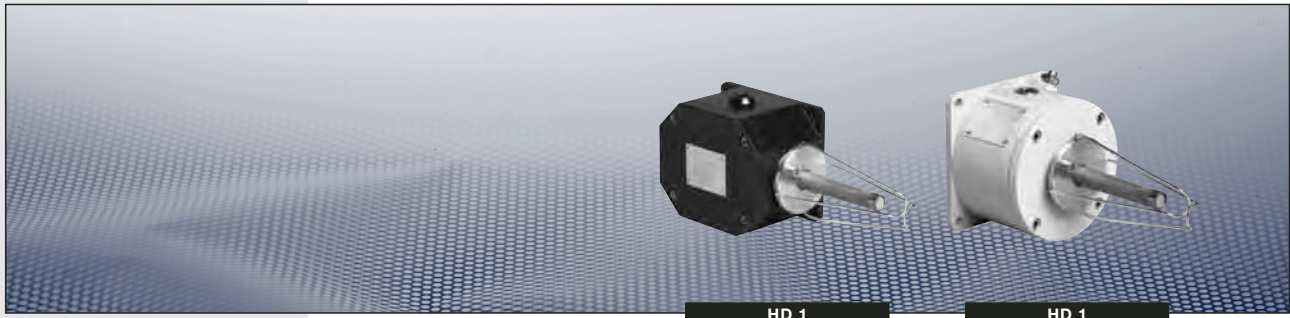
Stainless steel probe

Detector temperature settings:

60°C to 385°C, (140°F to 725°F)*

Marine grade alloy or GRP enclosure

Optional guard



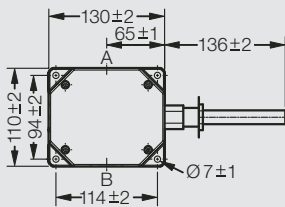
HD 1

HD 1

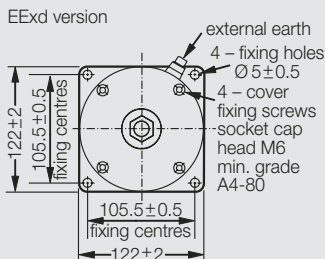
E x - H E A T D E T E C T O R

| HD 1 |

11.69



EEx ia/EEx em UL-Version

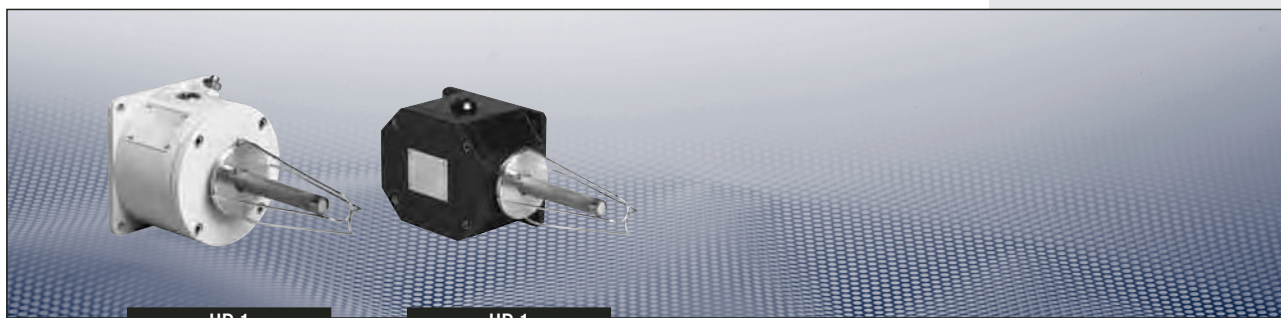


EExd Version

Technical data

Type HD 1

EC-Type Examination Certificate	Baseefa 03 ATEX 0447
Marking to 94/9/EC	<div> <div>II 2G EEx em II T6</div> <div>II 1G EEx ia II T6</div> <div>II 2G EEx d IIB T6</div> </div>
UL listed for USA and Canada	Class I, Div 2, Groups A, B, C & D
UL Listing No.	E252920
GOST 'R' & 'K' Certification	Exd, Exi & Exem versions Russian Fire Alarm (VNIPO) approved
Chinese Certification CQST	Exd, Exi & Exem versions
Detector material	316 stainless steel
Enclosure material	EEx d: LM25 marine grade alloy EEx ia/EEx em/UL – GRP (anti static): stainless steel cover screws
Finish	<div>Detector</div> <div>Enclosures</div>
	<div>Sand blasted</div> <div>EEx d - Epoxy painted grey as standard or to customer's specification</div> <div>EEx ia/EEx em/UL – Self coloured black or epoxy painted to customer's specification</div>
Operation	NO contact – CLOSSES on alarm temperature
Listed temperature settings/ Colour Code ¹⁾	<div>60 ± 4 °C (140 °F) black 71 ± 4 °C (160 °F) black</div> <div>88 ± 4 °C (190 °F) white 107 ± 4 °C (225 °F) white</div> <div>135 ± 6 °C (275 °F) blue 163 ± 6 °C (325 °F) red</div> <div>182 ± 6 °C (360 °F) red 232 ± 8 °C (450 °F) green</div> <div>316 ± 11 °C (600 °F) orange 385 ± 14 °C (725 °F) orange</div>
Contact rating	<div>EEx d/EEx em</div> <div>EEx ia</div>
	<div>125 V AC – 5A, 125 V DC – 0.5A, 48 V DC – 1A</div> <div>30 V – 300 mA</div>
Entries	2 x M20
Weight	EEx d: 2.0 kg EEx ia/EEx em: 1.1 kg
Rated terminal cross section	6 x 4 mm ²
Protection category to EN 60529	IP 66/IP 67
Permissible ambient temperature	<div>EEx d T3</div> <div>T6</div> <div>T4</div>
	<div>-20 °C to +125 °C</div> <div>-20 °C to +55 °C</div> <div>-55 °C to +55 °C</div>
Resistor	Series & EOL resistor (Maximum total 2) minimum value (Each) 470 Ω – only available in Exd, Exi & UL versions



HD 1

HD 1

11.70

E X - H E A T D E T E C T O R

| HD 1 |

Ordering details

Catalogue No.	Certification	Description	Ordering Code
HD1ULE140GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 140° F, 60° C, black detector tip, tolerance +7/-8° F, ±4° C	PX 46500152
HD1ULE160GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 160° F, 71° C, black detector tip, tolerance +7/-8° F, ±4° C	PX 46500153
HD1ULE190GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 190° F, 88° C, white detector tip, tolerance +7/-8° F, ±4° C	PX 46500154
HD1ULE225GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 225° F, 107° C, white detector tip, tolerance +7/-8° F, ±4° C	PX 46500155
HD1ULE275GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 275° F, 135° C, blue detector tip, tolerance ±10° F, ±6° C	PX 46500156
HD1ULE325GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 325° F, 163° C, red detector tip, tolerance ±10° F, ±6° C	PX 46500157
HD1ULE360GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 360° F, 182° C, red detector tip, tolerance ±10° F, ±6° C	PX 46500158
HD1ULE450GN	UL, cUL, Class I, Div 2, Groups A, B, C, D Class I, Zone 2, IIC	Temperature setting 450° F, 232° C, green detector tip, tolerance ±15° F, ±8° C	PX 46500159

Ordering Options*

Model	Certification	Code	Cert. Type	Code	Temperatur settings ¹⁾	Code	Options	Code	Enclosure Finish	Code
HD 1	ATEX	B	EEx d	D³⁾	140 °F	140	Duty label	D	Natural black	N
	UL listed	UL	EEx em	E	.	.	Tag label	T	Grey	G
	ATEX/UL dual listed	AU	EEx i	I	.	.	Guard	G	Red	R
	GOST 'R' ²⁾	G			.	.	Resistor EOL	E	Blue	B
	GOST 'K'	K			.	.	Resistor series	S	Yellow	Y
	Chinese (CQST)	Q			.	.	Diode(s)	I⁴⁾	Special finish	S
					.	.	Blanking plug	P		
					725 °F	725	None	N		

¹⁾ See technical data

²⁾ VNIPO approved as standard

³⁾ Not available UL or ATEX/UL dual listed

⁴⁾ Only available in ATEX/Exd

* For more options see www.medc.com or contact your local representative

**YOU NEED A RELIABLE AND COST-
EFFECTIVE TERMINAL ENCLOSURES?
(YOU WILL FIND IT HERE!)**



Content

Universal terminal enclosures and boxes in stainless steel and plastic versions.

Overview terminal enclosures and boxes in metal/plastic version . . . **12.5**

NEXT terminal enclosures

A premium selection of various enclosure sizes for a widest temperature made of 316 L or 304 stainless steel. Certified according to nearly all relevant standards e.g. ATEX, cUL_{us} AEx,

GOST-R ect **12.6**

NEXT METRIC size enclosures **12.8**

NEXT landscape METRIC size enclosures **12.11**

NEXT IMPERIAL size enclosures **12.12**

NEXT landscape IMPERIAL size enclosures **12.15**

EX-Cell terminal enclosures

Ex-Cell is a high quality enclosure range to suit the majority of applications and provides some unique design features to complete this cost-effective solution.

By combining its suitability for hazardous area environmental and its value, Ex-Cell is an ideal choice to satisfy several market requirements with a single product **12.16**

Ex-Cell METRIC size enclosures **12.18**

Ex-Cell IMPERIAL size enclosures **12.22**

STB terminal boxes

STB provides a simple but robust design to complement the NEXT and the ex-Cell ranges for the smaller junction box requirements, thus making the STB one of the most popular choices. Available in stainless steel 316 L or 304 electro-polished or powder coated with

4 screw lid **12.30**

STB METRIC size boxes **12.32**

STB IMPERIAL size boxes **12.34**

GHG 7xx plastic terminal boxes

GHG 7xx terminal box series made of high impact resistance moulded plastic is the choice for light-weight plastic solutions, where stainless steel is not necessary or too heavy **12.38**

GHG 791 **12.40**

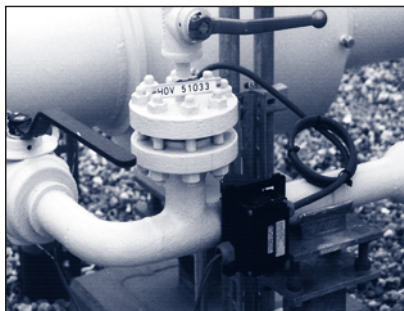
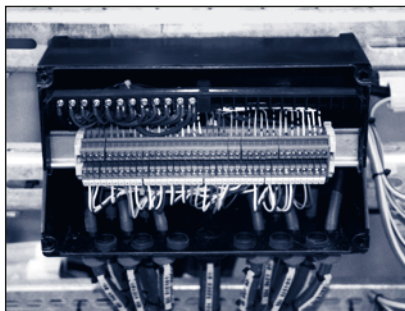
GHG 731 **12.42**

GHG 721 **12.44**

GHG 744/745 **12.48**

GHG 746/749 **12.50**

Fitting materials and accessories **12.52**



Terminal Enclosures for Instrumentation Solutions

Terminal boxes are necessary as a connection point for different cables leading to a common point. Especially in hazardous areas signal and monitoring devices must be routed safe and cost-effective together in a common control cable to one controller or control room.

Terminal boxes in various materials and sizes are the foundations for a reliable system of wiring and instrumentation tasks.

Cooper Crouse-Hinds UK Ltd. is manufacturing a range of high quality and robust junction boxes, enclosures and custom electrical assemblies. These have been designed and engineered to meet the requirements of the most demanding hazardous area, marine and heavy industrial environmental applications.

With over 30 years of experience in the design, engineering and manufacture of enclosures and custom electrical assemblies. Cooper Crouse-Hinds provides proven, tried and tested solutions using quality materials and processes to provide products to endure the toughest environmental conditions for project and installation requirements.

In addition to our standard range enclosure products we also manufacture many customised enclosure products for OEM customers that require an enclosure to meet a defined specification. These maybe variations on a standard product range to accommodate a customer's products or assemblies; alternatively it could be a custom design for a specific application.

All explosion protected terminal boxes are certified according latest standards of CENELEC, as well as UL or GOST.

Please visit our web sides

www.ceag.de

www.enclosures-crouse-hinds.uk.com

or ask your local representative for special certification.

12.3

12

EX - TERMINAL ENCLOSURES

Stainless steel version for Zone 1

The new explosion-protected terminal enclosures made of stainless steel (AISI 316 L) with ground surfaces was developed for instrumentation and control installations using the Ex-e and Ex-i technologies.

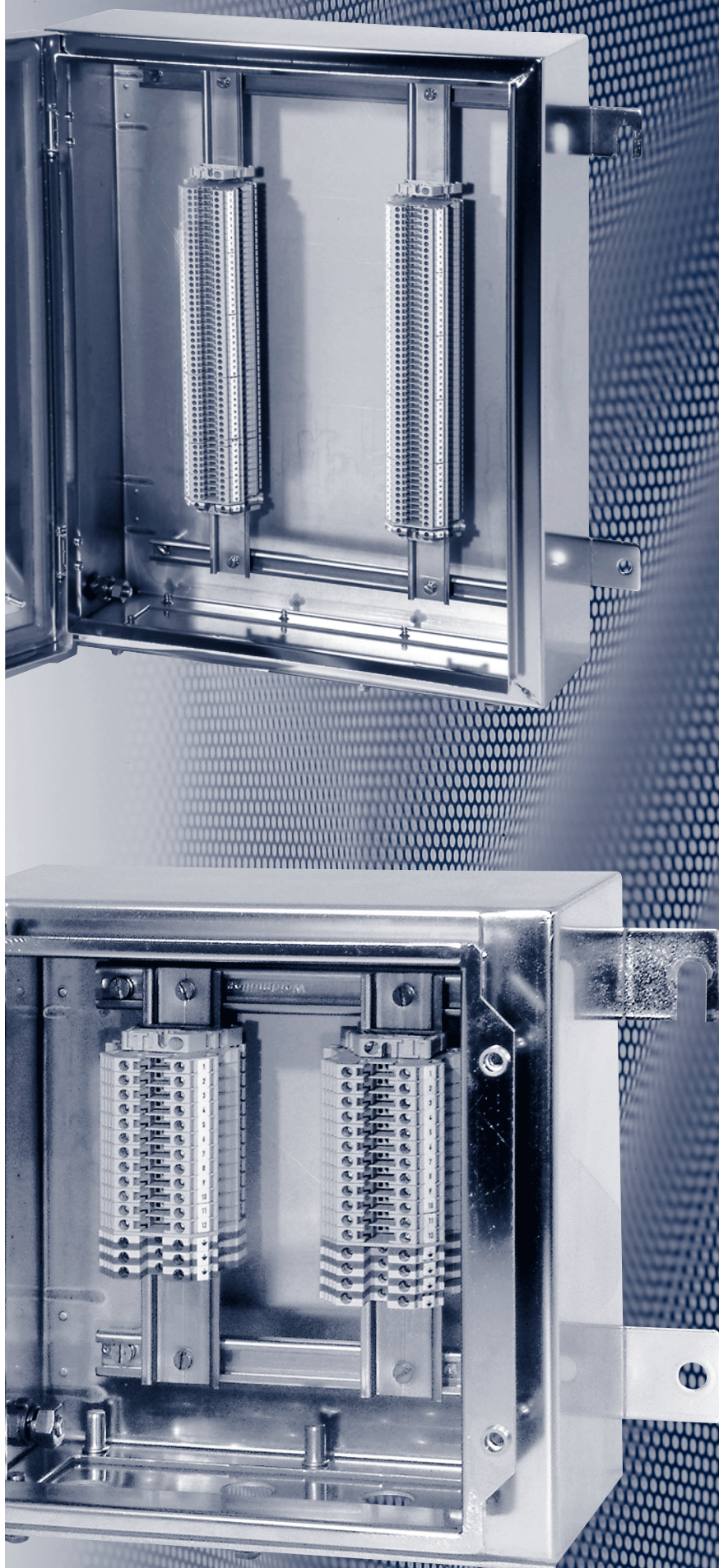
They act as a link between the main cable to the control room and the branch cables into the field. In addition to this, they may also be used for the direct connection of actuators and sensors. Here the metal cable glands also allow electromagnetically compatible connection methods.

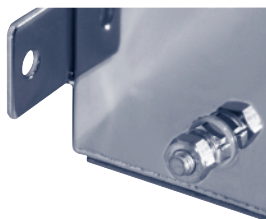
The robust design of the stainless steel terminal boxes provides a high degree of safety for offshore applications and in places where particularly adverse chemical, mechanical and climatic operating conditions prevail within the hazardous area.

Three terminal enclosures series in various sizes are available for accommodating up to terminals. The choice between screw and tension-spring (screwless) terminals for single and multi-wire conductors makes it possible for the installation engineers to select the type of connection that is most suitable for the respective application. Two separate PE rails are available for the separate connection of PE/PA and screened cables. Due to the optimized design, there is a large drilling area for fitting a large number of metal glands. Unused entry holes must be sealed safely with certified blanking plugs. As an alternative, a screw-on metal flange can be used for a wide variety of applications.

International approvals

**Stainless steel AISI 316 L,
with ground surface**
**Highly resistant
silicone seals**
Metal flanges available on request
Safety standard IP 66
PE/PA rails





This external & internal brass earth/ground stud assembly enables rapid and reliable protective earth/ground connection, which is mounted on the side of the enclosure for ease of access.



The enclosure is mounted by four heavy-duty 3 mm thick surface welded and stainless steel lugs, with slotted bottom lugs for ease of mounting. These provide a secure, reliable means of mounting the enclosure

OVERVIEW OF TERMINAL ENCLOSURES

Stainless steel for Zone 1

12.5

To make the choice of the right terminal boxes or branching boxes for your application, the tables on this page contain the basic data. You can use these tables to identify and configure your terminal boxes.

In the table of the maximum number of terminals, the information is based on the rated current of the terminal concerned. If the current per terminal is below the rated

current, the number can be interpreted on the maximum length of the terminal strip that can be equipped.

On the basis of the maximum drilled and the faulty circuit diameter of the cable and line duct, you can select the relevant terminal box by means of the number of ducts that you need.

NEXT Range		
Size	Max. terminal capacity (2.5²)	Max. entry guide (M16) Top-Bottom/Left/Right
22/15/13	1 x 21	6/6/6
26/26/16	2 x 27	20/9/9
26/26/20	2 x 27	28/18/18
30/30/16	2 x 36	26/20/26
30/30/20	2 x 36	34/28/34
38/26/16	2 x 51	20/20/20
38/26/20	2 x 51	28/28/28
45/38/16	2 x 67	29/29/29
45/38/20	2 x 67	46/46/46
48/48/20	3 x 71	53/46/53
50/35/20	3 x 75	40/40/40
62/45/20	4 x 99	53/53/53
74/55/20	5 x 124	60/60/60
76/50/20	3 x 128	53/82/82
86/64/20	6 x 147	82/80/80
91/61/20	5 x 158	72/72/72
98/74/20	6 x 171	80/106/106
30/35/20	3 x 36	40/28/34
38/45/20	4 x 36	53/28/28
45/55/20	5 x 67	60/44/44
50/64/20	6 x 75	82/53/53

Ex-Cell Range		
Size	Max. terminal capacity (2.5²)	Max. entry guide (M16) Top-Bottom/Left/Right
23/15/13	1 x 21	6/6/6
26/26/15	1 x 27	21/11/11
30/20/15	1 x 36	15/15/15
30/30/15	2 x 36	26/15/15
30/30/20	2 x 36	34/28/34
40/30/15	2 x 56	26/26/26
40/30/20	2 x 56	34/34/34
40/40/15	3 x 56	35/26/26
40/40/20	3 x 56	44/34/34
40/50/15	4 x 56	48/26/26
40/50/20	4 x 56	62/34/34
50/40/15	3 x 77	35/35/35
50/40/20	3 x 77	44/44/44
50/50/15	4 x 77	48/35/35
50/50/20	4 x 77	62/44/44
50/60/20	6 x 77	78/44/44
60/40/15	3 x 97	35/48/48
60/40/20	3 x 97	44/62/62
60/50/15	4 x 97	48/48/48
60/50/20	4 x 97	62/62/62
60/60/15	6 x 97	59/48/48
60/60/20	6 x 97	78/62/62
60/76/20	7 x 97	100/62/62
76/50/20	4 x 128	62/78/78
76/60/20	6 x 128	78/78/78
76/76/20	7 x 128	100/78/78

STB Range		
Size	Max. terminal capacity (2.5²)	Max. entry guide (M16) Top-Bottom/Left/Right
12/12/08	1 x 8	7/7/4
15/12/08	1 x 13	7/9/6
15/15/09	1 x 13	9/9/6
19/15/09	1 x 21	9/12/8
19/19/10	1 x 21	18/18/14
25/25/12	2 x 31	32/32/26
16/38/12	1 x 55	50/20/44
25/40/13	3 x 31	54/32/48
38/38/22	3 x 42	100/100/88
40/60/22	3 x 46	164/108/92
60/40/22	5 x 79	108/164/152

GHG Plastic Range	
Size	Max. terminal capacity (2.5²)
791 01	6
791 02	12
731 11	16
731 12	24
721 00	26
721 10	48
744 01	40
745 02	2 x 41
746 03	2 x 94
749 04	2 x 148

EX - TERMINAL ENCLOSURES

Stainless Steel Version for Zone 1 NEXT

The **NEXT „ATEX“** certified enclosure has been specifically designed for installation in locations with aggressively hostile environmental conditions. These include such locations as petro-chemical hazardous areas, pharmaceutical, food process and utility applications.

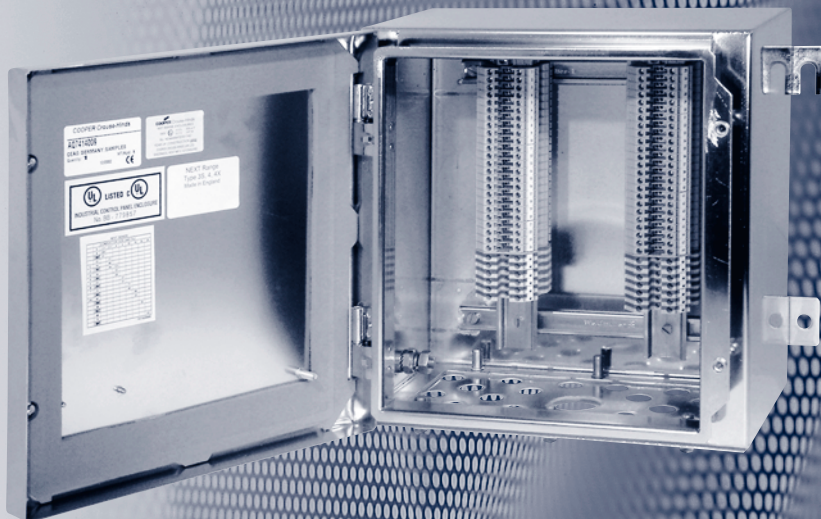
Manufactured from high quality stainless steel that is electro-polished for a highly corrosion resistant „Chromium enriched“ surface. In addition to this feature there are a number of design features that enhance the ease of installation, maintenance, environmental performance and enclosure longevity.

This multi certified enclosure is available in a comprehensive range of 17 different sizes and two depths, each with the facility for many configuration possibilities for a multitude of applications.

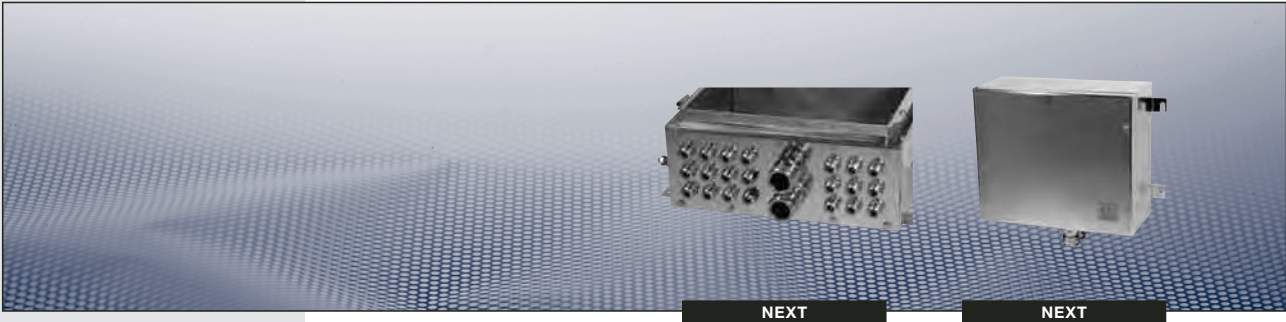
Using the highest quality materials, unique design benefits and precision manufacturing the **NEXT** range is the benchmark in heavy-duty gauge enclosures of its class with a 25 year design life.

An integral drainage channel prevents liquids or other solids contaminants from running in or falling into the enclosure when the door is opened, and to minimise gasket path contamination.

- 316L Stainless Steel (1.4404 to EN 10088) Superior “corrosion resistant” electro chemically polished**
- High integrity “one piece” closed cell chloroprene or optional silicone gasket**
- Detachable hinged door, stainless steel hinges with captive stainless steel hex screws**
- 4 x external welded lugs, 11mm Ø holes / slots.**
- Optional Gland Plate / Entries 3 mm thick**
- Extended ambient temperatures -65 °C to + 55 °C as option.**
- Certification GOST-R, AEx, cUL_{us} and Germanischer Lloyd on request.**



The high integrity „one piece“ sealing gasket for superior ingress protection (IP) of 66 and excellent recovery and re-sealing properties for continuous environmental protection.

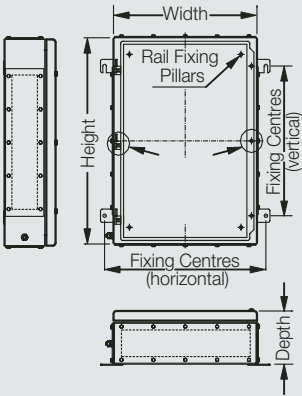


Ex - e

TERMINAL ENCLOSURES

12.7

NEXT



Technical data

Type NEXT

EC-Type Examination Certificate	KEMA 99 ATEX 3172 X
Marking to 94/9/EC	<div>II 2 G EEx e (ia) IIC T6, T5</div> <div>II 2 D IP 66 T100 °C</div>
Enclosure material	stainless steel 316 L electro chemically polished or sheet steel polyester powder coated (RAL 7032)
Material thickness	1.5 mm, 2 mm (- 62/45/20 and over)
Enclosure mounting	4 x 3 mm welded lugs with Ø 11 mm holes/slots, horizontal
Equipment mountings	4 x stand off pillars Ø 9 mm, 25 mm height, tapped M6 x 10, for rail or mounting plate
Gland plates/Entries	up to 4 side optional gland plate (3 mm) combination with entries to meet requirements
Enclosure earth	M10 external/internal brass earth stud assembly, M6 intern. stud on lid & painted gland plates
Rated voltage	up to 1100 V*
Rated current	up to 500 A*
Rated terminal cross section	up to 240 mm ² *
Degree of protection to EN 60529	IP 66
Insulation class	I
Permissible ambient temperature	
Chloroprene gasket	-45 C° to +40 °C (T6) -45 C° to +55 °C (T5)
Silicone gasket	-65 C° to +40 °C (T6) -65 C° to +55 °C (T5)

* depending on type of terminal and Ex-components used

Additional Approvals:

cULUs types 3S, 4, 4 x approval suitable for

Class I, Div 2 applications, Class I Zone 1, AExe II T6 (Limited range available),

GOST 'R', Germanischer Lloyd

An option for the mounting of up to four 3 mm thick

glanplates on each side in 4 possible combinations

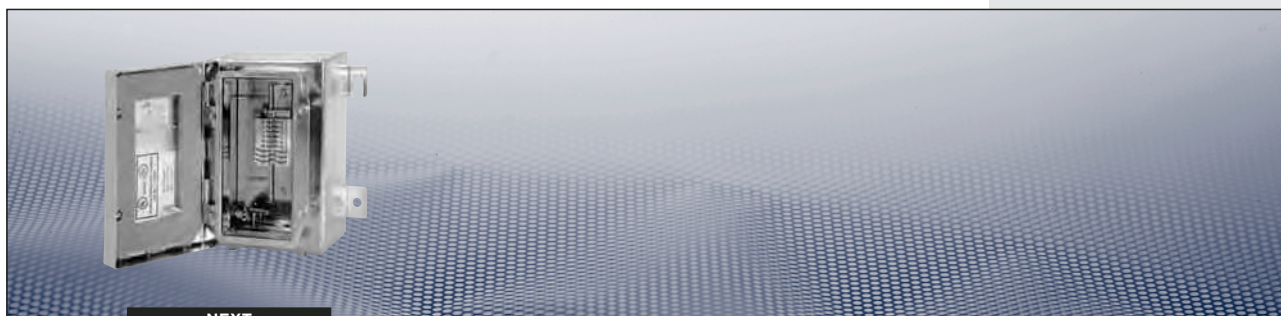
of 1, 2, 3 or 4 gland-plates. All sealed to IP66 by a

high integrity Chloroprene gasket and secured by

stainless steel bolts into blind nutserts.



Dimensions in mm



NEXT

Ex - e TERMINAL ENCLOSURES

| NEXT METRIC up to 2 x 51 terminals |

Enclosure dimensions and terminal content

NEXT	Dimensions ²⁾ H x W x D in mm	Fixing	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
		Centers ²⁾ Fvertical X Fhorizontal		Rail fixing		Rail length		Row orientation vertical (thickness in mm)			
Size				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
22/15/13	229 x 152 x 130	152 x 208 ³⁾	3.25	129	52	149	72	1 x 21	1 x 17	1 x 13	1 x 10
26/26/16	260 x 260 x 160	170 x 316	5.50	160	160	180	180	2 x 27	2 x 23	1 x 17	1 x 13
26/26/20	260 x 260 x 205	170 x 316	5.50	160	160	180	180	2 x 27	2 x 23	1 x 17	1 x 13
30/30/16	306 x 306 x 160	203 x 361 ³⁾	7.00	206	260	226	226	2 x 36	2 x 30	2 x 23	2 x 18
30/30/20	306 x 306 x 205	203 x 361 ³⁾	7.00	206	206	226	226	2 x 36	2 x 30	2 x 23	2 x 18
38/26/16	380 x 260 x 160	250 x 316	7.00	280	180	300	160	2 x 51	2 x 43	1 x 32	1 x 25
38/26/20	380 x 260 x 205	250 x 316	7.00	280	180	300	160	2 x 51	2 x 43	1 x 32	1 x 25

Gland entry detail

NEXT	Available glanding area			Max. Entry Guide (metric)							Order No. ⁴⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
	Size	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	
22/15/13	58 x 108	58 x 108	58 x 108	6/6/6	3/3/3	2/2/2	1/1/1	0/0/0	0/0/0	0/0/0	NXTS12215130
26/26/16	214 x 80	114 x 80	114 x 80	20/9/9	10/6/6	6/3/2	3/2/3	3/1/1	2/1/1	0/0/0	NXTS12626160
26/26/20	214 x 124	114 x 124	114 x 124	28/18/18	15/9/9	12/5/5	6/4/4	5/2/2	2/1/1	2/1/1	NXTS12626200
30/30/16	261 x 80	214 x 80	261 x 80	26/20/26	14/10/14	8/6/8	4/3/4	3/3/3	3/2/3	0/0/0	NXTS13030160
30/30/20	261 x 124	214 x 124	261 x 124	34/28/34	20/15/20	15/12/15	8/6/8	6/5/6	3/2/3	2/2/2	NXTS13030200
38/26/16	214 x 80	214 x 80	214 x 80	20/20/20	10/10/10	6/6/6	3/3/3	3/3/3	2/2/2	0/0/0	NXTS13826160
38/26/20	214 x 124	214 x 124	214 x 124	28/28/28	15/15/15	12/12/12	6/6/6	5/5/5	2/2/2	2/2/2	NXTS13826200

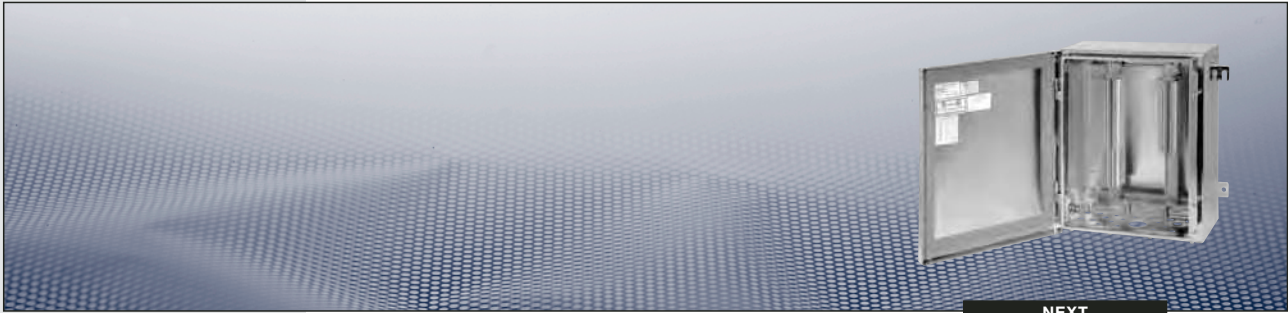
Options

with 1 gland plate	NXT S1 XXYZZ 1	with 2 gland plates	NXT S1 XXYZZ 2
with 3 gland plate	NXT S1 XXYZZ 3	with 4 gland plates	NXT S1 XXYZZ 4
NXT Painted	NXT PS XXYZZ N	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYZZ0-HASP

Example

Type	Order No.
30/30/16 with 3 gland plates, painted and Padlock HASP facility	NXTPS13030163-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.7
3. 123³⁾ Subtract 30 mm when no side gland plates
4. Refer to „OPTIONS“ for full order number detail



NEXT

E x - e T E R M I N A L E N C L O S U R E S

| NEXT METRIC up to 3 x 128 terminals |

12.9

Enclosure dimensions and terminal content

NEXT Size	Dimensions ²⁾ H x W x D in mm	Fixing	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
		Centers ²⁾		Rail fixing		Rail length		Row orientation vertical (thickness in mm)			
		Fvertical X Fhorizontal		vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
45/38/16	458 x 382 x 160	305 x 437 ³⁾	9.75	358	282	378	302	2 x 67	2 x 56	2 x 42	2 x 33
45/38/20	458 x 382 x 205	305 x 437 ³⁾	9.75	358	282	378	302	2 x 67	2 x 56	2 x 42	2 x 33
48/48/20	480 x 480 x 205	327 x 535 ³⁾	10.40	380	380	400	400	3 x 71	3 x 59	3 x 44	3 x 35
50/35/20	500 x 350 x 205	350 x 406	10.50	400	260	420	270	3 x 75	2 x 63	2 x 47	2 x 37
62/45/20	620 x 450 x 205	450 x 506	17.00	520	350	540	370	4 x 99	3 x 83	3 x 62	3 x 49
74/55/20	740 x 550 x 205	540 x 606	30.40	640	450	660	470	5 x 124	4 x 103	4 x 77	4 x 61
76/50/20	762 x 508 x 205	508 x 564 ³⁾	23.50	662	408	682	428	3 x 128	3 x 106	3 x 80	3 x 64

Gland entry detail

NEXT	Available glanding area			Max. Entry Guide (metric)							Order No. ⁴⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
Size	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
45/38/16	337 x 80	337 x 80	337 x 80	29/29/29	18/18/18	10/10/10	6/6/6	5/5/5	4/4/4	0/0/0	NXTS14538160
45/38/20	337 x 124	337 x 124	337 x 124	46/46/46	26/26/26	21/21/21	11/11/11	9/9/9	4/4/4	3/3/3	NXTS14538200
48/48/20	404 x 124	337 x 124	404 x 124	53/46/53	30/26/30	24/21/24	14/11/14	11/9/11	5/4/5	4/3/4	NXTS14848200
50/35/20	304 x 124	304 x 124	304 x 124	40/40/40	24/24/24	18/18/18	10/10/10	7/7/7	4/4/4	3/3/3	NXTS15035200
62/45/20	404 x 124	404 x 124	404 x 124	53/53/53	30/30/30	24/24/24	14/14/14	11/11/11	5/5/5	4/4/4	NXTS16245200
74/55/20	504 x 124	504 x 124	504 x 124	60/60/60	39/39/39	30/30/30	18/18/18	13/13/13	6/6/6	5/5/5	NXTS17455200
76/50/20	404 x 124	594 x 124	594 x 124	53/82/82	30/47/47	24/39/39	14/20/20	11/17/17	5/7/7	4/6/6	NXTS17650200

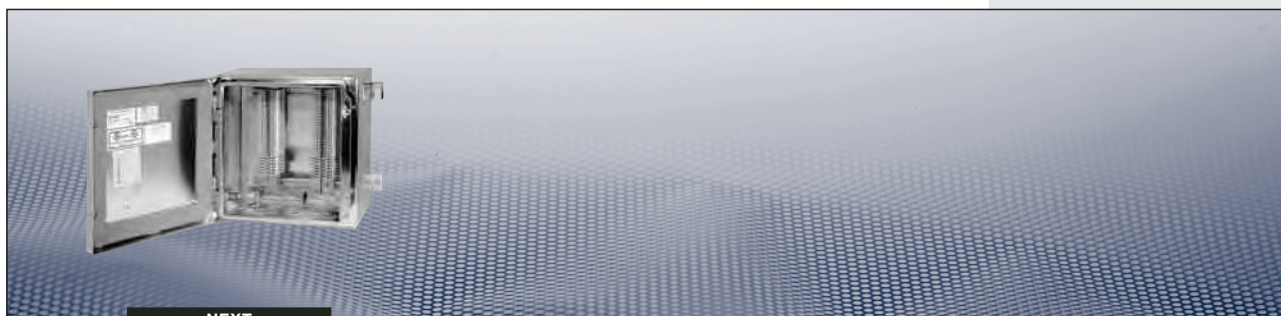
Options

with 1 gland plate	NXT S1 XXYZZ 1	with 2 gland plates	NXT S1 XXYZZ 2
with 3 gland plate	NXT S1 XXYZZ 3	with 4 gland plates	NXT S1 XXYZZ 4
NXT Painted	NXT PS XXYZZ N	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYZZ0-HASP

Example

Type	Order No.
62/45/20 with 3 gland plates, 316L SS and Padlock HASP facility	NXTS162445203-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.7
3. 123³⁾ Subtract 30 mm when no side gland plates
4. Refer to „OPTIONS“ for full order number detail



NEXT

12.10

E x - e T E R M I N A L E N C L O S U R E S

| NEXT METRIC up to 6 x 171 terminals |

Enclosure dimensions and terminal content

NEXT	Dimensions ²⁾ H x W x D in mm	Fixing	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
		Centers ²⁾ F _{vertical} X F _{horizontal}		Rail fixing		Rail length		Row orientation vertical (thickness in mm)			
Size				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
86/64/20	860 x 640 x 205	570 x 696	29.00	760	540	780	560	6 x 147	5 x 123	5 x 92	4 x 73
91/61/20	914 x 610 x 205	559 x 666 ³⁾	31.00	814	510	834	530	5 x 158	5 x 132	4 x 99	4 x 79
98/74/20	980 x 740 x 205	700 x 796	38.00	880	640	900	660	6 x 171	6 x 143	5 x 107	5 x 85

Gland entry detail

NEXT	Available glanding area			Max. Entry Guide (metric)							Order No. ⁴⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
Size	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
86/64/20	594 x 124	2 x (304 x 124)	2 x (304 x 124)	82/80/80	47/48/48	39/36/36	20/20/20	17/14/14	7/8/8	6/6/6	NXTS18664200
91/61/20	566 x 108	566 x 108	566 x 108	72/72/72	42/42/42	24/24/24	18/18/18	8/8/8	7/7/7	6/6/6	NXTS19161200
98/74/20	2 x (304 x 124)	2 x (404 x 124)	2 x (404 X 124)	80/106/106	48/60/60	36/48/48	20/28/28	14/22/22	8/10/10	6/8/8	NXTS19874200

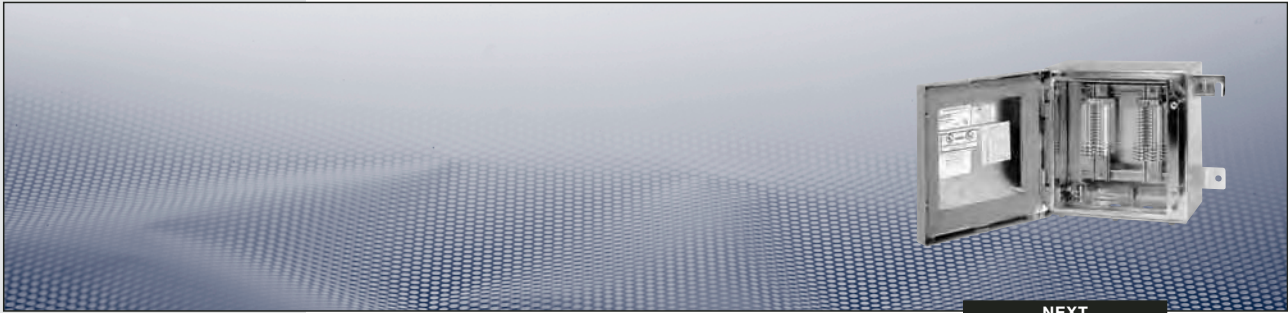
Options

with 1 gland plate	NXT S1 XYYZZ 1	with 2 gland plates	NXT S1 XYYZZ 2
with 3 gland plate	NXT S1 XYYZZ 3	with 4 gland plates	NXT S1 XYYZZ 4
NXT Painted	NXT PS XYYZZ N	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT _ XYYZZ0 - HASP

Example

Type	Order No.
91/61/20 with 1 gland plate, 316L SS and Padlock HASP facility	NXTPS19161201-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.7
3. 123³⁾ Subtract 30 mm when no side gland plates
4. Refer to „OPTIONS“ for full order number detail



E x - e T E R M I N A L E N C L O S U R E S

| NEXT METRIC up to 6 x 75 terminal |

12.11

Enclosure dimensions and terminal content

NEXT	Dimensions ²⁾ H x W x D in mm	Fixing	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
		Centers ²⁾		Rail fixing		Rail length		Row orientation vertical			
		Fvertical X Fhorizontal		vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
Size											
30/35/20 landscape	306 x 350 x 205	203 x 405	7.70	206	250	226	270	3 x 36	2 x 30	2 x 23	2 x 18
38/45/20 landscape	380 x 450 x 205	250 x 506	10.60	280	350	300	370	4 x 36	3 x 36	3 x 30	3 x 23
45/55/20 landscape	458 x 550 x 205	305 x 606	14.90	358	450	378	470	5 x 67	4 x 56	4 x 42	4 x 33
50/64/20 landscape	500 x 640 x 205	350 x 696	20.90	400	540	420	560	6 x 75	5 x 63	5 x 47	4 x 37

Gland entry detail

NexT	Available glanding area			Max. Entry Guide (metric)								Order No. ⁴⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right								
	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63		
Size												
30/35/20 landscape	304 x 124	214 x 124	258 x 124	40/28/34	24/15/18	18/12/15	10/6/8	7/5/6	4/2/3	3/2/2	NXTS13035201	
38/45/20 landscape	404 x 124	214 x 124	214 x 124	53/28/28	30/15/15	24/12/12	14/6/6	11/5/5	5/2/2	4/2/2	NXTS13845201	
45/55/20 landscape	504 x 124	334 x 124	334 x 124	60/44/44	39/26/26	30/21/21	18/11/11	13/9/9	6/4/4	5/3/3	NXTS14555201	
50/64/20 landscape	594 x 124	404 x 124	404 x 124	82/53/53	47/30/30	39/24/24	20/14/14	17/11/11	7/5/5	6/4/4	NXTS15064201	

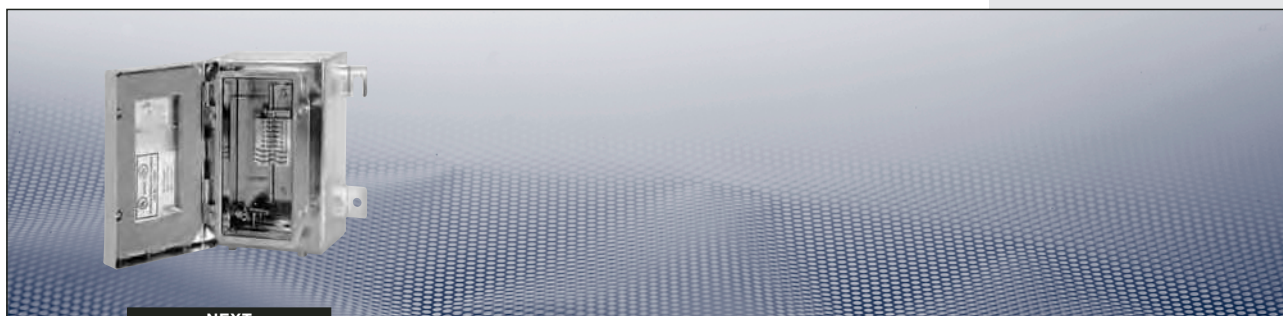
Options

with 1 gland plate	NXT S1 XXYYZZ 1	with 2 gland plates	NXT S1 XXYYZZ 2
with 3 gland plate	NXT S1 XXYYZZ 3	with 4 gland plates	NXT S1 XXYYZZ 4
NXT Painted	NXT PS XXYYZZ N	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYYZZ0- HASP

Example

Type	Order No.
30/35/20 with 3 gland plates, painted and Padlock HASP facility	NXTPS303520-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.7
3. 123³⁾ Subtract 30 mm when no side gland plates
4. Refer to „OPTIONS“ for full order number detail



NEXT

12.12

E x - e T E R M I N A L E N C L O S U R E S

| NEXT IMPERIAL up to 2 x 51 terminals |

Enclosure dimensions and terminal content

NEXT Size	Dimensions ²⁾ H x W x D in inches		Fixing Centers ²⁾ Fvertical X Fhorizontal	Weight in pounds (empty enclosure)	Terminal mounting rail Rail fixing Rail length centres				Terminal content Row orientation vertical			
					vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
22/15/13	9.02 x	5.98 x 5.12	5.98 x 8.19 ³⁾	7.15	5.08	2.05	5.87	2.83	1 x 21	1 x 17	1 x 13	1 x 10
26/26/16	10.24 x	10.24 x 6.3	6.69 x 12.44	12.10	6.30	6.30	7.09	7.09	2 x 27	2 x 23	1 x 17	1 x 13
26/26/20	10.24 x	10.24 x 8.07	6.69 x 12.44	12.10	6.30	6.30	7.09	7.09	2 x 27	2 x 23	1 x 17	1 x 13
30/30/16	12.05 x	12.05 x 6.3	0.79 x 1.42 ³⁾	15.40	8.11	8.11	8.90	8.90	2 x 36	2 x 30	2 x 23	2 x 18
30/30/20	12.05 x	12.05 x 8.07	0.79 x 1.42 ³⁾	15.40	8.11	8.11	8.90	8.90	2 x 36	2 x 30	2 x 23	2 x 18
38/26/16	14.96 x	10.24 x 6.3	9.84 x 12.44	15.40	11.02	7.09	11.81	6.30	2 x 51	2 x 43	1 x 32	1 x 25
38/26/20	14.96 x	10.24 x 8.07	9.84 x 12.44	15.40	11.02	7.09	11.81	6.30	2 x 51	2 x 43	1 x 32	1 x 25

Gland entry detail

NEXT Size	Available glanding area Top & Bottom Left Right (with gland plates fitted) in inches			Max. Entry Guide (imperial) Top & Bottom / Left / Right								Order No. ⁴⁾
				1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT		
22/15/13	4.25 x 2.28	4.25 x 2.28	4.25 x 2.28	3/3/3	2/2/2	2/2/2	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	NXTS12215130
26/26/16	8.43 x 3.15	4.49 x 3.15	4.49 x 3.15	11/5/5	4/2/2	4/2/2	3/1/1	2/1/1	0/0/0	0/0/0	0/0/0	NXTS12626160
26/26/20	8.43 x 4.88	4.49 x 4.88	4.49 x 4.88	17/8/8	12/6/6	7/3/3	5/2/2	2/1/1	2/1/1	2/1/1	2/1/1	NXTS12626200
30/30/16	10.28 x 3.15	8.43 x 3.15	10.28 x 3.15	13/11/13	5/4/5	4/4/4	4/3/4	3/2/3	0/0/0	0/0/0	0/0/0	NXTS13030160
30/30/20	10.28 x 4.88	8.43 x 4.88	10.28 x 4.88	20/17/20	15/12/15	8/7/8	7/5/7	3/2/3	2/2/2	2/2/2	2/2/2	NXTS13030200
38/26/16	8.43 x 3.15	8.43 x 3.15	8.43 x 3.15	11/11/11	4/4/4	4/4/4	3/3/3	2/2/2	0/0/0	0/0/0	0/0/0	NXTS13826160
38/26/20	8.43 x 4.88	8.43 x 4.88	8.43 x 4.88	17/17/17	12/12/12	7/7/7	5/5/5	2/2/2	2/2/2	2/2/2	2/2/2	NXTS13826200

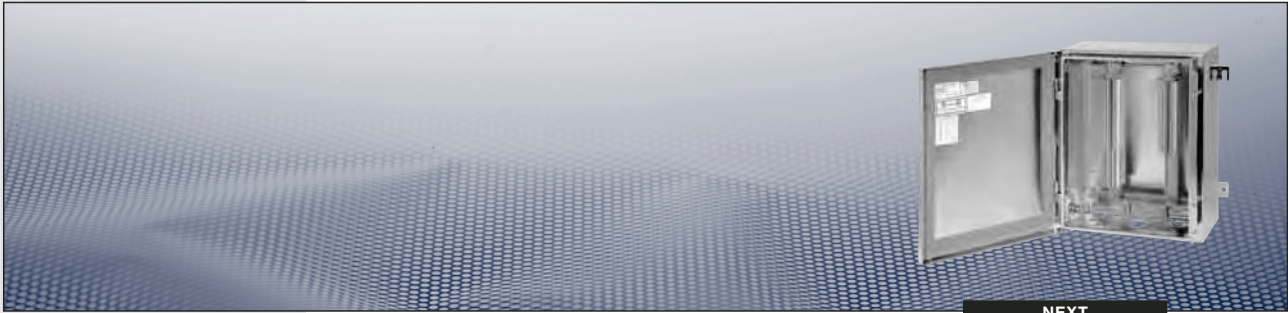
Options

with 1 gland plate	NXT S1 XXYZZ 1	with 2 gland plates	NXT S1 XXYZZ 2
with 3 gland plate	NXT S1 XXYZZ 3	with 4 gland plates	NXT S1 XXYZZ 4
NXT Painted	NXT PS XXYZZ N	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT _ XXYZZ0 - HASP

Example

Type	Order No.
38/26/20 with 1 gland plate, painted and Padlock HASP facility	NXTPS13826201-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.7
3. 123³⁾ Subtract 1.2 inch when no side gland plates
4. Refer to „OPTIONS“ for full order number detail



NEXT

E x - e T E R M I N A L E N C L O S U R E S

| NEXT IMPERIAL up to 3 x 128 terminals |

12.13

Enclosure dimensions and terminal content

NEXT Size	Dimensions ²⁾ H x W x D in inches	Fixing Centers ²⁾ Fvertical X Fhorizontal	Weight in pounds (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing		Rail length		Row orientation vertical			
				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
45/38/16	18.03 x 15.04 x 6.30	12.01 x 17.20 ³⁾	21.45	14.09	11.10	14.88	11.89	2 x 67	2 x 56	2 x 42	2 x 33
45/38/20	18.03 x 15.04 x 8.07	12.01 x 17.20 ³⁾	21.45	14.09	11.10	14.88	11.89	2 x 67	2 x 56	2 x 42	2 x 33
48/48/20	18.09 x 18.09 x 8.07	12.87 x 21.06 ³⁾	22.88	14.96	14.96	15.75	15.75	3 x 71	3 x 59	3 x 44	3 x 35
50/35/20	19.69 x 13.78 x 8.07	13.78 x 15.98	23.10	15.75	10.24	16.54	10.63	3 x 75	2 x 63	2 x 47	2 x 37
62/45/20	24.41 x 17.72 x 8.07	17.72 x 19.92	37.40	20.47	13.78	21.26	14.57	4 x 99	3 x 83	3 x 62	3 x 49
74/55/20	29.13 x 21.65 x 8.07	21.26 x 23.86	66.88	25.20	17.72	25.98	18.50	5 x 124	4 x 103	4 x 77	4 x 61
76/50/20	30.00 x 20.00 x 8.07	20.00 x 22.20 ³⁾	51.70	26.06	16.06	26.85	16.85	3 x 128	3 x 106	3 x 80	3 x 64

Gland entry detail

NEXT	Available glanding area			Max. Entry Guide (imperial)								Order No. ⁴⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right								
Size	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT		
45/38/16	13.27 x 3.15	13.27 x 3.15	13.27 x 3.15	18/18/18	7/7/7	6/6/6	5/5/5	4/4/4	0/0/0	0/0/0	NXTS14538160	
45/38/20	13.27 x 4.88	13.27 x 4.88	13.27 x 4.88	27/27/27	21/21/21	11/11/11	9/9/9	4/4/4	3/3/3	3/3/3	NXTS14538200	
48/48/20	15.91 x 4.88	13.27 x 4.88	15.91 x 4.88	33/27/33	26/21/26	14/11/14	11/9/11	5/4/5	4/3/4	3/3/3	NXTS14848200	
50/35/20	11.97 x 4.88	11.97 x 4.88	11.97 x 4.88	24/24/24	18/18/18	10/10/10	8/8/8	4/4/4	3/3/3	2/2/2	NXTS15035200	
62/45/20	15.91 x 4.88	15.91 x 4.88	15.91 x 4.88	33/33/33	26/26/26	14/14/14	11/11/11	5/5/5	4/4/4	3/3/3	NXTS16245200	
74/55/20	19.84 x 4.88	19.84 x 4.88	19.84 x 4.88	41/41/41	32/32/32	18/18/18	14/14/14	6/6/6	5/5/5	4/4/4	NXTS17455200	
76/50/20	15.91 x 4.88	23.39 x 4.88	23.39 x 4.88	33/48/48	26/39/39	14/21/21	11/17/17	5/7/7	4/6/6	3/5/5	NXTS17650200	

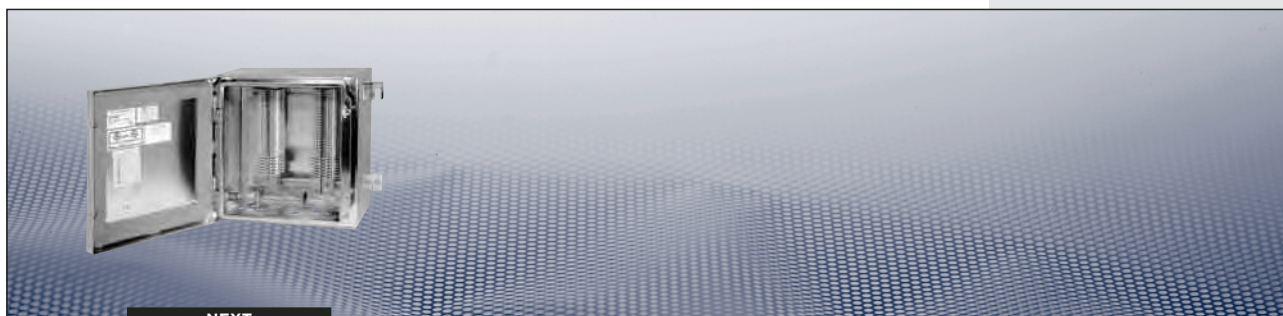
Options

with 1 gland plate	NXT S1 XXYYZZ 1	with 2 gland plates	NXT S1 XXYYZZ 2
with 3 gland plate	NXT S1 XXYYZZ 3	with 4 gland plates	NXT S1 XXYYZZ 4
NXT Painted	NXT PS XXYYZZ N	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYYZZ0-HASP

Example

Type	Order No.
62/45/20 with 3 gland plates, painted and Padlock HASP facility	NXTPS62445203-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.7
3. 123³⁾ Subtract 1.2 inch when no side gland plates
4. Refer to „OPTIONS“ for full order number detail



NEXT

12.14

E x - e T E R M I N A L E N C L O S U R E S

| NEXT IMPERIAL up to 6 x 171 terminals |

Enclosure dimensions and terminal content

NEXT Size	Dimensions ²⁾ H x W x D in inches	Fixing Centers ²⁾	Weight in pounds (empty enclosure)	Terminal mounting rail				Terminal content			
		F _{vertical} X F _{horizontal}		Rail fixing		Rail length		Row orientation vertical			
				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
86/64/20	33.86 x 25.20 x 8.07	22.44 x 27.40	83.80	29.92	21.26	30.71	22.05	6 x 147	5 x 123	5 x 92	4 x 73
91/61/20	35.98 x 24.02 x 8.07	22.01 x 26.22 ³⁾	68.20	32.05	20.08	32.83	20.87	5 x 158	5 x 132	4 x 99	4 x 79
98/74/20	38.58 x 29.13 x 8.07	27.56 x 31.34	83.60	34.65	25.20	35.43	25.98	6 x 171	6 x 143	5 x 107	5 x 85

Gland entry detail

Next	Available glanding area			Max. Entry Guide (imperial)							Order No. ⁴⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
Size	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
86/64/20	23.39 x 4.88	2 x (11.97 x 4.88)	2 x (11.97 x 4.88)	48/8/24	39/36/18	21/20/10	17/16/8	7/7/4	6/5/3	5/4/2	NXTS18664200
91/61/20	22.28 x 4.25	22.28 x 4.25	22.28 x 4.25	47/47/47	24/24/24	20/20/20	8/8/8	7/7/7	6/6/6	5/5/5	NXTS19161200
98/74/20	2 x (11.97 x 4.88)	2 x (15.91 x 4.88)	2 x (15.91 x 4.88)	48/66/33	36/51/26	20/28/14	16/22/11	7/9/5	5/7/4	4/6/3	NXTS19874200

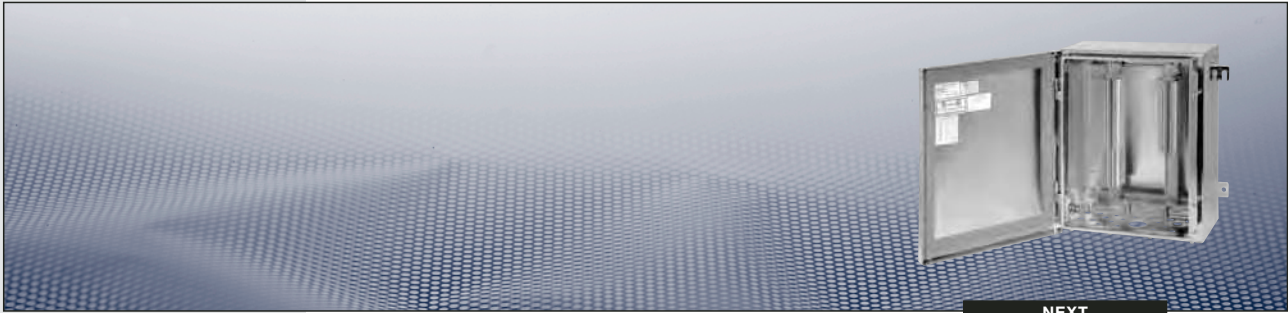
Options

with 1 gland plate	NXT S1 XXYZZ 1	with 2 gland plates	NXT S1 XXYZZ 2
with 3 gland plate	NXT S1 XXYZZ 3	with 4 gland plates	NXT S1 XXYZZ 4
NXT Painted	NXT PS XXYZZ N	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYZZ0- HASP

Example

Type	Order No.
98/74/20 with 1 gland plate, 316L and Padlock HASP facility	NXTS19874201-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.7
3. 123³⁾ Subtract 1.2 inch when no side gland plates
4. Refer to „OPTIONS“ for full order number detail



E x - e T E R M I N A L E N C L O S U R E S

| NEXT IMPERIAL up to 6 x 75 terminals |

12.15

Enclosure dimensions and terminal content

NEXT	Dimensions ²⁾ H x W x D in inches	Fixing Centers ²⁾ Vertical X Horizontal	Weight in pounds (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing		Rail length		Row orientation vertical			
Size				vert.	horiz.	vert.	horiz.	2.5N (5)	2.5 (5)	4 (6)	6 (8)
30/35/20 landscape	12.05 x 13.78 x 8.07	7.99 x 15.94	17.0	8.11	9.84	8.90	10.63	3 x 36	2 x 30	2 x 23	2 x 18
38/45/20 landscape	14.96 x 17.72 x 8.07	9.84 x 19.92	23.2	11.02	13.78	11.81	14.57	4 x 36	3 x 36	3 x 30	3 x 23
45/55/20 landscape	18.03 x 21.65 x 8.07	12.01 x 23.86	32.7	14.09	17.72	14.88	18.50	5 x 67	4 x 56	4 x 42	4 x 33
50/64/20 landscape	19.69 x 25.20 x 8.07	13.78 x 27.40	46.1	15.75	21.26	16.54	22.05	6 x 75	5 x 63	5 x 47	4 x 37

Gland entry detail

NEXT	Available glanding area			Max. Entry Guide (metric) gland / hub	Top & Bottom / Left / Right							Order No. ⁴⁾
	Top & Bottom	Left	Right		1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
Size	(with gland plates fitted) in inches											
30/35/20 landscape	11.97 x 4.88	8.43 x 4.88	10.16 x 4.88	38/26/32	23/15/20	18/12/15	10/6/8	8/5/-	3/2/3	3/2/2		NXTS13035201
				21/14/18	12/8/10	10/6/8	8/5/7	4/2/-	3/2/3	3/2/2		
38/45/20 landscape	15.91 x 4.88	8.43 x 4.88	8.43 x 4.88	52/26/26	32/15/15	26/12/12	13/6/6	11/5/-	5/2/2	4/2/2		NXTS13845201
				29/14/14	16/8/8	13/6/6	11/5/5	5/2/-	4/2/2	4/2/2		
45/55/20 landscape	19.84 x 4.88	13.15 x 4.88	13.15 x 4.88	64/42/42	39/26/26	33/21/21	17/11/11	14/9/-	6/4/4	5/3/3		NXTS14555201
				36/23/23	20/13/13	17/11/11	14/9/9	6/4/-	5/3/3	5/3/3		
50/64/20 landscape	23.39 x 4.88	15.91 x 4.88	15.91 x 4.88	78/52/52	47/32/32	39/26/26	20/13/13	17/11/-	7/5/5	6/4/4		NXTS15064201
				42/29/29	24/16/16	21/13/13	17/11/11	8/5/-	6/4/4	6/4/4		

Options

with 1 gland plate	NXT S1 XXYZZ 1	with 2 gland plates	NXT S1 XXYZZ 2
with 3 gland plate	NXT S1 XXYZZ 3	with 4 gland plates	NXT S1 XXYZZ 4
NXT Painted	NXT PS XXYZZ N	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	NXT NN XXYZZ0- HASP

Example

Type	Order No.
38/45/20 with 2 gland plates, 316L and Padlock HASP facility	NXTS13845202-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.7
3. 123³⁾ Subtract 1.2 inch when no side gland plates
4. Refer to „OPTIONS“ for full order number detail

EX - TERMINAL ENCLOSURES

Stainless Steel Version for Zone 1 Ex-Cell

The Ex-Cell enclosure range is an ATEX certified enclosure / termination solution for category 2 (Zone1) application with an ingress protection of IP66. Ex-Cell is available in a comprehensive range of sizes, each with the facility for various configuration possibilities for a multitude of applications. Using the highest quality materials, some unique design benefits and precision manufacturing, the Ex-Cell range is the benchmark in enclosure for both instrumentation and electrical applications.

The Ex-Cell product line is designed and ATEX certified for hazardous areas, UL-approved for heavy industrial applications and are predominantly used in the petro-chemical, pharmaceutical, food process and utilities market sectors. As a result of this our enclosures have the inherent benefits of a high degree of ingress protection (IP) to environmental characteristics such as ingress of water and dust. The ingress protection (IP) of the complete product line is IP66 (water & dust), have an impact resistance of a minimum of 7 Nm whilst maintaining IP66, thus making them ideal for wash-down applications.

The Ex-Cell-I series is made for instrumentation with easy access central locking system and hinged cover.

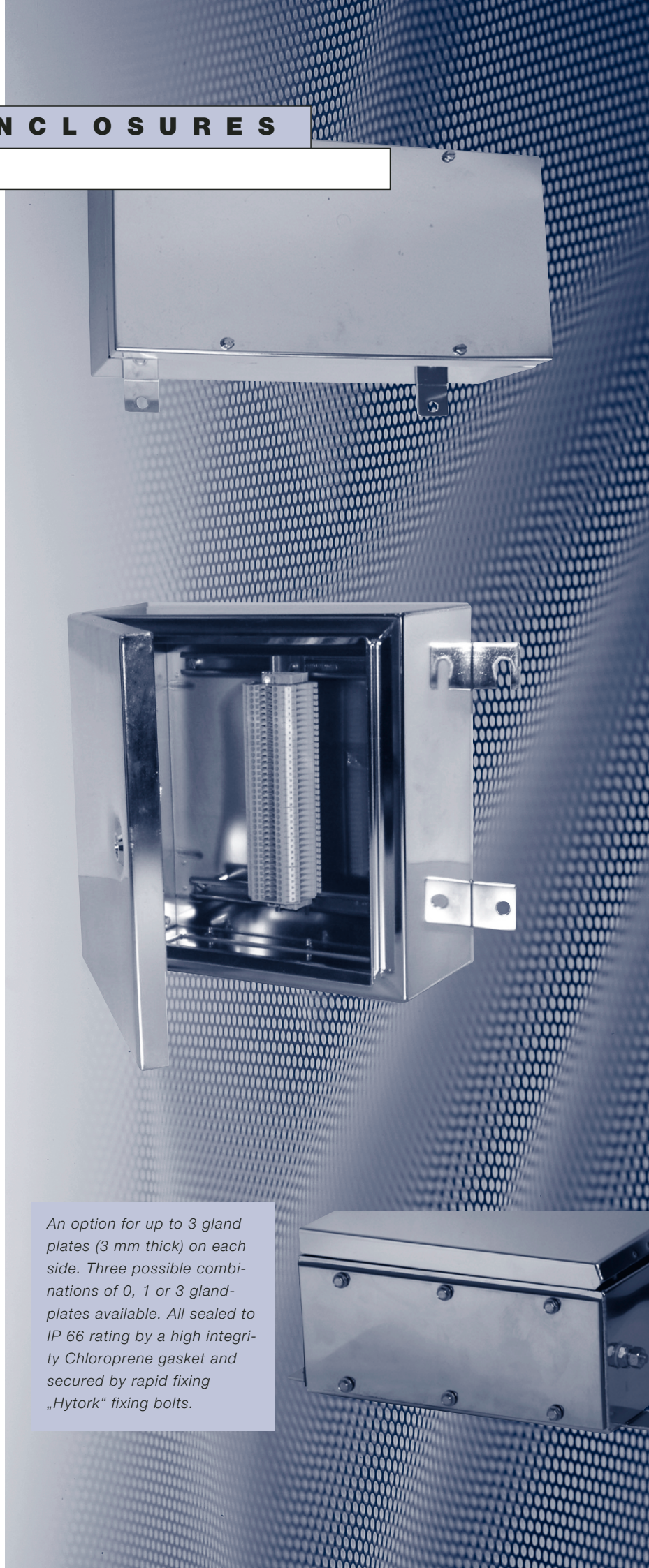
The 1/4 turn embossed latch or bolt down fastening provides rapid means of achieving high integrity ingress protection (IP) of 66 environmental seal for reliable, rapid environmental protection.

Stainless steel 316 L options and 304 IP 66

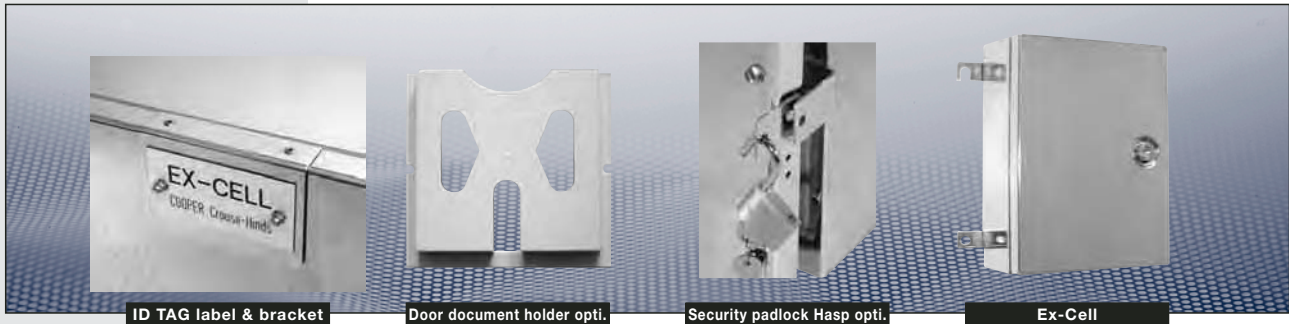
Hinges and central locking device for easy access

Extended ambient temperatures -20 °C to +60 °C using chloroprene sponge gasket

External and internal earthing bolts



An option for up to 3 gland plates (3 mm thick) on each side. Three possible combinations of 0, 1 or 3 gland-plates available. All sealed to IP 66 rating by a high integrity Chloroprene gasket and secured by rapid fixing „Hytork“ fixing bolts.



ID TAG label & bracket

Door document holder opti.

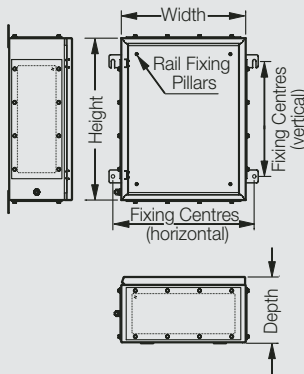
Security padlock Hasp opti.

Ex-Cell

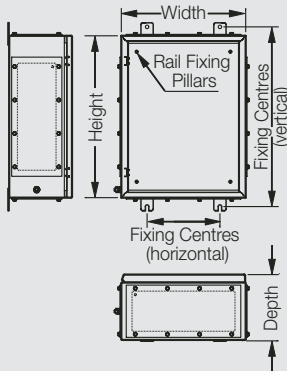
Ex - e / Ex - i TERMINAL ENCLOSURES

Ex-Cell METRIC and IMPERIAL

12.17



Metric version



Imperial version



Technical data

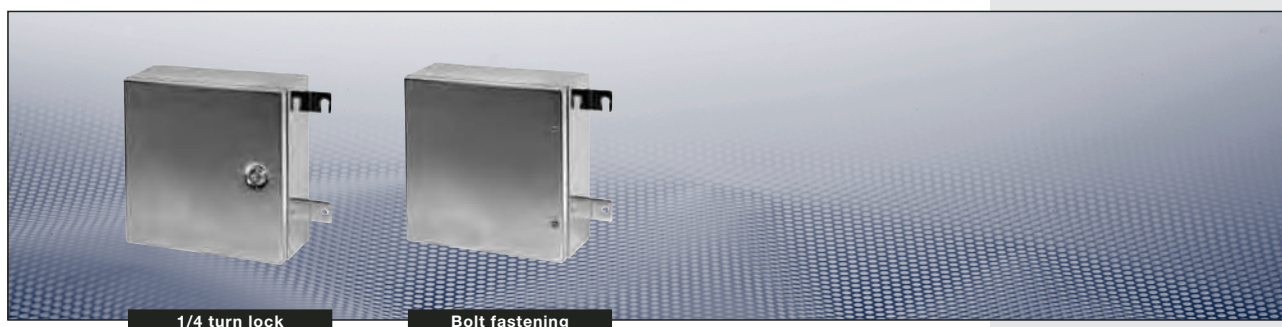
Type Ex-Cell

EC-Type Examination Certificate	PTB 02 ATEX 1014
Marking to 94/9/EC	Ex II 2 G EEx ia IIC T6, T5 Ex II 2 D IP 66 T80 °C, T95 °C
Enclosure material	stainless steel 316 L or 304 electro chemical polished or sheet steel polyester powder coated (RAL 7032)
Material thickness	1.2 mm (body), 1.5 mm (door)
Enclosure mounting	4 x 3 mm welded lugs with Ø 11 mm holes/slots, vertical or horizontal
Equipment mountings	4 x stand off pillars Ø 9 mm, 25 mm height, tapped M6 x 10, for rail or mounting plate
Gland plates/Entries	up to 4 side optional gland plate combination with entries to meet requirements
Enclosure earth	M10 external and internal brass earth stud assembly
Rated voltage	up to 750 V*
Rated current	up to 500 A*
Rated terminal cross section	up to 240 mm²*
Degree of protection to EN 60529	IP 66
Insulation class	I
Permissible ambient temperature	-20 °C to +60 °C (PUR-sealing)

* depending on type of terminal and Ex-components used

cULus types 3S, 4, 4x approval, Germanischer Lloyd available on request.

An integral drainage channel prevents liquids or other solids contaminants from running in or falling into the enclosure when the door is opened, and to minimise gasket path contamination.



12.18

Ex - e / Ex - i TERMINAL ENCLOSURES

| Ex-Cell METRIC up to 2 x 56 terminals |

Enclosure dimensions and terminal content

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Dimensions ²⁾ H x W x D in mm	Fixing Centers ²⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
23/15/13	229 x 152 x 127	152 x 208	2.35	129	52	149	72	1 x 21	1 x 17	1 x 13	1 x 10	1 x 9
26/26/15	260 x 260 x 152	170 x 316	2.8	160	160	180	180	2 x 27	2 x 23	1 x 17	1 x 13	1 x 11
30/20/15	305 x 203 x 152	203 x 259	3.4	205	103	225	123	1 x 36	1 x 30	1 x 23	1 x 18	1 x 15
30/30/15	305 x 305 x 152	203 x 361	4.6	205	205	225	225	2 x 36	2 x 30	2 x 23	2 x 18	2 x 15
30/30/20	305 x 305 x 203	203 x 361	5.8	205	205	225	225	2 x 36	2 x 30	2 x 23	2 x 18	2 x 15
40/30/15	406 x 305 x 152	267 x 361	5.7	306	205	326	225	2 x 56	2 x 47	2 x 35	2 x 28	2 x 23
40/30/20	406 x 305 x 203	267 x 361	6.6	306	205	326	225	2 x 56	2 x 47	2 x 35	2 x 28	2 x 23

Gland entry detail

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (metric)									Order No. ³⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right									
	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63			
23/15/13	108 x 58	108 x 58	108 x 58	6/6/6	2/2/2	2/2/2	1/1/1	0/0/0	0/0/0	0/0/0	0/0/0	XLHS12315130	
26/26/15	214 x 80	114 x 80	114 x 80	21/11/11	10/5/5	4/2/2	3/2/2	3/1/1	2/1/1	0/0/0	0/0/0	XLHS12626150	
30/20/15	156 x 80	156 x 80	156 x 80	15/15/15	7/7/7	3/3/3	2/2/2	2/2/2	2/2/2	0/0/0	0/0/0	XLHS13020150	
30/30/15	261 x 80	156 x 80	156 x 80	26/15/15	13/7/7	5/3/3	4/2/2	3/2/2	3/2/2	0/0/0	0/0/0	XLHS13030150	
30/30/20	261 x 124	214 x 124	261 x 124	34/28/34	18/15/18	15/12/15	8/6/8	6/5/6	3/2/3	2/2/2	2/2/2	XLHS13030200	
40/30/15	261 x 80	261 x 80	261 x 80	26/26/26	13/13/13	5/5/5	4/4/4	3/3/3	3/3/3	0/0/0	0/0/0	XLHS14030150	
40/30/20	261 x 124	261 x 124	261 x 124	34/34/34	18/18/18	15/15/15	8/8/8	6/6/6	3/3/3	2/2/2	2/2/2	XLHS14030200	

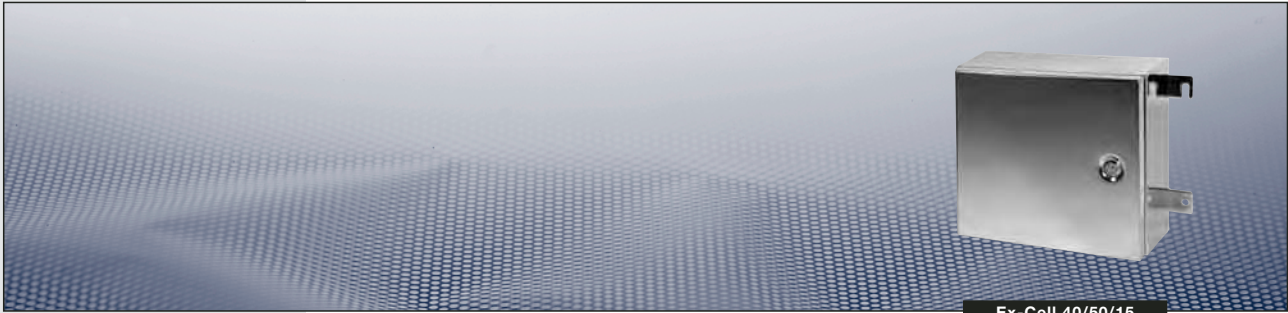
Options

with 1 gland plate	XLH S1 XXYZZ 1	with 3 gland plates	XLH S1 XXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLH S1 XXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLH S2 XXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLH S2 XXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLH PS XXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLH PS XXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLH NN XXYZZ 0-HASP

Example

Type	Order No.
30/20/15 with 3 gland plates, painted with bolt fastening and permanent padlock HASP facility	XLHPS 3020153-B-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.17
3. Refer „OPTIONS“ for full order number detail



Ex-Cell 40/50/15

E x - e / E x - i T E R M I N A L E N C L O S U R E S

| Ex-Cell METRIC up to 3 x 77 terminals |

12.19

Enclosure dimensions and terminal content

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Dimensions ²⁾ H x W x D in mm	Fixing Centers ²⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
40/40/15	406 x 406 x 152	267 x 462	7.1	306	306	326	326	3 x 56	3 x 47	3 x 35	3 x 28	3 x 23
40/40/20	406 x 406 x 203	267 x 462	8.1	306	306	326	326	3 x 56	3 x 47	3 x 35	3 x 28	3 x 23
40/50/15	406 x 508 x 152	267 x 564	8.5	306	408	326	428	4 x 56	4 x 47	4 x 35	4 x 28	4 x 23
40/50/20	406 x 508 x 203	267 x 564	9.7	306	408	326	428	4 x 56	4 x 47	4 x 35	4 x 28	4 x 23
50/40/15	508 x 406 x 152	354 x 462	8.5	408	306	428	326	3 x 77	3 x 64	3 x 48	3 x 38	3 x 32
50/40/20	508 x 406 x 203	354 x 462	9.7	408	306	428	326	3 x 77	3 x 64	3 x 48	3 x 38	3 x 32

Gland entry detail

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (metric)								Order No. ³⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right								
	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63		
40/40/15	337 x 80	261 x 80	261 x 80	35/26/26	17/13/13	7/5/5	6/4/4	5/3/3	4/3/3	0/0/0	XLHS14040150	
40/40/20	334 x 124	261 x 124	261 x 124	44/34/34	26/18/18	21/15/15	11/8/8	9/6/6	4/3/3	3/2/2	XLHS14040200	
40/50/15	464 x 80	261 x 80	261 x 80	48/26/26	24/13/13	10/5/5	8/4/4	7/3/3	6/3/3	0/0/0	XLHS14050150	
40/50/20	460 x 124	261 x 124	261 x 124	62/34/34	35/18/18	29/15/15	15/8/8	13/6/6	5/3/3	4/2/2	XLHS14050200	
50/40/15	337 x 80	337 x 80	337 x 80	35/35/35	17/17/17	7/7/7	6/6/6	5/5/5	4/4/4	0/0/0	XLHS15040150	
50/40/20	334 x 124	334 x 124	334 x 124	44/44/44	26/26/26	21/21/21	11/11/11	9/9/9	4/4/4	3/3/3	XLHS15040200	

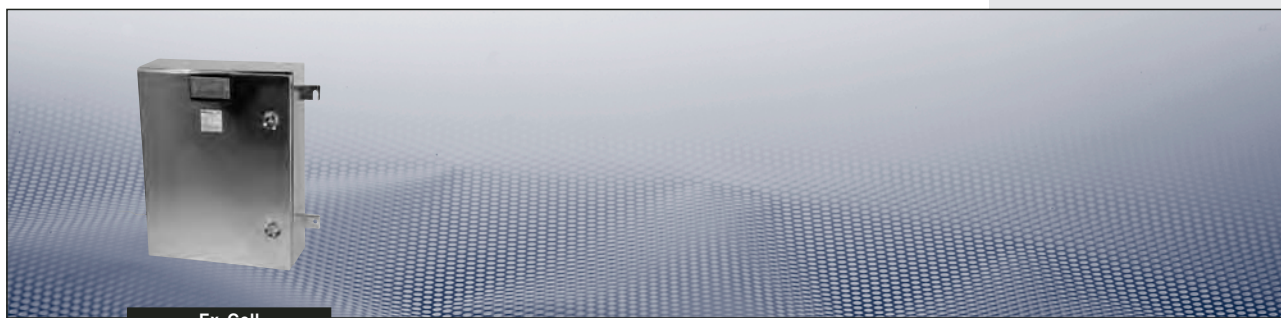
Options

with 1 gland plate	XLH S1 XXYZZ 1	with 3 gland plates	XLH S1 XXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLH S1 XXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLH S2 XXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLH S2 XXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLH PS XXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLH PS XXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLH NN XXYZZ0- HASP

Example

Type	Order No.
40/50/20 with 1 gland plates, 316L SS with bolt fastening and permanent padlock HASP facility	XLHS14050201-B-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.17
3. Refer to „OPTIONS“ for full order number detail



Ex-Cell

12.20

Ex - e / Ex - i TERMINAL ENCLOSURES

| Ex-Cell METRIC up to 4 x 97 terminals |

Enclosure dimensions and terminal content

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Dimensions ²⁾ H x W x D in mm	Fixing Centers ²⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
50/50/15	508 x 508 x 152	354 x 564	10.2	408	408	428	428	4 x 77	4 x 64	4x 48	4 x 38	4 x 32
50/50/20	508 x 508 x 203	354 x 564	11.4	408	408	428	428	4 x 77	4 x 64	4x 48	4 x 38	4 x 32
50/60/20	508 x 610 x 203	354 x 666	13.2	408	510	428	530	6 x 77	6 x 64	6x 48	6 x 38	6 x 32
60/40/15	610 x 406 x 152	445 x 462	9.9	510	306	530	326	3 x 97	3 x 81	3 x 61	3 x 49	3 x 40
60/40/20	610 x 406 x 203	445 x 462	11.2	510	306	530	326	3 x 97	3 x 81	3 x 61	3 x 49	3 x 40
60/50/15	610 x 508 x 152	445 x 564	11.8	510	408	530	428	4 x 97	4 x 81	4 x 61	4 x 49	4 x 40
60/50/20	610 x 508 x 203	445 x 564	13.2	510	408	530	428	4 x 97	4 x 81	4 x 61	4 x 49	4 x 40

Gland entry detail

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size				Available glanding area (with gland plates fitted) in mm								Max. Entry Guide (metric) Top & Bottom / Left / Right								Order No. ³⁾
Top & Bottom	Left	Right		M16	M20	M25	M32	M40	M50	M63										
50/50/15	464 x 80	337 x 80	337 x 80	48/35/35	24/17/17	10/7/7	8/6/6	7/5/5	6/4/4	0/0/0						XLHS15050150				
50/50/20	460 x 124	334 x 124	334 x 124	62/44/44	35/26/26	29/21/21	15/11/11	13/9/9	5/4/4	4/3/3						XLHS15050200				
50/60/20	562 x 124	334 x 124	334 x 124	78/44/44	44/26/26	36/21/21	19/11/11	16/9/9	7/4/4	5/3/3						XLHS15060200				
60/40/15	337 x 80	464 x 80	464 x 80	35/48/48	17/24/24	7/10/10	6/8/8	5/7/7	4/6/6	0/0/0						XLHS16040150				
60/40/20	334 x 124	460 x 124	460 x 124	44/62/62	26/35/35	21/29/29	11/15/15	9/13/13	4/5/5	3/4/4						XLHS16040200				
60/50/15	464 x 80	464 x 80	464 x 80	48/48/48	24/24/24	10/10/10	8/8/8	7/7/7	6/6/6	0/0/0						XLHS16050150				
60/50/20	460 x 124	460 x 124	460 x 124	62/62/62	35/35/35	29/29/29	15/15/15	13/13/13	5/5/5	4/4/4						XLHS16050200				

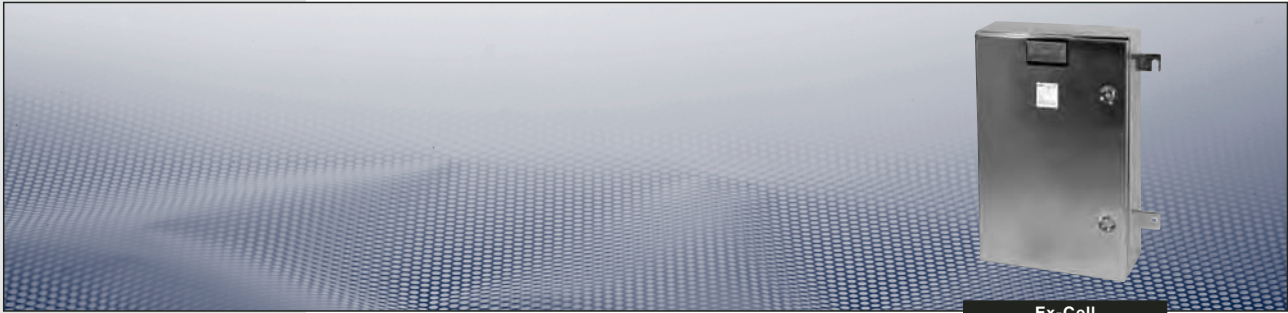
Options

with 1 gland plate	XLH S1 XXYZZ 1	with 3 gland plates	XLH S1 XXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLH S1 XXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLH S2 XXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLH S2 XXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLH PS XXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLH PS XXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLH NN XXYZZ0- HASP

Example

Type	Order No.
60/50/20 with 3 gland plates, painted 1/4 turn lock fastening and permanent padlock HASP facility	XLHPS6050203-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.17
3. Refer to „OPTIONS“ for full order number detail



Ex-Cell

Ex - e / Ex - i T E R M I N A L E N C L O S U R E S

| Ex-Cell METRIC up to 7 x 128 terminals |

12.21

Enclosure dimensions and terminal content

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Dimensions ²⁾ H x W x D in mm	Fixing Centers ²⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
60/60/15	610 x 610 x 152	445 x 666	13.7	510	510	530	530	6 x 97	6 x 81	6 x 61	6 x 49	6 x 40
60/60/20	610 x 610 x 203	445 x 666	15.3	510	510	530	530	6 x 97	6 x 81	6 x 61	6 x 49	6 x 40
60/76/20	610 x 762 x 203	445 x 818	18.3	510	662	530	682	7 x 97	7 x 81	7 x 61	7 x 49	7 x 40
76/50/20	762 x 508 x 203	508 x 564	15.9	662	408	682	428	4 x 128	4 x 106	4 x 80	4 x 64	4 x 53
76/60/20	762 x 610 x 203	508 x 666	18.3	662	510	682	530	6 x 128	6 x 106	6 x 80	6 x 64	6 x 53
76/76/20	762 x 762 x 203	508 x 818	21.9	662	662	682	682	7 x 128	7 x 106	7 x 80	7 x 64	7 x 53

Gland entry detail

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (metric)							Order No. ³⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
60/60/15	562 x 80	464 x 80	464 x 80	59/48/48	29/24/24	12/10/10	10/8/8	8/7/7	7/6/6	0/0/0	XLHS16060150
60/60/20	562 x 124	460 x 124	460 x 124	78/62/62	44/35/35	36/29/29	19/15/15	16/13/13	7/5/5	5/4/4	XLHS16060200
60/76/20	714 x 124	460 x 124	460 x 124	100/62/62	56/35/35	47/29/29	24/15/15	20/13/13	9/5/5	7/4/4	XLHS16076200
76/50/20	460 x 124	562 x 124	562 x 124	62/78/78	35/44/44	29//36/36	15/19/19	13/16/16	5/7/7	4/5/5	XLHS17650200
76/60/20	562 x 124	562 x 124	562 x 124	78/78/78	44/44/44	36/36/36	19/19/19	16/16/16	7/7/7	5/5/5	XLHS17660200
76/76/20	714 x 124	562 x 124	562 x 124	100/78/78	56/44/44	47/36/36	24/19/19	20/16/16	9/7/7	7/5/5	XLHS17676200

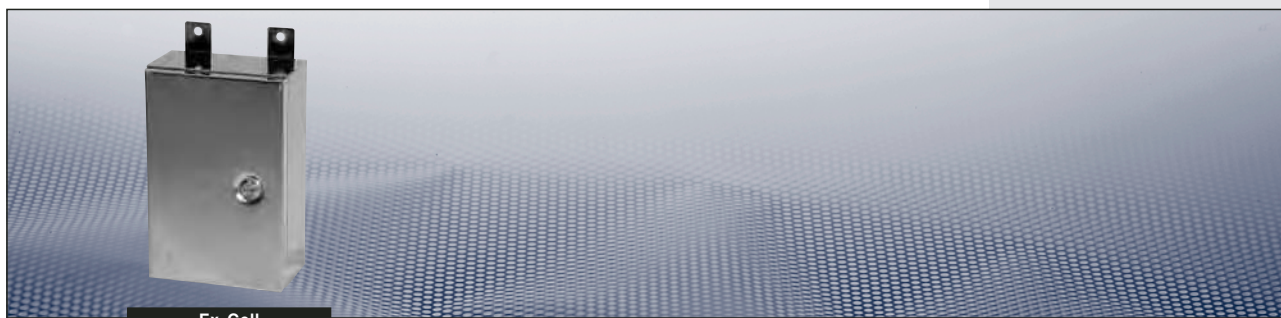
Options

with 1 gland plate	XLH S1 XXYZZ 1	with 3 gland plates	XLH S1 XXYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLH S1 XXYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLH S2 XXYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLH S2 XXYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLH PS XXYZZ 0
Ex-Cell Painted - Bolt Fastening	XLH PS XXYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLH PS NNYYZZ0- HASP

Example

Type	Order No.
60/76/20 with 3 gland plates, 316 SS with bolt fastening and permanent padlock HASP facility	XLHS16076203-B-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.17
3. Refer to „OPTIONS“ for full order number detail



Ex-Cell

12.22

Ex - e / Ex - i TERMINAL ENCLOSURES

| Ex-Cell IMPERIAL up to 2 x 36 terminals |

Enclosure dimensions and terminal content

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Dimensions ²⁾ H x W x D in inches	Fixing Centers ²⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
9"/6"/5"	9 x 6 x 5	10.24 x 3.50	5.17	5.08	2.05	5.87	2.83	1 x 21	1 x 17	1 x 13	1 x 10	1 x 9
12"/8"/6"	12 x 8 x 6	13.24 x 5.50	7.54	8.07	4.06	8.86	4.84	1 x 36	1 x 30	1 x 23	1 x 18	1 x 15
12"/12"/6"	12 x 12 x 6	13.24 x 9.50	10.07	8.07	8.07	8.86	8.86	2 x 36	2 x 30	2 x 23	2 x 18	2 x 15
12"/12"/8"	12 x 12 x 8	13.24 x 9.50	12.76	8.11	8.11	8.90	8.90	2 x 36	2 x 30	2 x 23	2 x 18	2 x 15

Gland entry detail

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right								Order No. ³⁾
	Top & Bottom	Left	Right	Gland/ Hub								
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT		
9"/6"/5"	4.25 x 2.28	4.25 x 2.28	4.25 x 2.28	6/6/6	2/2/2	2/2/2	1/1/1	0/0/0	0/0/0	0/0/0	XLVS10906050	
				2/2/2	2/2/2	2/2/2	0/0/0	0/0/0	0/0/0	0/0/0		
12"/8"/6"	6.14 x 3.15	6.14 x 3.15	6.14 x 3.15	9/9/9	7/7/7	3/3/3	2/2/2	2/2/2	2/2/2	0/0/0	XLVS11208060	
				3/3/3	3/3/3	2/2/2	0/0/0	0/0/0	0/0/0	0/0/0		
12"/12"/6"	10.28 x 3.15	6.14 x 3.15	6.14 x 3.15	16/9/9	13/7/7	5/3/3	4/2/2	3/2/2	3/2/2	0/0/0	XLVS11212060	
				12/3/3	5/3/3	4/2/2	4/0/0	3/0/0	0/0/0	0/0/0		
12"/12"/8"	10.27 x 4.88	8.42 x 4.88	10.27 x 4.88	32/26/32	20/15/20	15/12/15	8/6/8	6/5/6	3/2/3	2/2/2	XLVS11212080	
				18/14/18	10/8/10	8/6/8	7/5/7	3/2/3	3/2/3	2/2/2		

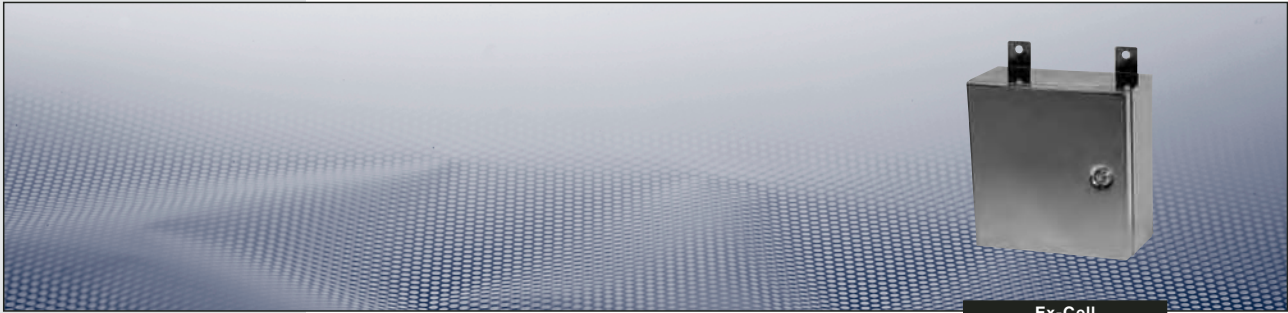
Options

with 1 gland plate	XLV S1 XYYZZ 1	with 3 gland plates	XLV S1 XYYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XYYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XYYZZ0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XYYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XYYZZ0
Ex-Cell Painted - Bolt Fastening	XLV PS XYYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XYYZZ0- HASP

Example

Type	Order No.
12/8/6 with 3 gland plates, painted with bolt fastening	XLHS11208063-B

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.17
3. Refer to „OPTIONS“ for full order number detail



Ex-Cell

Ex - e / Ex - i T E R M I N A L E N C L O S U R E S

| Ex-Cell IMPERIAL up to 3 x 56 terminals |

12.23

Enclosure dimensions and terminal content

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Dimensions ²⁾ H x W x D in inches	Fixing Centers ²⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
16"/12"/6"	16 x 12 x 6	17.24 x 9.50	12.57	12.05	8.07	12.83	8.86	2 x 56	2 x 47	2 x 35	2 x 28	2 x 23
16"/12"/8"	16 x 12 x 8	17.24 x 9.50	14.54	12.05	8.07	12.83	8.86	2 x 56	2 x 47	2 x 35	2 x 28	2 x 23
16"/16"/6"	16 x 16 x 6	17.24 x 10.00	15.63	12.05	12.05	12.83	12.83	3 x 56	3 x 47	3 x 35	3 x 28	3 x 23
16"/16"/8"	16 x 16 x 8	17.24 x 10.00	17.87	12.05	12.05	12.83	12.83	3 x 56	3 x 47	3 x 35	3 x 28	3 x 23

Gland entry detail

Ex-Cell 316L SS - 1/4 Turn Lock Fastening	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right								Order No. ³⁾	
	Top & Bottom	Left	Right	Gland/ Hub									
	(with gland plates fitted) in inches				1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT		
16"/12"/6"	10.28 x 3.15	10.28 x 3.15	10.28 x 3.15	16/16/16	13/13/13	5/5/5	4/4/4	3/3/3	3/3/3	0/0/0	XLVS11612060		
				12/12/12	5/5/5	4/4/4	4/4/4	3/3/3	0/0/0	0/0/0			
16"/12"/8"	10.27 x 4.88	10.27 x 4.88	10.27 x 4.88	32/32/32	20/20/20	15/15/15	8/8/8	6/6/6	3/3/3	2/2/2	XLVS11612080		
				18/18/18	10/10/10	8/8/8	7/7/7	3/3/3	3/3/3	2/2/2			
16"/16"/6"	13.27 x 3.15	10.28 x 3.15	10.28 x 3.15	21/16/16	17/13/13	7/5/5	6/4/4	5/3/3	4/3/3	0/0/0	XLVS11616060		
				15/12/12	7/5/5	6/4/4	5/4/4	4/3/3	0/0/0	0/0/0			
16"/16"/8"	13.15 x 4.88	10.27 x 4.88	10.27 x 4.88	42/32/32	26/20/20	21/15/15	11/8/8	9/6/6	4/3/3	3/2/2	XLVS11616080		
				23/18/18	13/10/10	11/8/8	9/7/7	4/3/3	3/3/3	3/2/2			

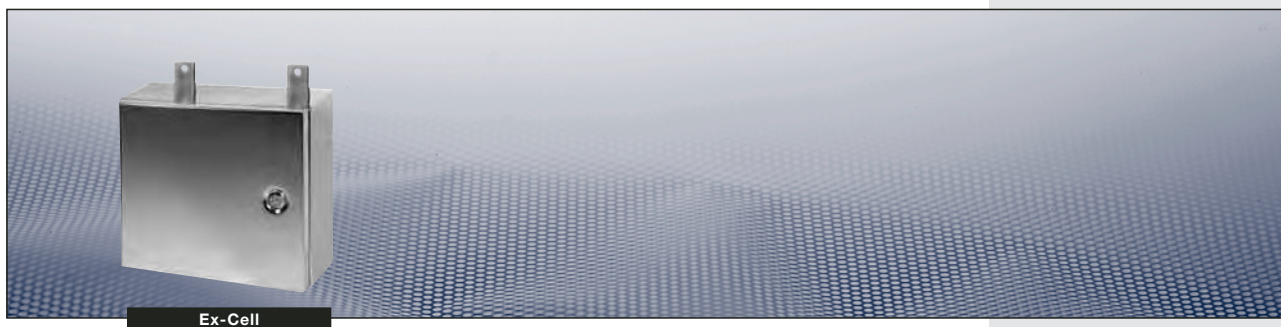
Options

with 1 gland plate	XLV S1 XXYYZZ 1	with 3 gland plates	XLV S1 XXYYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XXYYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XXYYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XXYYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XXYYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XXYYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XXYYZZ0- HASP

Example

Type	Order No.
16/16/06 with 1 gland plates, 304 SS with 1/4 turn lock fastening and permanent padlock HASP facility	XLVS21616061-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.17
3. Refer to „OPTIONS“ for full order number detail



12.24

Ex - e / Ex - i T E R M I N A L E N C L O S U R E S

| Ex-Cell IMPERIAL up to 3 x 77 terminals |

Enclosure dimensions and terminal content

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Dimensions ²⁾ H x W x D in inches	Fixing Centers ²⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
16"/20"/6"	16 x 20 x 6	17.24 x 14.00	18.71	12.05	16.06	12.83	16.85	4 x 56	4 x 47	4 x 35	4 x 28	4 x 23
16"/20"/8"	16 x 20 x 8	17.24 x 14.00	21.24	12.05	16.06	12.83	16.85	4 x 56	4 x 47	4 x 35	4 x 28	4 x 23
20"/16"/6"	20 x 16 x 6	21.24 x 10.00	18.71	16.06	12.05	16.85	12.83	3 x 77	3 x 64	3 x 48	3 x 38	3 x 32
20"/16"/8"	20 x 16 x 8	21.24 x 10.00	21.24	16.06	12.05	16.85	12.83	3 x 77	3 x 64	3 x 48	3 x 38	3 x 32

Gland entry detail

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right								Order No. ³⁾
	Top & Bottom	Left	Right	Gland/ Hub								
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT		
16"/20"/6"	18.27 x 3.15	10.28 x 3.15	10.28 x 3.15	30/16/16	24/13/13	10/5/5	8/4/4	7/3/3	6/3/3	0/0/0	XLVS11620060	
				22/12/12	10/5/5	8/4/4	7/4/4	6/3/3	0/0/0	0/0/0		
16"/20"/8"	18.11 x 4.88	10.27 x 4.88	10.27 x 4.88	58/32/32	36/20/20	30/15/15	15/8/8	13/6/6	5/3/3	4/2/2	XLVS11620080	
				33/18/18	18/10/10	16/8/8	13/7/7	6/3/3	5/3/3	4/2/2		
20"/16"/6"	13.27 x 3.15	13.27 x 3.15	13.27 x 3.15	21/21/21	17/17/17	7/7/7	6/6/6	5/5/5	4/4/4	0/0/0	XLVS12016060	
				15/15/15	7/7/7	6/6/6	5/5/5	4/4/4	0/0/0	0/0/0		
20"/16"/8"	13.15 x 4.88	13.15 x 4.88	13.15 x 4.88	42/42/42	26/26/26	21/21/21	11/11/11	9/9/9	4/4/4	3/3/3	XLVS12016080	
				23/23/23	13/13/13	11/11/11	9/9/9	4/4/4	3/3/3	3/3/3		

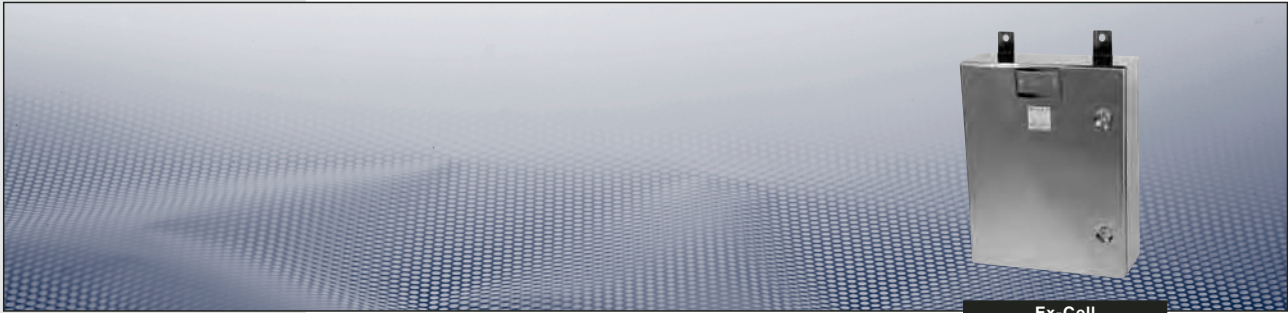
Options

with 1 gland plate	XLV S1 XXYYZZ 1	with 3 gland plates	XLV S1 XXYYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XXYYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XXYYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XXYYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XXYYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XXYYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XXYYZZ0- HASP

Example

Type	Order No.
20/16/8 with 3 gland plates, painted with bolt fastening and permanent padlock HASP facility	XLVPS2016083-B-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.17
3. Refer to „OPTIONS“ for full order number detail



Ex-Cell

E x - e / E x - i T E R M I N A L E N C L O S U R E S

| Ex-Cell IMPERIAL up to 6 x 77 terminals |

12.25

Enclosure dimensions and terminal content

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Dimensions ²⁾ H x W x D in inches	Fixing Centers ²⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
20"/20"/6"	20 x 20 x 6	21.24 x 14.00	22.36	16.06	16.06	16.85	16.85	4 x 77	4 x 64	4 x 48	4 x 38	4 x 32
20"/20"/8"	20 x 20 x 8	21.24 x 14.00	25.17	16.06	16.06	16.85	16.85	4 x 77	4 x 64	4 x 48	4 x 38	4 x 32
20"/24"/8"	20 x 24 x 8	21.24 x 18.00	29.10	16.06	20.08	16.85	20.87	6 x 77	6 x 64	6 x 48	6 x 38	6 x 32

Gland entry detail

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right								Order No. ³⁾
	Top & Bottom	Left	Right	Gland/ Hub								
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT		
20"/20"/6"	18.27 x 3.15	13.27 x 3.15	13.27 x 3.15	30/21/21	24/17/17	10/7/7	8/6/6	7/5/5	6/4/4	0/0/0	XLVS12020060	
				22/15/15	10/7/7	8/6/6	7/5/5	6/4/4	0/0/0	0/0/0		
20"/20"/8"	18.11 x 4.88	13.15 x 4.88	13.15 x 4.88	58/42/42	36/26/26	30/21/21	15/11/11	13/9/9	5/4/4	4/3/3	XLVS12020080	
				33/23/23	18/13/13	16/11/11	13/9/9	6/4/4	5/3/3	4/3/3		
20"/24"/8"	22.13 x 4.88	13.15 x 4.88	13.15 x 4.88	72/42/42	44/26/26	36/21/21	19/11/11	16/9/9	7/4/4	5/3/3	XLVS12024080	
				41/23/23	23/13/13	19/11/11	16/9/9	7/4/4	6/3/3	5/3/3		

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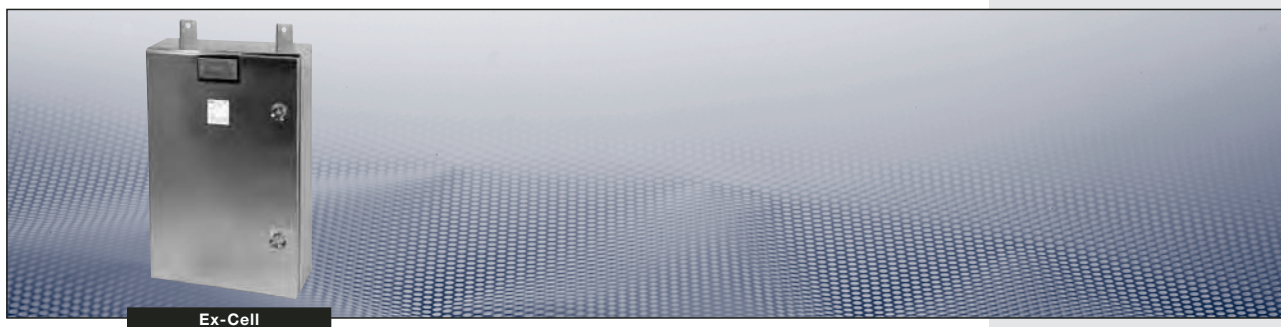
Options

with 1 gland plate	XLV S1 XXYYZZ 1	with 3 gland plates	XLV S1 XXYYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XXYYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XXYYZZ0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XXYYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XXYYZZ0
Ex-Cell Painted - Bolt Fastening	XLV PS XXYYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XXYYZZ0- HASP

Example

Type	Order No.
20/20/8 with 1 gland plates, 316L SS with bolt fastening	XLVS12020081-B

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.17
3. Refer to „OPTIONS“ for full order number detail



Ex-Cell

12.26

Ex - e / Ex - i TERMINAL ENCLOSURES

| Ex-Cell IMPERIAL up to 4 x 97 terminals |

Enclosure dimensions and terminal content

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Dimensions ²⁾ H x W x D in inches	Fixing Centers ²⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail Rail fixing Rail length centres				Terminal content Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
24"/16"/6"	24 x 16 x 6	25.24 x 10.00	21.80	20.08	12.05	20.87	12.83	3 x 97	3 x 81	3 x 61	3 x 49	3 x 40
24"/16"/8"	24 x 16 x 8	25.24 x 10.00	24.61	20.08	12.05	20.87	12.83	3 x 97	3 x 81	3 x 61	3 x 49	3 x 40
24"/20"/6"	24 x 20 x 6	25.24 x 14.00	26.01	20.08	16.06	20.87	16.85	4 x 97	4 x 81	4 x 61	4 x 49	4 x 40
24"/20"/8"	24 x 20 x 8	25.24 x 14.00	29.01	20.08	16.06	20.87	16.85	4 x 97	4 x 81	4 x 61	4 x 49	4 x 40

Gland entry detail

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Available glanding area Top & Bottom Left Right (with gland plates fitted) in inches			Max. Entry Guide (imperial) Top & Bottom / Left / Right Gland/ Hub								Order No. ³⁾
				1/2" NPT	3/4" NPT	2" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT		
24"/16"/6"	13.27 x 3.15	18.27 x 3.15	18.27 x 3.15	21/30/30 15/22/22	17/24/24 7/10/10	6/8/8 6/8/8	5/7/7 5/7/7	4/6/6 4/6/6	0/0/0 0/0/0	0/0/0 0/0/0		XLVS12416060
24"/16"/8"	13.15 x 4.88	18.11 x 4.88	18.11 x 4.88	42/58/58 23/33/33	26/36/36 13/18/18	21/30/30 11/16/16	11/15/15 9/13/13	4/5/5 4/6/6	3/4/4 3/5/5	3/4/4 3/4/4		XLVS12416080
24"/20"/6"	18.27 x 3.15	18.27 x 3.15	18.27 x 3.15	30/30/30 22/22/22	24/24/24 10/10/10	8/8/8 8/8/8	7/7/7 7/7/7	6/6/6 6/6/6	0/0/0 0/0/0	0/0/0 0/0/0		XLVS12420060
24"/20"/8"	18.11 x 4.88	18.11 x 4.88	18.11 x 4.88	58/58/58 33/33/33	36/36/36 18/18/18	30/30/30 16/16/16	15/15/15 13/13/13	5/5/5 6/6/6	4/4/4 5/5/5	4/4/4 4/4/4		XLVS12420080

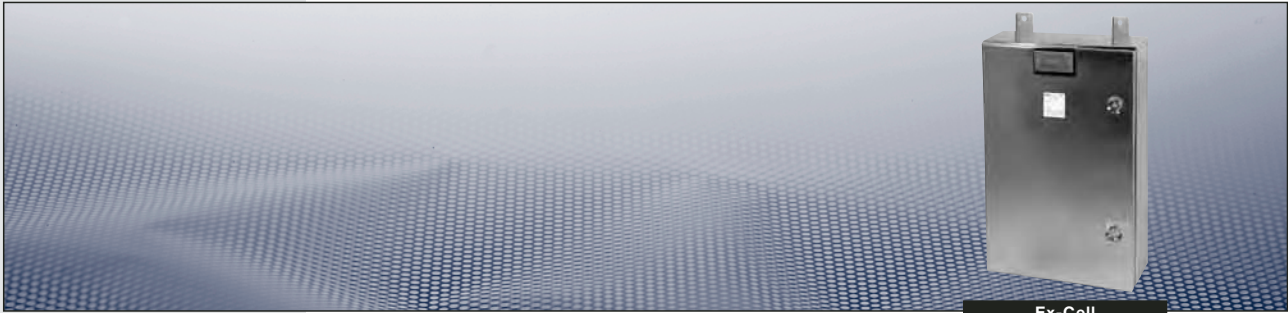
Options

with 1 gland plate	XLV S1 XYYZZ 1	with 3 gland plates	XLV S1 XYYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XYYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XYYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XYYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XYYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XYYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XYYZZ0- HASP

Example

Type	Order No.
24/16/6 with 1 gland plates, painted with bolt fastening and permanent padlock HASP facility	XLVPS2416061-B-HASP

Notes: 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.17
3. Refer to „OPTIONS“ for full order number detail



Ex-Cell

E x - e / E x - i T E R M I N A L E N C L O S U R E S

| Ex-Cell IMPERIAL up to 7 x 97 terminals |

12.27

Enclosure dimensions and terminal content

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Dimensions ²⁾ H x W x D in inches	Fixing Centers ²⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
24"/24"/6"	24 x 24 x 6	25.24 x 18.00	30.22	20.08	20.08	20.87	20.87	6 x 97	6 x 81	6 x 61	6 x 49	6 x 40
24"/24"/8"	24 x 24 x 8	25.24 x 18.00	33.60	20.08	20.08	20.87	20.87	6 x 97	6 x 81	6 x 61	6 x 49	6 x 40
24"/30"/8"	24 x 30 x 8	25.24 x 24.00	40.30	20.08	26.06	20.87	26.85	7 x 97	7 x 81	7 x 61	7 x 49	7 x 40

Gland entry detail

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right								Order No. ³⁾
	Top & Bottom	Left	Right	Gland/ Hub		Top		Bottom		Left / Right		
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT		
24"/24"/6"	22.13 x 3.15	18.27 x 3.15	18.27 x 3.15	36/30/30	29/24/24	12/10/10	10/8/8	8/7/7	7/6/6	0/0/0	XLVS12424060	
				27/22/22	12/10/10	10/8/8	8/7/7	7/6/6	0/0/0	0/0/0		
24"/24"/8"	22.13 x 4.88	18.11 x 4.88	18.11 x 4.88	72/58/58	44/36/36	36/30/30	19/15/15	16/13/13	7/5/5	5/4/4	XLVS12424080	
				41/33/33	23/18/18	19/16/16	16/13/13	7/6/6	6/5/5	5/4/4		
24"/30"/8"	28.11 x 4.88	18.11 x 4.88	18.11 x 4.88	94/58/58	57/36/36	47/30/30	24/15/15	20/13/13	9/5/5	7/4/4	XLVS12430080	
				51/33/33	30/18/18	25/16/16	21/13/13	9/6/6	8/5/5	7/4/4		

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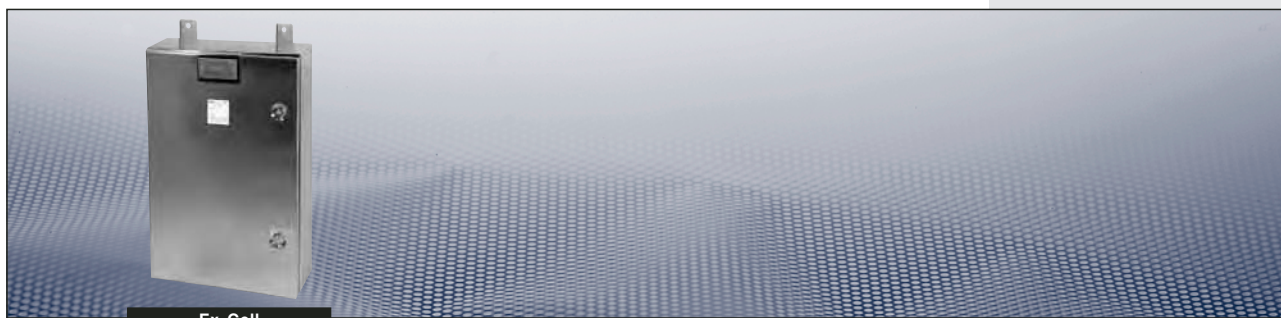
Options

with 1 gland plate	XLV S1 XXYYZZ 1	with 3 gland plates	XLV S1 XXYYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XXYYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XXYYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XXYYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XXYYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XXYYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XXYYZZ0- HASP

Example

Type	Order No.
24/22/8 with 3 gland plates, 316L SS with bolt fastening	XLVS12422083-B

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.17
3. Refer to „OPTIONS“ for full order number detail



Ex-Cell

12.28

Ex - e / Ex - i TERMINAL ENCLOSURES

| Ex-Cell IMPERIAL up to 7 x 128 terminals |

Enclosure dimensions and terminal content

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Dimensions ²⁾ H x W x D in inches	Fixing Centers ²⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content				
				Rail fixing		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
30"/20"/8"	30 x 20 x 8	31.24 x 14.00	34.96	26.06	16.06	26.85	16.85	4 x 128	4 x 106	4 x 80	4 x 64	4 x 53
30"/24"/8"	30 x 24 x 8	31.24 x 18.00	40.30	26.06	20.08	26.85	20.87	6 x 128	6 x 106	6 x 80	6 x 64	6 x 53
30"/30"/8"	30 x 30 x 8	31.24 x 24.00	48.25	26.06	26.06	26.85	26.85	7 x 128	7 x 106	7 x 80	7 x 64	7 x 53

Gland entry detail

Ex-Cell 316L SS - 1/4 Turn Lock Fastening Size	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right								Order No. ³⁾
	Top & Bottom	Left	Right	Gland/ Hub								
	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT		
30"/20"/8"	18.11 x 4.88	22.13 x 4.88	22.13 x 4.88	58/72/72	36/44/44	30/36/36	15/19/19	13/16/16	5/7/7	4/5/5	XLVS13020080	
				33/41/41	18/23/23	16/19/19	13/16/16	6/7/7	5/6/6	4/5/5		
30"/24"/8"	22.13 x 4.88	22.13 x 4.88	22.13 x 4.88	72/72/72	44/44/44	36/36/36	19/19/19	16/16/16	7/7/7	5/5/5	XLVS13024080	
				41/41/41	23/23/23	19/19/19	16/16/16	7/7/7	6/6/6	5/5/5		
30"/30"/8"	28.11 x 4.88	22.13 x 4.88	22.13 x 4.88	94/72/72	57/44/44	47/36/36	24/19/19	20/16/16	9/7/7	7/5/5	XLVS13030080	
				51/41/41	30/23/23	25/19/19	21/16/16	9/7/7	8/6/6	7/5/5		

Options

with 1 gland plate	XLV S1 XYYZZ 1	with 3 gland plates	XLV S1 XYYZZ 3
Ex-Cell 316L SS - Bolt Fastening	XLV S1 XYYZZ0- B	Ex-Cell 304 SS - 1/4 Turn Lock Fastening	XLV S2 XYYZZ 0
Ex-Cell 304 SS - Bolt Fastening	XLV S2 XYYZZ0- B	Ex-Cell Painted - 1/4 Turn Lock Fastening	XLV PS XYYZZ 0
Ex-Cell Painted - Bolt Fastening	XLV PS XYYZZ0- B	Permanent Padlock Hasp Facility (Factory Fitted ONLY)	XLV PS XYYZZ0- HASP

Example

Type	Order No.
30/30/8 with 1 gland plates, 304 SS with bolt fastening and permanent padlock HASP facility	HLVS23030081-B-HASP

- Notes:** 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimensions drawing see page 4.17
3. Refer to „OPTIONS“ for full order number detail

EX - TERMINAL ENCLOSURES

Stainless Steel Version for Zone 1 STB

The **STB** range is an “**ATEX certified**” terminal box solution available in various options of materials and finishes fully compliant with the impact, thermal and ingress requirements of EN50014, and is available in a comprehensive range of 12 different sizes. With for the possibilities many configuration for a multitude of applications. Using the highest quality materials, unique design benefits and precision manufacturing the **STB** range is the benchmark in heavy-duty gauge enclosures of its class.

STBx has unique wrap-round lid cover design that wraps around the body of the enclosures eliminate ingress of either liquids such as green-water or powder, such as sand. This design provides a significant advantage as the gasket sealing area is not exposed to the external environment, preventing contamination from ice formations and abrasion of sand storms. The lid cover is secured and sealed to IP66 by the retained stainless steel bolts around the outside of the enclosure, whilst being supported a floppy hinge that allow the lid cover to be removed.

316L Stainless Steel (1.4404 to EN 10088) Superior “corrosion resistant” electro chemically polished.

Sheet Steel - Polyester powder coated to RAL 7032.

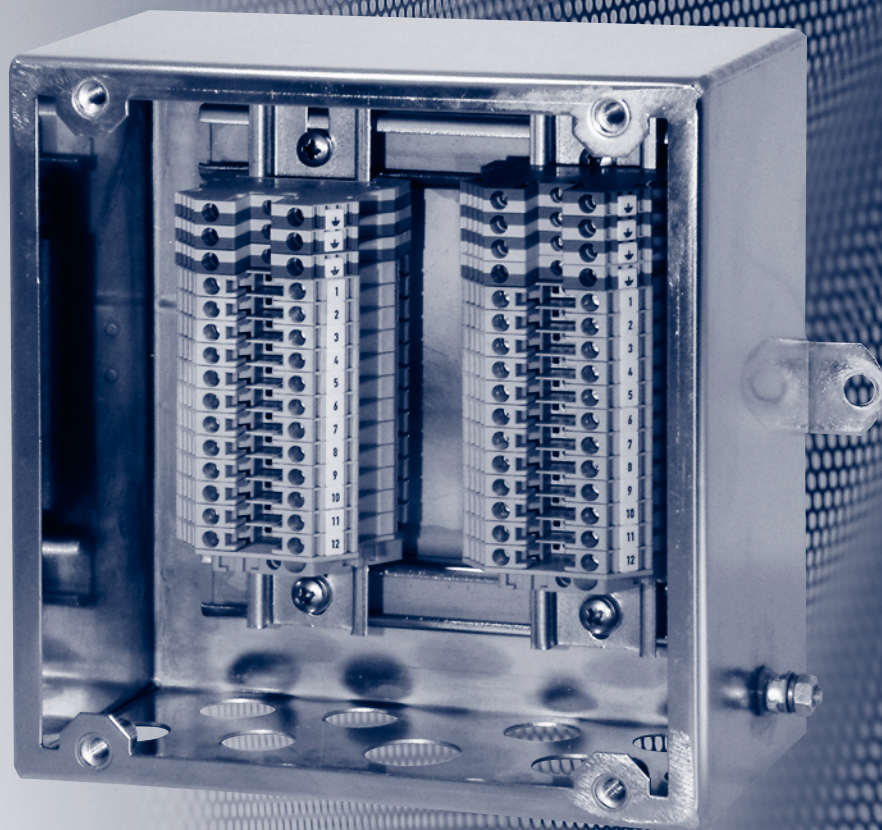
High integrity “one piece” solid Chloroprene rubber. or High integrity “one piece” closed cell chloroprene sponge.

Optional Silicone gasket available on all sizes.

IP 66

Extended ambient temperatures -65 °C to + 55 °C as option.

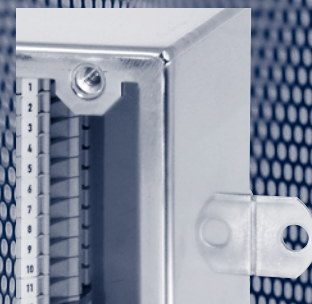
Certification GOST-R, AEx, cULus and Germanischer Lloyd on request

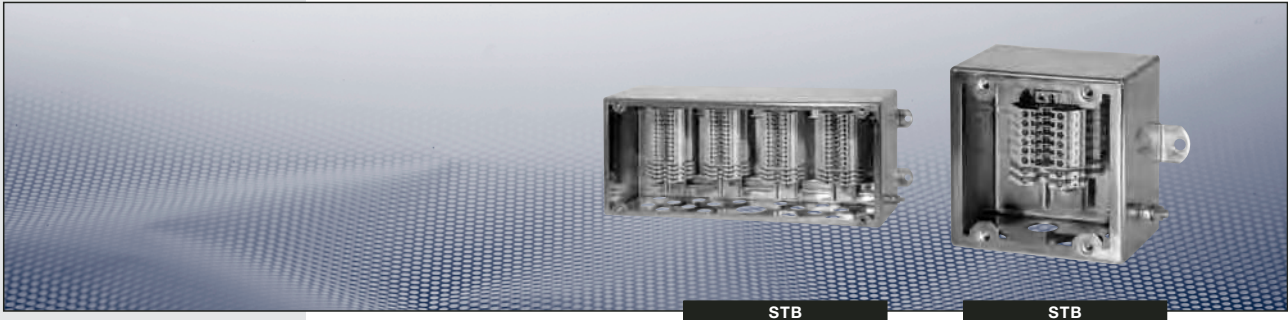


The superior quality „one piece” Chloroprene closed cell gasket material that maintains the enclosures high ingress protection integrity providing IP66. This material has a wide operating temperature range for the most hostile environments.



*The body of the **STBx** enclosure has a superior wide surface area gasket sealing area 10 mm wide compared to conventional enclosures that use a knife-edge seal, that is only the thickness of the material, typically only 1.5 mm.*

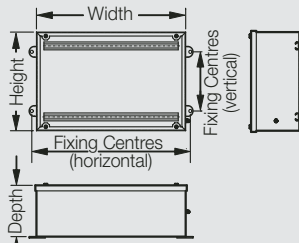




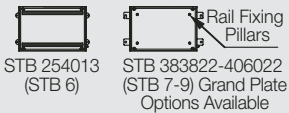
E x - e T E R M I N A L E N C L O S U R E S

| STB METRIC and IMPERIAL |

12.31



Fixing Lug and Rail / Pillar configuration
(not to scale)



Technical data

Type STB

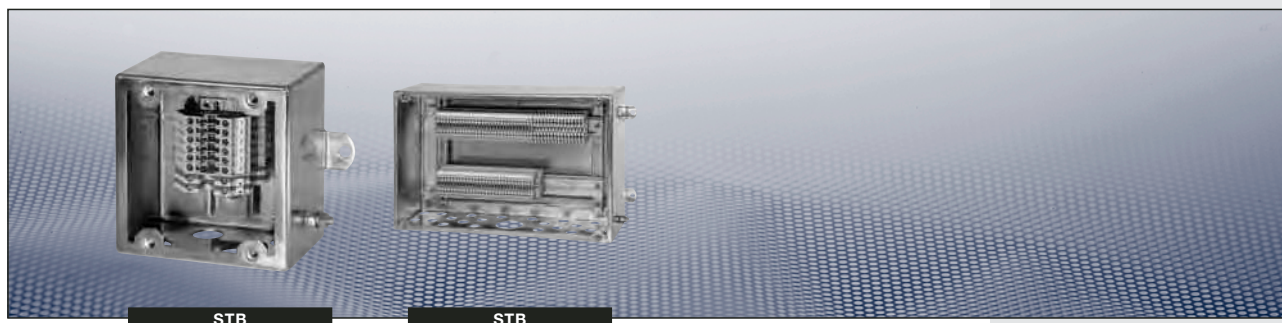
EC-Type Examination Certificate	KEMA 99 ATEX 7894 X
Marking to 94/9/EC	Ex II 2(1) G EEx e (ia) IIC T* Ex II 1 G EEx ia IIC T* Ex II 2 D IP 66 T100 °C
Enclosure material	stainless steel 316 L or sheet steel polyester powder coated
Material thickness	1.5 mm
Enclosure mounting	
STB 12/12/09 - 25/25/12	2 welded lugs with \varnothing 8 mm holes
STB 16/38/12 - 25/40/13	4 welded lugs with \varnothing 8 mm holes
STB 38/38/22 - 60/40/20	4 welded lugs with \varnothing 11 mm holes
Equipment mountings	
12/12/08 - 25/40/13	internally welded TAS 20 rail terminals mounting
38/38/20 - 60/40/20	4 x stand off pillars \varnothing 9 mm, 25 mm height, tapped M6 x 10, for rail or mounting plate
Gland plates/Entries (38/38/20 - 60/40/20)	1 or 3 side optional gland plate (3 mm) combination with entries to meet requirements
Enclosure earth	
12/12/08 - 25/40/13	M6 external/internal earth stud assembly
38/38/20 - 60/40/20	M10 external/internal earth stud assembly
Rated voltage	up to 750 V*
Rated current	up to 500 A*
Rated terminal cross section	up to 240 mm ² *
Protection category to EN 60529	IP 66
Insulation class	I
Permissible ambient temperature*	
	Chloroprene solid rubber gasket (12/12/08 - 25/25/12)
T6	-30 °C to +40 °C
T5	-30 °C to +55 °C
	Chloroprene closed cell sponge gasket (16/38/12 - 60/40/20)
T6	-45 °C to +40 °C
T5	-45 °C to +55 °C
	Silicone closed cell sponge gasket
T6	-65 °C to +40 °C
T5	-65 °C to +55 °C

* depending on type of terminal and Ex-components used

Additional certifications:

GOST-R, cULUs types 3S, 4, 4 x and Germanischer Lloyd approved on request.

12



12.32

E x - e T E R M I N A L E N C L O S U R E S

| STB METRIC up to 3 x 51 terminals |

Enclosure dimensions and terminal content

STB	Dimensions ¹⁾ H x W x D in mm	Fixing Centers ¹⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing		Rail length		Row orientation vertical			
Size				vert.	horiz.	vert.	horiz.	2.5 (6)	4 (6.5)	6 (8)	10 (10)
12/12/08 ²⁾	120 x 120 x 80	145 x 145	1.4	62	82			1 x 8	1 x 6	1 x 5	1 x 4
15/12/08 ²⁾	150 x 120 x 80	175 x 175	1.6	90	110			1 x 13	1 x 11	1 x 8	1 x 7
15/15/09 ²⁾	150 x 150 x 90	175 x 175	1.9	90	110			1 x 13	1 x 11	1 x 8	1 x 7
19/15/09 ²⁾	190 x 150 x 90	175 x 175	2.3	130	150			1 x 21	1 x 18	1 x 13	1 x 10
19/19/10 ²⁾	190 x 190 x 100	215 x 215	3.0	130	150			1 x 21	1 x 18	1 x 13	1 x 10
25/25/12 ²⁾	250 x 250 x 120	275 x 275	3.7	180	200			2 x 31	2 x 26	2 x 19	2 x 15
16/38/12 ²⁾	160 x 380 x 120	80 x 405	3.7	300	320			1 x 55	1 x 46	1 x 34	1 x 28
25/40/13 ²⁾	250 x 400 x 130	150 x 425	5.4	180	200			3 x 31	3 x 26	3 x 19	3 x 15

Gland entry detail

STB	Available glanding area						Max. Entry Guide (metric)							Order No. ⁴⁾
	Top & Bottom		Left		Right		Top & Bottom / Left / Right							
Size	(with gland plates fitted) in mm						M16	M20	M25	M32	M40	M50	M63	
12/12/08 ²⁾	114 x 63	114 x 63	114 x 63	70 x 63	7/7/4	3/3/1	2/2/1	2/2/1	2/2/1	0/0/0	0/0/0	0/0/0	0/0/0	STBS1121208
15/12/08 ²⁾	114 x 63	114 x 63	114 x 63	100 x 63	7/9/6	3/3/2	2/3/2	2/2/1	2/2/1	0/0/0	0/0/0	0/0/0	0/0/0	STBS1151208
15/15/09 ²⁾	144 x 73	144 x 73	144 x 73	100 x 73	9/9/6	6/6/4	3/3/2	2/2/1	2/2/1	2/2/1	0/0/0	0/0/0	0/0/0	STBS1151509
19/15/09 ²⁾	144 x 73	184 x 73	184 x 73	130 x 73	9/12/8	6/8/6	3/4/2	2/3/2	2/2/1	2/2/1	0/0/0	0/0/0	0/0/0	STBS1191509
19/19/10 ²⁾	184 x 83	184 x 83	184 x 83	140 x 83	18/18/14	8/8/6	7/7/5	3/3/2	2/2/2	2/2/2	2/2/1	0/0/0	0/0/0	STBS1191910
25/25/12 ²⁾	244 x 103	244 x 103	244 x 103	200 x 103	32/32/26	18/18/14	10/10/8	7/7/6	3/3/3	3/3/3	3/3/2	2/2/2	2/2/2	STBS1252512
16/38/12 ²⁾	372 x 103	154 x 103	154 x 103	330 x 103	50/20/44	29/11/24	15/6/14	12/4/10	5/2/5	4/1/4	4/1/4	3/1/3	3/1/3	STBS1163812
25/40/13 ²⁾	394 x 113	244 x 113	244 x 113	350 x 113	54/32/48	30/18/26	16/10/14	13/7/11	6/3/5	5/3/4	5/3/4	4/2/3	4/2/3	STBS1254013

Options

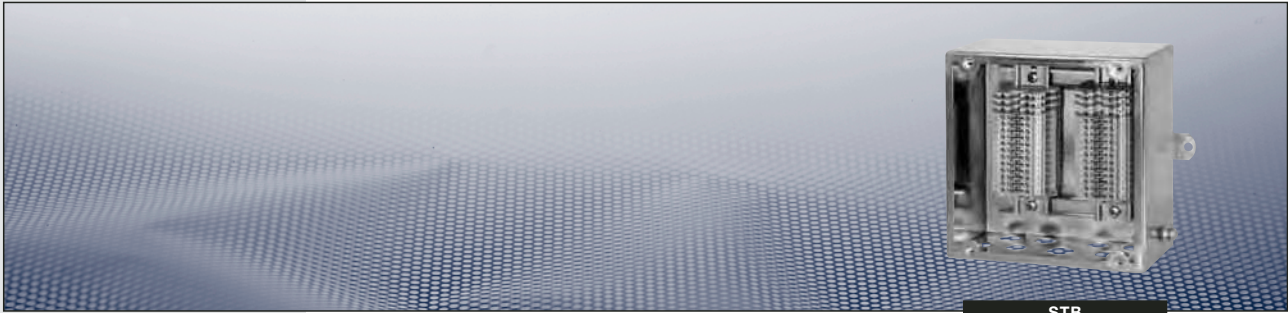
STB Painted	STB PS 1XXYYZZ	STB with additional UL CERT ²⁾	STB _S 1XXYYZZ UL
STB with gland 1 plate ³⁾	STB _S 1XXYYZZ 1	STB with gland 3 plate ³⁾	STB _S 1XXYYZZ 3

Example

Type	Order No.
15/15/09 painted with 3 gland plates and UL-certification	STBPS1151509-UL

The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.

- Notes:**
1. Dimensions drawing see page 4.31
 2. this types can be ordered with additional UL-Certification
 3. only this types includes UL-Certification and can be ordered with 1 or 3 gland plates
 4. Refer to „OPTIONS“ for full order number detail



STB

E x - e T E R M I N A L E N C L O S U R E S

| STB METRIC up to 5 x 79 terminals |

12.33

Enclosure dimensions and terminal content

STB	Dimensions ¹⁾ H x W x D in mm	Fixing Centers ¹⁾ vertical x horizontal	Weight in kg (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing		Rail length		Row orientation vertical			
Size				vert.	horiz.	vert.	horiz.	2.5 (6)	4 (6.5)	6 (8)	10 (10)
38/38/22 ²⁾	380 x 380 x 220	250 x 435	8.5	280	300			3 x 42	3 x 39	3 x 32	3 x 25
40/60/22 ²⁾	400 x 600 x 220	264 x 656	13.0	300	320			3 x 46	3 x 42	3 x 34	3 x 27
60/40/22 ²⁾	600 x 400 x 220	464 x 456	13.0	500	520			5 x 79	5 x 73	5 x 59	5 x 47

Gland entry detail

STB	Available glanding area			Max. Entry Guide (metric)							Order No. ³⁾
	Top & Bottom	Left	Right	Top & Bottom / Left / Right							
	Size	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	
38/38/22 ²⁾	374 x 203	374 x 203	324 x 203	100/100/88	57/57/48	40/40/33	24/24/20	15/15/12	8/8/7	6/6/5	STBS13838220
40/60/22 ²⁾	594 x 203	394 x 203	344 x 203	164/108/92	93/60/51	65/40/35	40/26/22	26/17/14	14/9/7	11/7/6	STBS14060220
60/40/22 ²⁾	337 x 124	337 x 124	337 x 124	108/164/152	60/93/84	40/65/60	26/40/38	17/26/23	9/14/13	7/11/10	STBS16040220

Options

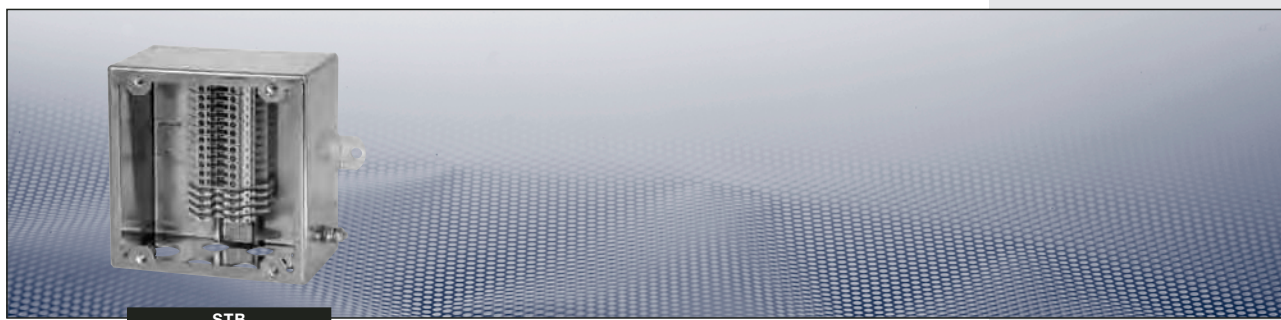
STB Painted	STB PS 1XXYYZZ	STB with gland 1 plate ²⁾	STB _S 1XXYYZZ 1
STB with gland 3 plate ²⁾	STB _S 1XXYYZZ 3		

Example

Type	Order No.
38/38/22 316L SS with 3 gland plates incl. UL-certification	STBS13838223

The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.

- Notes:** 1. Dimensions drawing see page 4.31
2. only this types includes UL-Certification and can be ordered with 1 or 3 gland plates
3. Refer to „OPTIONS“ for full order number



STB

12.34

E x - e T E R M I N A L E N C L O S U R E S

| STB IMPERIAL up to 21 terminals |

Enclosure dimensions and terminal content

STB	Dimensions ¹⁾ H x W x D in inches	Fixing Centers ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing		Rail length		Row orientation vertical			
Size				vert.	horiz.	vert.	horiz.	2.5 (6)	4 (6.5)	6 (8)	10 (10)
12/12/08 ²⁾	4.72 x 4.72 x 3.15	5.71 x 5.71	3.08	2.44	3.23			1 x 8	1 x 6	1 x 5	1 x 4
15/12/08 ²⁾	5.91 x 4.72 x 3.15	6.89 x 6.89	3.52	3.54	4.33			1 x 13	1 x 11	1 x 8	1 x 7
15/15/09 ²⁾	5.91 x 5.91 x 3.54	6.89 x 6.89	4.18	3.54	4.33			1 x 13	1 x 11	1 x 8	1 x 7
19/15/09 ²⁾	7.48 x 5.91 x 3.54	6.89 x 6.89	5.06	5.12	5.91			1 x 21	1 x 18	1 x 13	1 x 10

Technical data Type STB stainless steel enclosure

STB	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right								Order No.
	Top & Bottom	Left	Right	Gland/ Hub								
Size	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT		
12/12/08 ²⁾	4.49 x 2.48	4.49 x 2.48	2.76 x 2.48	6/6/3 2/2/1	3/3/1 2/2/1	2/2/1 2/2/1	2/2/1 0/0/0	0/0/0 0/0/0	0/0/0 0/0/0	0/0/0 0/0/0		STBS1121208
15/12/08 ²⁾	4.49 x 2.48	5.67 x 2.48	3.94 x 2.48	6/8/5 2/3/2	3/3/2 2/3/2	2/3/2 2/2/1	2/2/1 0/0/0	0/0/0 0/0/0	0/0/0 0/0/0	0/0/0 0/0/0		STBS1151208
15/15/09 ²⁾	5.67 x 2.87	5.67 x 2.87	3.94 x 2.87	8/8/5 3/3/2	6/6/4 3/3/2	3/3/2 2/2/1	2/2/1 2/2/1	2/2/1 0/0/0	0/0/0 0/0/0	0/0/0 0/0/0		STBS1151509
19/15/09 ²⁾	5.67 x 2.87	7.24 x 2.87	5.12 x 2.87	8/11/7 3/4/3	6/9/6 3/3/2	3/4/2 2/3/2	2/3/2 2/2/2	2/2/1 0/0/0	0/0/0 0/0/0	0/0/0 0/0/0		STBS1191509

Options

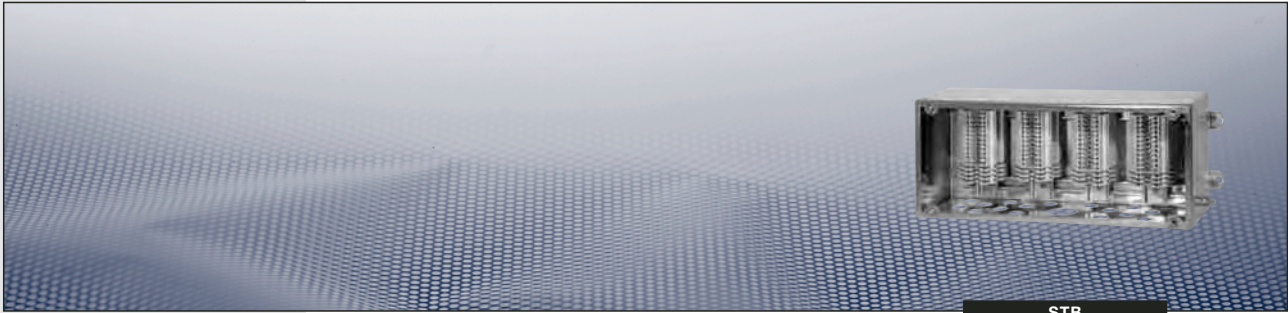
STB Painted	STB PS 1XXYYZZ	STB with additional UL CERT ²⁾	STB _S 1XXYYZZ UL
STB with gland 1 plate ³⁾	STB _S 1XXYYZZ 1	STB with gland 3 plate ³⁾	STB _S 1XXYYZZ 3

Example

Type	Order No.
15/15/09 painted with 3 gland plates and UL-certification	STBPS151509UL

The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.

- Notes:** 1. Dimensions drawing see page 4.31
2. this type can be ordered with additional UL-Certification
3. only this type includes UL-Certification and can be ordered with 1 or 3 gland plates



STB

E x - e T E R M I N A L E N C L O S U R E S

| STB IMPERIAL up to 3 x 31 terminals |

12.35

Enclosure dimensions and terminal content

STB	Dimensions ¹⁾ H x W x D in inches	Fixing Centers ¹⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing		Rail length		Row orientation vertical			
Size				vert.	horiz.	vert.	horiz.	2.5 (6)	4 (6.5)	6 (8)	10 (10)
19/19/10 ³⁾	7.48 x 7.48 x 3.94	8.46 x 8.46	6.60	5.12	5.91	1 x 21	1 x 18	1 x 13	1 x 10		
25/25/12 ³⁾	9.48 x 9.84 x 4.72	10.83 x 10.83	8.14	7.09	7.87	2 x 31	2 x 26	2 x 19	2 x 15		
16/38/12 ³⁾	6.30 x 14.96 x 4.72	3.15 x 15.94	8.14	11.81	12.60	1 x 55	1 x 46	1 x 34	1 x 28		
25/40/13 ³⁾	9.84 x 15.75 x 5.12	5.91 x 16.73	11.88	7.09	7.87	3 x 31	3 x 26	3 x 19	3 x 15		

Gland entry detail

STB	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right								Order No.
	Top & Bottom	Left	Right	Gland/Hub								
Size	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT		
19/19/10 ³⁾	7.24 x 3.27	7.24 x 3.27	7.24 x 3.27	17/17/12 8/8/6	9/9/6 3/3/3	7/7/5 3/3/2	3/3/2 2/2/2	2/2/2 2/2/1	2/2/1 0/0/0	0/0/0 0/0/0		STBS1191910
25/25/12 ³⁾	9.61 x 4.06	9.61 x 4.06	7.87 x 4.06	23/23/18 11/11/9	18/18/14 9/9/7	10/10/8 8/8/6	7/7/6 3/3/3	3/3/3 3/3/2	3/3/2 2/2/2	2/2/2 2/2/2		STBS1252512
16/38/12 ³⁾	14.65 x 4.06	6.06 x 4.06	12.99 x 4.06	36/14/29 17/6/15	29/11/23 15/5/13	16/6/12 12/4/11	12/4/9 5/2/5	5/2/4 5/2/4	4/1/3 4/1/3	3/1/3 3/1/3		STBS1163812
25/40/13 ³⁾	15.51 x 4.45	9.61 x 4.45	13.78 x 4.45	50/30/44 27/17/24	30/18/27 16/9/14	17/10/15 13/8/11	13/7/11 6/3/5	6/3/5 5/3/4	5/3/4 4/2/3	4/2/3 4/2/3		STBS1254013

12

Options

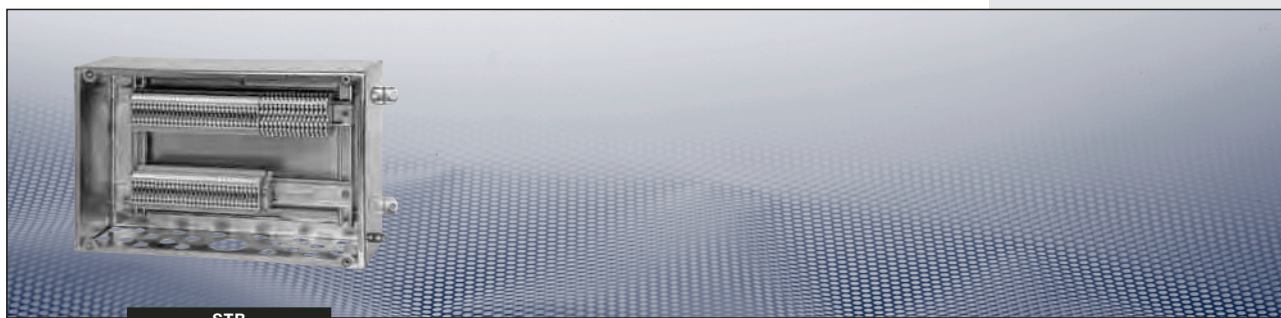
STB Painted	STB PS 1XXYYZZ	STB with additional UL CERT ²⁾	STB _S 1XXYYZZ UL
STB with gland 1 plate ³⁾	STB _S 1XXYY22 1	STB with gland 3 plate ³⁾	STB _S 1XXYY22 3

Example

Type	Order No.
16/38/12 316L SS with 1 gland plate with UL-certification	STBS11638121UL

The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.

- Notes:** 1. Dimensions drawing see page 4.31
2. this type can be ordered with additional UL-Certification
3. only this type includes UL-Certification and can be ordered with 1 or 3 gland plates



STB

12.36

E x - e T E R M I N A L E N C L O S U R E S

| STB IMPERIAL up to 5 x 79 terminals |

Enclosure dimensions and terminal content

STB	Dimensions ²⁾ H x W x D in inches	Fixing Centers ²⁾ vertical x horizontal	Weight in lbs (empty enclosure)	Terminal mounting rail				Terminal content			
				Rail fixing		Rail length		Row orientation vertical			
Size				vert.	horiz.	vert.	horiz.	2.5 (6)	4 (6.5)	6 (8)	10 (10)
38/38/22 ⁴⁾	14.96 x 14.96 x 8.66	9.84 x 17.13	18.70	11.02	11.81	3 x 42	3 x 39	3 x 32	3 x 25		
40/60/22 ⁴⁾	15.75 x 23.62 x 8.66	10.39 x 25.83	28.60	11.81	12.60	3 x 46	3 x 42	3 x 34	3 x 27		
60/40/22 ⁴⁾	23.62 x 15.75 x 8.66	18.27 x 17.95	28.60	19.69	20.47	5 x 79	5 x 73	5 x 59	5 x 47		

Gland entry detail

STB	Available glanding area			Max. Entry Guide (imperial) Top & Bottom / Left / Right							Order No.
	Top & Bottom	Left	Right	Gland/ Hub							
Size	(with gland plates fitted) in inches			1/2" NPT	3/4" NPT	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT	2 1/2" NPT	
38/38/22 ⁴⁾	14.72 x 7.99	14.72 x 7.99	12.76 x 7.99	84/84/70	57/57/48	40/40/33	24/24/20	15/15/12	8/8/7	6/6/5	STBS13838220
				43/43/38	30/30/26	24/24/22	15/15/14	14/14/11	7/7/6	6/6/5	
40/60/22 ⁴⁾	23.39 x 7.99	15.51 x 7.99	13.54 x 7.99	137/88/77	93/60/51	65/43/35	40/26/22	26/17/14	14/9/7	11/7/6	STBS14060220
				70/45/40	48/32/26	42/26/22	26/17/14	23/14/12	12/8/7	11/7/5	
60/40/22 ⁴⁾	15.51 x 7.99	23.39 x 7.99	21.42 x 7.99	88/137/123	60//93/84	43/65/58	26/40/36	17/26/23	9/14/13	7/11/10	STBS16040220
				45/70/65	32/48/44	26/42/38	17/26/24	14/23/20	8/12/11	7/11/10	

Options

STB Painted	STB PS XXXYYZ	STB with gland 1 plate ³⁾	STB _S XXXYYZ 1
STB with gland 3 plate ³⁾	STB _S XXXYYZ 3		

Example

Type	Order No.
38/38/22 painted with 3 gland plates incl. UL-certification	STBS3838223

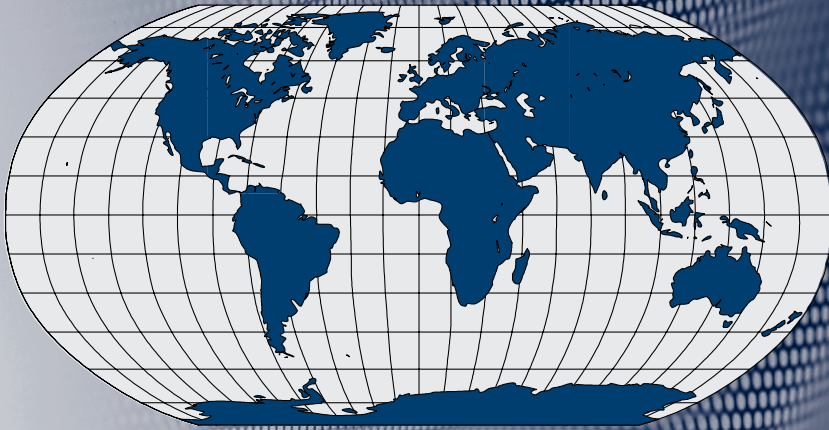
Notes: 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.

2. Dimensions drawing see page 4.31

3. this types includes UL-Certification and can be ordered with 1 or 3 gland plates

EX - PROTECTION WORLDWIDE

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