CEAG Products - Main Catalogue Part 2: Connectivity, Enclosures, Cable Glands, Control Stations, Switching and Distribution Systems

CROUSE-HINDS SERIES

The safety you rely on.



The leader in electrical products for hazardous, industrial and commercial applications world wide.







EATON

Powering Business Worldwide






The safety you rely on.

Delivering world-class reliability and safety in high consequence harsh and hazardous environments

Only Eaton's Crouse-Hinds can deliver...

- Protection and safety of people and assets around the world with unsurpassed reliability and quality in every product we offer
- Industry leading innovation and product efficiency
- Product solutions designed and certified for global specifications
- Best-in-class, global sales, and customer service teams that provide local support

The Eaton advantage.



Crouse-Hinds remains the brand that stands for safety in the harshest of environments when power management is most critical. While it all began with the Condulet®, the Crouse-Hinds brand has grown into the premier name for a comprehensive portfolio of solutions for high-consequence harsh and hazardous environments.

And now, the next phase in the evolution of the brand you trust: Crouse-Hinds joins the leading Eaton portfolio of reliable, efficient and safe electrical power management solutions.

More protection. More technology.
Expect more.

EATON
Powering Business Worldwide



Table of Contents

About us 2.0.2

0 Principles of explosion protection 2.0.4

1 Electrical connectivity 2.1.1

2 Ex-Junction boxes and terminal enclosures 2.2.1

3 Ex-Cable glands 2.3.1

4 Ex-Control units and control stations 2.4.1

5 Ex-Safety and main current switches 2.5.1

6 Ex-Control and distribution systems 2.6.1

7 Index of order code / Index of keywords 2.7.1

The product information published in our catalogues and literature is not guaranteed. It has been compiled with care and is sufficiently accurate for most purposes. It is subject to change without notice. Occasionally, it may be necessary to modify the materials, finishes, or other components of the product. These changes will in no way reduce the performance or function for which the product is intended.

All statements, technical information and recommendations contained herein are based on information and test we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with Eaton's Crouse-Hinds' Terms and Conditions of Sale, and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his/her intended use and assumes all risk and liability whatsoever in connection therewith.

All sales of Eaton's Crouse-Hinds products are specifically subject to the Terms and Conditions of Sale as shown in Eaton's Crouse-Hinds distributor price sheets.



Explosion-Protected Solutions - Worldwide-

With the brand of **CEAG** we develop and manufacture electrical products that provide safety, productivity, innovation and labour savings in hazardous, industrial and commercial environments - for more than 100 years.

We design, configure and manufacture explosion-protected electrical equipment for your safety. Of course we are certified for all functional areas according to the latest quality standards ISO 9001:2008 and in addition for the necessary explosion protection according to DIN EN 13980 / IECEx OD005.

We will implement consistently your specifications according to current directives and standards at the application site.

In addition to systems and components built to ATEX Directives 94/9/EC and European Standards, we also provides solutions approvals for internationally recognised IECEx (IEC Ex Scheme), Nepsi (China), UL, cUL (Americas), CSA (USA, Canada), Cepel (Brazil) as well as certification for Eastern Europe and the new TR-CU Customs Union (EAC).

Global Support & Manufacturing

Our sales support and manufacturing facilities are strategically positioned around the world to deliver products close to your project. Whenever required we are there on-site during construction, commissioning and training.

Eaton's Crouse-Hinds Division manufactures in 5 continents and sells into more than 100 countries. We have dedicated sales support in every major location with local technical sales and engineering teams to support your immediate needs. As one of the largest oil & gas bulk electrical and instrument material suppliers, we can easily provide you a single source for all the components to complete your project on time and on budget.

EATON
Powering Business Worldwide

A Powerful Transformation

Rely on the names you trust for the safety you need

The CEAG brand you know is evolving. Our products, part of Eaton's Crouse-Hinds portfolio, are now united with Eaton's leading range of reliable, efficient and safe electrical power management solutions. Combined, we provide the world's largest portfolio of electrical equipment for explosive, classified, and industrial areas.

With unsurpassed product reliability and quality, industry-leading innovation and product efficiency, and products designed and certified for global specifications, Eaton's Crouse-Hinds solutions, including CEAG products, delivers proven solutions for harsh and hazardous environments.

CEAG products have a new look as Crouse-Hinds Series, but the products and technology you trust remain unchanged. From explosion-proof panel boards and lighting to connectivity and cable glands, the broadest offering of solutions for harsh and hazardous environments is now available from Crouse-Hinds Division.

More protection. More technology.
Expect more.



0.1 Principles of Explosion-Protection

Overview

0

We like to offer you a one-day or multi-day seminars about the Principles of Explosion-Protection to get more detailed information on this important matter. Please see our web to find a seminar in your proximity. www.Crouse-Hinds.de.

The following overview about the Explosion Protection is only a small extract from our comprehensive 92-page brochure, which you can also download from our web-page.

Overview

Hazardous area 2.0.4
Zone classification 2.0.4
Classification of hazardous areas 2.0.4
Examples of applications and the classification of suitable equipment: 2.0.4
Classification of explosion protected apparatus in equipment groups and categories 2.0.6
Marking 2.0.6
Declaration of Conformity 2.0.7

Hazardous area

Definition:

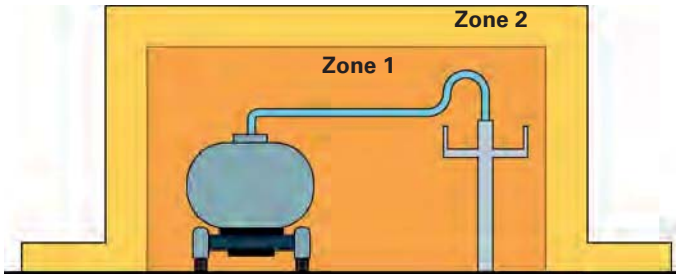
An area in which an explosive atmosphere is present, or may be expected to be present, in quantities such as to require special precautions for the construction, installation and use of electrical equipment (IEV 426-03-01).

NOTE:

A hazardous area is a three-dimensional region or space (EN 60079-14).

Zone classification

In accordance with EC-Directive 1999/92, hazardous areas are divided into six zones. The classification is based on the probability of the occurrence of an explosive atmosphere. In addition, distinction is made between flammable gases, vapours and mists on the one hand, and combustible dusts on the other. Information on the zone classification can also be found in the Explosion-Protection Rules of the Employers' Liability Insurance Association for the Chemical Industry and EN 60079-10.



Zone classification example: Loading/discharging flammable liquids from a road transport tanker without stand-alone ventilation.

Classification of hazardous areas

Zone 0

An area in which an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is present continuously or for long periods or frequently (EN 60079-14).

Zone 1

An area in which an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally (EN 60079-14).

Zone 2

An area in which an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation, but if it does occur, will persist for a short period only (EN 60079-14).

Zone 20

An area in which an explosive atmosphere in the form of a cloud of combustible dust in air is present continuously or for long periods or frequently (EN 60079-14).

Zone 21

An area in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur occasionally in normal operation (EN 60079-14).

Zone 22

An area in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation, but, if it does occur, will persist for a short period only (EN 60079-14).

NOTE:

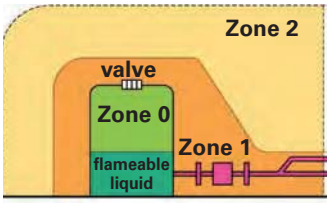
Layers, deposits and accumulations of combustible dust are to be considered in the same way as any other source that forms an explosive atmosphere. Normal operation is understood as being the state where installations are being used within their design parameters.

Examples of applications and the classification of suitable equipment:

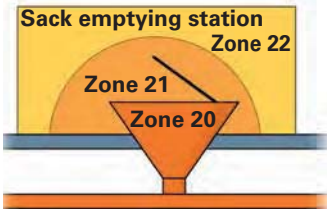
Zone 0

Zone 0 mainly encompasses areas such as the inside of enclosed containers, pipes and apparatus that contain flammable liquids. Here the respective operating temperature lies above the flash point. The potentially explosive atmosphere is above the surface of the liquid and not in the liquid. Most gases of flammable liquids are heavier than air and spread in a similar way to liquids. Cavities such as pits or pump sumps can usually accommodate these explosive gases for longer periods, so that it is also necessary to expect a Zone 0 area here. With equipment for Zone 0, ignition sources shall be protected against explosion even if the occurrence of failures is only rare. Hence, the equipment shall satisfy the following requirements:

Should one type of protection fail or should two faults occur simultaneously, sufficient protection against explosion shall still be ensured.



Example of the zone classification of explosive gas atmospheres to EN 60079-10-1



Example of the zone classification of explosive dust atmospheres according to EN 60079-10-2

The constructional requirements EN 60079-26 state that the necessary explosion-protection is attained if the equipment

- is built in accordance with the type of protection "ia" to EN 60079-11, Intrinsic Safety, or
- satisfies the requirements of two types of protection of the series EN 60079, which are effective independently of each other.

Thus, for example, flameproof luminaires were additionally pressurized or intrinsically safe apparatus in the type of protection „ib" were additionally potted. According to Directive 94/9/EC, equipment for Zone 0 shall satisfy the requirements for Category 1G. In Zone 0 the hazard of an ignition due to electrostatic charges, even on rare occasions, shall be safely excluded. For this reason, the requirements according to

EN 60079-0 for equipment for use in Zone 0 exceed by far those for equipment for Zone 1.

Zone 1

Flammable or explosive substances are made, processed or stored in Zone 1. This includes the proximity of loading flap or filling and discharging facilities, the vicinity of fragile equipment, pipes and glands on pumps and slides that do not seal adequately. It is likely that an ignitable concentration will occur during normal operation.

Ignition sources that occur during normal, trouble-free operation and those that usually occur in the event of operating disturbances shall be safely prevented.

The chapter „Electrical equipment for use in hazardous areas" describes the individual types of protection. According to the new Directive 2014/34/EU, Zone 1 equipment that shall satisfy the requirements for Category 2G.

Zone 2

Zone 2 encompasses areas around Zone 0 and Zone 1, as well as areas around flanged joints on pipes in enclosed rooms. Furthermore, it includes such areas in which, due to natural or forced ventilation, the lower explosive limit is only attained in exceptional cases, such as the environment of outdoor installations. Flammable or explosive substances are manufactured or stored in Zone 2. The probability of the occurrence of an ignitable concentration is rare and, if one occurs, it only persists for a short period.

During normal, trouble-free operation, ignition sources shall be safely prevented.

According to the new Directive 2014/34/EU, apparatus for Zone 2 shall satisfy the requirements for Category 3G. In addition, all equipment that satisfies the requirements for equipment for use in Zone 0 and Zone 1 is permitted.

Zone 20

Zone 20 mainly encompasses areas inside closed containers, pipes and apparatus in which combustible dust in the form of a cloud is present continuously or for long periods or frequently.

With equipment for Zone 20, ignition sources shall be protected against explosions, even if the occurrence of a malfunction is rare.

For this reason, equipment shall fulfil the following requirement:

In the event of the failure of one type of protection or the simultaneous occurrence of two malfunctions, it is necessary to ensure adequate explosion-protection. According to the new Directive 2014/34/EU, equipment for use in Zone 20 shall satisfy the requirements for Category 1D.

Zone 21

Among others, Zone 21 encompasses mills, warehouses for coal or grain, and the area surrounding filling stations. Here explosive clouds of dust can develop due, for example, to the occasional escaping of dust from the opening. The risk of hazards due to dust deposits is often underestimated. Explosive dust/air mixtures can develop due to the formation of a smoulder spot or of a low temperature carbonization gas, as well as due to the deflagration of a low temperature carbonization gas or the whirling-up of gas caused by glowing combustion.

Ignition sources that occur during normal, trouble-free operation and those that normally occur in the event of malfunctions shall be safely prevented.

The individual types of protection are described in the chapter „Electrical equipment for use in hazardous areas".

According to the new Directive 2014/34/EU, equipment for Zone 21 shall satisfy the requirements for Category 2D.

Zone 22

In Zone 22, under normal operating conditions it is unlikely that an explosive dust/air mixture will occur, but can occur, if there is a process failure and dust is lifted into the air.

Ignition sources shall be safely prevented during normal, trouble-free operation.



Example of dust Ex zone 21:
Explosion-protected plug and socket and terminal box in the field

According to the new Directive 2014/34/EU, equipment for Zone 22 shall satisfy the requirements for Category 3D. Detailed information on all zones can be found in the chapter "Construction and operation of electrical installations in hazardous areas" of the separate brochure.

0.1 Principles of Explosion-Protection

Overview

Classification of explosion protected apparatus in equipment groups and categories

Cat.	Equipment Group I (for use in mines liable to be endangered by firedamp)
M 1	Equipment Group I is subdivided into the Categories M1 and M2. The equipment must continue to work even in the event of infrequent failures coinciding with an existing explosive atmosphere and must feature such protective measures against explosion so that • if one constructional protective measure fails, at least one other independent constructional measure will ensure the required safety,or • if two independent faults occur in combination, the required safety is still ensured.
M2	If an explosive atmosphere occurs, it must be possible to switch off the equipment. The constructional explosion-protection measures ensure the required degree of safety during normal operation, even under severe operating conditions and, in particular, in cases of rough handling and changing environmental influences.
Cat	**Equipment Group II (for use in all other places liable to be endangered by explosive atmospheres)**
1	Equipment Group II is subdivided into the Categories 1, 2 and 3. The equipment is intended for use in areas in which an explosive atmosphere is present continuously or for long periods or frequently. Even if equipment failures only occur infrequently, the equipment must ensure the required degree of safety and feature such explosion-protection measures that • if one constructional protective measure fails, at least one other independent constructional protective measure ensures the required degree of safety, or • if two independent faults occur in combination, the required degree of safety is still ensured.
2	The equipment is intended for use in areas in which an explosive atmosphere occurs occasionally. Even in the case of frequent equipment failures or faulty conditions that are normally to be expected, the constructional explosion-protection measures ensure the required degree of safety.
3	The equipment is intended for use in areas in which no occurrence of an explosive atmosphere due to gases, vapours, mists or whirled-up dust is to be expected. If, however, it occurs, then in all probability only rarely or for a short period. During normal operation the equipment ensures the required degree of safety.

Equipment groups and equipment categories

Equipment is classified in groups and categories:

1. Equipment group

- **Equipment group I**

applies to equipment intended for use in underground parts of mines and to those parts of surface installations of mines liable to be endangered by firedamp and/or combustible dust.

- **Equipment group II**

applies to equipment intended for use in other places liable to be endangered by explosive atmospheres.

2. Categories

See adjacent table

Marking

Each piece of equipment and each protective system shall be marked in a clear and indelible manner with the following minimum data:

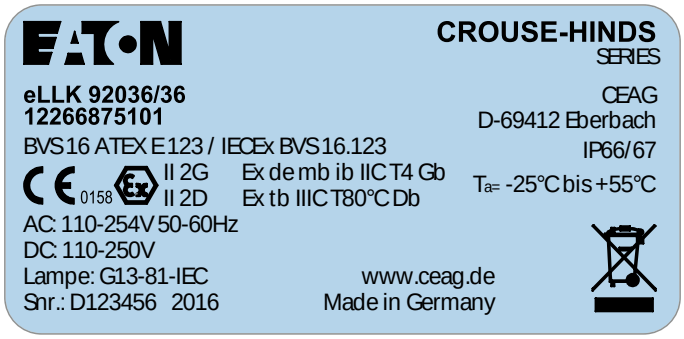
- **manufacturer's name and address**
- **CE marking and number of Notified Body, responsible for the monitoring of the quality system**
- **designation of the series and type**
- **serial number, if required**
- **the year of construction**
- **the special marking for explosion protected equipment together with the marking showing the category**
- **the letter "G" for apparatus group II for areas in which explosive mixtures of gas, vapour or mist with air mixtures are present**
- **and/or the letter "D" for areas where an explosive atmosphere can form due to dust.**

In addition and where required, any details that are indispensable for the safety of operation also have to be affixed.

Products that fall within the scope of given directives shall be provided with the **CE mark** by the manufacturer. This applies to products that are covered by the directives according to the new concept and include requirements relating to the technical properties of products.

These EC directives constitute binding regulations of the

Examples of markings:	
Ex II 1G	Equipment group II Category 1 (Zone 0 equipment) (G = gases, vapours, mists)
Ex II 2G	Equipment group II Category 2 (Zone 1 equipment) (G = gases, vapours, mists)
Ex II 3G	Equipment group II Category 3 (Zone 2 equipment) (G = gases, vapours, mists)
Ex II 1D	Equipment group II Category 1 (Zone 20 equipment) D = dust)
Ex II 2D	Equipment group II Category 2 (Zone 21 equipment) D = dust)
Ex II 3D	Equipment group II Category 3 (Zone 22 equipment) D = dust)



Example of a type label according to the latest standards and Directive 94/9/EC

„European Union". This means that compliance with these requirements is the condition for marketing the products in Europe. When a product is provided with the CE marking, the conformity of the product with the relevant basic requirements of all directives applicable to the products is confirmed. The marking is, therefore, an imperative requirement for the placing on the market of products within the Community, as well as in the country of origin.

The CE marking is only meant as evidence of conformity with the directives for the supervising authorities and is not a quality mark.

Declaration of Conformity

In addition to marking products with the CE mark, the manufacturer shall issue a Declaration of Conformity for the product. This Declaration of Conformity shall clearly state which directive was applied and according to which standards the tests were carried out.

Conformity assessment procedures for equipment according to the new Directive 2014/34/EU

Depending upon the conformity assessment procedure to be applied, a notified body can be active during the design and engineering phase, during the production phase or during both phases. The applicable evaluation procedure is laid down in Directive 94/9/EC according to the product, the group and the **equipment category.**

Equipment Groups I and II, Equipment Categories M1 and 1

In order to be permitted to affix the CE mark to his product, the manufacturer must arrange for the following procedures to be carried out:

- EC-type examination by a notified body and either
- an audit of the quality assurance for the production process or
- an audit of the products.

Equipment Groups I and II, Equipment Categories M2 and 2

With internal combustion motors and electrical apparatus, in order to be permitted to affix the CE mark on the product, the manufacturer must arrange for the following procedures to be carried out and/or ensure the following measures:

- **EC-type examination by a notified body and**
- **either guarantee of constructional conformity or**
- **verification of the required quality level by means of the quality assurance procedure for the products.**

The internal production control procedure shall be applied for all other equipment in these groups and categories.

Conformity assessment procedure				
Equipment Group	I and II	I and II	I and II	II
Category	M 1 and 1	M 2 and 2	M 2 and 2	3
Field of Application	• any apparatus • if applicable safety and control devices • components (*) • independent protective systems	• electrical apparatus • if applicable, safety and control devices • components (*) • I.C. engines	• other apparatus • components (*)	• any apparatus • safety and control devices • components (*)
Combination of procedures acc. to Annexes III to IX	EC type sample test to Annex III plus quality assurance of production acc. to Annex IV or inspection of products acc. to Annex V	EC type sample test to Annex III plus quality assurance of product acc. to Annex VIII or conformity with design IV	Internal production control acc. to Annex VIII plus submitting of technical documents to the designated test lab	Internal production control acc. to Annex VIII
Alternative: Individual EC test acc. to Annex IX				
(*) Components without affixed CE marking				

Equipment Group II, Equipment Category 3

In order to be permitted to affix the CE mark to the product, the manufacturer shall apply the internal production control procedure.

In order to place products on the market within the EU, the EC Declaration of Conformity shall be included with all products or batches of identical products. This does not apply to the report issued by the notified body as part of the audit of the quality assurance system of the manufacturer or the EC-Type Examination Certificate.



EATON
Powering Business Worldwide

EG-Konformitätserklärung
EC-Declaration of conformity
CE-Déclaration de conformité

BVS 09 ATEX E 029 (1)
GHG 900 1000 P0020 F

Wir / *We / Nous*

Cooper Crouse-Hinds GmbH
Neuer Weg-Nord 49
D-69412 Eberbach

erklären in alleiniger Verantwortung, dass das Produkt:
hereby declare in our sole responsibility, that the product
déclarons de notre seule responsabilité, que le produit

LED Rettungszeichenleuchte
LED exit luminaire
Lumineux antidéflagrant à diodes

⟨Ex⟩ II 2 G / ⟨Ex⟩ II 2 D

EXIT *

den folgenden EU-Richtlinien, den entsprechenden harmonisierten Normen, und weiteren normativen Dokumenten entspricht
complies with the following EU directives, their corresponding harmonized standards, and other normative documents
correspond aux directives européennes suivantes, à leurs normes harmonisées, et aux autres documents normatifs suivants:

Bestimmungen der Richtlinie *Terms of the directive* *Prescription de la directive*		Titel und / oder Nr. sowie Ausgabedatum der Norm *Title and / or No. and date of issue of the standard* *Titre et / ou No. ainsi que date d'émission des normes*
94/9/EG: 94/9/EC: 94/9/CE: 2014/34/EU	Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen. *Equipment and protective systems intended for use in potentially explosive atmospheres.* *Appareils et systèmes de protection destinés à être utilisés en atmosphères explosibles* *Equipment and protective systems intended for use in potentially explosive atmospheres.* gültig ab 20 April 2016, valid as of 20 April 2016	EN 60 079-0: 2012 EN 60 079-7: 2007 EN 60 079-11: 2012 EN 60 079-18: 2009 EN 60 079-31: 2014
		EN 60 598-1: 2008 + A11: 2009 EN 60 598-2-22: 1999 +A1 : 2003 + A2 : 2008 EN 60 529: 1991 + A1: 2000 + A2: 2013
2004/108/EG: 2004/108/EC: 2004/108/CE: 2014/30/EU:	Elektromagnetische Verträglichkeit *Electromagnetic compatibility* *Compatibilité électromagnétique* *Electromagnetic compatibility* gültig ab 20 April 2016, valid as of 20 April 2016	EN 55 015: 2013
2011/65/EU: 2011/65/EU: 2011/65/UE:	RoHS - Richtlinie *RoHS – directive* *Directive RoHS*	EN 50 581: 2012

Eberbach, den 21.09.2015

Ort und Datum
Place and date
Lieu et date

Dr. Matthias Stelzer
Geschäftsführer
Managing Director
Président-directeur général

(1) Benannte Stelle (EG-Baumusterprüfbescheinigung)
Notified body (EC-type examination certificate)
Organisme notifié (Examen CE de type)

DEKRA EXAM GmbH (0158)
Dinnendahlstraße 9
D-44809 Bochum

BVS 14 ATEX ZQS/E332 (2)

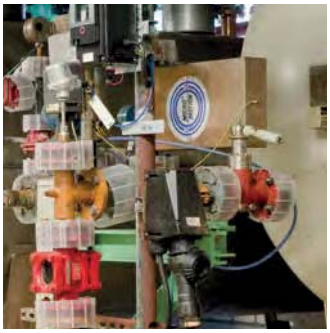
(2) Benannte Stelle (Qualitätssicherung Produktion)
Notified body (Production Quality Assurance)
Organisme notifié (Assurance Qualité de Production)

DEKRA EXAM GmbH (0158)
Dinnendahlstraße 9
D-44809 Bochum



Electrical connectivity





Electrical connectivity – confidence in contacts 2.1.4
Overview Ex-plugs and receptacles 2.1.5
What is eXLink? 2.1.7
eXLink – function and technique 2.1.9
1.1 GHG 51 Ex-Plugs and Receptacles 10 - 125 A 2.1.10
Ex-plugs and receptacles 16 A 2/3-pole up to 50 V 2.1.11
16 A 4-/5-pole transformer plug / plug with fuse 2.1.13
32 A 4-/5-pole transformer plug / plug with fuse 2.1.14
Ex-plugs and receptacles 10 A 21-pole up to 250 V 2.1.16
Ex-plugs and receptacles 20 A 7-pole up to 500 V 2.1.18
Ex-plugs and receptacles 16 A 3/4/5-pole up to 690 V 2.1.20
Accessories for Ex-plugs and receptacles 16 A 2.1.23
Ex-plugs and receptacles 32 A 4/5-pole up to 690 V 2.1.24
Accessories Ex-plugs and receptacles 32 A 2.1.27
Ex-plugs and receptacles 63 A 4/5-pole up to 690 V 2.1.28
Ex-plugs and receptacles 125 A 4/5-pole up to 690 V 2.1.31
Ex-plugs and receptacles 20 A 3/4/5-pole up to 600 V IEC 309 Series 2 - CSA 2.1.34
Ex-plugs and receptacles 30 A 3/4/5-pole up to 600 V IEC 309 Series 2 - CSA 2.1.36
Ex-plugs and receptacles 60 A 3/4/5-pole up to 600 V IEC 309 Series 2 - CSA 2.1.38
Ex-plugs and receptacles 100 A 3/4/5-pole up to 600 V IEC 309 Series 2 - CSA 2.1.40
1.2 GHG 51 Ex-Wall Sockets with Stainless Steel Enclosure 2.1.42
Ex-wall socket stainless steel 16 A 2.1.43
Ex-wall socket stainless steel 32 A 2.1.44
Ex-wall socket stainless steel 63 A 2.1.45
Ex-wall socket stainless steel 125 A 2.1.46
1.3 GHG 51 Ex-Wall Socket with RCD/MCB 2.1.48
1.4 GHG 51 Ex-Plugs and Receptacles with Status LED 2.1.50
1.5 Light Metal Ex-Plugs and Sockets 16 A metal design for zone 1 and 2 ..... 2.1.54
1.6 Ex-Plugs and Receptacles Plastic Version for Zone 2 16 A to 125 A 2.1.56
Ex-plugs and receptacles zone 2: 16 A 3/4/5-pole up to 690 V 2.1.57
Ex-plugs and receptacles zone 2: 32 A 3/4/5-pole up to 690 V 2.1.61
Accessories for Ex-plugs and receptacles 32 A zone 2 ..... 2.1.64
Ex-plugs and receptacles zone 2: 63 A 3/4/5-pole up to 690 V 2.1.65
Ex-plugs and receptacles zone 2: 125 A 3/4/5-pole up to 690 V 2.1.68
1.7 Plugs and Receptacles Plastic Version for Industrial Applications 16 A to 125 A 2.1.72
Plugs and receptacles for industrial use: 16 A 3/4/5-pole up to 415 V 2.1.73
Accessories plugs and receptacles 16 A for industrial use 2.1.76
Plugs and receptacles for industrial use: 32 A 4/5-pole up to 415 V 2.1.77
Accessories plugs and receptacles 32 A for industrial use 2.1.80
Plugs and receptacles for industrial use: 63 A 4/5-pole up to 690 V 2.1.81
Plugs and receptacles for industrial use: 125 A 4/5-pole up to 690 V 2.1.84
1.8 Ex-Repair and Maintenance Receptacles 16 A up to 125 A plugs and receptacles plastic version for zones 1, 2, 21 and 22 ..... 2.1.88
Ex-repair- and maintenance receptacles: 16 A 3-pole and 5-pole up to 415 V 2.1.89
Ex-repair- and maintenance receptacles: 32 A 5-pole up to 415 V 2.1.92
Ex-repair- and maintenance receptacles: 63 A 5-pole up to 415 V 2.1.94
1.9 Ex-Repair and Maintenance Receptacle Distribution 40 A and 80 A distribution plastic version for zones 1 and 2 ..... 2.1.96
1.10 Ex-Portable Multi-Outlet Distributions and Cable Reels 16 A and 32 A for Zone 1 and Zone 21 ..... 2.1.98
Ex-portable outlet distributions 16 A 3-pole, 5-pole 2.1.99
Ex-cable reel: 16 A 3- and 5-pole, 32 A 4- and 5-pole 2.1.101
1.11 Ex-Protected Portable Power Supply Units 16 A – 125 A for Zone 1 ..... 2.1.102
1.12 FI-Ex Power Cords Electrical connection technology zone 1/21, 2/22 and industrial applications 2.1.112
1.13 eXLink®- the Miniature-Power Connector 4-pole/4-pole + PE - 10 A for Zone 1 and Zone 21 ..... 2.1.116
eXLink 4-pole/4-pole + PE 2.1.117
eXLink Configuration Online 2.1.119
eXLink plug 4-pole 2.1.120
eXLink plug 4-pole + PE 2.1.121
eXLink coupler 4-pole 2.1.122
eXLink coupler 4-pole + PE 2.1.123
eXLink flange socket 4-pole 2.1.124
eXLink flange socket 4-pole + PE 2.1.125
eXLink inlet 4-pole 2.1.126
eXLink inlet 4-pole + PE 2.1.127
eXLink inlet > 2000 cm³ 4-pole 2.1.128
eXLink inlet > 2000 cm³ 4-pole + PE 2.1.129
eXLink plug/coupler for armoured cables 4-pole 2.1.130
eXLink plug/coupler for armoured cables 4-pole + PE 2.1.131
eXLink Accessories 4-pole/4-pole + PE 2.1.132
1.14 eXLink®- Ethernet/USB eXLink 4-pole + PA for Zone 1 and Zone 21 ..... 2.1.134
eXLink – plug-in bus connection 2.1.135
eXLink Ethernet 4-pole + PA 2.1.136
eXLink USB 4-pole 2.1.137
1.15 eXLink®- the Miniature-Power Connector 7-pole / 6-pole + PE - 16 A for Zone 1 and Zone 22 ..... 2.1.138
eXLink 7-pole/6-pole + PE 2.1.139
Ordering key eXLink 7-pole/6-pole + PE 2.1.140
eXLink configuration online 2.1.141
eXLink plug 7-pole/6-pole + PE 2.1.142
eXLink coupler 7-pole/6-pole + PE 2.1.143
eXLink receptacle 7-pole/6-pole + PE 2.1.144
eXLink inlet > 2000 cm³ 7-pole/6-pole + PE 2.1.146
eXLink plug/coupler for armoured cables 7-pole/6-pole + PE 2.1.147
eXLink Accessories 7-pole/6-pole + PE 2.1.148
eXLink mining 2.1.150
eXLink 4-pole/4-pole + PE/ 6-pole + PE/7-pole 2.1.151
eXLink mining 4-pole + PE 2.1.152
eXLink mining 4-pole 2.1.153
eXLink mining 6-pole + PE 2.1.154
1.16 Pre-Assembled Branching/Terminal Boxes with eXLink technology 2.1.156







From Ethernet connection to 125 A 3-phase Motors

Connectivity solutions needs various requirements:

- high-frequency low current for BUS or Ethernet connections
- low voltage with rated current up to 16 A
- rated voltage from 250 V to 750 V and rated current up to 125 A

These are only the most visible differences in product design.

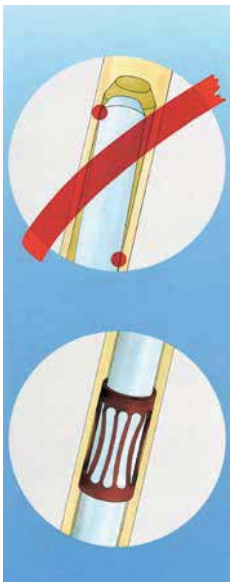
Even more requirements have been taken into account while designing and manufacturing connectivity products for use in hazardous areas.

Chemical resistance as well as mechanical strength – thermal behaviour and extended lifetime – products with the trade mark **„CEAG"** will adhere to this challenges. Product families like **eXLink®, Ex-Therm** and **plugs & receptacles GHG 5…** will serve most of the upcoming market requirements.

Crouse-Hinds Series: Always a reliable contact

The principal feature is the pin and sleeve contact point. It determines the overall quality of the plug and receptacle system; special designed contacts mean low insertion and withdrawal forces, reliable contact-making, low transition resistances and low thermal loads. The explosion protection stands and falls with these features.

The self-cleaning Ex-e multi-contact



The self-cleaning Ex-e multicontact connections are made of louver-like punched 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 receptacles 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-free, extreme temperature conditions 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 an external 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 interlocked 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. The integrated switch is giving an easy to clean design too and offers the possibility to design and integrate the 16 A & 32 A receptacle into nearly any ex-e enclosure.

Auxiliary 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.

CEE plugs and receptacles

A first step towards creating an international standard for industrial plugs and receptacles was taken with the IEC 60309 and CEE Publication 17, "Requirements for Plugs and Receptacles for Industrial Use".

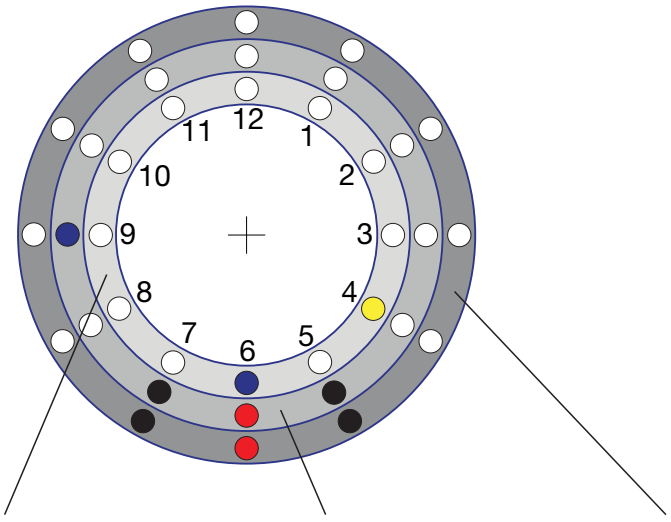
"IEC" stands for "INTERNATIONAL ELECTRICAL COMMISSION".

When selecting plugs and receptacles from the existing ranges for standardization, preference was given to round plugs and receptacles, as the contact-making insert can be arranged in various positions (hours of day). This allows a high degree of differentiation of plugs and receptacles with regard to the various types of currents, voltages, frequencies, etc.

High ingress protection

The new plugs and receptacles reliably supply electrical power, even under the most difficult circumstances. From minus 20°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 IP66; and thanks to the type of bayonet ring, the degree of protection IP66 is also ensured when the plug is inserted and energized – we have tested it!





Ground pin location	Number of pins (P = Power, N = Neutral, PE = Earth or Ground)		
	2 P + PE P + N + PE	3 P + PE	3 P + N + PE
2h	>50 V, 300 - 500 Hz, only 16 A/32 A green housing	>50 V, 300 - 500 Hz, only 16 A/32 A green housing	>50 V, 300 - 500 Hz, only 16 A/32 A green housing
3h	–	380 V, 50 Hz, only 16 A/32 A 440 V, 60 Hz, only 16 A/32 A [1] red housing	220/380 V, 50 Hz, only 16 A/32 A 250/440 V, 60 Hz, only 16 A/32 A [1] red housing
4h	100 - 130 V, 50–60 Hz yellow housing	100 - 130 V, 50–60 Hz yellow housing	57/100 - 75/130 V, 50–60 Hz yellow housing
5h	277 V, 60 Hz grey housing	600 - 690 V, 50/60 Hz black housing	347/600 - 400/690 V, 50/60 Hz black housing
6h	200 - 250 V, 50–60 Hz blue housing	380 - 415 V, 50/60 Hz red housing	200/346 - 240/415 V, 50/60 Hz red housing
7h	480 - 500 V, 50–60 Hz grey housing	480 - 500 V, 50/60 Hz grey housing	277/480 - 288/500 V, 50/60 Hz grey housing
8h	> 250 V DC-voltage grey housing	–	–
9h	380 - 415 V, 50–60 Hz red housing	200 - 250 V, 50/60 Hz blue housing	120/208 - 144/250 V, 50/60 Hz blue housing
10h	–	> 50 V, 100 - 300 Hz green housing	–
11h	–	440 - 460 V, 60 Hz [2] red housing	250/400 - 265/460 V, 60 Hz [2] red housing
12h	50 - 60 Hz [3] grey housing	50/60 Hz [3] grey housing	–

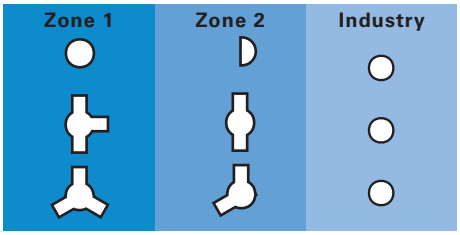
[1] for reefer container; [2] for ships; [3] Output of an isolation transformer with more than 50 V



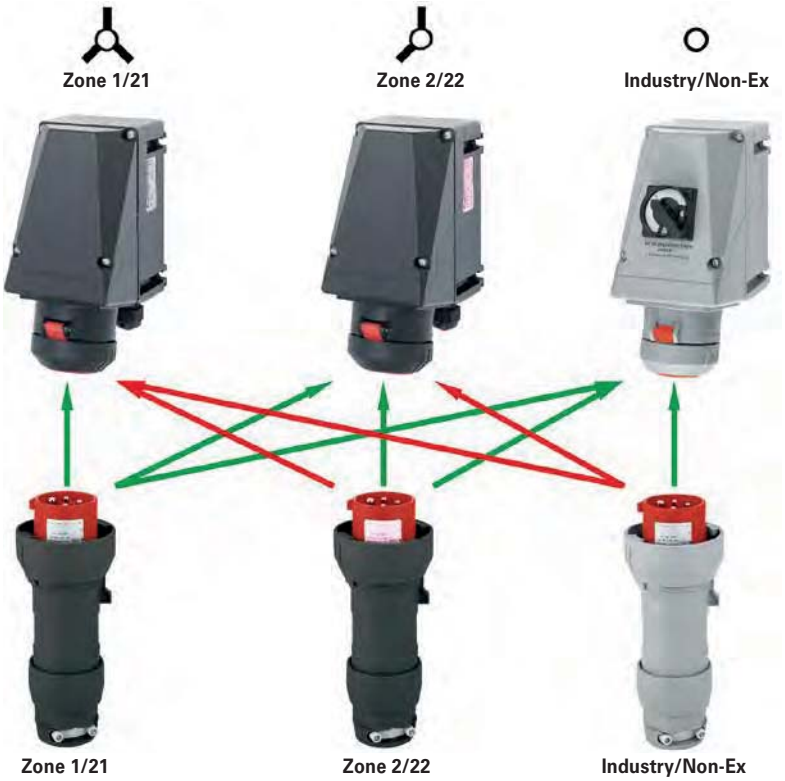


The key to safety

Plugs and receptacles with a cleverness: The innovative coding of apparatus allows plugs used for Zone 1 to be used in receptacles for Zone 2 and/or for usage with industrial receptacles as well. Hence, plugs and receptacles 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 receptacles.



Coding of the plugs and receptacles



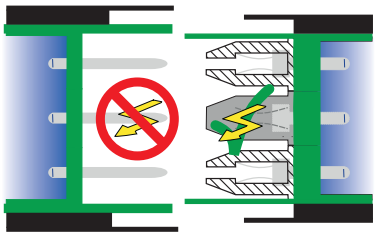


possible not possible
Combination of
possible/not possible
connections of
plug/wall socket









What is eXLink?

eXLink is a complete system for connecting and disconnecting products electrically. This system is available in different versions for different applications: 4-pole, 4-pole + PE, 6-pole + PE and 7-pole.
It is necessary to distinguish between active components (couplers/ receptacles) that, due to the design of the live parts (contact sockets in IP 30), can also be live when open, and passive components (plugs/inlets) that, due to the exposed plug pins, must not be live.

A solution for every environment

Depending upon the field of application, the components of the **eXLink connector system** are available in different versions:



- **Moulded plastic**
  The material used is a heavy-duty, impact resistant polyamide that, even in the event of extreme fluctuations in temperature, retains its high material properties.



- **Nickel-plated brass**
  The use of this material has been proven very successful for inlets and receptacles in flameproof apparatus. Thanks to its insensitivity to severe ambient conditions, it is particularly well suited for use in atmospheres with a particularly high content of harmful and aggressive substances.



- **AISI 316L stainless steel**
  This material is used if aggressive environmental influences, such as salt water, acids, alkalis, place particularly high demands on the corrosion resistance and mechanical stress of a component. Stainless steel receptacles and inlets are also used for the connection of flameproof apparatus.



- **Option for the connection of armoured cables:**
  In order to be able to provide a solution for the connection of armoured, braided or screened cables, we have developed a metal version with a universal armouring clamp. This allows the use of many commonly used armoured cables. An external strain relief provides protection against strong external forces. This solution is available in nickel-plated brass and stainless steel for plugs and couplers.



- **Threads:**
  The 4-pole and 4-pole + PE inlets and receptacles feature an integral M20 or NPT 1/2" thread.
  The 6-pole + PE and 7-pole inlets and receptacles have an integral M25 or NPT 3/4" thread. NPT-metallic only.







Components

Different applications need individual solutions, who can be reached by the combination of well-suited components.



- **Plug:**
  Suitable as a cable end – with plug pins (in line male cable connector), must not be live when disconnected **(passive component).**



- **Connector:**
  Suitable as a cable end – with contact sockets (in line female cable connector), can be live when disconnected **(active component).**



- **Receptacle:**
  Suitable for installation with thread in products – with contact sockets (female), can be live when disconnected **(active component).**

- **Inlet:**
  Suitable for installation with thread in products – with plug pins (male), must not be live when disconnected **(passive component).**

- **Elbow:**
  90° elbow to facilitate installation of an inlet or a receptacle into a device when it is not possible to lay the cables in a straight line. The direction of the elbow can be aligned in 12 directions (30° turns).



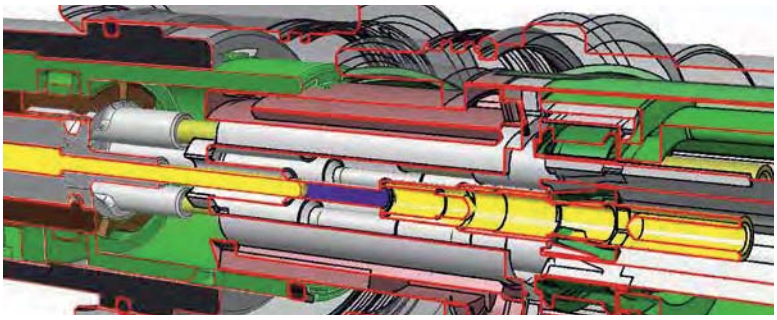
- **Locking device:**
  A two-part system which, when **eXLink** is installed on the connector/inlet, plug/receptacle or connector/plug, allows a padlock to be attached to prevent **eXLink** from being disconnected by unauthorised person.



- **eXLink Mining:**
  eXLink Mining is a separate approved connecting and disconnecting electrical equipment for use in fire-damp environment in underground mining – without tools. With connectors for armoured cables approved for operation in areas where there is danger of fire damp you can connect lamps, indicators, sensors, motors etc. with a current consumption of up to 16 A easily by plugging.









Function

The self-cleaning Ex-e multi-contact conducting pins provide permanent faultless electrical connection. To ensure that the contact system remains fully functional even during long-term use in aggressive environments all conducting pins are silver-plated.
The quality of the connection means that the system is suitable for current in the mA range up to 16 A continuously.

Coding

Male and female connectors are coded using a similar timetable according IEC 60309 standard, where voltage and current types have their own „time of day" to ensure that the correct connection is made.

3-/4-pole:

- 2 h Bus connections
- 4 h 110 V AC 2-pole + PE
- 5 h 24 V AC 4-pole + PE
- 6 h 230 V AC 2-pole + PE
- 8 h 24 V DC 4-pole
- 10 h 230 V AC 4-pole + PE
- 12 h 24 V AC 2-pole + PE

6+1-pole:

- 4 h 110 V AC 6-pole + PE
- 6 h 230 V AC 6-pole + PE
- 8 h 24 V DC 7-pole
- 10 h 400 V AC 6-pole + PE
- 12 h 24 V AC 6-pole + PE

However, individual combinations can also be coded if required by customers. The time code can be read on the connector. The location of PE/PA in relation to the keyway determines the name (e.g. 6 h = PE/PA bottom). By the time-setup it is protected to connect apparatus to the wrong outlet.

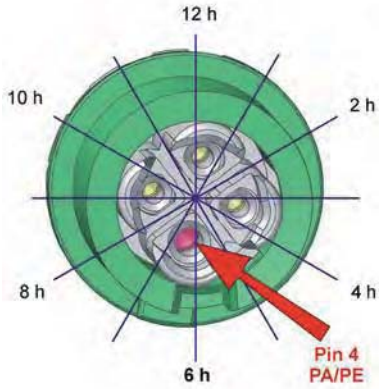
Connection types

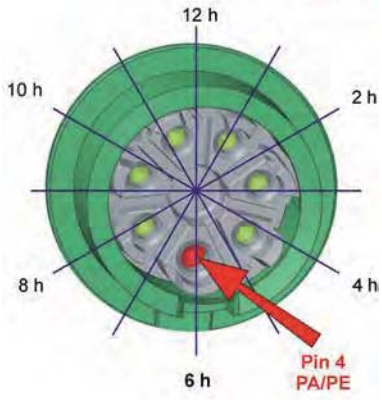
The **eXLink** is available in two connection types:

- **Crimp connection**
  The conductors are crimped directly into the contact pins. The crimp connection is suitable for all cables from 0.25 mm^2 - 0.5 mm^2, 0.75 mm^2 - 1.5 mm^2 or in a third version for 2.5 mm^2.
  Smaller cables can be soldered.
- **Cage clamp terminal**
  This solution allows conductors between 0.5 and 1.0 mm^2 to be installed easily as the conductors do not have to be crimped into the contact pins. All plugs and couplers up to and including the 4-pole version can be delivered with cage clamp
  terminals. The 6-pole+PE and the 7-pole versions are available as cage clamp versions too.

Extended ambient temperature range

The system is approved for a standard ambient temperature range of –55 °C to +75 °C. The use of moulded plastic versions is restricted in mechanical strength from –55 °C to –25 °C. Above +40 °C up to +75 °C the rated current have to be decreased.





GHG 51 Ex-Plugs and Receptacles 10 - 125 A

Plastic version for Zone 1, 2, 21 and 22

A good connection

Providing electrical energy there, where it is most needed – even in hazardous areas for the Zones 1, 2, 21 and 22.

Non-stationary electrical apparatus have generally high requirements on the energy/power supply. Robust plugs and receptacles as well as a high chemical resistance are at the first glance very important. Electrical reliability is a must not only for all connectivity products.

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 utilisation.

CEAG plugs and receptacles 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 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.

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.

Apart from the plugs and receptacles for the European market, we also have plugs and sockets extra for the US market, which are in accordance to all of the necessary standards UL and safety protection systems used there. The available standard range used here, are the 20 A, 30 A, 60 A and 100 A.





Features

- **Nickel-plated contacts**
- **Low insertion force**
- **Safety standard IP66 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**



Wall socket



Flange socket



Coupler



Plug

Technical data

	Ex-plugs and receptacles for low voltage, 2- and 3-pole acc. to IEC 60309-1/2
Marking accd. to 2014/34/EU	Wall socket, plug and coupler: Ⓔx II 2 G Ex de [ia] IIC T6/T5 / Flange socket: Ⓔx II 2 G Ex db eb IIC
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1039 Flange socket: BVS 14 ATEX E 131 U
IECEx Certificate of Conformity	Wall socket, plug and coupler: IECEx BKI 04.0002 / Flange socket: IECEx BVS 14.0089U
Marking accd. to IECEx	Wall socket, plug and coupler: Ex ed [ia] IIC T6/T5 / Flange socket: Ex de IIC Gb
Permissible ambient temperature	–20 °C to +40 °C
Rated voltage	up to 50 V
Rated current	16 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 50 V / I_e 16 A
External back-up fuse, max.	without therm. protection: 16 A / with therm. protection: 35 A
Degree of protection accd. to EN 60529	IP54 (IP 66 optional)
	Wall socket
Cable entry	1 x M25 cable gland, 1 x M25 plastic Ex-screw plug (bottom) or 2 x metal thread M20 with screw plug plastic
Connecting terminals	2 x 1.5 - 4 mm²
Enclosure material	glass-fibre reinforced polyester
	Plug
Cable entry	Ø 9 - 17 mm
Connecting terminals	1.0 - 4 mm²
Enclosure material	Polyamide
	Coupler
Cable entry	Ø 9 - 17 mm
Connecting terminals	1.5 - 4 mm²
Enclosure material	Polyamide
	Flange socket
Connecting terminals	1.5 - 4 mm²
Enclosure material	Polyamide

Details for used cable glands see pages 2.3.ff



Plug



Coupler



Flange socket



Wall socket

Ordering details

Voltage	h	Type	Cable gland	Weight approx.	Order No.
Type 2-pole low voltage					
≤ 24 V	 no aux. keyway	Wall socket	M25 KU	1.2 kg	**GHG 513 4200 R0001**
		Flange socket		0.4 kg	**GHG 542 5200 V0000**
		Coupler		0.7 kg	**GHG 513 3200 R0001**
		Plug		0.35 kg	**GHG 542 2200 V0000**
42 V	 12 h	Wall socket	M25 KU	1.2 kg	**GHG 513 4212 R0001**
		Flange socket		0.4 kg	**GHG 542 5212 V0000**
		Coupler		0.7 kg	**GHG 513 3212 R0001**
		Plug		0.35 kg	**GHG 542 2212 V0000**
Type 3-pole low voltage					
≤ 24 V	 no aux. keyway	Wall socket	M25 KU	1.2 kg	**GHG 513 4300 R0001**
		Flange socket		0.4 kg	**GHG 542 5300 V0000**
		Coupler		0.7 kg	**GHG 513 3300 R0001**
		Plug		0.35 kg	**GHG 542 2300 V0000**
42 V	 12 h	Wall socket	M25 KU	1.2 kg	**GHG 513 4312 R0001**
		Flange socket		0.4 kg	**GHG 542 5312 V0000**
		Coupler		0.7 kg	**GHG 513 3312 R0001**
		Plug		0.35 kg	**GHG 542 2312 V0000**

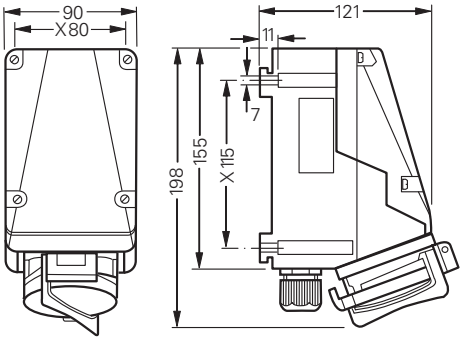
Other voltage ranges and versions available on request

KU = 1 x plastic cable glands M25, 1 x M25 plastic Ex-screw plug

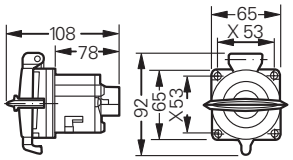
Accessories

Type	Application	Fixing method	Order No.
Mounting plate size 4	Wall mounting	snap on for GHG 531 4/5 pole	**GHG 610 1953 R0151**
Mounting plate size 4	Wall mounting	snap on for GHG 531 3 pole	**GHG 610 1953 R0152**
Protective canopy size 4		pluggable	**GHG 610 1955 R0107**

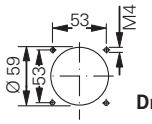
Dimension drawing



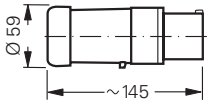
Wall socket



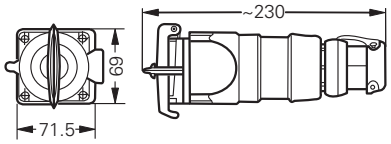
Flange socket



Drilling for flange socket



Plug



Coupler

X = fixing dimensions

Dimensions in mm

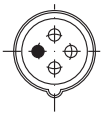


Transformer plug

Technical data

	Ex-transformer plug acc. to IEC 60309-1/2, up to 415 V
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed IIC T5
EC-Type Examination Certificate	PTB 99 ATEX 1039
Marking accd. to IECEx	Ex ed [ia] IIC T6/T5
IECEx Certificate of Conformity	IECEx BKI 04.0002
Permissible ambient temperature	-20 °C to + 40 °C
Rated voltage primary	250 V AC
Rated voltage secondary	12 V, 24 V, 36 V, 42 V or 230 V~
Frequency	50 - 60 Hz
Power consumption	max. 65 VA
Back up fuse, internal	0.5 A mT, replaceable
Connecting terminals	1 x 1 - 4 mm²
Protection class	I
Degree of protection accd. to EN 60529	IP54
Cable entry	Ø 10 - 20 mm
Enclosure material	glass-fibre reinforced polyester, polyamide

Ordering details

Voltage	h	Type	Weight approx.	Sec voltage	Order No.
16 A transformer plug 4-pole					
200-250 V	 9 h	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**
16 A transformer plug 5-pole					
380-415 V	 6 h	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**
Plug with fuse					
200-250 V	 6 h	Plug with fuse max. 6.3 A	1.3 kg	–	**GHG 531 7536 V0000**

Accessories

Plug cap 3/4 pole	**GHG 530 1935 R0002**
Plug cap 5 pole / Plug with fuse	**GHG 530 1935 R0005**



Transformer plug

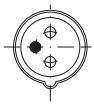
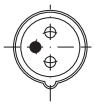


Plug cap

Technical data

	Ex-transformer plug acc. to IEC 60309-1/2, up to 415 V
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T5
EC-Type Examination Certificate	PTB 99 ATEX 1041
IECEx Certificate of Conformity	IECEx BKI 04.0006
Marking accd. to IECEx	Ex ed [ia] IIC T6/T5
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage primary	250 V AC
Rated voltage secondary	24 V, 36 V or 42 V/230 V AC
Frequency	50/60 Hz
Power consumption	max. 65 VA
Back up fuse, internal	0.5 A mT, replaceable
Connecting terminals	1 x 1 - 4 mm²
Protection class	I
Degree of protection accd. to EN 60529	IP54
Cable entry	Ø 10 - 20 mm
Enclosure material	glass-fibre reinforced polyester, polyamide

Ordering details

Voltage	h	Type	Weight approx.	Sec voltage	Order No.
32 A transformer plug 4-pole					
200-250 V	 9 h	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**
32 A transformer plug 5-pole					
380-415 V	 6 h	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**
Plug with fuse					
200-250 V	 6 h	Plug with fuse max. 6.3 A	1.3 kg		**GHG 532 7536 V0000**
Accessories					
Plug cap 4 pole					**GHG 530 1935 R0002**
Plug cap 5 pole / plug with fuse					**GHG 530 1935 R0005**

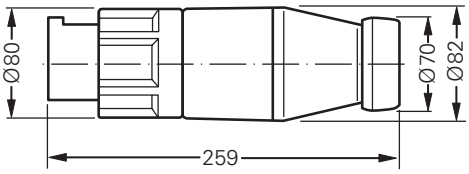


Transformer plug



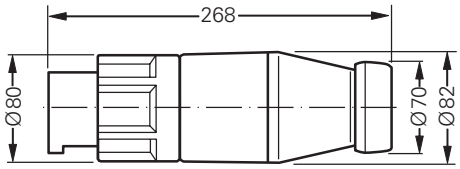
Plug cap

Dimension drawing





Transformer plug 16 A





Transformer plug 32 A

Dimensions in mm



Wall socket



Plug

Technical data

	Ex-plugs and receptacles, 21-pole
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e II T6
EC-Type Examination Certificate	PTB 00 ATEX 1109
Permissible ambient temperature	-20 °C to + 40 °C
Rated voltage	250 V AC
Rated current	10 A
Frequency	up to 400 Hz
External back up fuse	without therm. protection: 10 A with therm. protection: 16 A gG (rated current 10 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP65
Enclosure colour	black

	Wall socket
Cable entry/enclosure drilling	1 x M40 cable gland, 1 x M32 metal thread with plastic Ex-screw plug
Connecting terminals	1 x 1.0 - 2.5 mm²
Enclosure material	glass-fibre reinforced polyester

	Plug
Cable entry	Ø 19 - 28 mm
Connecting terminals	1 x 1.0 - 2.5 mm² crimp or solder connection[1)]
Enclosure material	Polyamide

[1)] Please use appropriate crimp tool

Details for used cable glands see pages 2.3.ff



Plug



Wall socket

Ordering details

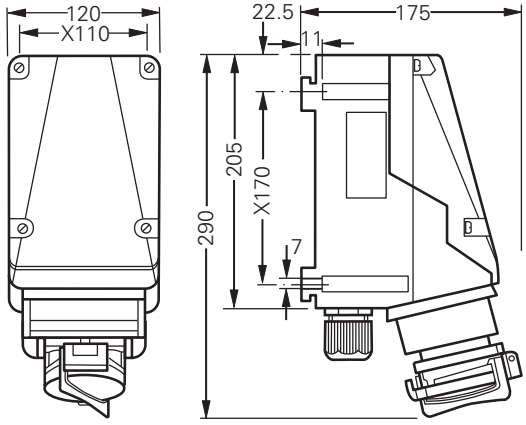
Type	h	Cable gland	Weight	Order No.
Type 10 A 21-pole				
Wall socket	5 h	KU	1.8 kg	**GHG 511 4905 R0001**
Wall socket	5 h	ME	1.9 kg	**GHG 511 4905 R3001**
Plug	5 h		0.7 kg	**GHG 591 2201 R0001**
Wall socket	6 h	KU	1.8 kg	**GHG 511 4906 R0001**
Wall socket	6 h	ME	1.9 kg	**GHG 511 4906 R3001**
Plug	6 h		0.7 kg	**GHG 591 2201 R0002**
Wall socket	7 h	KU	1.8 kg	**GHG 511 4907 R0001**
Wall socket	7 h	ME	1.9 kg	**GHG 511 4907 R3001**
Plug	7 h		0.7 kg	**GHG 591 2201 R0003**

Type	Application	Fixing method	Order No.
Accessories			
Plug cap 21-pole			**GHG 530 1935 R0008**
Mounting plate size 5	for wall mounting	snap on	**GHG 610 1953 R0128**
Mounting plate size 5	for trellis mounting	snap on	**GHG 610 1953 R0128**
Mounting plate size 5	for pipe clamp	snap on	**GHG 610 1953 R0132**
Socket bushes 1 set = 7 pcs.			**GHG 590 1301 R0102**
Plug pins 1 set = 7 pcs.			**GHG 590 1302 R0102**
Ex-crimping tool for sockets and pins			**GHG 590 1902 R0001**
Dismanteling tool for sockets and pins			**GHG 590 1903 R0001**

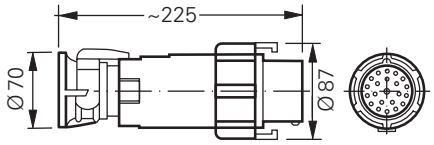
KU = 1 x plastic cable glands M40

ME = 1 x metal thread M32 with plastic Ex-screw plug

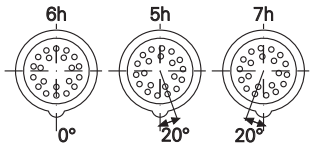
Dimension drawing I Wiring diagram



Wall socket 21-pole



Plug 21-pole



X = fixing dimensions

Dimensions in mm



Wall socket



Plug

Technical data

	Ex-plugs and receptacles, 7-pole
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed IIC T6/T5
EC-Type Examination Certificate	PTB 00 ATEX 1109
Permissible ambient temperature	-20 °C to + 40 °C
Rated voltage	500 V
Rated current	16 A (T6) / 20 A (T5)
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3	U_e 500 V / I_e 10 A
accd. EN 60947-4	U_e 250 V / I_e 16 A
External back up fuse	without therm. protection: 16 A with therm. protection: 25 A gG (rated current 16/20 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure colour	black

	Wall socket
Cable entry/enclosure drilling	1 x M40, 1 plastic Ex-screw plug 2 x M32 metal thread with 2 plastic Ex-screw plug
Connecting terminals	2 x 1.5 - 4 mm^2
Enclosure material	glass-fibre reinforced polyester

	Plug
Cable gland	Ø 9 - 17 mm
Connecting terminals	1 x 1.0 - 2.5 mm^2 crimp or solder connection[1)]
Enclosure material	Polyamide

[1)] Please use appropriate crimp tool

Details for used cable glands see pages 2.3.ff



Plug



Wall socket

Ordering details

Type	h	Cable gland	Weight	Order No.
Type 20 A 7-pole				
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**
Plug 7-pole	6 h		0.3 kg	**GHG 592 2001 R0002**
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 6-pole + PE	7 h		0.3 kg	**GHG 592 2001 R0022**

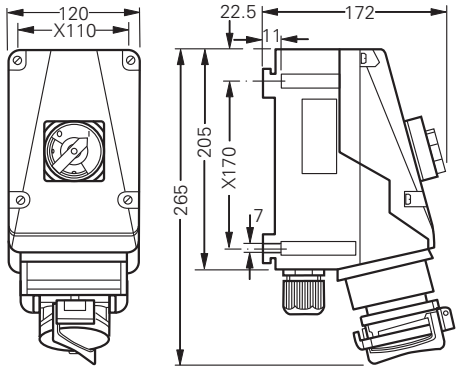
Type	Application	Fixing method	Order No.
Accessories			
Plug cap 7-pole			**GHG 540 1935 R0002**
Mounting plate size 5	for wall mounting	snap on	**GHG 610 1953 R0128**
Mounting plate size 5	for trellis mounting	snap on	**GHG 610 1953 R0128**
Mounting plate size 5	pipe clamp	snap on	**GHG 610 1953 R0132**
Socket bushes 1 set = 7 pcs.			**GHG 590 1301 R0102**
Plug pins 1 set = 7 pcs.			**GHG 590 1302 R0102**
Ex-crimping tool for sockets and pins			**GHG 590 1902 R0001**
Dismanteling tool for sockets and pins			**GHG 590 1903 R0001**

Other voltage ranges and versions available on request

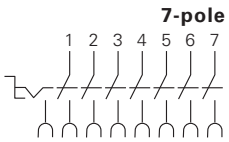
KU = 1 x plastic cable glands M40, 1 x M40 with plastic Ex-screw plug

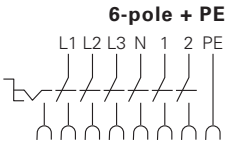
ME = 2 x metal thread M32 with plastic Ex-screw plug

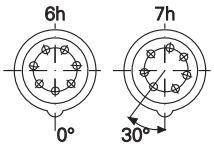
Dimension drawing I Wiring diagram

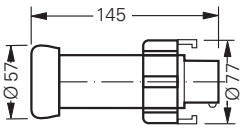


Wall socket 7-pole









Plug 7-pole

X = fixing dimensions

Dimensions in mm



Wall socket



Flange socket



Coupler



Plug

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-1/2 16A
Marking accd. to 2014/34/EU	Wall socket, plug and coupler: Ⓔx II 2 G Ex ed IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C Flange socket: Ⓔx II 2 G Ex db eb IIC/IIB Gb / Ⓔx II 2 D Ex tb IIIC Db
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1039 / Flange socket: BVS 15 ATEX E 101 U
IECEx Certificate of Conformity	Wall socket, plug and coupler: IECEx BKI 04.0002 / Flange socket: IECEx BVS 15.0088U
Marking accd. to IECEx	Wall socket, plug and coupler: IEx ed [ia] IIC T6/T5 / Flange socket: Ex db eb IIC/IIB Gb / Ex tb IIIC Db
Permissible ambient temperature	-20°C up to +40°C [1]
Rated voltage	up to 400 V, (3-pole) / 690 V, (4-pole) / 500 V, (5-pole) AC
Rated current	16 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 250 V / I_e 16 A (3-pole) U_e 690 V / I_e 16 A (4-pole) U_e 500 V / I_e 16 A (5-pole)
External back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gG (rated current 16 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
	Wall socket
Cable entry	1 x M25 cable gland, 1 x M25 plastic Ex-screw plug or 2 x metal thread M20 with plastic Ex-screw plug
Connecting terminals	2 x 1 - 4 mm²
Enclosure material	glass-fibre reinforced polyester
	Plug
Cable entry	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	1 x 1.0 - 2.5 mm²
Enclosure material	Polyamide
	Coupler
Cable entry	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	2 x 1 - 4 mm²
Enclosure material	Polyamide
	Flange socket
Connecting terminals	2 x 1 - 4 mm²
Enclosure material	Polyamide

[1] extended temperature range on request.

Details for used cable glands see pages 2.3ff

Ordering details

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 16 A 3-pole						
110-130 V	 4 h	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**
		Plug			0.35 kg	**GHG 511 7304 R0001**



Plug



Coupler



Flange socket



Wall socket

Ordering details

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 16 A 3-pole						
200-250 V	 6 h	Wall socket	–	KU	1.2 kg	**GHG 511 4306 R0001**
		Wall socket	–	GE	1.2 kg	**GHG 511 4306 R0002**
		Wall socket	–	ME	1.3 kg	**GHG 511 4306 R3001**
		Wall socket	–	GM	1.3 kg	**GHG 511 4306 R3003**
		Flange socket			0.4 kg	**GHG 511 8306 R0001**
		Coupler			0.7 kg	**GHG 511 3306 R0001**
		Plug			0.35 kg	**GHG 511 7306 R0001**
Type 16 A 4-pole						
200-250 V	 9 h	Wall socket	–	KU	1.4 kg	**GHG 511 4409 R0001**
		Wall socket	–	ME	1.5 kg	**GHG 511 4409 R3001**
		Wall socket	–	GM	1,6 kg	**GHG 511 4409 R3003**
		Flange socket			1.0 kg	**GHG 511 8409 R0001**
		Coupler			0.9 kg	**GHG 511 3409 R0001**
		Plug			0.38 kg	**GHG 511 7409 R0001**
380-415 V	 6 h	Wall socket	–	KU	1.4 kg	**GHG 511 4406 R0001**
		Wall socket	–	ME	1.5 kg	**GHG 511 4406 R3001**
		Wall socket	–	GM	1,6 kg	**GHG 511 4406 R3003**
		Wall socket	yes	KH	1,4 kg	**GHG 511 4406 R0501**
		Flange socket			1.0 kg	**GHG 511 8406 R0001**
		Coupler			0.9 kg	**GHG 511 3406 R0001**
		Plug			0.38 kg	**GHG 511 7406 R0001**
480-500 V	 7 h	Wall socket	–	KU	1.4 kg	**GHG 511 4407 R0001**
		Wall socket	–	ME	1.5 kg	**GHG 511 4407 R3001**
		Wall socket	yes	KH	1.4 kg	**GHG 511 4407 R0501**
		Flange socket			1.0 kg	**GHG 511 8407 R0001**
		Coupler			0.9 kg	**GHG 511 3407 R0001**
		Plug			0.38 kg	**GHG 511 7407 R0001**
600-690 V	 5 h	Wall socket	–	KU	1.4 kg	**GHG 511 4405 R0001**
		Wall socket	–	ME	1.5 kg	**GHG 511 4405 R3001**
		Wall socket	yes	KH	1.4 kg	**GHG 511 4405 R0501**
		Flange socket			1.0 kg	**GHG 511 8405 R0001**
		Coupler			0.9 kg	**GHG 511 3405 R0001**
		Plug			0.38 kg	**GHG 511 7405 R0001**
Type 16 A 5-pole						
200-250 V 380-415 V	 6 h	Wall socket	–	KU	1.4 kg	**GHG 511 4506 R0001**
		Wall socket	–	ME	1.5 kg	**GHG 511 4506 R3001**
		Wall socket	yes	KH	1.4 kg	**GHG 511 4506 R0501**
		Wall socket	–	GM	1,6 kg	**GHG 511 4506 R3003**
		Flange socket			1.0 kg	**GHG 511 8506 R0001**
		Coupler			0.95 kg	**GHG 511 3506 R0001**
		Plug			0.42 kg	**GHG 511 7506 R0001**

Other voltage ranges and versions available on request
KU = 1 x plastic cable glands M25, 1 x M25 plastic Ex-screw plug
ME = 2 x metal thread M20
GM = 2 x metal thread M20 with screw plug, with external earth bolt M6
KH = 2 x plastic cable glands M25, aux. contact, 1 NO
GE = 2x plastic thread M20 without gland/screw plug



Wall socket



flange socket

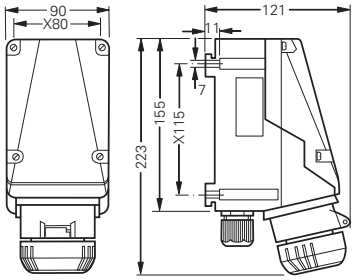


Coupler

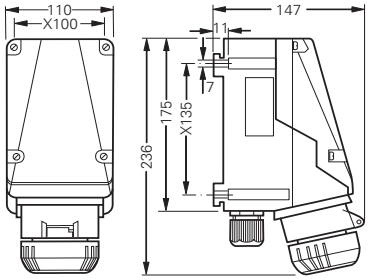


Plug

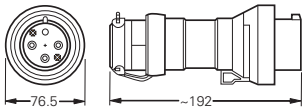
Dimension drawing I Wiring diagram



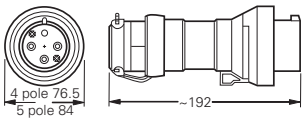
Wall socket 3-pole



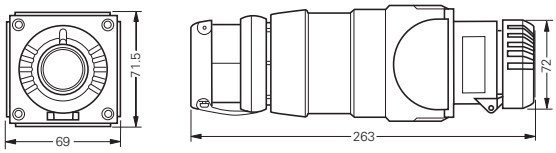
Wall socket 4/5-pole



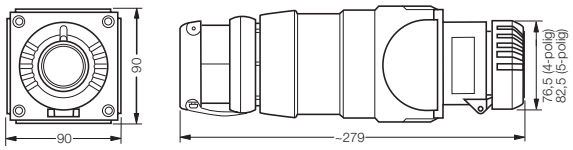
Plug 3-pole



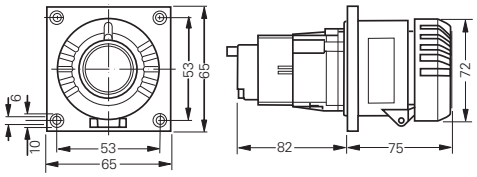
Plug 4/5-pole



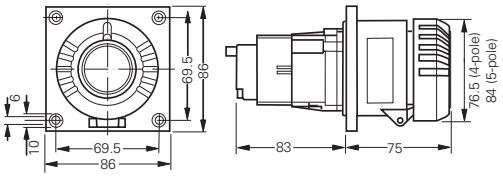
Coupler 3-pole



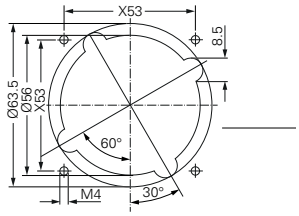
Coupler 4/5-pole



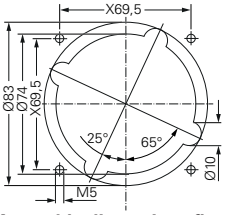
Flange socket 3-pole



Flange socket 4/5-pole

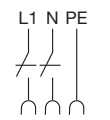


Assembly dimensions flange socket



Assembly dimensions flange socket X = fixing dimensions

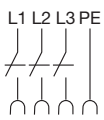
without aux. contact



1 P + N + PE



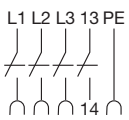
without aux. contact



3P + PE

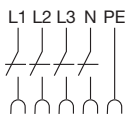


with aux. contact



3P + AUX + PE

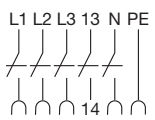
without aux. contact



3P + N + PE



with aux. contact



3P + N + AUX + PE

Dimensions in mm



Protective canopy



Plug cap



GHG 610 1901 R0126

Accessories

Type	Application	Fixing method	Order No.
Mounting plates for wall sockets 16 A			
Size 4	for wall mounting	snap on	**GHG 610 1953 R0126**
Size 4	for trellis mounting	snap on	**GHG 610 1953 R0126**
Size 4	for pipe clamp	snap on	**GHG 610 1953 R0130**

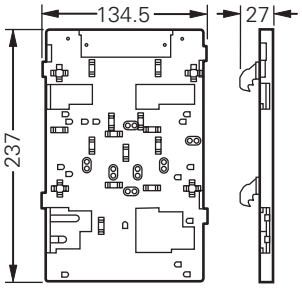
Type		Order No.
Plug cap for plugs 16 A		
Plug 16 A 3-pole		**GHG 510 1901 R0001**
Plug 16 A 4-pole		**GHG 510 1901 R0002**
Plug 16 A 5-pole		**GHG 510 1901 R0003**

Type	OU	Order No.
Accessories for mounting plates		
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

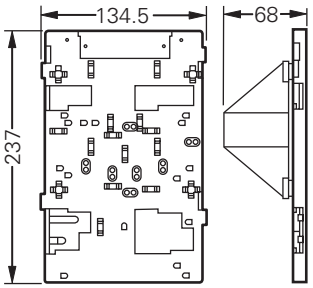
Please pay attention that only order units (OU) according to the ordering details can be delivered.

Type	Application	Order No.
Protective canopy for mounting plate		
Size 4	for mounting plate size 4, snap on	**GHG 610 1955 R0107**

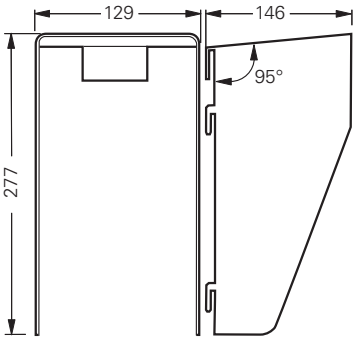
Dimension drawing



Mounting plate size 4 for wall/trellis mounting



Mounting plate size 4 for pipe clamp



Protective canopy size 4

Dimensions in mm



Wall socket



Flange socket



Coupler



Plug

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-1/2
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de (ia) IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	Wall socket, plug and coupler: PTB 99 ATEX 1041 Flange socket: PTB 99 ATEX 1042 U
IECEx Certificate of Conformity	IECEx BKI 04.0006
Marking accd. to IECEx	Ex ed [ia] IIC T6/T5
Permissible ambient temperature	-20 °C to +40 °C [1]
Rated voltage	up to 690 V (AC)
Rated current	32 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 32 A
External back up fuse	without therm. protection: 35 A with therm. protection: 50 A gG (rated current 32 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure colour	black
	Wall socket
Cable entry/enclosure drilling	1 x M40 cable gland, 1 x M40 plastic Ex-screw plug or 2 x M32 metal thread with 2 plastic Ex-screw plug
Connecting terminals	2 x 4 - 10 mm²
Enclosure material	glass-fibre reinforced polyester
	Plug
Cable entry	Ø 12 - 28 mm
Connecting terminals	1.0 - 6 mm²
Enclosure material	Polyamide
	Coupler
Cable entry	Ø 12 - 28 mm
Connecting terminals	2 x 4 - 10 mm²
Enclosure material	Polyamide
	Flange socket
Connecting terminals	2 x 4 - 10 mm²
Enclosure material	Polyamide

[1] extended temperature range on request

Details for used cable glands see pages 2.3.ff



Plug



Coupler



Flange socket



Wall socket

Ordering details

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 32 A 4-pole						
200-250 V	 9 h	Wall socket	–	KU	2.3 kg	**GHG 512 4409 R0001**
		Wall socket	–	ME	2.4 kg	**GHG 512 4409 R3001**
		Wall socket	–	GM	2.3 kg	**GHG 512 4409 R3003**
		Flange socket			1.0 kg	**GHG 512 8409 R0001**
		Coupler			1.55 kg	**GHG 512 3409 R0001**
		Plug			0.55 kg	**GHG 512 7409 R0001**
380-415 V	 6 h	Wall socket	–	KU	2.3 kg	**GHG 512 4406 R0001**
		Wall socket	–	ME	2.4 kg	**GHG 512 4406 R3001**
		Wall socket	yes	KH	2.3 kg	**GHG 512 4406 R0501**
		Wall socket	–	GM	2.4 kg	**GHG 512 4406 R3003**
		Flange socket			1.0 kg	**GHG 512 8406 R0001**
		Coupler			1.55 kg	**GHG 512 3406 R0001**
		Plug			0.55 kg	**GHG 512 7406 R0001**
480-500 V	 7 h	Wall socket	–	KU	2.3 kg	**GHG 512 4407 R0001**
		Wall socket	–	ME	2.4 kg	**GHG 512 4407 R3001**
		Wall socket	yes	KH	2.3 kg	**GHG 512 4407 R0501**
		Flange socket			1.0 kg	**GHG 512 8407 R0001**
		Coupler			1.55 kg	**GHG 512 3407 R0001**
		Plug			0.55 kg	**GHG 512 7407 R0001**
600-690 V	 5 h	Wall socket	–	KU	1.8 kg	**GHG 512 4405 R0001**
		Wall socket	–	ME	2.4 kg	**GHG 512 4405 R3001**
		Wall socket	yes	KH	2.3 kg	**GHG 512 4405 R0501**
		Flange socket			1.0 kg	**GHG 512 8405 R0001**
		Coupler			1.55 kg	**GHG 512 3405 R0001**
		Plug			0.55 kg	**GHG 512 7405 R0001**
Type 32 A 5-pole						
200-250 V 380-415 V	 6 h	Wall socket	–	KU	2.3 kg	**GHG 512 4506 R0001**
		Wall socket	–	ME	2.4 kg	**GHG 512 4506 R3001**
		Wall socket	yes	KH	2.3 kg	**GHG 512 4506 R0501**
		Wall socket	–	GM	2.4 kg	**GHG 512 4506 R3003**
		Flange socket			1.0 kg	**GHG 512 8506 R0001**
		Coupler			1.6 kg	**GHG 512 3506 R0001**
		Plug			0.6 kg	**GHG 512 7506 R0001**

Other voltage ranges and versions available on request

KU = 1 x plastic cable glands M40, 1 x M40 plastic Ex-screw plug

KH = 1 x plastic cable glands M40, 1 x plastic cable glands M25, with aux. contact

ME = 2 x metal thread M32 with plastic Ex-screw plug

GM = 2 x metal thread M32 with screw plug, with external earth bolt M6



Wall socket



Flange socket

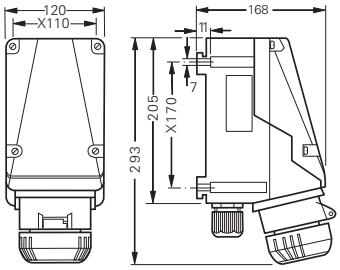


Coupler

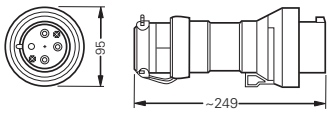


Plug

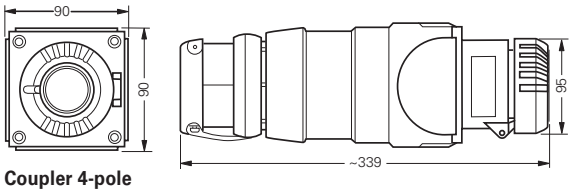
Dimension drawing I Wiring diagram



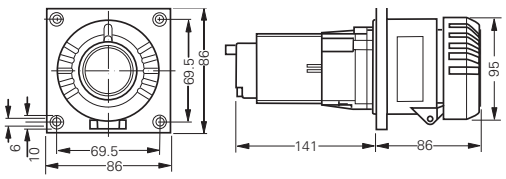
Wall socket 4-pole



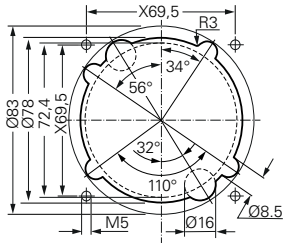
Plug 4-pole



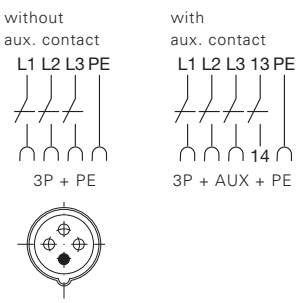
Coupler 4-pole

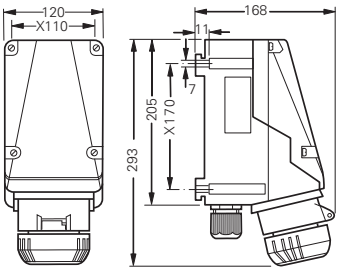


Flange socket 4-pole

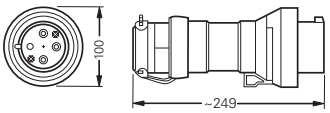


Assembly dimensions flange socket

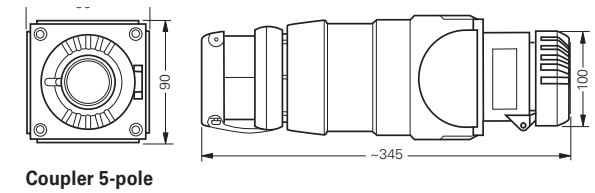




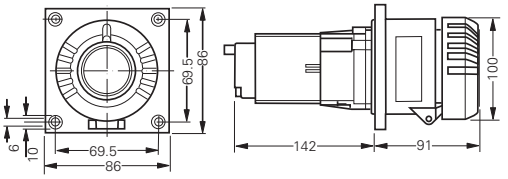
Wall socket 5-pole



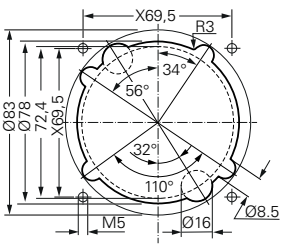
Plug 5-pole



Coupler 5-pole

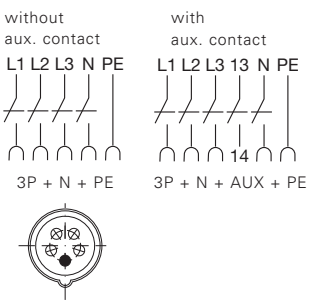


Flange socket 5-pole



Assembly dimensions flange socket

X = fixing dimensions



Dimensions in mm



Protective canopy



Plug cap



GHG 610 1901 R0128

Accessories

Type	Application	Fixing method	Order No.
Mounting plates for wall sockets 32 A			
Size 5	for wall mounting	snap on	**GHG 610 1953 R0128**
Size 5	for trellis mounting	snap on	**GHG 610 1953 R0128**
Size 5	for pipe clamp	snap on	**GHG 610 1953 R0132**

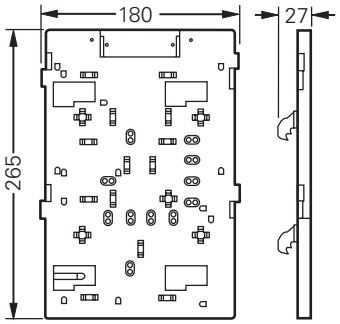
Type		Order No.
Plug cap for plugs 32 A		
Plug 32 A 3-pole/4-pole		**GHG 510 1901 R0004**
Plug 32 A 5-pole		**GHG 510 1901 R0005**

Type	OU	Order No.
Accessories for mounting plates		
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

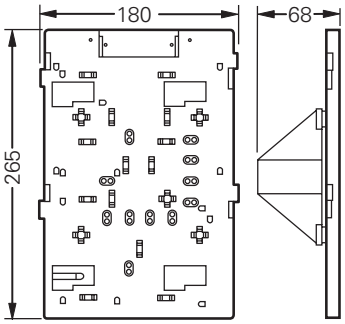
Please pay attention that only order units (OU) according to the ordering details can be delivered.

Type	Application	Order No.
Protective canopy for mounting plate		
Size 5	for mounting plate size 5, snap on	**GHG 610 1955 R0108**

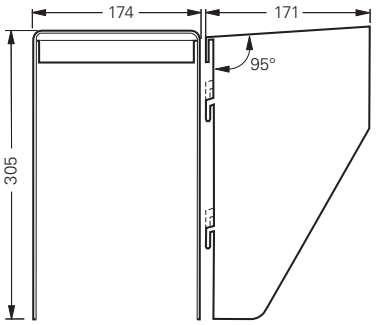
Dimension drawing



Mounting plate size 5 for wall/trellis mounting



Mounting plate size 5 for pipe mounting



Protective canopy size 5

Dimensions in mm



Wall socket



Plug

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-1/2
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T5/T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 1070
IECEx Certificate of Conformity	IECEx BKI 04.0004
Marking accd. to IECEx	Ex ed IIC T6
Permissible ambient temperature	-20 °C to +40 °C[1)]
Rated voltage	690 V (AC)
Rated current	63 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 63 A
External back up fuse	without therm. protection: 63 A with therm. protection: 80 A gG (rated current 63 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure colour	black

	Wall socket
Cable entry/enclosure drilling	1 x M50 cable gland, 1 x M50 plastic Ex-screw plug or 2 x M40 metal thread with 2 plastic Ex-screw plug
Connecting terminals	2 x 4 - 25 mm² / with ring cable lug[2)] 1 x 35 mm²
Enclosure material	glass-fibre reinforced polyester

	Plug
Cable gland	Ø 19 - 34 mm
Connecting terminals	1 x 4 - 16 mm², with cable lug[3)] 1 x 25 mm²
Enclosure material	Polyamide

[1)] extended temperature range on request

[2)] use supplied cable lugs

[3)] see accessories

Details for used cable glands see pages 2.3.ff



Plug cap



Plug



Wall socket

Ordering details

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 63 A 4-pole						
200-250 V	 9 h	Wall socket	–	KU	8.1 kg	**GHG 514 4409 R0001**
		Wall socket	–	ME	8.2 kg	**GHG 514 4409 R3001**
		Plug			0.9 kg	**GHG 514 7409 R0001**
380-415 V	 6 h	Wall socket	–	KU	8.1 kg	**GHG 514 4406 R0001**
		Wall socket	–	ME	8.2 kg	**GHG 514 4406 R3001**
		Wall socket	yes	KH	8.2 kg	**GHG 514 4406 R0501**
		Wall socket	–	GM	8.2 kg	**GHG 514 4406 R3017**
		Plug			0.9 kg	**GHG 514 7406 R0001**
480-500 V	 7 h	Wall socket	–	KU	8.1 kg	**GHG 514 4407 R0001**
		Wall socket	–	ME	8.2 kg	**GHG 514 4407 R3001**
		Wall socket	yes	KH	8.2 kg	**GHG 514 4407 R0501**
		Wall socket	–	GM	8.2 kg	**GHG 514 4407 R3003**
		Plug			0.9 kg	**GHG 514 7407 R0001**
600-690 V	 5 h	Wall socket	–	KU	8.1 kg	**GHG 514 4405 R0001**
		Wall socket	–	ME	8.1 kg	**GHG 514 4405 R3001**
		Wall socket	yes	KH	8.2 kg	**GHG 514 4405 R0501**
		Wall socket	–	GM	8.2 kg	**GHG 514 4405 R3002**
		Plug			0.9 kg	**GHG 514 7405 R0001**
Type 63 A 5-pole						
200-250 V 380-415 V	 6 h	Wall socket	–	KU	8.1 kg	**GHG 514 4506 R0001**
		Wall socket	–	ME	8.1 kg	**GHG 514 4506 R3001**
		Wall socket	yes	KH	8.2 kg	**GHG 514 4506 R0501**
		Wall socket	–	GM	8.2 kg	**GHG 514 4506 R3006**
		Plug			0.9 kg	**GHG 514 7506 R0001**

Accessories

Type	OU	Order No.
Set of ring cable lugs 35/70 mm² for wall socket (6 + 2 pcs.)	1	**GHG 510 1916 R0001**
Plug cap 4-pole/5-pole	1	**GHG 510 1901 R0006**
Set of cable lugs 35 mm² (5 pcs., for plug)	5	**GHG 510 1916 R0001**

Other voltage ranges and versions available on request

KU = 1 x plastic cable glands M50, 1 x M50 plastic Ex-screw plug

KH = 1 x plastic cable glands M50, 1 x plastic cable glands M25, with aux. contact

ME = 2 x metal thread M40 with plastic Ex-screw plug

GM = 2 x metal thread M40 with screw plug M40 with external earth bolt M8

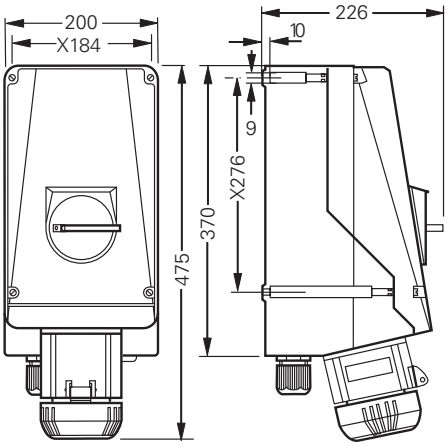


Wall socket

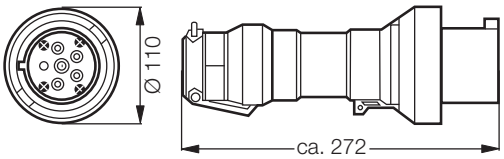


Plug

Dimension drawing I Wiring diagram

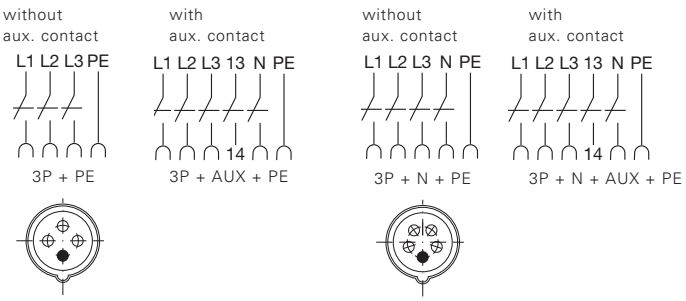


Wall socket 4/5-pole



Plug 4/5-pole

X = fixing dimensions



Dimensions in mm



Plug



Wall socket

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-1/2
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 01 ATEX 1069
IECEx Certificate of Conformity	IECEx BKI 04.0005
Marking accd. to IECEx	Ex ed IIC T6
Permissible ambient temperature	-20 °C to + 40 °C[1)]
Rated voltage	690 V
Rated current	125 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	Ue 690 V / Ie 125 A
External back up fuse	without therm. protection: 125 A with therm. protection: 160 A gG (rated current 125 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure colour	black

	Wall socket
Cable entry/enclosure drilling	1 x M63 cable gland, 1 x M63 plastic Ex-screw plug or 2 x M50 metal thread with 2 plastic Ex-screw plug
Connecting terminals	2 x 4 - 70 mm² / with ring cable lug[2)] 1 x 120 mm²
Enclosure material	glass-fibre reinforced polyester

	Plug
Cable entry	Ø 31 - 55 mm
Connecting terminals	1 x 4 - 35 mm² / with pin cable lug[3)] 1 x 50 mm²
Enclosure material	Polyamide

[1)] extended temperature range on request
[2)] use supplied cable lugs
[3)] see accessories

Details for used cable glands see pages 2.3.ff



Wall socket



Plug



Plug cap

Ordering details

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 125 A 4-pole						
200-250 V	 9 h	Wall socket	–	KU	12.3 kg	**GHG 515 4409 R0001**
		Wall socket	–	ME	12.5 kg	**GHG 515 4409 R3001**
		Wall socket	yes	KH	12.5 kg	**GHG 515 4409 R0501**
		Plug			1.5 kg	**GHG 515 7409 R0001**
380-415 V	 6 h	Wall socket	–	KU	12.3 kg	**GHG 515 4406 R0001**
		Wall socket	–	ME	12.5 kg	**GHG 515 4406 R3001**
		Wall socket	yes	KH	12.5 kg	**GHG 515 4406 R0501**
		Wall socket	–	GM	8.2 kg	**GHG 515 4406 R3003**
		Plug			1.5 kg	**GHG 515 7406 R0001**
480-500 V	 7 h	Wall socket	–	KU	12.3 kg	**GHG 515 4407 R0001**
		Wall socket	–	ME	12.5 kg	**GHG 515 4407 R3001**
		Wall socket	yes	KH	12.5 kg	**GHG 515 4407 R0501**
		Wall socket	–	GM	8.2 kg	**GHG 515 4407 R3002**
		Plug			1.5 kg	**GHG 515 7407 R0001**
600-690 V	 5 h	Wall socket	–	KU	12.3 kg	**GHG 515 4405 R0001**
		Wall socket	–	ME	12.5 kg	**GHG 515 4405 R3001**
		Wall socket	yes	KH	12.5 kg	**GHG 515 4405 R0501**
		Wall socket	–	GM	8.2 kg	**GHG 515 4405 R3002**
		Plug			1.5 kg	**GHG 515 7405 R0001**
Type 125 A 5-pole						
200-250 V 380-415 V	 6 h	Wall socket	–	KU	13.0 kg	**GHG 515 4506 R0001**
		Wall socket	–	ME	13.2 kg	**GHG 515 4506 R3001**
		Wall socket	yes	KH	13.2 kg	**GHG 515 4506 R0501**
		Wall socket	–	GM	8.2 kg	**GHG 515 4506 R3005**
		Plug			1.2 kg	**GHG 515 7506 R0001**

Accessories

Type	OU	Order No.
Plug cap 4-pole/5-pole	1	**GHG 510 1901 R0007**
Set of ring cable lug 70/120 mm² for wall socket (je 4 + 1 pcs.)	1	**GHG 260 1911 R0004**
Set of cable lugs 50 mm² (5 pcs., for plug)	5	**GHG 510 1916 R0002**

Other voltage ranges and versions available on request

KU = 1 x plastic cable glands M63, 1 x M40 plastic Ex-screw plug

KH = 1 x plastic cable glands M63, 1 x plastic cable glands M25, with aux. contact

ME = 2 x metal thread M50 with plastic Ex-screw plug

GM = 2 x metal thread M50 with screw plug, with external earth bolt M8

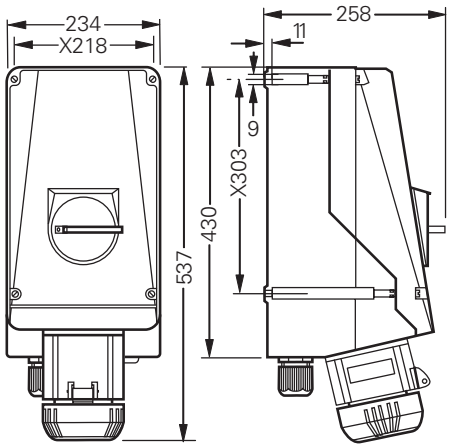


Plug

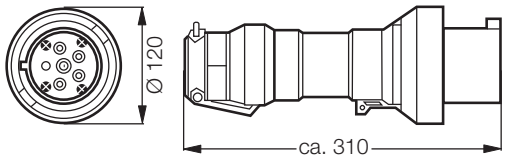


Wall socket

Dimension drawing I Wiring diagram



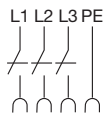
Wall socket 4/5-pole



Plug 4/5-pole

X = fixing dimensions

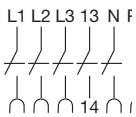
without aux. contact



3P + PE

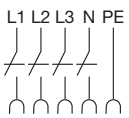


with aux. contact



3P + AUX + PE

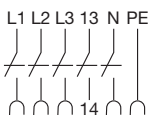
without aux. contact



3P + N + PE



with aux. contact



3P + N + AUX + PE

Dimensions in mm



Wall socket



Flange socket



Coupler



Plug

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-Series 2 20 A
Certificate of Compliance	CSA 2080082
Marking accd. to NEC 500	Class I Div 2 Group A, B, C and D, Class II Div. 1 Group E, F, and G
Marking accd. to NEC 505/CEC 18	Class I Zone 1 AEx ed IIC T6 / Ex ed IIC T6
Permissible ambient temperature	-45°C up to +55°C[1)]
Rated voltage	480 V (3-pole) / 600 V (4-pole) / 480 V (5-pole) AC
Rated current	20 A
Frequency	up to 400 Hz
Rated switching capacity	3-pole: 277 V / 3 HP, 4-pole: 600 V / 10 Hp 60 Hz, 5-pole: 600 V / 10 HP (60 Hz)
External back-up fuse, max.	without therm. protection: 20 A with therm. protection: 35 A gG (rated current 20A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
	Wall socket
Cable entry	1x 1/2´´ or 1 x 3/4´´ NPT Myers Hub
Connecting terminals	2 x AWG 16 - 12
Enclosure material	glass-fibre reinforced polyester
	Plug
Cable entry	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	1 x AWG 17 - 14
Enclosure material	Polyamide
	Flange socket
Connecting terminals	2 x AWG 16 - 12
Enclosure material	glass-fibre reinforced polyester
	Coupler
Cable entry	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	1 x AWG 16 - 12
Enclosure material	Polyamide

[1)] + 55 °C with reduced line current



Wall socket



Flange socket



Coupler



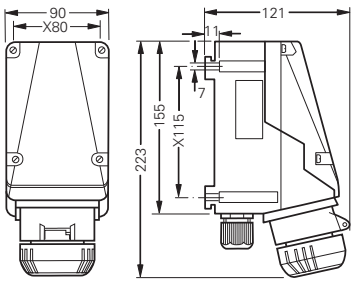
Plug

Ordering details

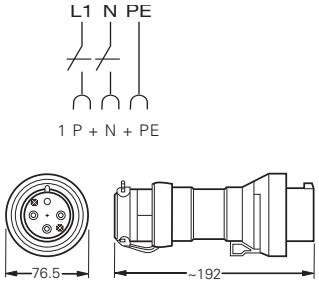
Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 20 A 3-pole						
125 V	 4 h	Wall socket	–	ME20	1.4 kg	**GHG 511 4304 L3001**
		Flange socket			1.0 kg	**GHG 511 8304 L0001**
		Coupler			0.9 kg	**GHG 511 3304 L0001**
		Plug			0.38 kg	**GHG 511 7304 L0001**
250 V	 6 h	Wall socket	–	ME20	1.4 kg	**GHG 511 4306 L3001**
		Flange socket			1.0 kg	**GHG 511 8306 L0001**
		Coupler			0.9 kg	**GHG 511 3306 L0001**
		Plug			0.38 kg	**GHG 511 7306 L0001**
Type 20 A 4-pole						
3Ø 600 V	 5 h	Wall socket	–	ME25	1.9 kg	**GHG 511 4405 L3001**
		Flange socket			1.0 kg	**GHG 511 8405 L0001**
		Coupler			0.9 kg	**GHG 511 3405 L0001**
		Plug	–		0.38 kg	**GHG 511 7405 L0001**
3Ø 480 V	 7 h	Wall socket	–	ME25	1.9 kg	**GHG 511 4407 L3001**
		Flange socket			1.0 kg	**GHG 511 8407 L0001**
		Coupler			0.9 kg	**GHG 511 3407 L0001**
		Plug	–		0.38 kg	**GHG 511 7407 L0001**
3Ø 250 V	 9 h	Wall socket	–	ME25	1.9 kg	**GHG 511 4409 L3001**
		Flange socket			1.0 kg	**GHG 511 8409 L0001**
		Coupler			0.9 kg	**GHG 511 3409 L0001**
		Plug	–		0.38 kg	**GHG 511 7409 L0001**

Other voltage ranges and versions available on request
ME20 = 2 x metal thread M20, 1 x 1/2" Myers Hub adapter, 1 x M20 plastic Ex-screw plug
ME25 = 2 x metal thread M25, 1 x 3/4" Myers Hub adapter, 1 x M25 plastic Ex-screw plug

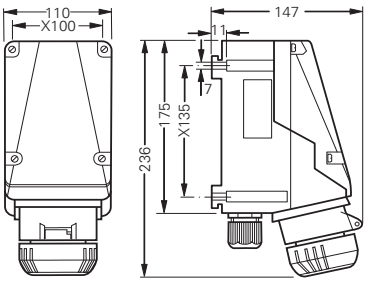
Dimension drawing I Wiring diagram



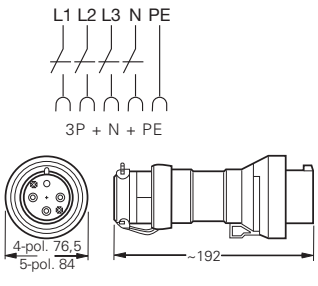
Wall socket 3-pole



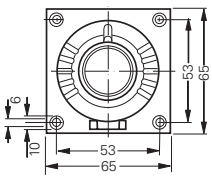
Plug 3-pole

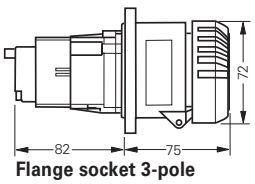


Wall socket 4 pole

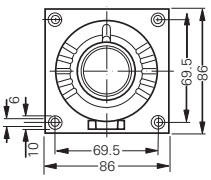


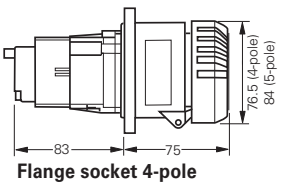
Plug 4-pole



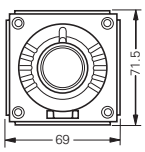


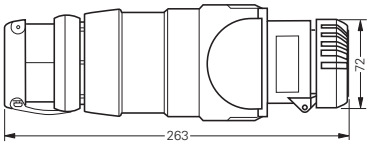
Flange socket 3-pole



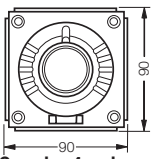


Flange socket 4-pole

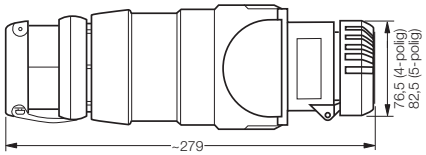




Coupler 3-pole



Coupler 4-pole



X = fixing dimensions

Dimensions in mm



Wall socket



Plug



Flange socket



Coupler

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-Series 2 30 A
Certificate of Compliance	CSA 2080082
Marking accd. to NEC 500	Class I Div 2 Group A, B, C and D, Class II Div. 1 Group E, F, and G
Marking accd. to NEC 505/CEC 18	Class I Zone 1 AEx ed IIC T6 / Ex ed IIC T6
Permissible ambient temperature	-45°C up to +55°C
Rated voltage	600 V AC
Rated current	30 A
Frequency	up to 400 Hz
Rated switching capacity	600 V 30 A
External back-up fuse, max.	without therm. protection: 30 A with therm. protection: 50 A gG (rated current 30 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
	Wall socket
Cable entry	1 x 1"NPT Myers Hub, 1 x M32 thread with screw plug
Connecting terminals	2 x AWG 12-8
Enclosure material	glass-fibre reinforced polyester
	Plug
Cable entry	Ø 17 - 28 mm
Connecting terminals	1 x AWG 18 - 10
Enclosure material	Polyamide
	Coupler
Cable entry	Ø 17 - 28 mm
Connecting terminals	2 x AWG 12-8
Enclosure material	glass-fibre reinforced polyester
Flange socket	**Flange socket**
Connecting terminals	1 x AWG 12-8
Enclosure material	Polyamide



Flange socket



Coupler



Plug



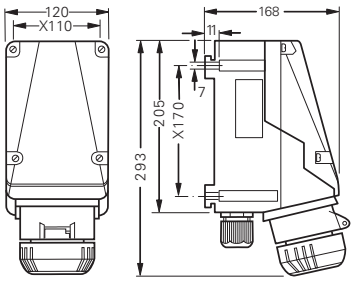
Wall socket

Ordering details

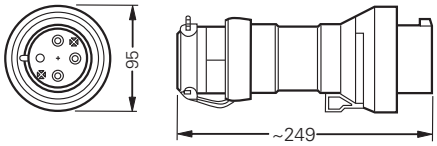
Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 30 A 4-pole						
3Ø 600 V	 5 h	Wall socket	–	ME32	2.1 kg	**GHG 512 4405 L3001**
		Flange socket			1.0 kg	**GHG 512 8405 L0001**
		Coupler			1.55 kg	**GHG 512 3405 L0001**
		Plug	–		0.4 kg	**GHG 512 7405 L0001**
3Ø 480 V	 7 h	Wall socket	–	ME32	2.1 kg	**GHG 512 4407 L3001**
		Flange socket			1.0 kg	**GHG 512 8407 L0001**
		Coupler			1.55 kg	**GHG 512 3407 L0001**
		Plug	–		0.4kg	**GHG 512 7407 L0001**
3Ø 250 V	 9 h	Wall socket	–	ME32	2.1kg	**GHG 512 4409 L3001**
		Flange socket			1.0 kg	**GHG 512 8409 L0001**
		Coupler			1.55 kg	**GHG 512 3409 L0001**
		Plug	–		0.4kg	**GHG 512 7409 L0001**

Other voltage ranges and versions available on request
ME32 = 2 x metal thread M32, 1 x 1" Myers Hub adapter, 1 x M32 plastic Ex-screw plug

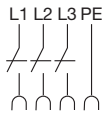
Dimension drawing I Wiring diagram



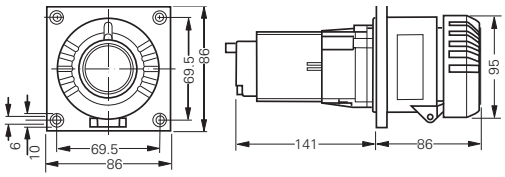
Wall socket 4-pole



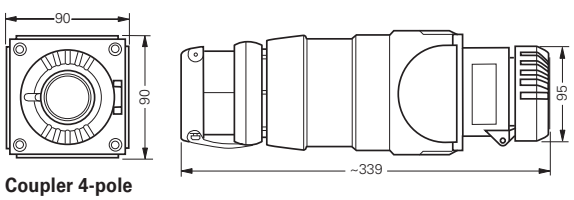
Plug 4-pole



3P + PE



Flange socket 4-pole



Coupler 4-pole

X = fixing dimensions

Dimensions in mm



Wall socket



Plug

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-Series 2 60 A
Certificate of Compliance	CSA 2089057
Marking accd. to NEC 500	Class I Div 2 Group A, B, C and D, Class II Div. 1 Group E, F, and G
Marking accd. to NEC 505/CEC 18	Class I Zone 1 AEx ed IIC T6 / Ex ed IIC T6
Permissible ambient temperature	-20°C up to +40°C
Rated voltage	600 V AC
Rated current	60 A
Frequency	up to 400 Hz
Rated switching capacity	600 V 60 A
External back-up fuse, max.	without therm. protection: 60 A with therm. protection: 80 A gG (rated current 60 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66

	Wall socket
Cable entry	1 x 1 1/4"NPT Myers Hub, 1 x M40 thread with screw plug
Connecting terminals	2 x AWG 12 - 4
Enclosure material	glass-fibre reinforced polyester

	Plug
Cable entry	Ø 19 - 34 mm
Connecting terminals	1 x AWG 12 - 6
Enclosure material	Polyamide



Plug



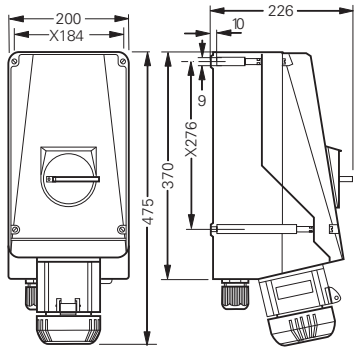
Wall socket

Ordering details

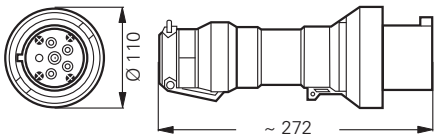
Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 60 A 4-pole						
3Ø 600 V	 5 h	Wall socket	–	ME40	8.2 kg	**GHG 514 4405 L3001**
		Plug	–		0.9 kg	**GHG 514 7405 L0001**
3Ø 480 V	 7 h	Wall socket	–	ME40	8.2 kg	**GHG 514 4407 L3001**
		Plug	–		0.9 kg	**GHG 514 7407 L0001**
3Ø 250 V	 9 h	Wall socket	–	ME40	8.2 kg	**GHG 514 4409 L3001**
		Plug	–		0.9 kg	**GHG 514 7409 L0001**

Other voltage ranges and versions available on request
ME40 = 2 x metal thread M40, 1 x 1 1/4" Myers Hub adapter, 1 x M40 plastic Ex-screw plug

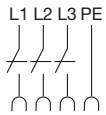
Dimension drawing I Wiring diagram



Wall socket 4-pole



Plug 4-pole



3P + PE

X = fixing dimensions

Dimensions in mm



Wall socket



Plug

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-Series 2 100 A
Certificate of Compliance	CSA 2089057
Marking accd. to NEC 500	Class I Div 2 Group A, B, C and D, Class II Div. 1 Group E, F, and G
Marking accd. to NEC 505/CEC 18	Class I Zone 1 AEx ed IIC T6 / Ex ed IIC T6
Permissible ambient temperature	-20°C up to +40°C
Rated voltage	600 V AC
Rated current	100 A
Frequency	up to 400 Hz
Rated switching capacity	600 V 100 A
External back-up fuse, max.	without therm. protection: 100 A with therm. protection: 160 A gG (rated current 100 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66

	Plug
Cable entry	1 x 1 1/2"NPT Myers Hub, 1 x M50 thread with screw plug
Connecting terminals	2 x AWG 12 - 1
Enclosure material	glass-fibre reinforced polyester

	Plug
Cable entry	Ø 31 - 55 mm
Connecting terminals	1 x AWG 12 - 3
Enclosure material	Polyamide



Plug



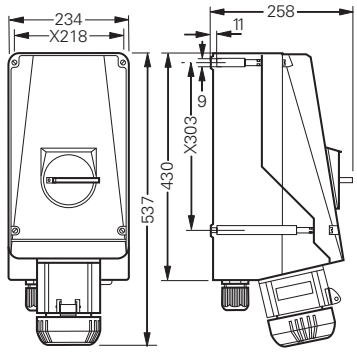
Wall socket

Ordering details

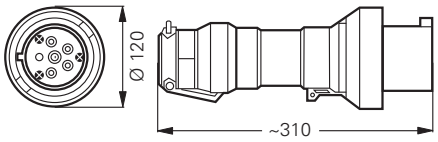
Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 100 A 4-pole						
3Ø 600 V	 5 h	Wall socket	–	ME50	12.6 kg	**GHG 515 4405 L3001**
		Plug	–		1.5 kg	**GHG 515 7405 L0001**
3Ø 480 V	 7 h	Wall socket	–	ME50	12.6 kg	**GHG 515 4407 L3001**
		Plug	–		1.5 kg	**GHG 515 7407 L0001**
3Ø 250 V	 9 h	Wall socket	–	ME50	12.6 kg	**GHG 515 4409 L3001**
		Plug	–		1.5 kg	**GHG 515 7409 L0001**

Other voltage ranges and versions available on request
ME50 = 2 x metal thread M50, 1 x 1 1/2" Myers Hub adapter, 1 x M50 plastic Ex-screw plug

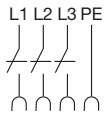
Dimension drawing I Wiring diagram



Wall socket 4-pole



Plug 4-pole



3P + PE

X = fixing dimensions

Dimensions in mm

GHG 51 Ex-Wall Sockets with Stainless Steel Enclosure

From 16 A - 125 A for zone 1, 2, 21 and 22

A reliable connection

Making electrical energy available, where it is needed, in highly combustible ranges of the zones 1, 2, 21 and 22 is a substantial task. In addition to high mechanical protection and the ability to withstand aggressive environmental influences is also required. Our ranges of wall sockets with our new stainless steel housing are the best choice.
Our durable and long-lasting GHG 51 series, with the high mechanical and chemical stability of the stainless steel housings are combined here, as well as generously dimensioned connection area with Ex-e connecting terminals perfect the new series.



Features

- **Robust & durable enclosure made of stainless steel AISI 316L**
- **Increased resistance against chemicals, salt water and higher impact conditions**
- **Easy to clean design**
- **High ingress protection IP 66 applies also in the plugged-in state**
- **Full AC-3 switching ability**
- **Compatible with existing and proven GHG 51 plugs**
- **Easy looping options w/o using of junction boxes (16A-125A)**
- **External earth bolt to connect ground**
- **Panel mounting possibilities**



Wall socket 16 A

Technical data

	Ex-wall socket 16 A
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6 I Ⓔx II D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1039
IECEx Certificate of Conformity	IECEx BVS 12.0027
Marking accd. to IECEx	Ex de mb IIC T5/T6 Gb Ex tb IIIC T80 °C Db IP66
Permissible ambient temperature	-20 °C to +40 °C[1)]
Rated voltage	up to 250 V (3-pole) / 690 V (4-pole) / 415 V (5-pole)
Rated current	16 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 16 A
Connecting terminals	2 x 1.5 mm² - 16 mm²
Enclosure drilling	2 x M25 metal thread with 2 x M25 screw plug, various cable glands on request
Protection class	I
Degree of protection accd. to EN 60529	IP 66
Enclosure material	stainless steel AISI 316L
Weight	1.3 kg (3-pole) / 1.8 kg (5-pole)

[1)] extended temperature range on request

Ordering details Wall socket 16 A (stainless steel)

Voltage	h	Rated current	Dimensions in mm (L x W x H)	Weight approx.	Cable entry	Order No.
Wall socket 3-pole						
110 - 130 V	 4 h	16 A	200 x 200 x 270	1.3 kg	2 x M25	**GHG 511 4304 R1001**
200 - 250 V	 6 h	16 A	200 x 200 x 270	1.3 kg	2 x M25	**GHG 511 4306 R1001**
Wall socket 4-pole						
690 V	 5 h	16 A	200 x 200 x 270	1.8 kg	2 x M25	**GHG 511 4405 R1001**
415 V	 6 h	16 A	200 x 200 x 270	1.8 kg	2 x M25	**GHG 511 4406 R1001**
Wall socket 5-pole						
240 - 415 V	 6 h	16 A	200 x 200 x 270	1.8 kg	2 x M25	**GHG 511 4506 R1001**



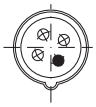
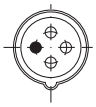
Wall socket 32 A

Technical data

	Ex-wall socket 32 A
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6 I Ⓔx II D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1041
IECEx Certificate of Conformity	IECEx BVS 12.0027
Marking accd. to IECEx	Ex de mb IIC T5/T6 Gb Ex tb IIIC T80 °C Db IP66
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	up to 690 V (4-pole) / 415 V (5-pole)
Rated current	32 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 32 A
Connecting terminals	2 x 2.5 mm² - 35 mm²
Enclosure drilling	2 x M32 metal thread with 2 x M32 screw plug, various cable glands on request
Protection class	I
Degree of protection accd. to EN 60529	IP 66
Enclosure material	Stainless steel AISI 316L
Weight	2.3 kg

[1] extended temperature range on request

Ordering details Wall socket 32 A (stainless steel)

Voltage	h	Rated current	Dimensions in mm (L x W x H)	Weight approx.	Cable entry	Order No.
Wall socket 4-pole						
690 V	 5 h	32 A	436 x 300 x 210	2.3 kg	2 x M32	**GHG 512 4405 R1001**
415 V	 6 h	32 A	436 x 300 x 210	2.3 kg	2 x M32	**GHG 512 4406 R1001**
500 V	 7 h	32 A	436 x 300 x 210	2.3 kg	2 x M32	**GHG 512 4407 R1001**
250 V	 9 h	32 A	436 x 300 x 210	2.3 kg	2 x M32	**GHG 512 4409 R1001**
Wall socket 5-pole						
415 V	 6 h	32 A	436 x 300 x 210	2.3 kg	2 x M32	**GHG 512 4506 R1001**



Wall socket 63 A

Technical data

	Ex-wall socket 63 A
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6 I Ⓔx II D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 1070
IECEx Certificate of Conformity	IECEx BVS 12.0027
Marking accd. to IECEx	Ex de mb IIC T5/T6 Gb Ex tb IIIC T80 °C Db IP66
Permissible ambient temperature	-20 °C to +40 °C[1)]
Rated voltage	up to 690 V (4-pole) / 415 V (5-pole)
Rated current	63 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 63 A
Connecting terminals	2 x 16 mm² - 95 mm²
Enclosure drilling	2 x M50 metal thread with 2 x M50 screw plug, various cable glands on request
Protection class	I
Degree of protection accd. to EN 60529	IP 66
Enclosure material	Stainless steel AISI 316L
Weight	8.9 kg

[1)] extended temperature range on request

Ordering details Wall socket 63 A (stainless steel)

Voltage	h	Rated current	Dimensions in mm (L x W x H)	Weight approx.	Cable entry	Order No.
Wall socket 4-pole						
690 V	 5 h	63 A	640 x 320 x 270	8.9 kg	2 x M50	**GHG 514 4405 R1001**
415 V	 6 h	63 A	640 x 320 x 270	8.9 kg	2 x M50	**GHG 514 4406 R1001**
500 V	 7 h	63 A	640 x 320 x 270	8.9 kg	2 x M50	**GHG 514 4407 R1001**
Wall socket 5-pole						
240 - 415 V	 6 h	63 A	640 x 320 x 270	8.9 kg	2 x M50	**GHG 514 4506 R1001**



Wall socket 125 A

Technical data

	Ex-wall socket 125 A
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6 I Ⓔx II D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 01 ATEX 1069
IECEx Certificate of Conformity	IECEx BVS 12.0027
Marking accd. to IECEx	Ex de mb IIC T5/T6 Gb Ex tb IIIC T80 °C Db IP66
Permissible ambient temperature	-20 °C to +40 °C[1)]
Rated voltage	up to 690 V (4-pole) / 415 V (5-pole)
Rated current	125 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 125 A
Connecting terminals	2 x 16 mm² - 95 mm²
Enclosure drilling	2 x M50 metal thread with 2 x M50 screw plug, various cable glands on request
Protection class	I
Degree of protection accd. to EN 60529	IP 66
Enclosure material	Stainless steel AISI 316L
Weight	9.6 kg

[1)] extended temperature range on request

Ordering details Wall socket 125 A (stainless steel)

Voltage	h	Rated current	Dimensions in mm (L x W x H)	Weight approx.	Cable entry	Order No.
Wall socket 4-pole						
690 V	 5 h	125 A	640 x 320 x 270	9.6 kg	2 x M50	**GHG 515 4405 R1001**
415 V	 6 h	125 A	640 x 320 x 270	9.6 kg	2 x M50	**GHG 515 4406 R1001**
500 V	 7 h	125 A	640 x 320 x 270	9.6 kg	2 x M50	**GHG 515 4407 R1001**
250 V	 9 h	125 A	640 x 320 x 270	9.6 kg	2 x M50	**GHG 515 4409 R1001**
Wall socket 5-pole						
240 - 415 V	 6 h	125 A	640 x 320 x 270	9.6 kg	2 x M50	**GHG 515 4506 R1001**



Wall socket 63/125 A

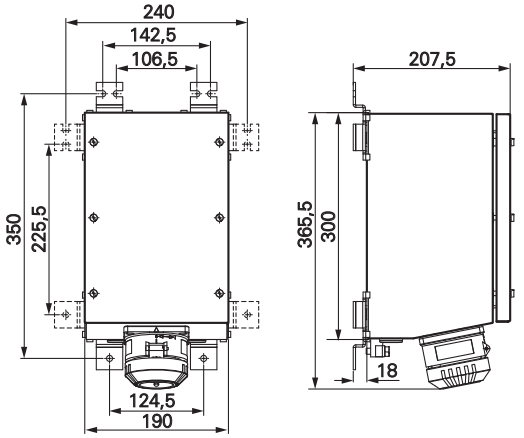


Wall socket 32 A

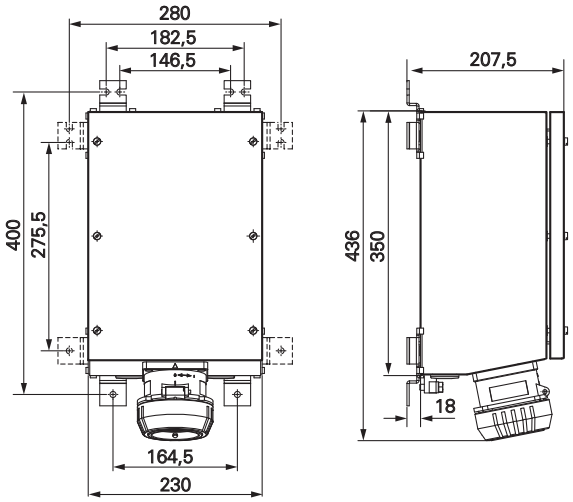


Wall socket 16 A

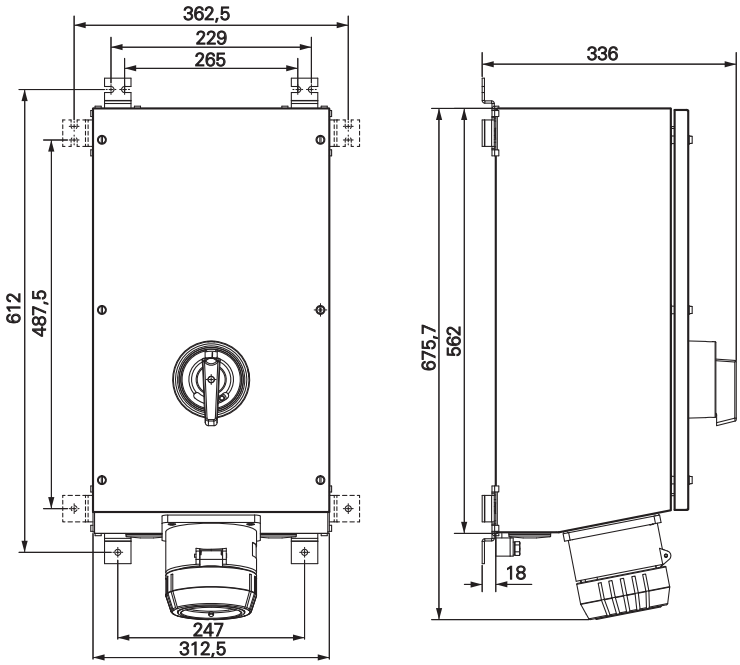
Dimension drawing



Wall socket 16 A



Wall socket 32 A



Wall socket 63 A / 125 A

Dimensions in mm

GHG 51 Ex-Wall Socket with RCD/MCB

Enclosure solutions with RCD/MCB (RCBO) 16 A up to 32 A for zone 1, 2, 21 and 22

Customized protection

The new explosion-protected wall sockets with integrated protective device allow the local, customized protection of the connected equipment.

Especially in industrial environments with their numerous sources of danger, the protection of persons always comes first. Here, an RCD/MCB that is connected directly upstream from the end consumers is the optimal solution.
With a tripping current of 10- 500 mA, it provides safe protection against serious injuries due to an electric shock in the event of a fault of the connected equipment. With the built-in RCD/MCB, the feed line and the end unit can be protected individually to suit the required load.

Local safety

With the new RCD/MCB sockets even individual work areas can be isolated with utmost precision while maintenance work is carried out. In case of a fault, only the area affected is switched off – all other areas remain fully functional! In addition, individual areas can be switched off manually and safeguarded against being switched on accidentally with the padlocking facility.

Long cable length-no problem

The reason for the problems is that with increasing cable length the loop impedance increases. An increased resistance extends the release time of a circuit breaker (fuse) or cancels the protection effect. By using the RCD/MCB, integrated directly into the wall socket, the cable lengths are shortened to the load and minimizes the circuit malfunction.

The RCD/MCB sockets allow direct, on-site access to the safety devices. As a result, you can act more flexibly and your reaction times are reduced drastically.

Proven technology

The concept of the new RCD/MCB sockets is based on our tried-and-tested RCD/MCB enclosure concept in conjunction with our robust flange sockets and the built-in Ex-d components that can be operated easily at any time via a hinged actuating flap.





Features

- **INew standard for Ex-wall sockets with personel protection**
- **Standard-enclosure for various requirements**
- **Lockable actuating flap**
- **MCB 10 - 500 mA**
- **Product series for 16 A and 32 A rated current**
- **High ingress protection IP 66**



Type1



Type 2



Type 3

Technical data

	Ex-wall socket 16 - 32 A with RCD/MCB
Marking accd. to 2014/34/EU	Ⓔx II G Ex de IIC T4 Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEx Certificate of Conformity	IECEx BKI 06.007
Marking accd. to IECE	Ex de IIC T4 ExtD A21 IP66 T80 °C
Permissible ambient temperature	-20 °C up to +40 °C [2]
Rated voltage	24 V / 130 V / 230 V / 400 V (AC)
Rated current	16 A / 32 A
Connecting terminals	16 A: 2 x 6mm² / 32 A: 2 x 16mm²
Cable glands / enclosure drilling	2 x M25 x 1,5 (16 A), 2 x M40 x 1,5 (32 A)
Insulation class	I
Degree of protection to EN 60529	IP66
Enclosure material	Enclosure: GRP[1] / flange socket: polyamide

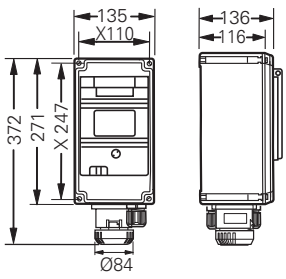
[1] Other types on request (other RCBOs or enclosure materials GRP/stainless steel)
[2] extended temperature range on request

Ordering details wall socket with RCD/MCB (RCBO)

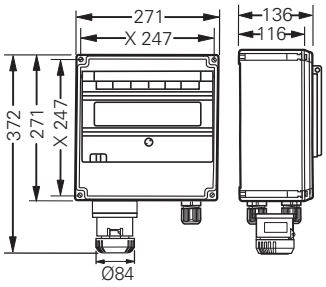
Voltage	No. of poles/h	Rated current	Dimension in mm (L x B x H)	Weigt approx.	Cable gland	Order-No.
Typ 1 with RCBO 16 A 30 mA						
110 - 130 V	3-pol. 4 h	16 A	372 x 135 x 136	2,4 kg	2 x M25	**GHG 619 0001 R0007**
24 V	3-pol. 8 h	16 A	372 x 135 x 136	2,4 kg	2 x M25	**GHG 619 0001 R0008**
220 - 250 V	3-pol. 6 h	16 A	372 x 135 x 136	2,4 kg	2 x M25	**GHG 619 0001 R0009**
Typ 2 with RCD/MCB 16 A 30 mA						
110 - 130 V	5-pol. 4 h	16 A	372 x 271 x 136	2,7 kg	2 x M25	**GHG 619 0001 R0010**
380 - 415 V	5-pol. 6 h	16 A	372 x 271 x 136	2,7 kg	2 x M25	**GHG 619 0001 R0011**
Typ 3 with RCD/MCB 32 A 30 mA						
110 - 130 V	5-pol. 4 h	32 A	522 x 271 x 136	3,5 kg	2 x M40	**GHG 619 0001 R0013**
380 - 415 V	5-pol. 6 h	32 A	522 x 271 x 136	3,5 kg	2 x M40	**GHG 619 0001 R0014**

Dimension drawing

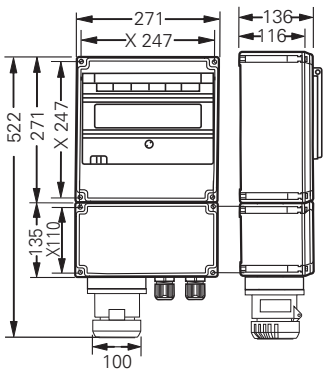
Type 1 **X = fixing dimensions**



Type 2



Type 3



Dimensions in mm

GHG 51 Ex-Plugs and Receptacles with Status LED

1 From 16 A - 125 A for zone 1, 2, 21 and 22

Operating conditions at a glance

The integrated white LED with green coloured lens indicates different operating conditions of the used type of wall socket.

Type Line:

Indicates, when the wall socket is connected to mains

Type Load:

Indicates, when the plug is correctly inserted and switched

CEAG plugs and receptacles 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 coding system of the various versions offers different solutions for a secure and problem-free utilization in all areas.

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.



Features

- **Interlocking switch design**
- **Easy plug-in & diconnect**
- **Self-cleaning multi-lamella contact design with low transition resistance**
- **High level of ingress protection (IP66) even in its plugged-in state**
- **High durability and chemical resistance**
- **Wide product range for international applications: 16 A - 125 A Series 1**
- **Fully compatible with existing plugs of the proven GHG 51 ... series...**



Wall socket 125 A



Wall socket 63 A



Wall socket 32 A



Wall socket 16 A

Technical data

	Ex-wall socket 16 A- 125 A acc. to IEC 60309-1/2 up to 690 V
Marking accd. to 2014/34/EU	Ⓔx D II 2 G Ex ed IIC T6 / Ⓔx D II 2 D Ex tD A21 IP66 T80°C
Permissible ambient temperature	-20 °C to +40 °C [1]
Rated voltage	230/400 V AC
Frequency	50/60 Hz
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure material	glass-fibre reinforced polyester

	Wall socket 16 A
EC-Type Examination Certificate	PTB 99 ATEX 1039
Rated making / Rated breaking capacity	AC-3 accd. EN 60947-3: U_e 690 V / I_e 16 A
Cable entry	1 x M25 cable gland, 1 x M25 thread plug plastic
Rated current	16 A
External back-up fuse, max.	without therm. protection: 16 A/ with therm. protection 35 A gG (rated current 16 A set to)
Connecting terminals	2 x 1.5 - 4 mm²

	Wall socket 32 A
EC-Type Examination Certificate	PTB 99 ATEX 1044
IECEx Certificate of conformity	IECEx BKI 06.0007
Marking accd. to IECEx	Ex de ia/ib m [ia/ib] IIC T4…T6
Rated making / Rated breaking capacity	AC-3 accd. EN 60947-3: Ue 690 V / Ie 32 A
Cable entry	1 x M40 cable gland, 1 x M40 thread plug plastic
Rated current	32 A
External back-up fuse, max.	without therm. protection: 32 A/ with therm. protection 50 A gG (rated current 32 A set to)
Connecting terminals	2 x 4 - 10 mm²

	Wall socket 63 A
EC-Type Examination Certificate	PTB 00 ATEX 1070
Rated making / Rated breaking capacity	AC-3 accd. EN 60947-3: Ue 690 V / Ie 63 A
Cable entry	1 x M50 cable gland, 1 x M50 thread plug plastic
Rated current	63 A
External back-up fuse, max.	without therm. protection: 63 A/ with therm. protection 80 A gG (rated current 63 A set to)
Connecting terminals	2 x 4 - 25 mm²

	Wall socket 125 A
EC-Type Examination Certificate	PTB 01 ATEX 1069
Rated making / Rated breaking capacity	AC-3 accd. EN 60947-3: Ue 690 V / Ie 125 A
Cable entry	1 x M63 cable gland, 1 x M63 thread plug plastic
Rated current	125 A
External back-up fuse, max.	without therm. protection: 125 A/ with therm. protection 125 A gG (rated current 125 A set to)
Connecting terminals	2 x 4 - 70 mm²

[1] extended temperature range on request

Details for used cable glands see pages 2.3.ff



Wall socket 16 A



Wall socket 32 A



Wall socket 63 A



Wall socket 125 A

Ordering details 16/32/63/125 A 3-pole, 4-pole and 5-pole up to 415V

Voltage	h	Type	Weight approx.	Order No.
Type 16 A line				
110 V - 130 V	4 h	Wall socket - 3 pole	1.3 kg	**GHG 511 4304 R0301**
200 V - 250 V	6 h	Wall socket - 3 pole	1.3 kg	**GHG 511 4306 R0301**
110 V - 130 V	4 h	Wall socket - 5 pole	1.9 kg	**GHG 511 4504 R0301**
380 V - 415 V	6 h	Wall socket - 5 pole	1.9 kg	**GHG 511 4506 R0301**
380 V - 415 V	8 h	Wall socket - 5 pole	1.9 kg	**GHG 511 4508 R0301**
Type 16 A load				
110 V - 130 V	4 h	Wall socket - 3 pole	1.3 kg	**GHG 511 4304 R0351**
200 V - 250 V	6 h	Wall socket - 3 pole	1.3 kg	**GHG 511 4306 R0351**
110 V - 130 V	4 h	Wall socket - 5 pole	1.9 kg	**GHG 511 4504 R0351**
380 V - 415 V	6 h	Wall socket - 5 pole	1.9 kg	**GHG 511 4506 R0351**
380 V - 415 V	8 h	Wall socket - 5 pole	1.9 kg	**GHG 511 4508 R0351**
Type 32 A line				
110 V - 130 V	4 h	Wall socket - 5 pole	2.8 kg	**GHG 619 0001 R0001**
380 V - 415 V	6 h	Wall socket - 5 pole	2.8 kg	**GHG 619 0001 R0002**
380 V - 415 V	8 h	Wall socket - 5 pole	2.8 kg	**GHG 619 0001 R0003**
Type 32 A load				
110 V - 130 V	4 h	Wall socket - 5 pole	2.8 kg	**GHG 619 0001 R0004**
380 V - 415 V	6 h	Wall socket - 5 pole	2.8 kg	**GHG 619 0001 R0005**
380 V - 415 V	8 h	Wall socket - 5 pole	2.8 kg	**GHG 619 0001 R0006**
Type 63 A line				
110 V - 130 V	4 h	Wall socket - 5 pole	8.2 kg	**GHG 514 4504 R0301**
380 V - 415 V	6 h	Wall socket - 5 pole	8.2 kg	**GHG 514 4506 R0301**
380 V - 415 V	8 h	Wall socket - 5 pole	8.2 kg	**GHG 514 4508 R0301**
Type 63 A load				
110 V - 130 V	4 h	Wall socket - 5 pole	8.2 kg	**GHG 514 4504 R0351**
380 V - 415 V	6 h	Wall socket - 5 pole	8.2 kg	**GHG 514 4506 R0351**
380 V - 415 V	8 h	Wall socket - 5 pole	8.2 kg	**GHG 514 4508 R0351**
Type 125 A line				
110 V - 130 V	4 h	Wall socket - 5 pole	12.6 kg	**GHG 515 4504 R0301**
380 V - 415 V	6 h	Wall socket - 5 pole	12.6 kg	**GHG 515 4506 R0301**
380 V - 415 V	8 h	Wall socket - 5 pole	12.6kg	**GHG 515 4508 R0301**
Type 125 A load				
110 V - 130 V	4 h	Wall socket - 5 pole	12.6 kg	**GHG 515 4504 R0351**
380 V - 415 V	6 h	Wall socket - 5 pole	12.6 kg	**GHG 515 4506 R0351**
380 V - 415 V	8 h	Wall socket - 5 pole	12.6 kg	**GHG 515 4508 R0351**

Other voltage ranges and h-codes on request.



Wall socket 16 A



Wall socket 32 A

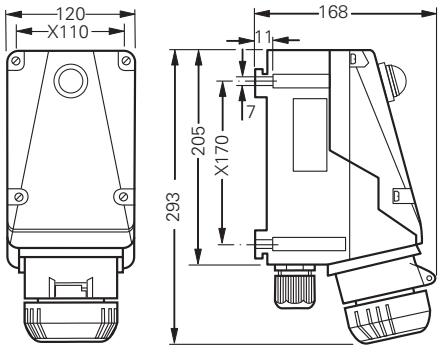


Wall socket 63 A

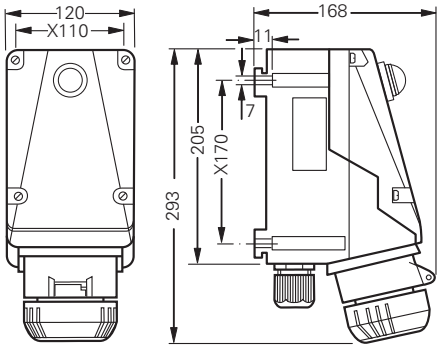


Wall socket 125 A

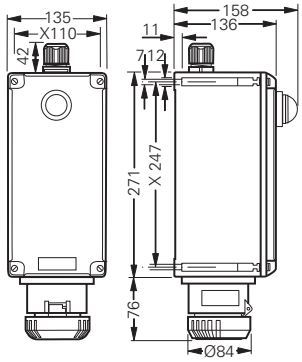
Dimension drawing I Wiring diagram



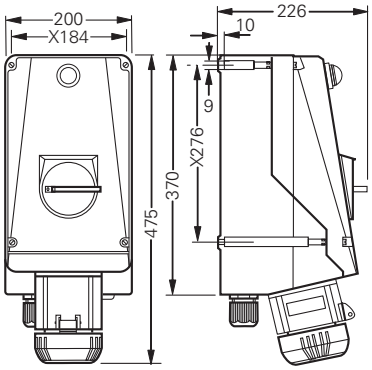
Wall socket 16 A 3-pole



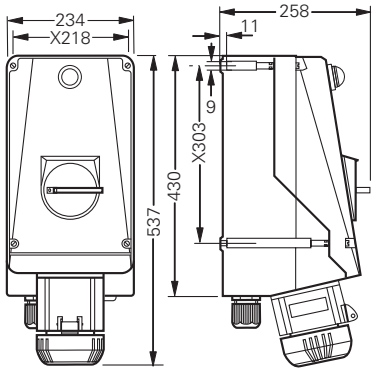
Wall socket 16 A 5-pole



Wall socket 32 A 5-pole

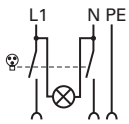


Wall socket 63 A 5-pole

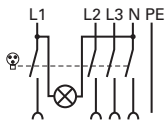


Wall socket 125 A 5-pole

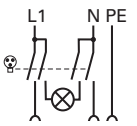
X = fixing dimensions



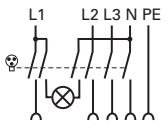
2-pole.+PE Line



3-pole.+N+PE Line



2-pole.+PE LOAD



3-pole.+N+PE LOAD

Dimensions in mm

Light Metal Ex-Plugs and Sockets

1 16 A metal design for zone 1 and 2

Customized protection

The explosion-protected light metal plugs and receptacle devices 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 highest 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 receptacle devices with high-quality cast aluminium housings can be connected to a large connecting room via explosion-proof conduits or explosion-proof screwed connections.

Flameproof enclosure

Unused flameproof threads for cable glands have to be closed with certified plugs.

The light metal plug and socket devices have an outside earthing connection.

The explosion-protected plug can be plugged into an industrial sockets if their contacts are executed according to IEC 60309. Connecting terminals are in an Ex-e chamber, all other parts are Ex-d protected.



Features

- **Ex-d enclosure**
- **High mechanical, chemical and thermal resistance conduit**
- **Connecting technology**



Plug



Wall socket

Technical data

	Ex-d plugs and receptacles 16 A
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6
EC-Type Examination Certificate	LOM 03 ATEX 2019
Permissible ambient temperature	–20 °C to +55 °C [1]
Rated voltage	see ordering details
Rated current	16 A
Frequency	50/60 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 415 V / I_e 16 A
External back-up fuse, max.	without therm. protection: 16 A / with therm. protection: 35 A gG
Degree of protection accd. to EN 60529	IP65
Enclosure material	light alloy, polyester powder coated

	Wall socket
Cable entry	2 x 3/4", ISO 7/1, one plugged
Connecting terminals	2 x 1.0 - 2.5 mm²

	Plug
Cable entry	Ø 8.5 - 13.5 mm
Connecting terminals	1 x 1.0 - 2.5 mm² / PE: 1 x 1.5 - 6 mm²

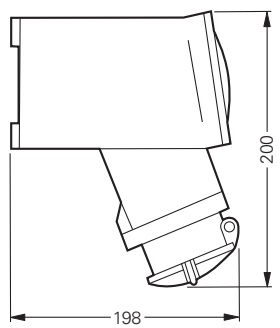
[1] extended temperature range on request

Ordering details

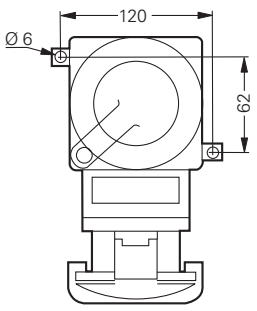
Voltage[1]	h	Type	Weight approx.	Order No.
Type 16 A 3-pole				
220 - 250 V	6	Wall socket	2.7 kg	**NOR 000 003 230 016**
	6	Plug	0.55 kg	**NOR 000 003 230 058**
Type 16 A 4-pole				
380 - 415 V	6	Wall socket	2.7 kg	**NOR 000 003 230 024**
	6	Plug	0.55 kg	**NOR 000 003 230 066**
Type 16 A 5-pole				
380 - 415 V	6	Wall socket	2.7 kg	**NOR 000 003 230 032**
	6	Plug	0.7 kg	**NOR 000 003 230 074**

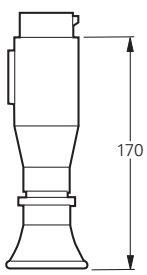
[1] other voltage ranges on request

Dimension drawing



Wall socket





Plug

No. of poles	A
3-pole	Ø 56 mm
4-pole	Ø 66 mm
5-pole	Ø 70 mm

X = fixing dimensions

Dimensions in mm

Ex-Plugs and Receptacles Plastic Version for Zone 2

16 A to 125 A

A good connection

Providing electrical energy there, where it is most needed – even in hazardous areas for Zone 2.

Non-stationary electrical apparatus have generally high requirements on the energy/power supply. Robust plugs and receptacles as well as a high chemical resistance are at the first glance very important. Electrical reliability is a must not only for all connectivity products.

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 utilisation

CEAG plugs and receptacles 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.

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.

Apart from the plugs and receptacles for the European market, we also have plugs and sockets extra for the US market, which are in accordance to all of the necessary standards UL and safety protection systems used there. The available standard range used here, are the 20 A, 30 A, 60 A and 100 A.



Features

- **Safety standard IP66 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

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-1/2 16A
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nC IIC T5/T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Permissible ambient temperature	-20°C up to +40°C[1)]
Rated voltage	up to 400 V (3-pole) / 750 V (4-pole) / 500 V (5-pole) AC
Rated current	up to 16 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	400 V / 16 A
External back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gG (rated current 16 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66

	Wall socket
Cable entry	1 x M25 cable gland, 1 x M25 plastic Ex-screw plug or
	2 x metal thread M20 with plastic Ex-screw plug
Connecting terminals	2 x 1.5 - 4 mm²
Enclosure material	glass-fibre reinforced polyester

	Plug
Cable entry	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	1 x 1.0 - 2.5 mm²
Enclosure material	Polyamide

	Coupler
Cable entry	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	2 x 1.5 - 4 mm²
Enclosure material	Polyamide

	Flange socket
Connecting terminals	2 x 1 - 4 mm²
Enclosure material	Polyamide

[1)] extended temperature range on request

Details for used cable glands see pages 2.3.ff



Wall socket



Flange socket



Coupler



Plug

Ordering details

Voltage	h	Type	Cable entry	Weight approx.	Order No.
Type 16 A 3-pole					
110-130 V	 4	Wall socket	KU	1.2 kg	**GHG 516 4304 R0001**
		Wall socket	ME	1.3 kg	**GHG 516 4304 R3001**
		Flange socket		0.35 kg	**GHG 516 8304 R0001**
		Coupler		0.7 kg	**GHG 516 3304 R0001**
		Plug		0.35 kg	**GHG 516 7304 R0001**
200-250 V	 6	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**
Type 16 A 4-pole					
200-250 V	 9	Wall socket	KU	1.4 kg	**GHG 516 4409 R0001**
		Wall socket	ME	1.5 kg	**GHG 516 4409 R3001**
		Flange socket		3.8 kg	**GHG 516 8409 R0001**
		Coupler		0.9 kg	**GHG 516 3409 R0001**
		Plug		0.38 kg	**GHG 516 7409 R0001**
380-415 V	 6	Wall socket	KU	1.4 kg	**GHG 516 4406 R0001**
		Wall socket	ME	1.5 kg	**GHG 516 4406 R3001**
		Flange socket		3.8 kg	**GHG 516 8406 R0001**
		Coupler		0.9 kg	**GHG 516 3406 R0001**
		Plug		0.38 kg	**GHG 516 7406 R0001**
480-500 V	 7	Wall socket	KU	1.4 kg	**GHG 516 4407 R0001**
		Wall socket	ME	1.5 kg	**GHG 516 4407 R3001**
		Flange socket		3.8 kg	**GHG 516 8407 R0001**
		Coupler		0.9 kg	**GHG 516 3407 R0001**
		Plug		0.38 kg	**GHG 516 7407 R0001**
600-690 V	 5	Wall socket	KU	1.8 kg	**GHG 516 4405 R0001**
		Wall socket	ME	1.9 kg	**GHG 516 4405 R3001**
		Flange socket		3.8 kg	**GHG 516 8405 R0001**
		Coupler		0.9 kg	**GHG 516 3405 R0001**
		Plug		0.38 kg	**GHG 516 7405 R0001**
Type 16 A 5-pole					
200-250 V 380-415 V	 6	Wall socket	KU	1.4 kg	**GHG 516 4506 R0001**
		Wall socket	ME	1.5 kg	**GHG 516 4506 R3001**
		Flange socket		0.4 kg	**GHG 516 8506 R0001**
		Coupler		0.95 kg	**GHG 516 3506 R0001**
		Plug		0.42 kg	**GHG 516 7506 R0001**

other voltage ranges and versions, e.g. with aux. contact, on request

KU = 1 x plastic cable glands M25 cable gland, 1 x M25 plastic Ex-screw plug

ME = 2 x metal thread M20 with plastic Ex-screw plug



Plug



Coupler

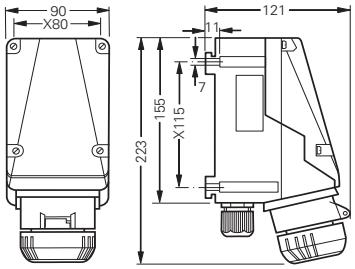


Flange socket

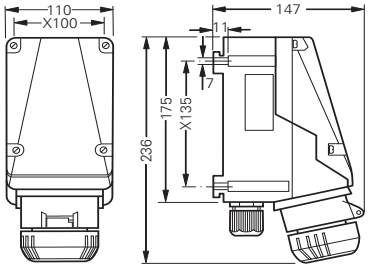


Wall socket

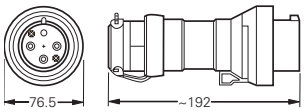
Dimension drawing I Wiring diagram



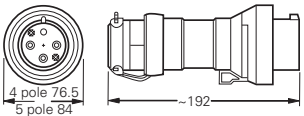
Wall socket 3-pole



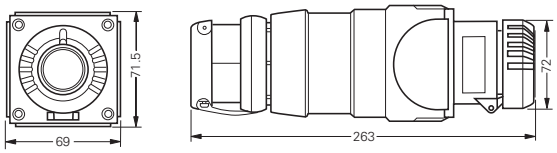
Wall socket 4/5-pole



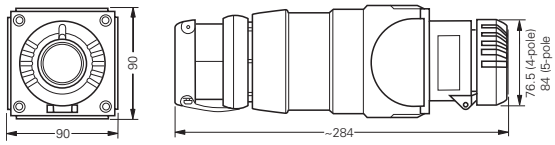
Plug 3-pole



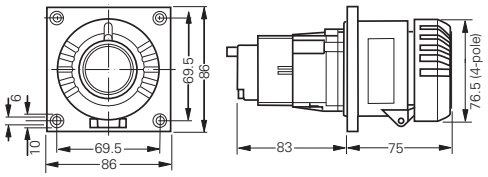
Plug 4/5-pole



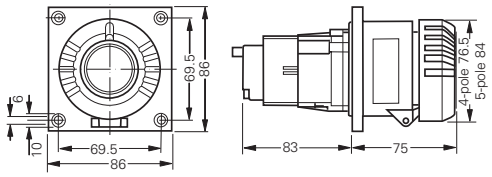
Coupler 3-pole



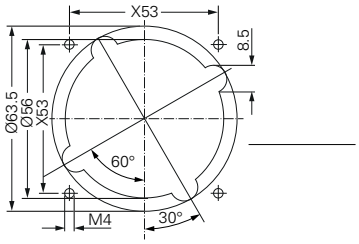
Coupler 4/5-pole



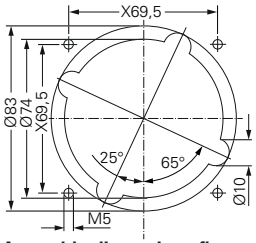
Flange socket 3-pole



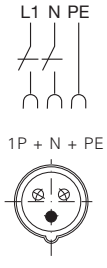
Flange socket 4/5-pole

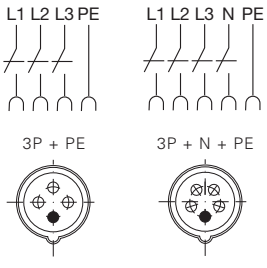


Assembly dimensions flange socket



Assembly dimensions flange socket X = fixing dimensions





Dimensions in mm



Mounting plate



Plug cap



Protective canopy

Accessories

Type	Application	Fixing method	Order No.
Mounting plates for wall sockets 16 A			
Size 4	for wall mounting	snap on	**GHG 610 1953 R0126**
Size 4	for trellis mounting	snap on	**GHG 610 1953 R0126**
Size 4	for pipe clamp	snap on	**GHG 610 1953 R0130**

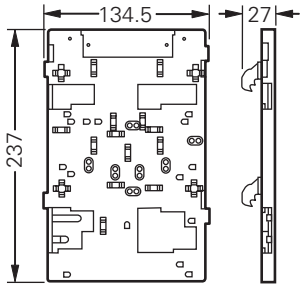
Type	Order No.
Plug cap for plugs 16 A	
Plug 16 A 3-pole	**GHG 510 1901 R0001**
Plug 16 A 4-pole	**GHG 510 1901 R0002**
Plug 16 A 5-pole	**GHG 510 1901 R0003**

Type	OU	Order No.
Accessories for mounting plates		
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

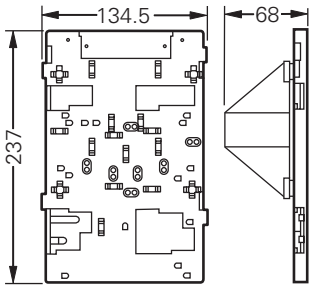
Please pay attention that only order units (OU) according to the ordering details can be delivered.

Type	Application	Order No.
Protective canopy for mounting plate		
Size 4	for mounting plate size 4, snap on	**GHG 610 1955 R0107**

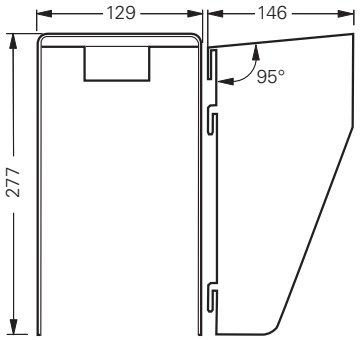
Dimension drawing



Mounting plate size 4
for wall/trellis mounting



Mounting plate size 4
for pipe mounting



Protective canopy size 4

Dimensions in mm



Plug



Coupler



Flange socket



Wall socket

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-1/2
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nC IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Permissible ambient temperature	–20 °C to +40 °C[1)]
Rated voltage	690 V (AC)
Rated current	up to 32 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 32 A
External back up fuse	without therm. protection: 35 A with therm. protection: 50 A gG (rated current 32 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure colour	black

	Wall socket
Cable entry/enclosure drilling	1 x M40 cable gland, 1 x M40 plastic Ex-screw plug or 2 x M32 metal thread with 2 plastic Ex-screw plug
Connecting terminals	2 x 4 - 10 mm²
Enclosure material	glass-fibre reinforced polyester

	Plug
Cable entry	Ø 12 - 28 mm
Connecting terminals	1 x 1.0 - 6 mm²
Enclosure material	Polyamide

	Coupler
Cable entry	Ø 12 - 28 mm
Connecting terminals	2 x 4 - 10 mm²
Enclosure material	Polyamide

	Flange socket
Connecting terminals	2 x 4 - 10 mm²
Enclosure material	Polyamide

[1)] extended temperature range on request

Details for used cable glands see pages 2.3.ff



Wall socket



Flange socket



Coupler



Plug

Ordering details

Voltage	h	Type	Cable entry	Weight approx.	Order No.
Type 32 A 4-pole					
200-250 V	 9	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	 6	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	 7	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	 5	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**
Type 32 A 5-pole					
200-250 V 380-415 V	 6	Wall socket	KU	1.8 kg	**GHG 517 4506 R0001**
		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**
		Plug		0.7 kg	**GHG 517 7506 R0001**

other voltage ranges and versions, e.g. with aux. contact, on request

KU = 1 x plastic cable glands M40 cable gland, 1 x M40 plastic Ex-screw plug

ME = 2 x metal thread M32 with plastic Ex-screw plug



Plug



Coupler

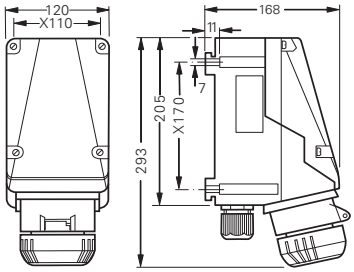


Flange socket

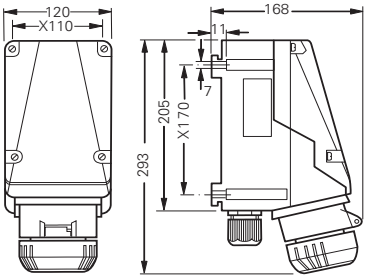


Wall socket

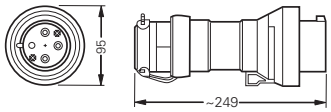
Dimension drawing I Wiring diagram



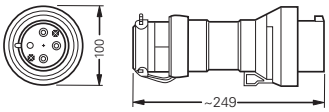
Wall socket 4-pole



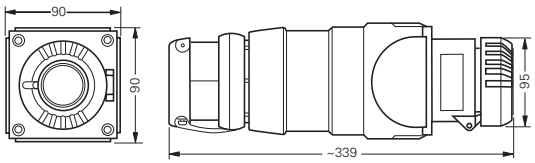
Wall socket 5-pole



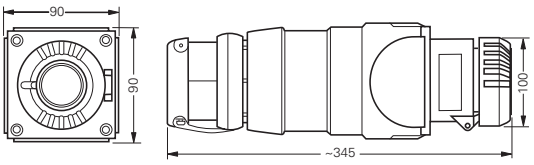
Plug 4-pole



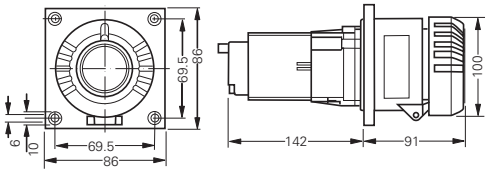
Plug 5-pole



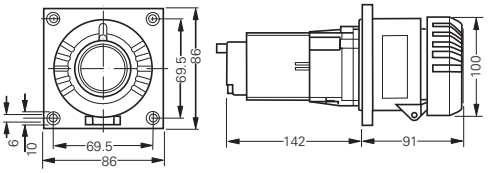
Coupler 4-pole



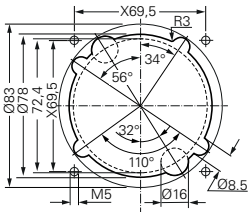
Coupler 5-pole



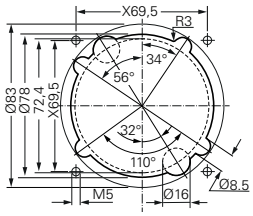
Flange socket 4-pole



Flange socket 5-pole

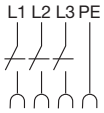


Assembly dimensions flange socket



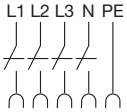
Assembly dimensions flange socket

X = fixing dimensions



3P + PE





3P + N + PE



Dimensions in mm



Mounting plate



Plug cap



Protective canopy

Accessories

Type	Application	Fixing method	Order No.
Mounting plates for wall sockets 32 A			
Size 5	for wall mounting	snap on	**GHG 610 1953 R0128**
Size 5	for trellis mounting	snap on	**GHG 610 1953 R0128**
Size 5	for pipe clamp	snap on	**GHG 610 1953 R0132**

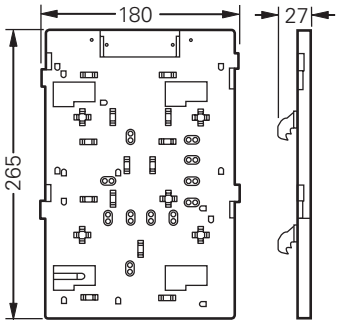
Type	Order No.
Plug cap for plugs 32 A	
Plug 32 A 3-pole/4-pole	**GHG 510 1901 R0004**
Plug 32 A 5-pole	**GHG 510 1901 R0005**

Type	OU	Order No.
Accessories for mounting plates		
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

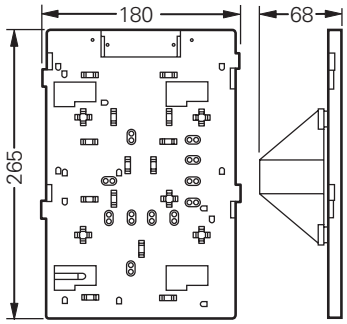
Please pay attention that only order units (OU) according to the ordering details can be delivered.

Type	Application	Order No.
Protective canopy for mounting plate		
Size 5	for mounting plate size 5, snap on	**GHG 610 1955 R0108**

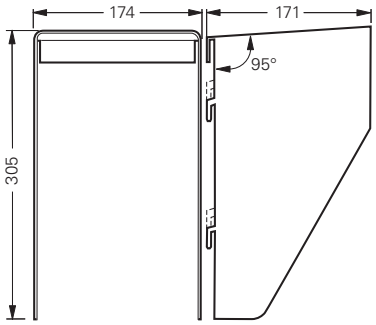
Dimension drawing



Mounting plate size 5
for wall/trellis mounting



Mounting plate size 5
for pipe mounting



Protective canopy size 5

Dimensions in mm



Plug



Wall socket

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-1/2 up to 690 V
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nC IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Permissible ambient temperature	-20 °C to + 40 °C[1)]
Rated voltage	690 V
Rated current	63 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 63 A
External back up fuse	without therm. protection: 63 A with therm. protection: 80 A gG (rated current 63 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure colour	black

	Wall socket
Cable entry/enclosure drilling	1 x M50 cable gland, 1 x M50 plastic Ex-screw plug or 2 x M40 metal thread with plastic Ex-screw plug
Connecting terminals	2 x 4 - 25 mm² / with cable lug[2)] 1 x 35 mm²
Enclosure material	glass-fibre reinforced polyester

	Plug
Cable gland	Ø 19 - 34 mm
Connecting terminals	1 x 4 - 16 mm² / 1 x 25 mm² with pin cable lug
Enclosure material	Polyamide

[1)] extended temperature range on request
[2)] use supplied cable lugs
[3)] see accessories

Details for used cable glands see pages 2.3.ff



Wall socket



Plug



Plug cap

Ordering details

Voltage	h	Type	Cable entry	Weight approx.	Order No.
Type 63 A 4-pole					
200-250 V	 9	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	 6	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	 7	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	 5	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**
Type 63 A 5-pole					
200-250 V 380-415 V	 6	Wall socket	KU	8.15 kg	**GHG 518 4506 R0001**
		Wall socket	ME	8.25 kg	**GHG 518 4506 R3001**
		Plug		0.75 kg	**GHG 518 7506 R0001**

Accessories

Type	OU	Order No.
Plug cap for plugs		
Set of ring cable lug 35/70 mm² for wall socket (6 + 2 pcs.)	1	**GHG 510 1916 R0001**
Plug cap 4-pole/5-pole	1	**GHG 510 1901 R0006**
Set of cable lugs 35 mm² (5 pcs., for plug)	5	**GHG 510 1916 R0001**

other voltage ranges and versions, e.g. with aux. contact, on request

KU = 1 x plastic cable glands M40 cable gland, 1 x M40 plastic Ex-screw plug

ME = 2 x metal thread M32 with plastic Ex-screw plug

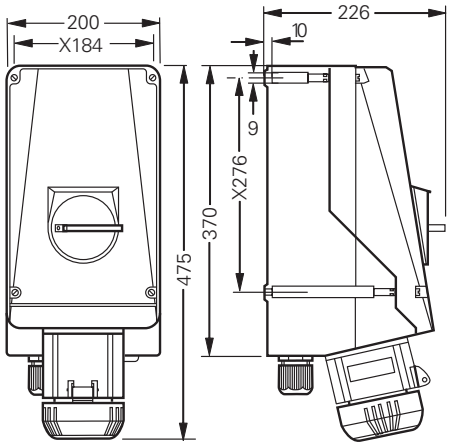


Plug

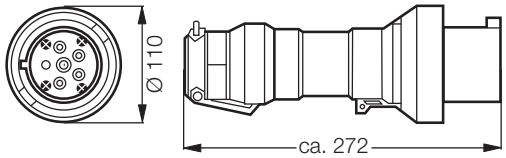


Wall socket

Dimension drawing I Wiring diagram

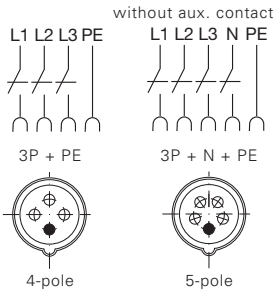


Wall socket 4/5-pole



Plug 4/5-pole

X = fixing dimensions



Dimensions in mm



Wall socket



Plug

Technical data

	Ex-plugs and receptacles acc. to IEC 60309-1/2 to 690 V
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex de IIC T6
EC-Type Examination Certificate	PTB 99 ATEX 1115
Permissible ambient temperature	-20 °C to + 40 °C[1]
Rated voltage	690 V
Rated current	125 A
Frequency	up to 400 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 125 A
External back up fuse	without therm. protection: 125 A with therm. protection: 160 A gG (rated current 125 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure colour	black

	Wall socket
Cable entry/enclosure drilling	1 x M63 cable gland, 1 x M63 plastic Ex-screw plug or 1 x M50 ,1 x M50 plastic Ex-screw plug
Connecting terminals	2 x 4 - 70 mm² / with cable lug[2] 1 x 120 mm²
Enclosure material	glass-fibre reinforced polyester

	Plug
Cable entry	Ø 31 - 58 mm
Connecting terminals	1 x 4 - 35 mm² / with pin cable lug[3] 1 x 50 mm²
Enclosure material	Polyamide

[1] extended temperature range on request

[2] use supplied cable lugs

[3] see accessories

Details for used cable glands see pages 2.3.ff

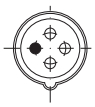


Plug



Wall socket

Ordering details

Voltage	h	Type	Cable entry	Weight approx.	Order No.
Type 125 A 4-pole					
200-250 V	 9	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**
380-415 V	 6	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**
480-500 V	 7	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**
600-690 V	 5	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**
Type 125 A 5-pole					
200-250 V 380-415 V	 6	Wall socket	KU	13.0 kg	**GHG 519 4506 R0001**
		Wall socket	ME	13.2 kg	**GHG 519 4506 R3001**
		Plug		1.2 kg	**GHG 519 7506 R0001**

Accessories

Type	OU	Order No.
Plug cap 4-pole/5-pole	1	**GHG 510 1901 R0007**
Set of ring cable lugs 70/120 mm² for wall socket (4 + 1 pcs.)	5	**GHG 260 1911 R0004**
Set of cable lugs 50 mm² (5 pcs., for plug)	5	**GHG 510 1916 R0002**

other voltage ranges and versions, e.g. with aux. contact, on request

KU = 1 x plastic cable glands M40 cable gland, 1 x M40 plastic Ex-screw plug

ME = 2 x metal thread M32 with plastic Ex-screw plug

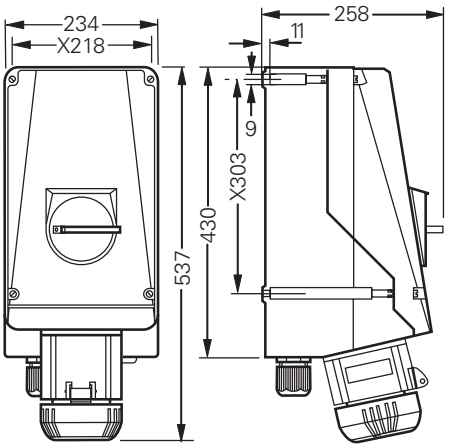


Wall socket

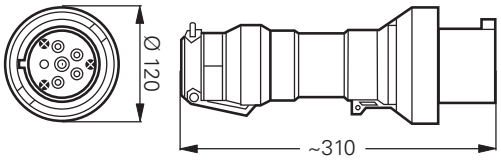


Plug

Dimension drawing I Wiring diagram

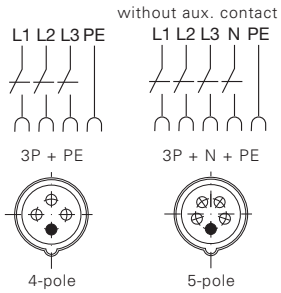


Wall socket 4/5-pole



Plug 4/5-pole

X = fixing dimensions



Dimensions in mm


Abwasser

Plugs and Receptacles Plastic Version for Industrial Applications

16 A to 125 A

Not explosion-protected, but proven CEAG quality

CEAG plugs and receptacles are not only robust, they are also very reliable. In the "normal" industrial environment plugs and receptacles are exposed to similar conditions (chemical and mechanical) as their explosion-protected counterparts. With the introduction of the plug and receptacle generation Crouse-Hinds has now a complete program for industrial usage.

Easy to install

The wall sockets can simply be clipped-onto pre-installed mounting plates without having to use tools. These high quality plugs and receptacles warranty 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 receptacle generation.

Degree of protection: IP66

Plugs and receptacles of the 16 A to 125 A range fulfil (even when they are plugged-in) the high safety standard of IP66 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 and North American market.



Features

- **High impact resistant**
- **Low engaging force**
- **Safety standard IP66 applies also in plugged-in condition**
- **Self-cleaning lamellar contacts, low transition resistance**
- **Fibre-glass reinforced polyester housings**
- **Interlocking switch**



Plug



Coupler



Flange socket



Wall socket

Technical data

	Plugs and receptacles - industrial use acc. to IEC 60309-1/2 up to 690 V
Permissible ambient temperature	-20 °C to +40 °C / -45 °C to +55 °C (optional)[1)]
Rated voltage	415 V (3-pole) / 690 V (4-/5-pole)
Rated current	16 A
Frequency	50/60 Hz
External back-up fuse, max.	without therm. protection: 16 A
Protection class	I
Degree of protection accd. to EN 60529	IP66
	Wall socket with interlock switch
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3 for wall socket with switch	U_e 500 V / I_e 20 A
Cable entry	1 x M25 cable gland, 1 x M25 thread plug plastic
Connecting terminals	2 x 1.5 – 4 mm²
Enclosure material	glass-fibre reinforced polyester
	Wall socket without switch
Cable entry	2 x M25 top, 2 x M25 bottom
Connecting terminals	2 x 1.5 – 4 mm²
Enclosure material	Polyamide
	Plug
Cable entry	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	1 x 1.0 – 2.5 mm²
Enclosure material	Polyamide
	Coupler
Cable entry	Ø 8 - 19 mm (3-pole) / Ø 8 - 21 mm (4-pole) / 12 - 21 mm (5-pole)
Connecting terminals	2 x 1.5 – 4 mm²
Enclosure material	Polyamide
	Flange socket/inlet
Connecting terminals	2 x 1.5 – 4 mm²
Enclosure material	Polyamide

[1)] extended temperature range on request

Details for used cable glands see pages 2.3.ff



Wall socket w. interlock switch



Inlet

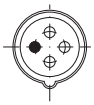


Coupler



Plug

Ordering details

Voltage	h	Type	Weight approx.	Order No.
Type 16 A 3-pole				
110-130 V	 4	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	 6	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**
Type 16 A 4-pole				
200-250 V	 9	Wall socket	0.85 kg	**GHG 521 2409 R0001**
		Wall socket with interlock 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	 6	Wall socket	0.85 kg	**GHG 521 2406 R0001**
		Wall socket with interlock 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	 7	Wall socket	0.85 kg	**GHG 521 2407 R0001**
		Wall socket with interlock 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	 5	Wall socket	0.85 kg	**GHG 521 2405 R0001**
		Wall socket with interlock 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**
Type 16 A 5-pole				
200-250 V 380-415 V	 6	Wall socket	0.90 kg	**GHG 521 2506 R0001**
		Wall socket with interlock 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



Plug



Coupler

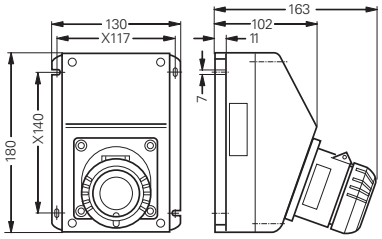


Flange socket

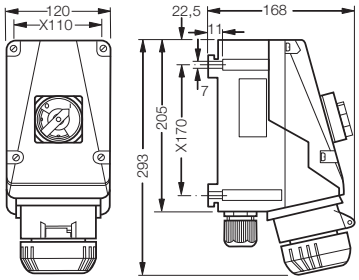


Wall socket w. switch 5-pole

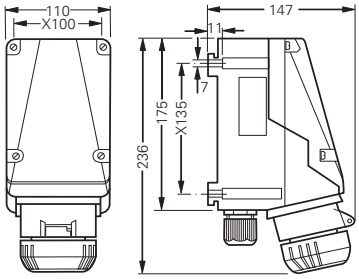
Dimension drawing I Wiring diagram



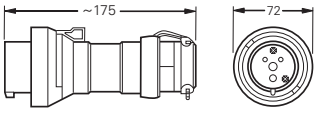
Wall socket without switch 3, 4, 5-pole



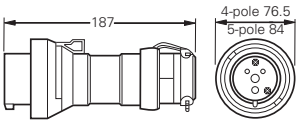
Wall socket 4-pole with switch



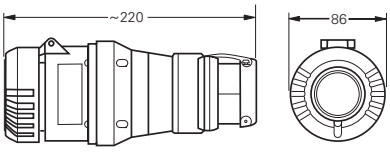
Wall socket 5-pole with switch



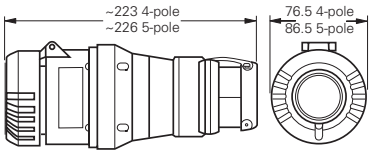
Plug 3-pole



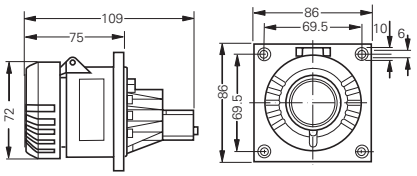
Plug 4/5-pole



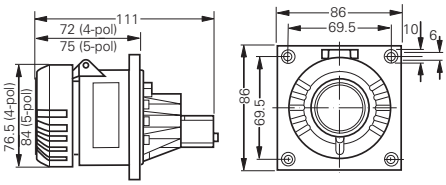
Coupler 3-pole



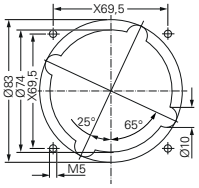
Coupler 4/5-pole



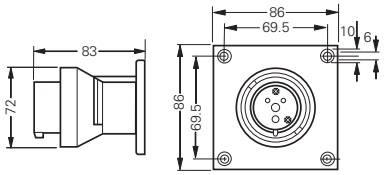
Flange socket 3-pole



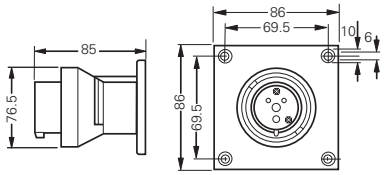
Flange socket 4/5-pole



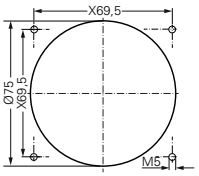
Assembly dimensions flange socket 5 pole



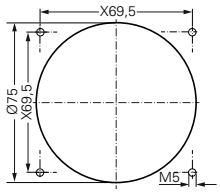
Inlet 3-pole



Inlet 4/5-pole



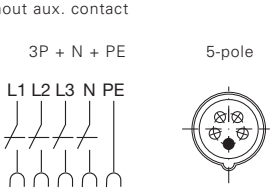
Assembly dimensions inlet 5 pole



Assembly dimensions flange socket 3 + 4 pole and inlet



without aux. contact



X = fixing dimensions

Dimensions in mm



Mounting plate



Plug cap



Protective canopy

Accessories

Type	Application	Fixing method	Order No.
Mounting plates for wall sockets 16 A			
Size 4	for wall mounting	snap on	**GHG 610 1953 R0126**
Size 4	for trellis mounting	snap on	**GHG 610 1953 R0126**
Size 4	for pipe clamp	snap on	**GHG 610 1953 R0130**

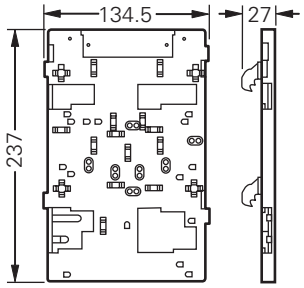
Type	Order No.
Plug cap for plugs 16 A	
Plug 16 A 3-pole	**GHG 510 1901 R0001**
Plug 16 A 4-pole	**GHG 510 1901 R0002**
Plug 16 A 5-pole	**GHG 510 1901 R0003**

Type	OU	Order No.
Accessories for mounting plates		
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

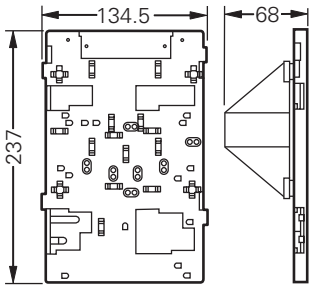
Please pay attention that only order units (OU) according to the ordering details can be delivered.

Type	Application	Order No.
Protective canopy for mounting plate		
Size 4	for mounting plate size 4, snap on	**GHG 610 1955 R0107**

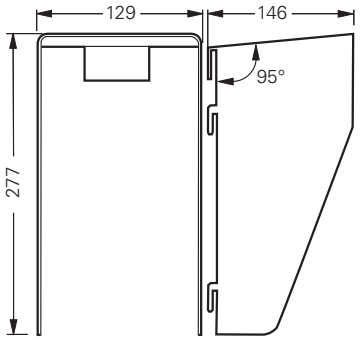
Dimension drawing



Mounting plate size 4
for wall/trellis mounting



Mounting plate size 4
for pipe mounting



Protective canopy size 4

Dimensions in mm



Inlet



Plug



Wall socket



Wall socket w. interlock switch 4-pole

Technical data

	Plugs and receptacles - industrial use acc. to IEC 60309-1/2 up to 690 V
Permissible ambient temperature	-20 °C to +40 °C / -45 °C to +55 °C (optional)[1)]
Rated voltage	690 V
Rated current	32 A
Frequency	50/60 Hz
External back-up fuse, max.	without therm. protection: 32 A
Protection class	I
Degree of protection accd. to EN 60529	IP66
	Wall socket with interlock switch
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3 for wall socket with switch	U_e 500 V / I_e 20 A
Cable entry	1 x M40 cable gland, 1 x M40 thread plug plastic
Connecting terminals	2 x 4 – 10 mm²
Enclosure material	glass-fibre reinforced polyester
	Wall socket without switch
Cable entry	2 x M25 top, M25 bottom
Connecting terminals	1 x 4 – 10 mm²
Enclosure material	Polyamide
	Plug
Cable entry	Ø 17 - 28 mm
Connecting terminals	1 x 1 – 6 mm²
Enclosure material	Polyamide
	Coupler
Cable entry	Ø 17 - 28 mm
Connecting terminals	2 x 4 – 10 mm²
Enclosure material	Polyamide
	Flange socket/Inlet
Connecting terminals	2 x 4 – 10 mm²
Enclosure material	Polyamide

[1)] extended temperature range on request

Details for used cable glands see pages 2.3.ff



Wall socket



Flange socket



Coupler



Plug

Ordering details

Voltage	h	Type	Weight approx.	Order No.
Type 32 A 4-pole				
200-250 V	 9	Wall socket	1.0 kg	**GHG 522 2409 R0001**
		Wall socket with interlock 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	 6	Wall socket	1.0 kg	**GHG 522 2406 R0001**
		Wall socket with interlock 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	 7	Wall socket	1.0 kg	**GHG 522 2407 R0001**
		Wall socket with interlock 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	 5	Wall socket	1.0 kg	**GHG 522 2405 R0001**
		Wall socket with interlock 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**
Type 32 A 5-pole				
200-250 V 380-415 V	 6	Wall socket	1.1 kg	**GHG 522 2506 R0001**
		Wall socket with interlock 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**
		Inlet	0.33 kg	**GHG 522 9506 R0001**

Other voltage ranges and versions available on request



Plug



Coupler

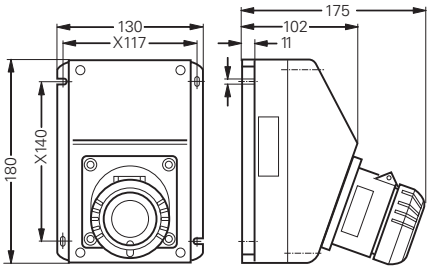


Flange socket

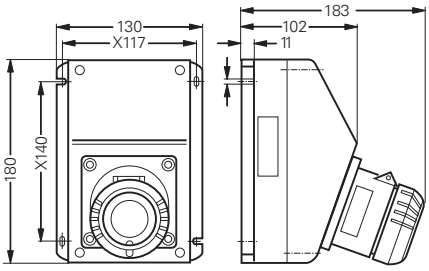


Wall socket w. interlock switch 5-pole

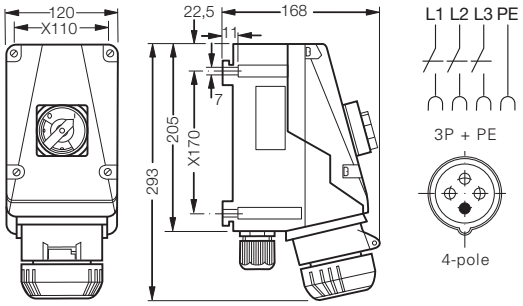
Dimension drawing I Wiring diagram



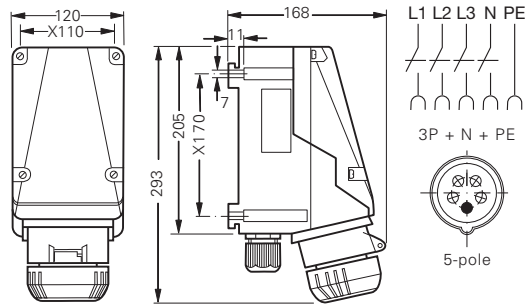
Wall socket 4-pole



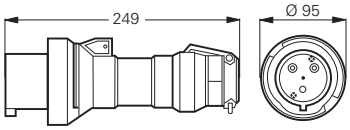
Wall socket 5-pole



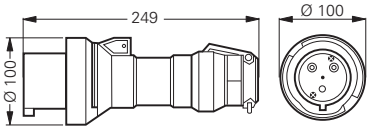
Wall socket with interlock switch 4-pole



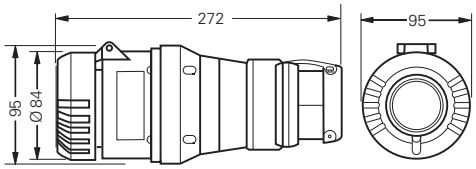
Wall socket with interlock switch 5-pole



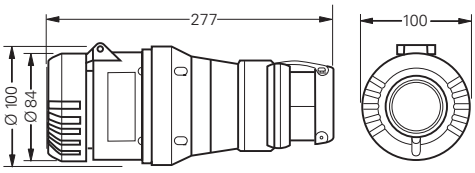
Plug 4-pole



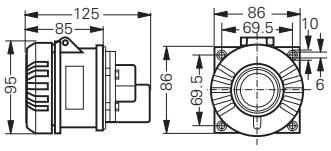
Plug 5-pole



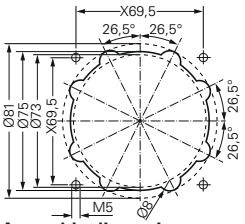
Coupler 4-pole



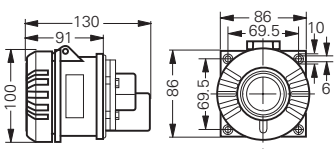
Coupler 5-pole



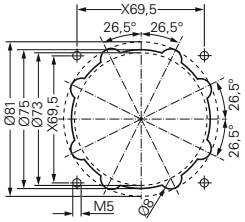
Flange socket 4-pole



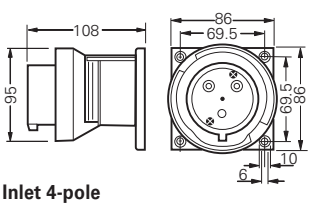
Assembly dimensions



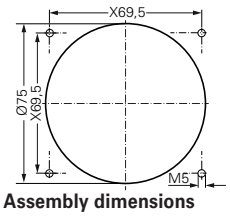
Flange socket 5-pole



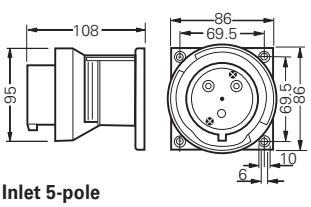
Assembly dimensions



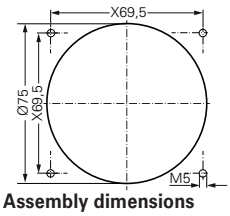
Inlet 4-pole



Assembly dimensions



Inlet 5-pole



Assembly dimensions

X = fixing dimensions

Dimensions in mm



Mounting plate



Plug cap



Protective canopy

Accessories

Type	Application	Fixing method	Order No.
Mounting plates for wall sockets 32 A			
Size 5	for wall mounting	snap on	**GHG 610 1953 R0128**
Size 5	for trellis mounting	snap on	**GHG 610 1953 R0128**
Size 5	pipe clamp	snap on	**GHG 610 1953 R0132**

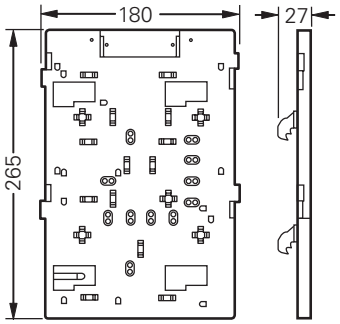
Type	Order No.
Plug cap for plugs 32 A	
Plug 32 A 3-pole/4-pole	**GHG 510 1901 R0004**
Plug 32 A 5-pole	**GHG 510 1901 R0005**

Type	OU	Order No.
Accessories for mounting plates		
Mounting set for pipes 1" (Ø 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

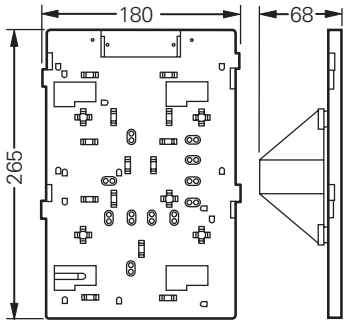
Please pay attention that only order units (OU) according to the ordering details can be delivered.

Type	Application	Order No.
Protective canopy for mounting plate		
Size 5	for mounting plate size 5, snap on	**GHG 610 1955 R0108**

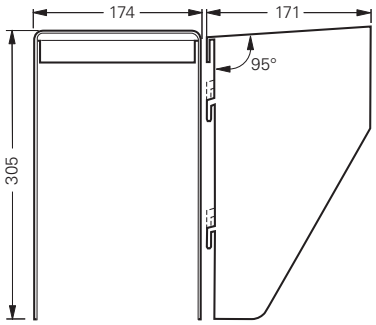
Dimension drawing



Mounting plate size 5
for wall/trellis mounting



Mounting plate size 5
for pipe mounting



Protective canopy size 5

Dimensions in mm



Inlet



Coupler



Flange socket



Wall socket w. interlock switch

Technical data

	Plugs and receptacles - industrial use acc. to IEC 60309-1/2 up to 690 V
Permissible ambient temperature	-20 °C to +40 °C / -45 °C to +55 °C (optional)[1]
Rated voltage	690 V
Rated current	63 A
Frequency	50/60 Hz
External back-up fuse, max.	without therm. protection: 63 A
Protection class	I
Degree of protection accd. to EN 60529	IP66

	Wall socket with interlock switch
Rated making / Rated breaking capacity AC-23 accd. EN 60947-3 for wall socket with switch	U_e 415 V / I_e 63 A
Cable entry	1 x M50 cable gland, 1 x M50 thread plug plastic
Connecting terminals	2 x 4 – 25 mm² with switch
	2 x 4 – 35 mm² without switch
Enclosure material	glass-fibre reinforced polyester

	Plug
Cable entry	Ø 19 - 34 mm
Connecting terminals	1 x 4 – 16 mm² / with pin cable lug[2] 1 x 35 mm²
Enclosure material	Polyamide

	Coupler
Cable entry	Ø 19 - 34 mm
Connecting terminals	1 x 2.5 – 35 mm²
Enclosure material	Polyamide

	Flange socket/Inlet
Connecting terminals	1 x 2.5 – 35 mm²
Enclosure material	Polyamide

[1] extended temperature range on request

[2] use supplied cable lugs

Details for used cable glands see pages 2.3.ff



Wall socket w. interlock switch



Flange socket



Coupler



Plug

Ordering details

Voltage	h	Type	Weight approx.	Order No.
Type 63 A 4-pole				
200-250 V	 9	Wall socket with interlock 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	 6	Wall socket with interlock 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	 7	Wall socket with interlock 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	 5	Wall socket with interlock 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**
Type 63 A 5-pole				
200/250 V up to 380/415 V	 6	Wall socket with interlock switch	5.6 kg	**GHG 524 4506 R0001**
		Plug	0.8 kg	**GHG 524 7506 R0001**
		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

Type	OU	Order No.
Plug cap for plugs		
Set of pin cable lug 35 mm² (5 pcs. for plug)	5	**GHG 510 1916 R0001**
Plug cap 4-pole/5-pole	1	**GHG 510 1901 R0006**



Plug



Coupler

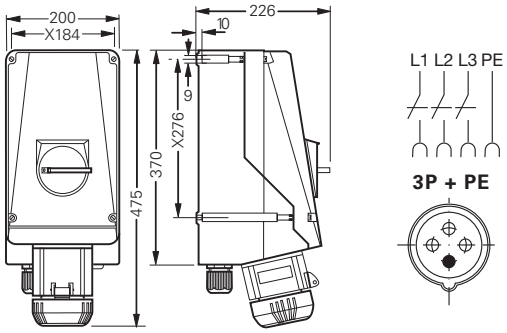


Inlet

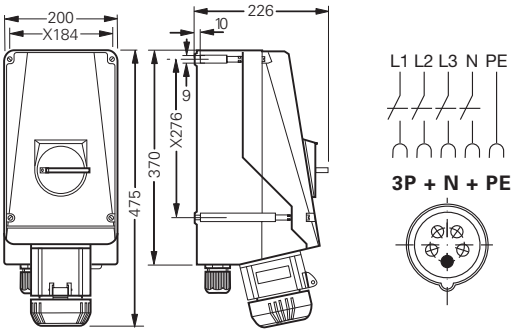


Wall socket w. interlock switch

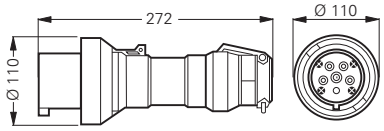
Dimension drawing I Wiring diagram



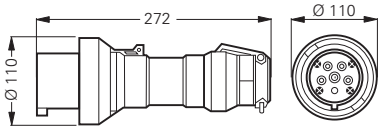
Wall socket 4-pole



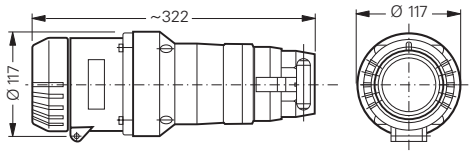
Wall socket 5-pole



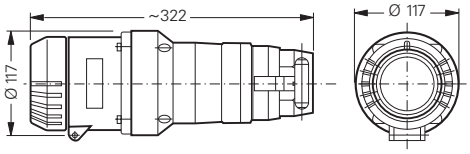
Plug 4-pole



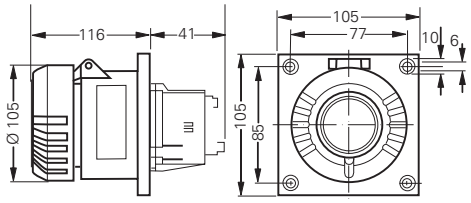
Plug 5-pole



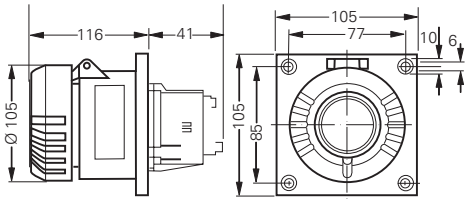
Coupler 4-pole



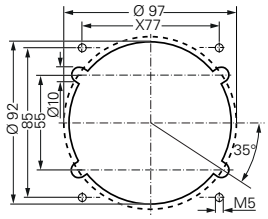
Coupler 5-pole



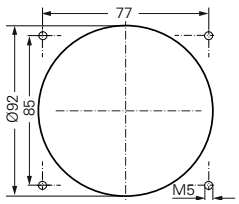
Flange socket 4-pole



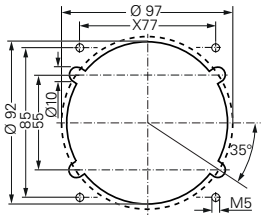
Flange socket 5-pole



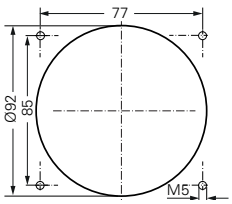
Assembly dimensions flange socket



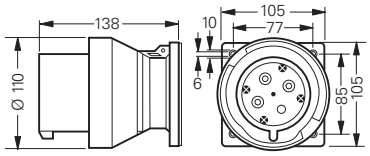
Assembly dimensions inlet



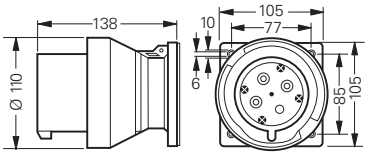
Assembly dimensions flange socket



Assembly dimensions inlet



Inlet 4-pole



Inlet 5-pole

X = fixing dimensions

Dimensions in mm



Wall socket w. interlock switch



Inlet



Plug

Technical data

	Plugs and receptacles - industrial use acc. to IEC 60309-1/2 up to 690 V
Permissible ambient temperature	–20 °C to +40 °C / -40 °C to +55 °C (optional)[1]
Rated voltage	690 V~
Rated current	125 A
Frequency	50/60 Hz
External back-up fuse, max.	without therm. protection: 125 A
Protection class	I
Degree of protection accd. to EN 60529	IP66
	Wall socket with interlock switch
Rated making / Rated breaking capacity AC-23 accd. EN 60947-3 for wall socket with switch	U_e 415 V / I_e 90 A
Cable entry	1 x M63 cable gland, 1 x M63 thread plug plastic
Connecting terminals	2 x 10 – 70 mm²
Enclosure material	glass-fibre reinforced polyester
	Plug
Cable entry	Ø 31 - 58 mm
Connecting terminals	1 x 2.5 – 35 mm² / with pin cable lug[2] 35 mm²
Enclosure material	Polyamide
	Inlet
Connecting terminals	1 x 2.5 – 35 mm²
Enclosure material	Polyamide

[1] extended temperature range on request

[2] use supplied cable lugs

Details for used cable glands see pages 2.3.ff



Plug

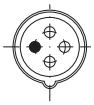


Inled



Wall socket w. interlock switch

Ordering details

Voltage	h	Type	Weight approx.	Order No.
Type 125 A 4-pole				
200-250 V	 9	Wall socket with interlock switch	8.6 kg	**GHG 525 4409 R0001**
		Plug	1.3 kg	**GHG 525 7409 R0001**
		Inlet	0.9 kg	**GHG 525 9409 R0001**
380-415 V	 6	Wall socket with interlock switch	8.6 kg	**GHG 525 4406 R0001**
		Plug	1.3 kg	**GHG 525 7406 R0001**
		Inlet	0.9 kg	**GHG 525 9406 R0001**
480-500 V	 7	Wall socket with interlock switch	8.6 kg	**GHG 525 4407 R0001**
		Plug	1.3 kg	**GHG 525 7407 R0001**
		Inlet	0.9 kg	**GHG 525 9407 R0001**
600-690 V	 5	Wall socket with interlock switch	8.6 kg	**GHG 525 4405 R0001**
		Plug	1.3 kg	**GHG 525 7405 R0001**
		Inlet	0.9 kg	**GHG 525 9405 R0001**
Type 125 A 5-pole				
200-250 V 380-415 V	 6	Wall socket with interlock switch	8.8 kg	**GHG 525 4506 R0001**
		Plug	1.4 kg	**GHG 525 7506 R0001**
		Inlet	1.1 kg	**GHG 525 9506 R0001**

Other voltage ranges and versions available on request

Accessories

Type	OU	Order No.
Plug cap for plugs		
Set of pin cable lug 50 mm² (5 pcs. for plug)	5	**GHG 510 1916 R0002**
Plug cap 4-pole/5-pole	1	**GHG 510 1901 R0007**



Wall socket w. interlock switch

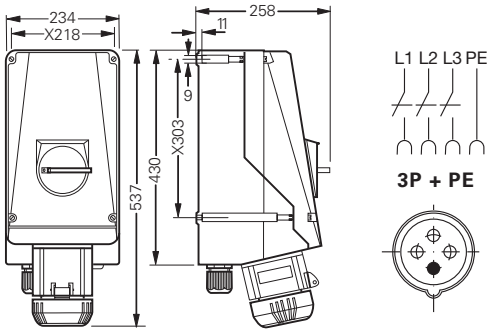


Inlet

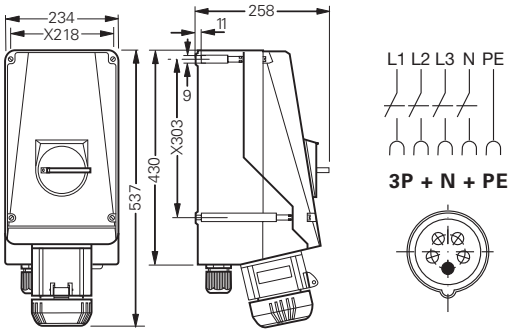


Plug

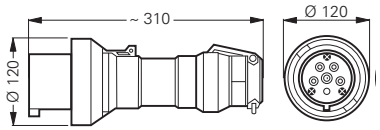
Dimension drawing | Wiring diagram



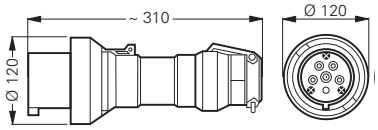
Wall socket 4-pole



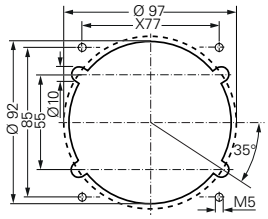
Wall socket 5-pole



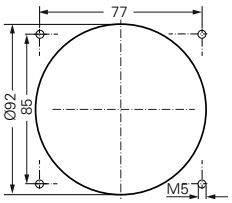
Plug 4-pole



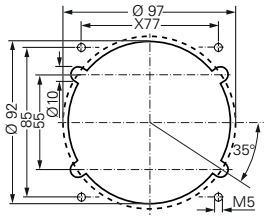
Plug 5-pole



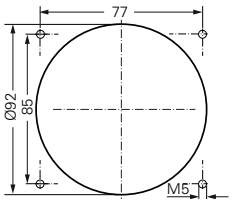
Assembly dimensions flange socket



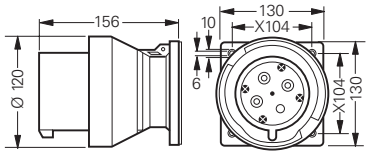
Assembly dimensions inlet



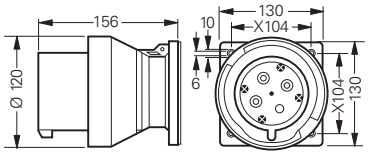
Assembly dimensions flange socket



Assembly dimensions inlet



Inlet 4-pole



Inlet 5-pole

X = fixing dimensions

Dimensions in mm



Ex-Repair and Maintenance Receptacles

16 A up to 63 A plugs and receptacles plastic version for zones 1, 2, 21 and 22

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 receptacles 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 receptacles is selectively possible after a hot work permit has been issued.

The CEAG repair and maintenance receptacles with and without an interlocking switch can be used with both industry and Ex-plugs. Interlocked repair and maintenance receptacles have an internal switch who prevents that a plug can be pulled out while power is on. The interlock is activated by turning the plug.

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 power.



Features

- **Commercially available industrial apparatus can be used with a „hot work permit“**
- **Sockets with lamellar contacts for a secure connection**
- **Switch and/or socket cover are lockable**
- **High mechanical, chemical and thermal stability**



non-interlocked



non-interlocked



interlocked

Technical data

	Ex-receptacles accd. to IEC 60309-1/2
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C/T95 °C
EC-Type Examination Certificate	PTB 00 ATEX 1032 X
Permissible ambient temperature	–20 °C to +40 °C[1)]
Rated voltage	up to 440 V (AC)
Rated current	16 A (AC)
Frequency	50/60 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 415 V / I_e 16 A
External back-up fuse, max.	without therm. protection: 16 A with therm. protection: 35 A gG (rated current 16 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
Cable entry	1 x M25 cable gland, 1 x M25 plastic Ex-screw plug or 2 x metal thread M20 with plastic Ex-screw plug
Connecting terminals	2 x 1.0 - 4 mm^2
Enclosure material	glass-fibre reinforced polyester

[1)] extended temperature range on request

Details for used cable glands see pages 2.3.ff



interlocked

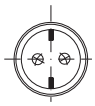


non-interlocked



non-interlocked

Ordering details

Voltage	h	Type	Cable entry	Weight approx.	Order No.
Type CEE 16 A 3-pole, interlocked					
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**
		Plug			**GHG 511 7306 R0001**
Type CEE 16 A 3-pole, non-interlocked					
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**
		Plug			**GHG 511 7306 R0001**
Type 16 A 2-pole, non-interlocked „PE-contact“					
230 V		Wall socket[1)]	KU	1.2 kg	**GHG 511 4306 R0902**
		Wall socket[1)]	ME	1.3 kg	**GHG 511 4306 R3903**
		Wall socket[1)]	GM	1.3 kg	**GHG 511 4306 R3904**
		Schutzkontakt[1)]			

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type CEE 16 A 5-pole, interlocked						
380-415 V	 6	Wall socket	–	KU	1.6 kg	**GHG 511 4506 R0901**
		Wall socket	–	ME	1.7 kg	**GHG 511 4506 R3901**
		Wall socket	yes	KH	1.6 kg	**GHG 511 4506 R0903**
		Plug				**GHG 511 7506 R0001**
Type CEE 16 A 5-pole, non-interlocked						
380-415 V	 6	Wall socket	–	KU	1.8 kg	**GHG 511 4506 R0902**
		Wall socket	–	ME	1.9 kg	**GHG 511 4506 R3902**
		Wall socket	yes	KH	1.8 kg	**GHG 511 4506 R0904**
		Plug				**GHG 511 7506 R0001**

Other voltage ranges and versions available on request

GM = 2 x metal thread M20 without cable gland/thread plug with protective earth
KU = 1 x plastic cable glands M25, 1 x M25 plastic Ex-screw plug

ME = 2 x metal thread M20 with plastic Ex-screw plug

KH = 2 x plastic cable glands M25 cable gland, with aux. contact, 1 x NO

[1)] Not compatible with GHG 511 7306 R0001



non-interlocked

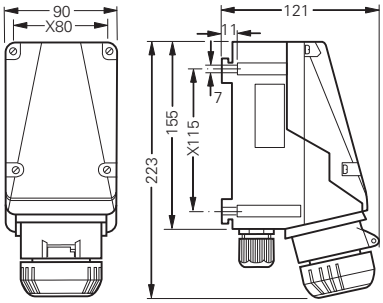


non-interlocked

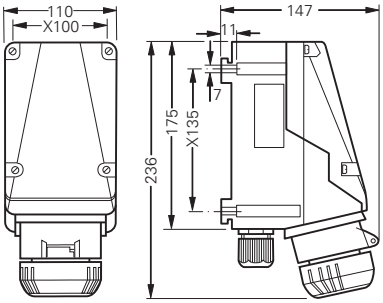


interlocked

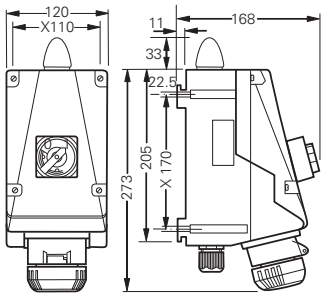
Dimension drawing I Wiring diagram



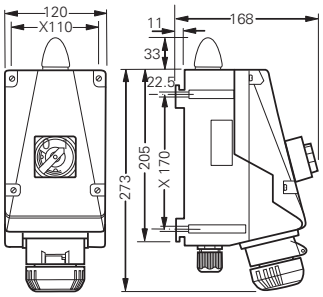
Wall socket interlocked 3-pole



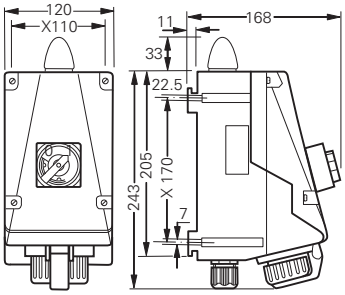
Wall socket interlocked 5-pole



Wall socket non-interlocked 3-pole



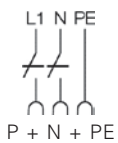
Wall socket non-interlocked 5-pole



Wall socket non-interlocked with earthing contact 3-pole

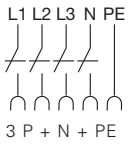
X = fixing dimensions

with earthing contact

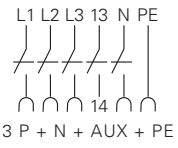




without aux. contact



with aux. contact





Dimensions in mm



interlocked



non-interlocked

Technical data

	Ex-receptacles accd. to IEC 60309-1/2
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C / T95 °C
EC-Type Examination Certificate	PTB 00 ATEX 1032 X
Permissible ambient temperature	–20 °C to +40 °C[1)]
Rated voltage	440 V (AC)
Rated current	32 A
Frequency	50/60 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 32 A
External back-up fuse, max.	without therm. protection: 35 A with therm. protection: 50 A gG (rated current 32 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
Cable entry	1 x M40 cable gland, 1 x M40 plastic Ex-screw plug or 2 x metal thread M32 with plastic Ex-screw plug
Connecting terminals	2 x 4 - 10 mm²
Enclosure material	glass-fibre reinforced polyester

[1)] extended temperature range on request

Details for used cable glands see pages 2.3.ff



non-interlocked



interlocked

Ordering details

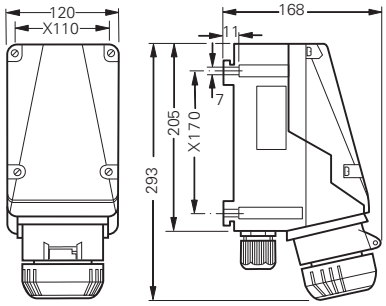
Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 32 A 5-pole, interlocked						
380-415 V	 6	Wall socket	–	KU	2.3 kg	**GHG 512 4506 R0901**
		Wall socket	–	ME	2.4 kg	**GHG 512 4506 R3901**
		Wall socket	yes	KH	2.3 kg	**GHG 512 4506 R0903**
Type 32 A 5-pole, non-interlocked						
380-415 V	 6	Wall socket	–	KU	1.8 kg	**GHG 512 4506 R0904**
		Wall socket	–	ME	1.9 kg	**GHG 512 4506 R3902**
		Wall socket	yes	KH	1.8 kg	**GHG 512 4506 R0905**

Other voltage ranges and versions available on request.
KU = 1 x plastic cable glands M40 cable gland, 1 x M40 plastic Ex-screw plug

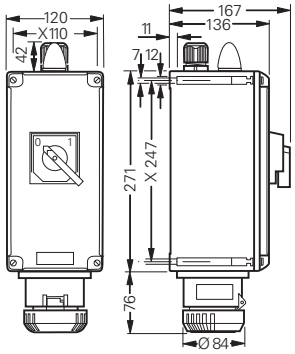
ME = 2 x metal thread M32 with plastic Ex-screw plug

KH = 1 x plastic cable glands M40 cable gland,
1 x plastic cable glands M25 cable gland

Dimension drawing I Wiring diagram

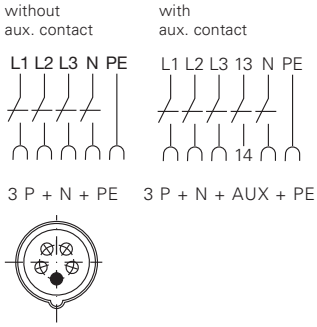


Wall socket interlocked 5-pole



Wall socket non-interlocked 5-pole

X = fixing dimensions



Dimensions in mm



interlocked



non-interlocked

Technical data

	Ex-receptacles accd. to IEC 60309-1/2
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C/T95 °C
EC-Type Examination Certificate	PTB 00 ATEX 1032 X
Permissible ambient temperature	–20 °C to +40 °C[1)]
Rated voltage	550 V (AC)
Rated current	63 A (AC)
Frequency	50/60 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 63 A
External back-up fuse, max.	without therm. protection: 63 A with therm. protection: 80 A gG (rated current 63 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP66
Cable entry	1 x M50 cable gland, 1 x M50 plastic Ex-screw plug 2 x metal thread M40 with plastic Ex-screw plug
Connecting terminals	2 x 4 - 25 mm²
Enclosure material	glass-fibre reinforced polyester

[1)] extended temperature range on request

Details for used cable glands see pages 2.3.ff



non-interlocked



interlocked

Ordering details

Voltage	h	Type	Aux. contact	Cable entry	Weight approx.	Order No.
Type 63 A 5-pole, interlocked						
380-415 V	 6	Wall socket	–	KU	8.1 kg	**GHG 514 4506 R0901**
		Wall socket	–	ME	8.3 kg	**GHG 514 4506 R3901**
		Wall socket	yes	KH	8.1 kg	**GHG 514 4506 R0903**
Type 63 A 5-pole, non-interlocked						
380-415 V	 6	Wall socket	–	KU	8.1 kg	**GHG 514 4506 R0904**
		Wall socket	–	ME	8.3 kg	**GHG 514 4506 R3902**
		Wall socket	yes	KH	8.1 kg	**GHG 514 4506 R0905**

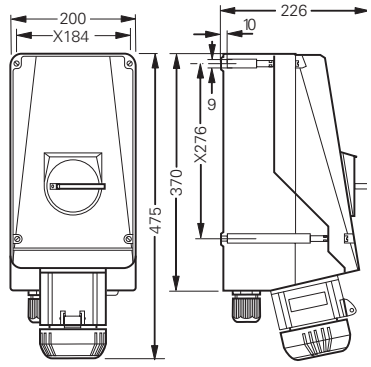
125 A and other versions on request

KU = 1 x plastic cable glands M50 cable gland, 1 x M50 plastic Ex-screw plug

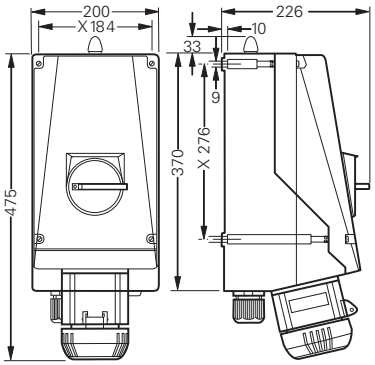
ME = 2 x metal thread M40 with plastic Ex-screw plug

KH = 1 x plastic cable glands M50 cable gland,
1 x plastic cable glands M25 cable gland, with aux. contact, 1 x NO

Dimension drawing I Wiring diagram

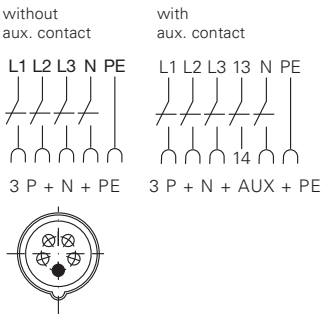


Wall socket interlocked 5-pole



Wall socket non-interlocked 5-pole

X = fixing dimensions



Dimensions in mm

Ex-Repair and Maintenance Receptacle Distribution

1 40 A and 80 A distribution plastic version for zones 1 and 2

Maintenance procedure

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 receptacle 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 receptacle distributions is selectively possible after a hot work permit has been issued.

All sockets are equipped with high quality switches and RCDs and have separate MCB's.

Repair and maintenance sockets have a red signal lamp on the top side of the housing showing the actual state of connection.



Features

- **Industrial electrical devices can be used with a „hot work permit"**
- **Sockets with lamellar contacts for secure connection**
- **Lockable switch with all-pole switching and AC-3 motor switching capability**
- **High mechanical, chemical and thermal resistance**
- **Sockets can be locked separately**



80 A

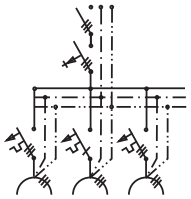
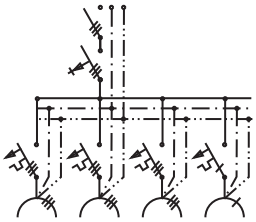


40 A

Technical data

	Repair receptacle distributions
Marking accd. to 2014/34/EU	Ex II 2 G Ex ed IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 1100 X
Permissible ambient temperature	–55 °C to +55 °C (40 A) / –36 °C to +55 °C (80 A)[1]
Rated voltage	400 V
Rated current	40 A / 80 A
Frequency	50 - 60 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	40 A switch: U_e 400 V / I_e 40 A 80 A switch: U_e 400 V / I_e 80 A
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black

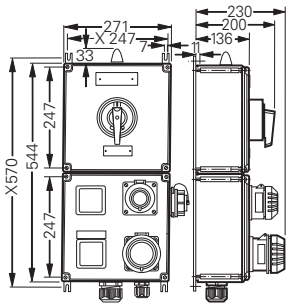
Ordering details

Number of components	Circuit	Order No.
1 switch, 4-pole, 40 A, 1 RCD 40/0,03 A; 1 IEC 60309-socket, 16 A, 1 MCB, 3-pole, 16 A 1 IEC 60309-socket, 32 A, 1 MCB, 3-pole, 32 A 1 earthed socket 16 A, 1 MCB, 1-pole, 16 A 1 signal lamp 1 cable gland M40 cable gland 1 cable gland M25 cable gland Weight: 8.5 kg		**GHG 981 0042 R0001**
1 switch, 4-pole, 80 A, 1 RCD 80/0,03 A 1 IEC 60309-socket, 16 A, 1 MCB, 3-pole, 16 A 1 IEC 60309-socket, 32 A, 1 MCB, 3-pole, 32 A 1 IEC 60309-socket, 63 A, 1 MCB, 3-pole, 63 A 1 earthed socket 16 A, 1 MCB, 1-pole, 16 A 1 signal lamp 1 cable gland M50 cable gland 1 cable gland M25 cable gland Weight: 15 kg		**GHG 981 0043 R0001**

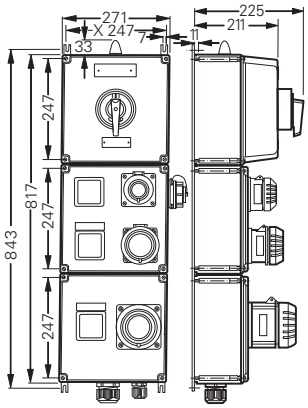
Other types on request / Customer specifications on request

[1] extended temperature range on request

Dimension drawing



Repair socket distributions 40 A



Repair socket distributions 80 A

X = fixing dimensions

Dimensions in mm

Ex-Portable Multi-Outlet Distributions and Cable Reels

16 A and 32 A for Zone 1 and Zone 21

Flexible power connection

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 or cable reels.

The multi-outlet distribution units are equipped with flange-mounting socket outlets that even comply with the high degree of protection IP66 when they are plugged in.

This means that this distribution units are also suitable for use in the harshest industrial conditions.

The portable, explosion-protected cable reels 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 receptacles 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 potential equalisation conductor. Optionally, the cable reel can also be supplied with conductive reels.

A version of all-rubber design for use in harsh areas offers various applications. The small design gives best opportunities to be stored in operation vehicles or container.

All portable distributions are for use by:

- fire brigades
- civil defence
- rescue services
- police
- maintenance operation



Features

- **High IP 66 protection**
- **Portable distribution of electricity via sockets in the area at risk of explosions**
- **Mechanical, chemical and thermal resistance**
- **Variable socket combinations**
- **Easy handling even with gloves**



16A 5-pole



16A 3-pole

Technical data

	16 A 3-pole I 16 A 5-pole
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed IIC T6
EC-Type Examination Certificate	PTB 02 ATEX 1035
Permissible ambient temperature	-20 °C to +40 °C[1)]
Rated voltage	3-pole 16 A: up to 500 V / 5-pole 16 A: up to 400 V
Rated current	16 A
Frequency	50/60 Hz
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 16 A
External back up fuse	without thermal protection: 16 A with thermal protection: 25 A gG (rated current 16 A set to)
Degree of protection accd. to EN 60529	IP66
Cable entry/enclosure drilling	Trumpet shaped cable gland M32
Weight	with 2 m connecting cable: 4.2 kg / with 5 m connecting cable 5.2 kg
Enclosure material	Socket distribution: glass-fibre reinforced polyester Plug and flange socket: polyamide
Enclosure colour	black

[1)] extended temperature range on request



16A 5/3-pole



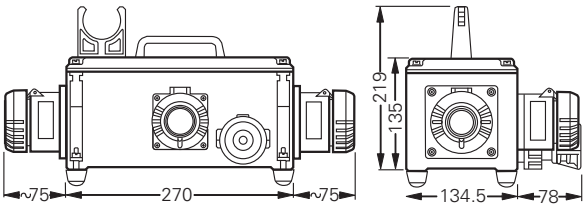
16A 3/5-pole

Ordering details

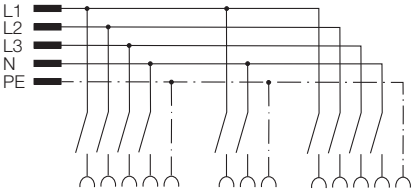
Design	Version	Order No.
Type design with 2 m connecting cable		
2 x socket 16 A 1 x socket 16 A	3-pole 5-pole	**GHG 931 0003 R0011**
1 x socket 16 A 2 x socket 16 A	3-pole 5-pole	**GHG 931 0003 R0012**
3 x socket 16 A	3-pole	**GHG 931 0003 R0013**
Type design with 5 m connecting cable		
2 x socket 16 A 1 x socket 16 A	3-pole 5-pole	**GHG 931 0003 R0021**
1 x socket 16 A 2 x socket 16 A	3-pole 5-pole	**GHG 931 0003 R0022**
3 x socket 16 A	3-pole	**GHG 931 0003 R0023**
Type design with 7 m connecting cable		
2 x socket 16 A 1 x socket 16 A	3-pole 5-pole	**GHG 931 0003 R0008**
1 x socket 16 A 2 x socket 16 A	3-pole 5-pole	**GHG 931 0003 R0009**
3 x socket 16 A	3-pole	**GHG 931 0003 R0010**

Other configurations on request.

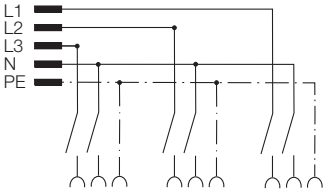
Dimension drawing | Wiring diagram



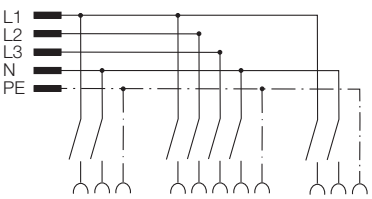
Socket distribution 16A 3-pole/5-pole



2 x 5-pole, 1 x 3-pole



3 x 3-pole



2 x 3-pole, 1 x 5-pole

Dimensions in mm



Stainless steel

Technical data

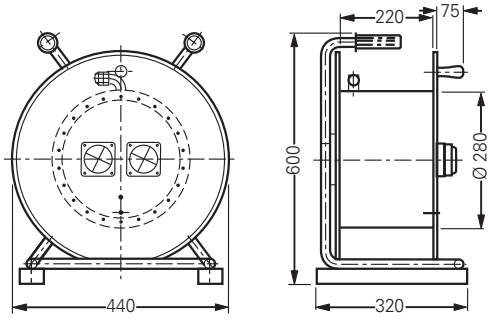
	Cable reel stainless steel
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6
EC-Type Examination Certificate	PTB 08 ATEX 1073
Permissible ambient temperature	–20 °C ... +55 °C[1)]
Rated voltage	3-pole: 415 V 5-pole: 500 V (690 V up to 5 h)
Rated current	16 A/32 A
Frequency	50/60 Hz
External back up fuse	without thermal protection: 16 A with thermal protection: 25 A gG (rated current 16 A set to)
Protection class	I
Degree of protection accd. to EN 60529	IP54
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
Enclosure material	Cable reel: enclosure stainless steel Plug and flange socket: polyamide

[1)] extended temperature range on request

Ordering details

Design	Version	Order No.
Stainless steel 16 A design with 20 m connecting cable HO7...		
1 x Flange socket 16 A 3-pole 1 x Flange socket 16 A 5-pole	5 x 2.5 mm²	**GHG 931 0003 R0031**
3 x Flange socket 16 A 3-pole	3 x 2.5 mm²	**GHG 931 0003 R0032**
2 x Flange socket 16 A 5-pole	5 x 2.5 mm²	**GHG 931 0003 R0033**
Stainless steel 16 A design with 20 m connecting cable HO7...		
2 x Flange socket 32 A 4-pole	4 x 4 mm²	**GHG 931 0003 R0034**
2 x Flange socket 32 A 5-pole	5 x 4 mm²	**GHG 931 0003 R0035**
1 x Flange socket 16 A 5-pole 1 x Flange socket 32 A 5-pole	5 x 4 mm²	**GHG 931 0003 R0036**

Dimension drawing



Dimensions in mm

Ex-Protected Portable Power Supply Units

16 A – 125 A for Zone 1

Mobile power supply everywhere

Special requirements apply for power distributions for the use and operation of portable equipment in hazardous areas in Zones 1, 2, 21 and 22. It is necessary to ensure that any external mechanical influences are effectively kept away from the equipment.

CEAG explosion-protected power distributions fulfil these high mechanical explosion protection requirements by means of a high-strength protective framework made of stainless steel (1.4301) and enclosures that have been specially developed for this purpose.

Whether in accordance with customer requirements or as a series product, sizes 16 A – 125 A are possible. All the electrical outgoing circuits can be fitted with separate MCBs or RCDs. Customized components, such as electronic sub-assemblies, can also be safely built into special, flameproof enclosures with the required Certificate of Conformity.

Degree of protection

The power distributions are fitted with flange sockets that fulfil the high requirements of the degree of protection IP 66, even with plugs inserted.

Thus, these distributions are even suitable for use under most extreme industrial conditions.

For the additional connection to the protective conductor (PE) or equipotential bonding conductor (PA), there is a stud welded directly onto the framework.



Features

- **Flexible power distribution in the hazardous area thanks to sockets with lamellar contacts for optimum contact safety**
- **Padlocking of switch with all-pole disconnection and full AC-3 switching capacity**
- **High mechanical, chemical and thermal resistance**
- **Customer specific design**



EXKO 233201 A0015

Technical data

	Ex-protected portable power supply unit EXKO
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T4 / Ⓔx II 2 D Ex tD A21 IP65 T95°C
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20°C up to +40°C
Rated voltage	400 V / 230 V
Rated current	63 A
Frequency	50 - 60 Hz
Back-up fuse external	63A gG
Protection class	I
Degree of protection accd. to EN 60529	IP65
Cable entry	1 x M50 Trumpet shaped cable gland
Enclosure material	sheet steel, painted (option stainless steel AISI 316L) Wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	metal frame stainless steel, squared 20 x 20 x 2 including lockable wheels 968 x 800 x 600 mm
Enclosure colour	RAL 7032

Ordering details

Design	Components external	Order No.
1x MCB 4-pole - C40A, 10kA 1x RCD 4-pole - 40A 0.03A 10kA 1x RCD 4-pole - 63A 0.03A, 10kA 3x RCD with overcurrent protection (1-pole+N, C16A/0.03, 10kA) 3x MCB 4-pole - C32A , 10kA	1x Plug 63A 5-pole, 06h (GHG5147506R0001) 1x Wall socket 63A 5-pole, 06h (GHG5144506R0001) 3x Flange socket 32A 5-pole, 06h (GHG5128506R0001) 6x Flange socket 16A 3-pole, 06h (GHG5118306R0001) actuating flap for components	**EXKO 233201 A0015**

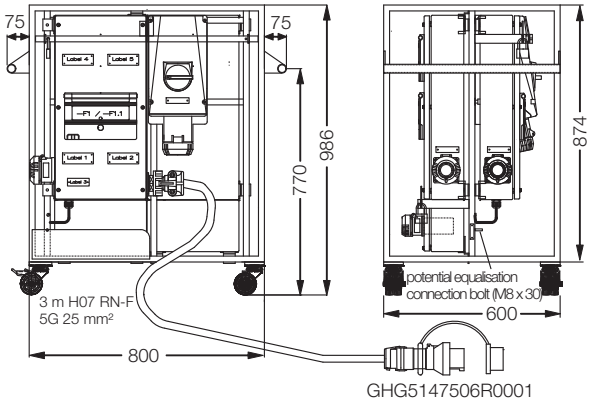
Option:

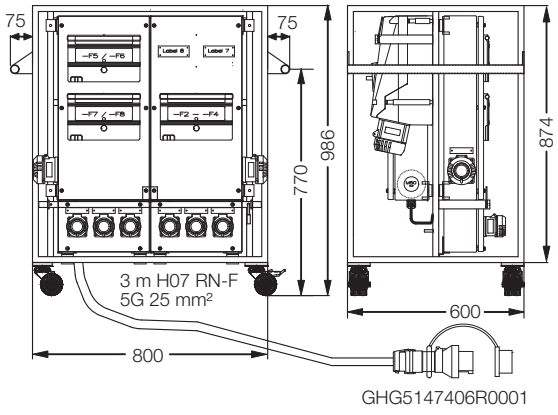
Padlock facility for enclosure cover

Enclosure material stainless steel AISI 316L

Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing





Dimensions in mm



only for illustration

Technical data

	Ex-protected portable power supply unit EXKO 233201 A0016
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T4 / Ⓔx II 2 D IP65 T95°C
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	400 V / 230 V
Rated current	32 A
Frequency	50 Hz
Back-up fuse external	32 A gG / gG
Protection class	I
Degree of protection accd. to EN 60529	IP65
Cable entry	1x M32 Trumpet shaped cable gland, 1x M12 cable gland plastic
Connecting cable	H07RN-F 5 x 6mm² with plug 32A, 3 m
Enclosure material	Sheet steel, painted (optional: stainless steel AISI 316L), Wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	Metal frame stainless steel squared 20 x 20 x 2 including lockable wheels 1019 x 800 x 600 mm
Weight	69 kg
Enclosure colour	RAL 7032

Ordering details

Design	Components external	Order No.
1x MCB S204M - C32A, 10kA 1x RCD F204A - 40A 0.03A 10kA 3x RCBO DS971 - C16A 0.03A, 10kA	1x Plug 32A 5-pole, 380-415V (06h) (GHG5127506R0001) 1x Flange socket 32A 5-pole, 380-415V (06h) (GHG5128506R0001) 6x Flange socket 16A 3-pole, 230V (06h) (GHG5118306R0001) actuating flap for components	**EXKO 233201 A0016**

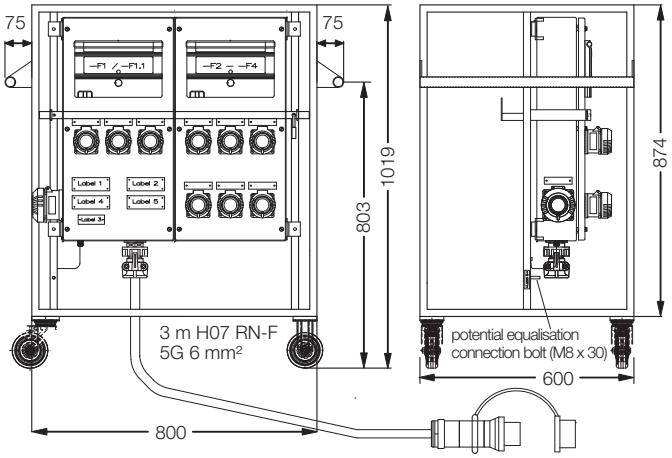
Option:

Padlock facility for enclosure cover

Enclosure material stainless steel AISI 316L

Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm



only for illustration

Technical data

	Ex-protected portable power supply unit EXKO 233201 A0006
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	230/24 V transformer, 100 VA
Rated current	16 A
Frequency	50 Hz
Back-up fuse external	16 A gG / gG
Protection class	I
Degree of protection accd. to EN 60529	IP65
Cable entry	1x M25 Trumpet shaped cable gland, 1x M12 cable gland plastic
Enclosure material	glass-fibre reinforced polyester (option sheet steel, painted or stainless steel AISI 316L) Wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	Metal frame stainless steel squared 20 x 20 x 2 with wheels 1062 x 500 x 336 mm
Weight	30 kg
Enclosure colour	black

Ordering details

Design	Components external	Order No.
1x MCB S202M - K0.5A, 10kA 1x RCBO DS971 - C4A 0.03A, 10kA 1x transformer 230/24V 100VA	2x Flange socket 16A 3-pole, 24V (GHG5420007R0003 actuating flap for components	**EXKO 233201 A0006**

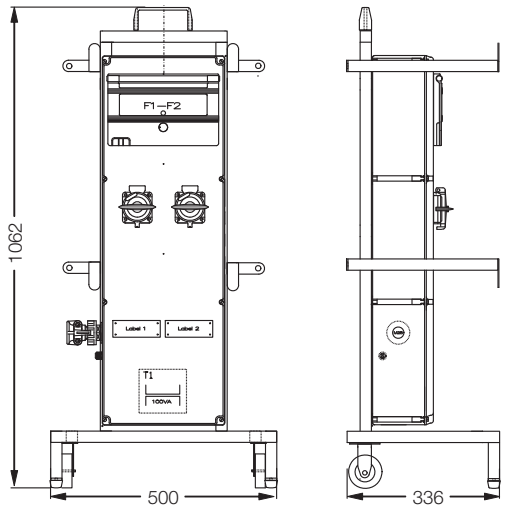
Option:

Padlock facility for enclosure cover

Enclosure material stainless steel AISI 316L

Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm



only for illustration

Technical data

	Ex-protected portable power supply unit EXKO 233201 A0007
Marking accd. to 2014/34/EU	Ex II 2 G Ex de IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20°C up to +40°C
Rated voltage	110/24 V transformer, 500 VA
Rated current	16 A
Frequency	50 Hz
Back-up fuse external	25A gG / gG
Protection class	I
Degree of protection accd. to EN 60529	IP65
Cable entry	1 x M25 Trumpet shaped cable gland, 1 x M12 cable gland plastic
Enclosure material	glass-fibre reinforced polyester (option sheet steel, painted or stainless steel AISI 316L) Wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	Metal frame stainless steel squared 20 x 20 x 2 with wheels 1062 x 774 x 336 mm
Weight	44 kg
Enclosure colour	black

Ordering details

Design	Components external	Order No.
1x MCB S202P - K6A, 10kA 2x MCB S202M - C16A, 10kA 1x transformer 110/24V 550VA	1x Flange socket 16A 3-pole, 110V (GHG5118304R0001) 2x Flange socket 16A 2polig, 24V (GHG5420007R0004) actuating flap for components	EXKO 233201 A0007

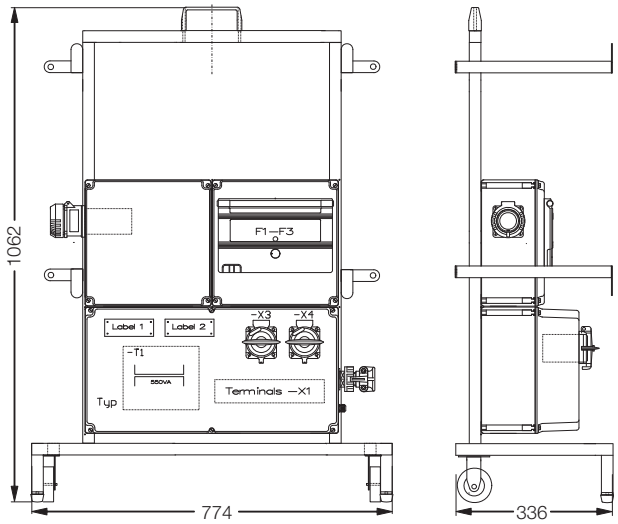
Option:

Padlock facility for enclosure cover

Enclosure material stainless steel AISI 316L

Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm



only for illustration

Technical data

	Ex-protected portable power supply unit EXKO 233201 A0014
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20°C up to +40°C
Rated voltage	230/42 V transformer, 550 VA
Rated current	16 A
Frequency	50 - 60 Hz
Back-up fuse external	16 A gG / gG
Protection class	I
Degree of protection accd. to EN 60529	IP65
Cable entry	1x M25 Trumpet shaped cable gland, 1x M12 cable gland plastic
Connecting cable	H07RN-F 3 x 1.5 mm² with plug 16A, 3 m
Enclosure material	glass-fibre reinforced polyester (option sheet steel, painted or stainless steel AISI 316L) Wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	Metal frame stainless steel squared 20 x 20 x 2 with wheels 1062 x 500 x 336 mm
Weight	40 kg
Enclosure colour	black

Ordering details

Design	Components external	Order No.
1x MCB S202P - K3A, 10kA 1x MCB S202M - C10A, 10kA 1x transformer 230/42V 550VA	2 x Flange socket 16 A 2-pole, 42 V (GHG5420007R0002) 1 x Plug 16 A 3-pole, 230 V 06 h (GHG5117306R0001) actuating flap for components	**EXKO 233201 A0014**

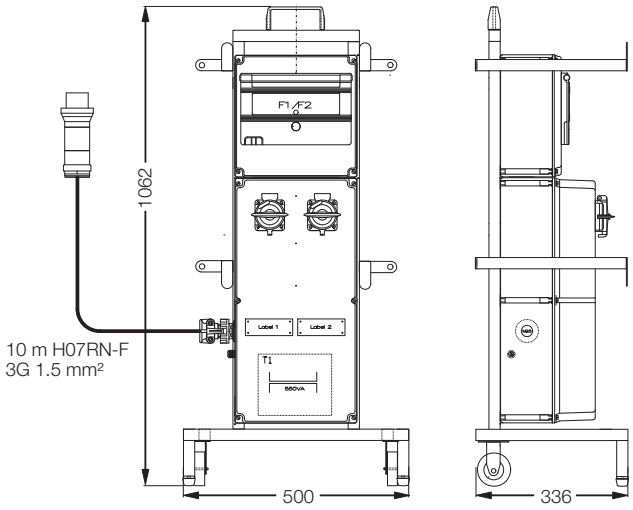
Option:

Padlock facility for enclosure cover

Enclosure material stainless steel AISI 316L

Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm



EXKO 233201 A0019

Technical data

	Ex-protected portable power supply unit EXKO 233201 A0019
Marking accd. to 2014/34/EU	Ex II 2 G Ex de IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20°C up to +55°C
Rated voltage	240/42 V transformer, 400 VA
Rated current	16 A
Frequency	50 Hz
Back-up fuse external	16 A gG / gG
Protection class	I
Degree of protection accd. to EN 60529	IP65
Cable entry	1x M32 Trumpet shaped cable gland, 1x M12 cable gland plastic
Enclosure material	Sheet steel (option stainless steel AISI 316L) Wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	Metal frame stainless steel squared 20 x 20 x 2 with wheels 1064 x 612 x 336 mm
Weight	38 kg
Enclosure colour	RAL 7032

Ordering details

Design	Components external	Order No.
1x MCB S202M - K16A, 10kA 1x Ex-d Sicherung 2x T 2A 1x transformer 240/24V 400VA	4x Flange socket 16A 3-pole, 24V (GHG5425300V0000) 4x Plug 16A 3-pole, 24V (GHG5422300V0000) actuating flap for components	**EXKO 233201 A0019**

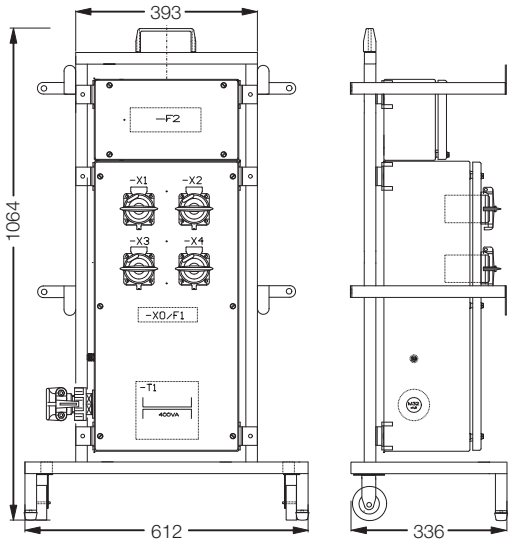
Option:

Padlock facility for enclosure cover

Enclosure material stainless steel AISI 316L

Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm



EXKO 233201 A0021

Technical data

	Ex-protected portable power supply unit EXKO 233201 A0021
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T4 / Ⓔx II 2 D IP65 T95°C
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	207 V / 120 V
Rated current	32 A
Frequency	50 Hz
Back-up fuse external	63 A gG / gG
Protection class	I
Degree of protection accd. to EN 60529	IP65
Cable entry	1x M40 Trumpet shaped cable gland, 1x M12 cable gland plastic
Connecting cable	H07RN-F 5 x 10 mm² without plug, 10 m
Enclosure material	Plastic, metal plate AISI 304L Wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	Metal frame 378 x 594 x 213 mm
Weight	25 kg
Enclosure colour	black

Ordering details

Design	Components external	Order No.
1x MCB S202M - C32A, 10kA 3x Fi-LS DS971 - C16A 0.03A, 6kA	3x Wall socket 16A 3-pole, 120V (04h) (GHG5118304R0001) actuating flap for components	**EXKO 233201 A0021**

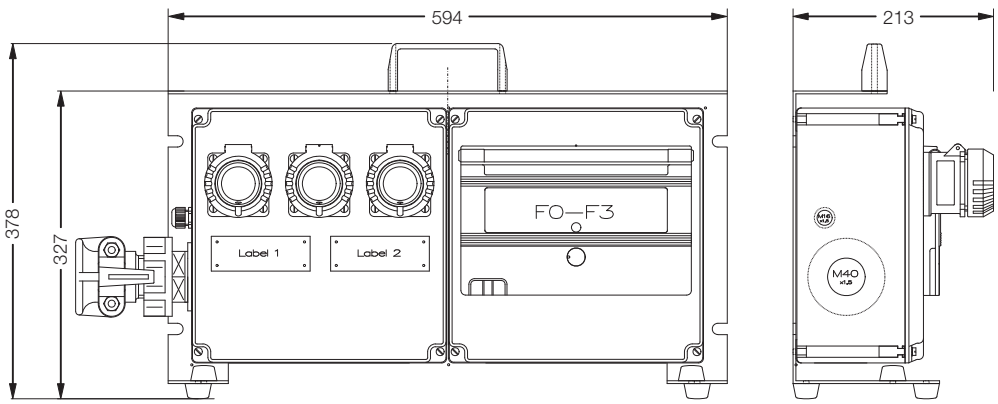
Option:

Padlock facility for enclosure cover

Enclosure material stainless steel AISI 316L

Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm



only for illustration

Technical data

	Ex-protected portable power supply unit EXKO 233201 A0025
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T4
EC-Type Examination Certificate	PTB 99 ATEX 1057
Permissible ambient temperature	-20 °C to +40 °C
Rated voltage	230/24 V transformer, 400 VA
Rated current	16 A
Frequency	50 Hz
Back-up fuse external	16 A gG / gG
Protection class	I
Degree of protection accd. to EN 60529	IP65
Cable entry	1x M25 Trumpet shaped cable gland, 1 x M12 cable gland plastic
connecting cable	H07RN-F 3 x 2.5 mm² with plug 16 A, 3 m
Enclosure material	Ex-d enclosure: die-cast aluminium, connection box: stainless steel AISI 316L Wall socket: glass-fibre reinforced polyester, plug: polyamide
Dimensions (H x W x D)	Metal frame stainless steel squared 20 x 20 x 2 including lockable wheels 936 x 720 x 369 mm
Weight	62 kg
Enclosure colour	RAL 7032

Ordering details

Design	Components external	Order No.
1x MCB S202M - C10A, 10kA 1x MCB S202M - C13A, 10kA 1x power supply 230V AC / 24V DC 20A	1x Plug 16A 3-pole, 230V (06h) (GHG5117306R0001) 4x Wall socket 16A 3-pole, 24V (01h) (GHG5118301R0001) actuating flap for components	**EXKO 233201 A0025**

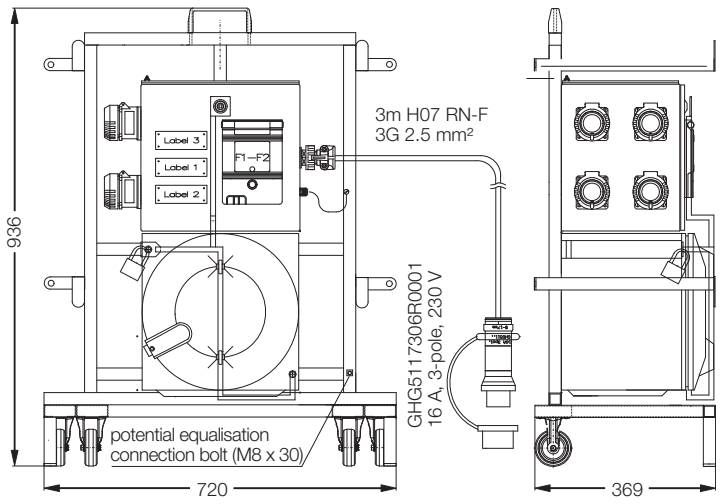
Option:

Padlock facility for enclosure cover

Enclosure material stainless steel AISI 316L

Customized solution for connection cable, plugs & sockets and rated voltage

Dimension drawing



Dimensions in mm


60-32
MV24

Fl-Ex Power Cords

Electrical connection technology zone 1/21, 2/22 and industrial applications

A perfect connection

Providing electrical energy there, where it is most needed – even in hazardous areas for the Zones 1, 2, 21 and 22.

To be on the safe side

Non-stationary electrical apparatus have generally high requirements on the energy/power supply. Robust plugs and receptacles as well as a high chemical resistance are at the first glance very important. Electrical reliability is a must not only for all connectivity products. 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 utilisation. CEAG plugs and receptacles 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.

Use our competence - even in industrial environment

Our new range of FL-Ex Power Cord contains not only explosion protected connection technology.

Fitted by the same high level features, our connection technology range is also available for industrial use. Our robust plugs and receptacles for industrial use fulfils the highest standards in mechanical and chemical resistance.

Ex power cord - the comfortable solution

For the individual connection of electrical apparatus by connectors we developed a wide range of power cords for use in hazardous areas as well as for industrial applications. By use of FL-Ex Power Cords, electrical apparatus can be powered with energy flexible and safe.



Features

- **Nickel plated contact elements**
- **Easy plugging**
- **Optional mechanical interlock**
- **High degree of protection IP 66, even plugged**
- **Glove operation**
- **Lockable against unauthorized use**



EXKO238001E



K0238001L



EXKO238001F

Technical data

	Plug and receptacles for industrial application (industrial standard)
Permissible ambient temperature	-20 °C to +40 °C / -45 °C to + 45 °C (optional)[1]
IK-class according to EN 50102	IK 10 / 20 J
Rated voltage	3-pol.: 400 V / 4-/5-pol.: 690 V
Rated current	16 A / 32 A / 63 A
Frequency	50/60 Hz
External back up fuse	without therm. protection: 16 A / 32 A / 63 A
Protection class	I
Degree of protection accd. to EN 60529	IP 66
Enclosure material	Polyamide

	Plug and receptacles for Zone 1/2, 21/22
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1039 (16 A) / PTB 99 ATEX 1041 (32 A) / PTB 00 ATEX 1070 (63 A) / PTB 01 ATEX 1069 (125 A)
IECEx Certificate of Conformity	IECEx BKI 04.0002 (16 A) / IECEx BKI 04.0006 (32 A) / IECEx BKI 04.0004 (63 A) / IECEx BKI 04.0005 (125 A)
Marking accd. to IECEx	Ex de IIC T6/T5 (16 A/32 A) / Ex de IIC T6 (63 A) / Ex de IIC T6 (125 A)
Permissible ambient temperature	-20 °C to +40 °C [1]
IK-class according to EN 50102	IK 10 / 20 J
Rated voltage	3-pol.: 400 V / 4-pol.: 690 V / 5-pol.: 500 V
Rated current	16 A / 32 A / 63 A / 125 A
Rated making / Rated breaking capacity AC-3 accd. EN 60947-3	U_e 690 V / I_e 16 A I U_e 690 V / I_e 32 A
Frequency	50/60 Hz
External back up fuse	without therm. protection: 16 A / 32 A / 63 A / 125 A
Degree of protection accd. to EN 60529	IP 66 (with protective cover or plugged in and powered)
Enclosure material	Polyamide

	Connecting cable
Rubber coated cord, heavy duty	H07 RN-F, dimensions see ordering details

[1] extended temperature range on request

Ordering details

Voltage	Plug / Coupler Ex / Industrie	Cord length	Weight approx.	Order No. (for industrial use only*)
16 A adaptor for industrial use for 3-pole connection				
200 - 250 V	3-pole / 3-pole	2 m x 3G 2.5 mm²	0.9 kg	**KO 238001 G0001**
16 A adaptor for industrial use for 5-pole connection				
380 - 415 V	5-pole / 5-pole	2 m x 5G 2.5 mm²	1.6 kg	**KO 238001 G0002**
32 A adaptor for industrial use for 4-pole connection				
380 - 415 V	4-pole / 4-pole	2 m x 4G 6 mm²	2.8 kg	**KO 238001 G0003**
32 A adaptor for industrial use for 5-pole connection				
380 - 415 V	5-pole / 5-pole	2 m x 5G 6 mm²	4.0 kg	**KO 238001 G0004**
16 A adaptor for industrial use for 5-pole / 3-pole connection				
380 - 415 V / 200 - 250 V	5-pole / 3-pole	2 m x 3G 2.5 mm²	1.0 kg	**KO 238001 G0005**

ATTENTION!

These adaptors are suitable for the power connection of industrial apparatus for servicing and maintenance in hazardous areas. They are not Ex approved and are only allowed for use outside of Ex areas or with a valid hot work permit!

*] Only for industrial use. Attention! Not approved for use in hazardous areas.



EXKO238001F



K0238001L



EXKO238001E

Ordering details Power cord (single-side connected)

Voltage	Coding	Cable length	Weight approx.	Order No. (for Ex-zone 1/2, 21/22)	Order No. (for industrial use only*)
16 A Power cord for 3-pole connection incl. plug, 06 h and protection cap					
200 - 250 V		5 m x 3G 2.5 mm²	1.5 kg	**EXKO 238001 E0001**	**KO 238001 K0001**
200 - 250 V		10 m x 3G 2.5 mm²	3.9 kg	**EXKO 238001 E0002**	**KO 238001 K0002**
200 - 250 V		25 m x 3G 2.5 mm²	6.2 kg	**EXKO 238001 E0003**	**KO 238001 K0003**
16 A Power cord for 5-pole connection incl. plug, 06 h and protection cap					
380 - 415 V		5 m x 3G 2.5 mm²	1.6 kg	**EXKO 238001 E0004**	**KO 238001 K0004**
380 - 415 V		10 m x 3G 2.5 mm²	4.0 kg	**EXKO 238001 E0005**	**KO 238001 K0005**
380 - 415 V		25 m x 3G 2.5 mm²	6.3 kg	**EXKO 238001 E0006**	**KO 238001 K0006**
32 A Power cord for 4-pole connection incl. plug, 06 h and protection cap					
380 - 415 V		5 m x 4G 6 mm²	1.6 kg	**EXKO 238001 E0007**	**KO 238001 K0007**
380 - 415 V		10 m x 4G 6 mm²	4.0 kg	**EXKO 238001 E0008**	**KO 238001 K0008**
380 - 415 V		25 m x 4G 6 mm²	6.3 kg	**EXKO 238001 E0009**	**KO 238001 K0009**
32 A Power cord for 5-pole connection incl. plug, 06 h and protection cap					
380 - 415 V		5 m x 5G 6 mm²	4.6 kg	**EXKO 238001 E0010**	**KO 238001 K0010**
380 - 415 V		10 m x 5G 6 mm²	12.2 kg	**EXKO 238001 E0011**	**KO 238001 K0011**
380 - 415 V		25 m x 5G 6 mm²	19.8 kg	**EXKO 238001 E0012**	**KO 238001 K0012**
63 A Power cord for 4-pole connection incl. plug, 06 h and protection cap					
380 - 415 V		5 m x 4G 16 mm²	7.9 kg	**EXKO 238001 E0013**	**KO 238001 K0013**
380 - 415 V		10 m x 4G 16 mm²	21.3 kg	**EXKO 238001 E0014**	**KO 238001 K0014**
380 - 415 V		25 m x 4G 16 mm²	34.8 kg	**EXKO 238001 E0015**	**KO 238001 K0015**
380 - 415 V		5 m x 4G 25 mm²	11.3 kg	**EXKO 238001 E0016**	**KO 238001 K0016**
380 - 415 V		10 m x 4G 25 mm²	31.2 kg	**EXKO 238001 E0017**	**KO 238001 K0017**
380 - 415 V		25 m x 4G 25 mm²	51.2 kg	**EXKO 238001 E0018**	**KO 238001 K0018**
63 A Power cord for 5-pole connection incl. plug, 06 h and protection cap					
380 - 415 V		5 m x 5G 16 mm²	9.6 kg	**EXKO 238001 E0019**	**KO 238001 K0019**
380 - 415 V		10 m x 5G 16 mm²	26.4 kg	**EXKO 238001 E0020**	**KO 238001 K0020**
380 - 415 V		25 m x 5G 16 mm²	43.2 kg	**EXKO 238001 E0021**	**KO 238001 K0021**
380 - 415 V		5 m x 5G 25 mm²	13.7 kg	**EXKO 238001 E0022**	**KO 238001 K0022**
380 - 415 V		10 m x 5G 25 mm²	38.4 kg	**EXKO 238001 E0023**	**KO 238001 K0023**
380 - 415 V		25 m x 5G 25 mm²	63.1 kg	**EXKO 238001 E0024**	**KO 238001 K0024**
125 A Power cord for 4-pole connection incl. plug, 06 h and protection cap					
380 - 415 V		5 m x 4G 35 mm²	15.2 kg	**EXKO 238001 E0025**	**KO 238001 K0025**
380 - 415 V		10 m x 4G 35 mm²	41.7 kg	**EXKO 238001 E0026**	**KO 238001 K0026**
380 - 415 V		25 m x 4G 35 mm²	68.1 kg	**EXKO 238001 E0027**	**KO 238001 K0027**
380 - 415 V		5 m x 4G 50 mm²	20.4 kg	**EXKO 238001 E0028**	**KO 238001 K0028**
380 - 415 V		10 m x 4G 50 mm²	56.7 kg	**EXKO 238001 E0029**	**KO 238001 K0029**
380 - 415 V		25 m x 4G 50 mm²	93.1 kg	**EXKO 238001 E0030**	**KO 238001 K0030**
125 A Power cord for 5-pole connection incl. plug, 06 h and protection cap					
380 - 415 V		5 m x 5G 35 mm²	16.2 kg	**EXKO 238001 E0031**	**KO 238001 K0031**
380 - 415 V		10 m x 5G 35 mm²	44.3 kg	**EXKO 238001 E0032**	**KO 238001 K0032**
380 - 415 V		25 m x 5G 35 mm²	72.4 kg	**EXKO 238001 E0033**	**KO 238001 K0033**
380 - 415 V		5 m x 5G 50 mm²	22.7 kg	**EXKO 238001 E0034**	**KO 238001 K0034**
380 - 415 V		10 m x 5G 50 mm²	63.2 kg	**EXKO 238001 E0035**	**KO 238001 K0035**
380 - 415 V		25 m x 5G 50 mm²	103.7 kg	**EXKO 238001 E0036**	**KO 238001 K0036**

*) Only for industrial use. Attention! Not approved for use in hazardous areas.



K0238001L



EXKO238001F

Ordering details Extension cord (double-side connected)

Voltage	Coding	Cable length	Weight approx.	Order No. (for Ex-Zone 1/2, 21/22)	Order No. (for industrial use only*)
16 A Extension cord for 3-pole connection incl. plug & coupler, 06 h					
200 - 250 V		5 m x 3G 2.5 mm²	1.6 kg	**EXKO 238001 F0001**	**KO 238001 L0001**
200 - 250 V		10 m x 3G 2.5 mm²	3.9 kg	**EXKO 238001 F0002**	**KO 238001 L0002**
200 - 250 V		25 m x 3G 2.5 mm²	6.3 kg	**EXKO 238001 F0003**	**KO 238001 L0003**
16 A Extension cord for 5-pole connection incl. plug & coupler, 06 h					
380 - 415 V		5 m x 5G 2.5 mm²	2.3 kg	**EXKO 238001 F0004**	**KO 238001 L0004**
380 - 415 V		10 m x 5G 2.5 mm²	4.6 kg	**EXKO 238001 F0005**	**KO 238001 L0005**
380 - 415 V		25 m x 5G 2.5 mm²	7.0 kg	**EXKO 238001 F0006**	**KO 238001 L0006**
32 A Extension cord for 4-pole connection incl. plug & coupler, 06 h					
380 - 415 V		5 m x 4G 6 mm²	4.2 kg	**EXKO 238001 F0007**	**KO 238001 L0007**
380 - 415 V		10 m x 4G 6 mm²	8.9 kg	**EXKO 238001 F0008**	**KO 238001 L0008**
380 - 415 V		25 m x 4G 6 mm²	13.7 kg	**EXKO 238001 F0009**	**KO 238001 L0009**
32 A Extension cord for 5-pole connection incl. plug & coupler, 06 h					
380 - 415 V		5 m x 5G 6 mm²	6.2 kg	**EXKO 238001 F0010**	**KO 238001 L0010**
380 - 415 V		10 m x 5G 6 mm²	13.8 kg	**EXKO 238001 F0011**	**KO 238001 L0011**
380 - 415 V		25 m x 5G 6 mm²	21.4 kg	**EXKO 238001 F0012**	**KO 238001 L0012**
63 A Extension cord for 4-pole connection incl. plug & coupler, 06 h					
380 - 415 V		5 m x 4G 16 mm²	8.9 kg		**KO 238001 L0013**
380 - 415 V		10 m x 4G 16 mm²	22.4 kg		**KO 238001 L0014**
380 - 415 V		25 m x 4G 16 mm²	35.8 kg		**KO 238001 L0015**
63 A Extension cord for 4-pole connection incl. plug & coupler, 06 h					
380 - 415 V		5 m x 4G 25 mm²	12.3 kg		**KO 238001 L0016**
380 - 415 V		10 m x 4G 25 mm²	32.2 kg		**KO 238001 L0017**
380 - 415 V		25 m x 4G 25 mm²	52.4 kg		**KO 238001 L0018**
63 A Extension cord for 5-pole connection incl. plug & coupler, 06 h					
380 - 415 V		5 m x 5G 16 mm²	10.7 kg		**KO 238001 L0019**
380 - 415 V		10 m x 5G 16 mm²	27.5 kg		**KO 238001 L0020**
380 - 415 V		25 m x 5G 16 mm²	44.3 kg		**KO 238001 L0021**
63 A Extension cord for 5-pole connection incl. plug & coupler, 06 h					
380 - 415 V		5 m x 5G 25 mm²	14.8 kg		**KO 238001 L0022**
380 - 415 V		10 m x 5G 25 mm²	39.5 kg		**KO 238001 L0023**
380 - 415 V		25 m x 5G 25 mm²	62.2 kg		**KO 238001 L0024**
125 A Extension cord for 4-pole connection incl. plug & coupler, 06 h					
380 - 415 V		5 m x 4G 35 mm²	16.7 kg		**KO 238001 L0025**
380 - 415 V		10 m x 4G 35 mm²	43.7 kg		**KO 238001 L0026**
380 - 415 V		25 m x 4G 35 mm²	69.6 kg		**KO 238001 L0027**
125 A Extension cord for 4-pole connection incl. plug & coupler, 06 h					
380 - 415 V		5 m x 4G 50 mm²	21.8 kg		**KO 238001 L0028**
380 - 415 V		10 m x 4G 50 mm²	58.3 kg		**KO 238001 L0029**
380 - 415 V		25 m x 4G 50 mm²	94.5 kg		**KO 238001 L0030**
125 A Extension cord for 5-pole connection incl. plug & coupler, 06 h					
380 - 415 V		5 m x 5G 35 mm²	17.8 kg		**KO 238001 L0031**
380 - 415 V		10 m x 5G 35 mm²	45.9 kg		**KO 238001 L0032**
380 - 415 V		25 m x 5G 35 mm²	74.1 kg		**KO 238001 L0033**
125 A Extension cord for 5-pole connection incl. plug & coupler, 06 h					
380 - 415 V		5 m x 5G 50 mm²	24.2 kg		**KO 238001 L0034**
380 - 415 V		10 m x 5G 50 mm²	64.8 kg		**KO 238001 L0035**
380 - 415 V		25 m x 5G 50 mm²	105.2 kg		**KO 238001 L0036**

*) Only for industrial use. Attention! Not approved for use in hazardous areas.

eXLink®- the Miniature-Power Connector

1 eXLink 4-pole/4-pole + PE - 10 A for Zone 1 and Zone 21

From BUS-technology to 10 A

Providing flexible power supply and BUS-connection there, where it is needed – even in hazardous areas for the Zones 1, 2, 21 and 22.

The **eXLink** 4-pole/4+1 pole is a complete system for connecting and disconnecting products electrically. Supplying from low voltage BUS signals up to 250 V AC / 10 A electrical power the full range of connectors and receptacles are available with moulded plastic enclosure as well as nickel-plated brass or stainless steel enclosures.

Time code for safety

A time coding, following the IEC 60309 system secures from misconnections of non-compatible voltage levels. Only connectors and plugs with the same voltage level can be plugged together.

Proven connectivity

The well-known and reliable bonding technique "crimp connection" for wire size of 0.25 mm² up to 0.5 mm², 0.75 mm² up to 1.5 mm² and optional 2.5 mm² is used for wire connection to the pins. Additionally a screw-less technique "cage clamp" can be used for selected types.

A special plug and connector for the use of armoured cable with armouring diameter up to 1.5 mm is available.

The Receptacle and the Inlet are equipped with metric thread M20 x 1.5 or 1/2" NPT thread to screw directly into electrical apparatus. The factory potted metal versions can be used directly into Ex-d enclosures without additionally certification to be applied.

No "Hot Work Permit"

All **eXLink** plugs, inlets, receptacle and connectors are designed for hot swapping of apparatus in hazardous areas without disconnecting terminals, without shutting down circuits and without a "hot work permit"!



Features

- **Hot swap**
- **Standard IP protection IP66/IP68**
  Permissible ambient temperature form –55 to +70 °C
- **Up to 250 V 10 A**
- **Stainless steel or nickel plated brass enclosures for highest mechanical protection**
- **Max. 4 pole + PE connections**
- **World wide certifications**
- **Mining (EX I M2) certified**



Flange socket



Inlet



Plug



Coupler

Technical data

		eXLink 4-pole/ 4-pole + PE
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6 / Ⓔx II 2 G Ex ia/ib IIC T6 Ⓔx II 2 D tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 03 ATEX 1016 X
IECEx Certificate of Conformity		IECEx BKI 06.0005X
Marking accd. to IECEx		Ex de IIC T6 / Ex ia/ib IIC T6 Ex tD A21 IP66 T80 °C
Permissible ambient temperature		–55 °C to +40 °C (Rated current 10 A) –55 °C to +75 °C (Rated current 2 A) –20 °C to +40 °C (Elbow, plastic)
Store temperature in original wrapping		–55 °C to +80 °C
Frequency range		0-100 MHz, fast Ethernet compatible
Transmission performance acc. to TIA/EIA-568-B.2		Category 5e up to 100 Mbaud
Rated voltage		AC up to 250 V, 50/60 Hz / DC up to 60 V
Rated current		max. 10 A
Switching capacity accd. EN 61 984	AC: DC:	250 V / 10 A 60 V / 2.5 A
Rated making / Rated breaking capacity accd. EN 60947-4-1	AC-3: DC-3:	U_e 250 V / I_e 1 A U_e 60 V / I_e 0.5 A
External back-up fuse max. without therm. protection		10 A
External back-up fuse max. with therm. protection		20 A gG
Protection class acc. EN 60598		II: Plastic / I: metal
Terminal cross section Plug, coupler Inlet, receptacle in plastic		Crimp 0.5 mm²: 0.25 - 0.5 mm² Crimp 1.5 mm²: 0.75 - 1.5 mm² / Solder Crimp 2.5 mm²: 2.5 mm² Cage clamp[1]: 0.5 - 1.0 mm² multi wire, 0.5 - 1.5 mm² single wire Crimp 0.5 mm²: 0.25 - 0.5 mm² Crimp 1.5 mm²: 0.75 - 1.5 mm² / Solder Crimp 2.5 mm²: 2.5 mm² / 30 cm multi wire 1.5 mm²/2.5 mm²
Inlet, receptacle in metal		30 cm multi wire[2]: 1.5 mm² / 2.5 mm²
Cable gland plug and coupler		Ø 4 - 7.5 mm / Ø 7.5 - 11.0 mm
Cable gland plug and coupler for armoured cables		external isol. Ø 12 - 21 mm / internal isol. Ø 8.5 - 16 mm / armouring 0 - 1.5 mm
Mounting thread inlet and flange socket		M20 x 1.5 / 1/2´´ NPT[3]
Degree of protection accd. to EN 60529		IP66/IP68 with closed and locked protective caps or duly plugged and locked components
Enclosure material Plug, coupler, inlet < 2000 cm³ and flange socket Inlet > 2000 cm³ and plug/coupler for armoured cables		Polyamide, nickel plated brass or stainless steel AISI 316L Nickel plated brass or stainless steel AISI 316L

[1] not for 4-pole + PE
[2] other length on request
[3] NPT for metal version only

Ordering key eXLink 4-pole/4-pole + PE

1. Content
- 1 = 4-pole
- 4 = 4-pole + PE[1)]

2. Type
- 1 = Elbow
- 3 = Coupler
- 6 = Inlet > 2000 cm³
- 7 = Plug
- 8 = Flange socket
- 9 = Inlet

3. Connection technology
- 1 = Crimp up to 1.5 mm²
- 2 = Crimp up to 2.5 mm²
- 6 = Cage clamp

Option: Crimp up to 0.5 mm²

4. Coding
- 01 = 1 h / Ethernet[1)]
- 02 = 2 h / Bus
- 03 = 3 h / Special code[1)]
- 04 = 4 h / 110 V AC 2p + PE
- 05 = 5 h / 24 V DC 4p + PE[1)]
- 06 = 6 h / 230 V AC 2p + PE
- 07 = 7 h / Special code[1)]
- 08 = 8 h / 24 V DC 4p
- 09 = 9 h / Special code[1)]
- 10 = 10 h / 230 V AC 4p + PE[1)]
- 11 = 11 h / Special code[1)]
- 12 = 12 h / 24 V AC 2p + PE

[1)] only crimp version

GHG 57X XXXX RXX0X

5. Material
- 0 = Plastic
- 1 = Stainless steel AISI 316L
- 2 = Stainless steel AISI 316L for armoured cables
- 3 = Nickel-plated brass
- 4 = Nickel-plated brass for armoured cables
- 5 = Stainless steel AISI 316L NPT
- 6 = Nickel-plated brass NPT

6. Accessories
- 0 = without padlocking facility
- 8 = Protection cap for plug
- 9 = with padlocking facility

7. Connecting cable Ø (plug and coupler)
- 1 = 4 – 7.5 mm/12 – 21 mm[2)]
- 2 = 7.5 – 11 mm

[2)] Version for armoured cables

8. Connection (flange socket and inlet)

connecting cable	Plastic	Nickel-plated brass	Stainless steel
Crimp	...R0XX1	n.a.	n.a.
30 cm	...R0XX2	...R3XX1	...R1XX1
50 cm	...R0XX3	...R3XX2	...R1XX2
75 cm	...R0XX4	...R3XX3	...R1XX3
150 cm	...R0XX5	...R3XX4	...R1XX4

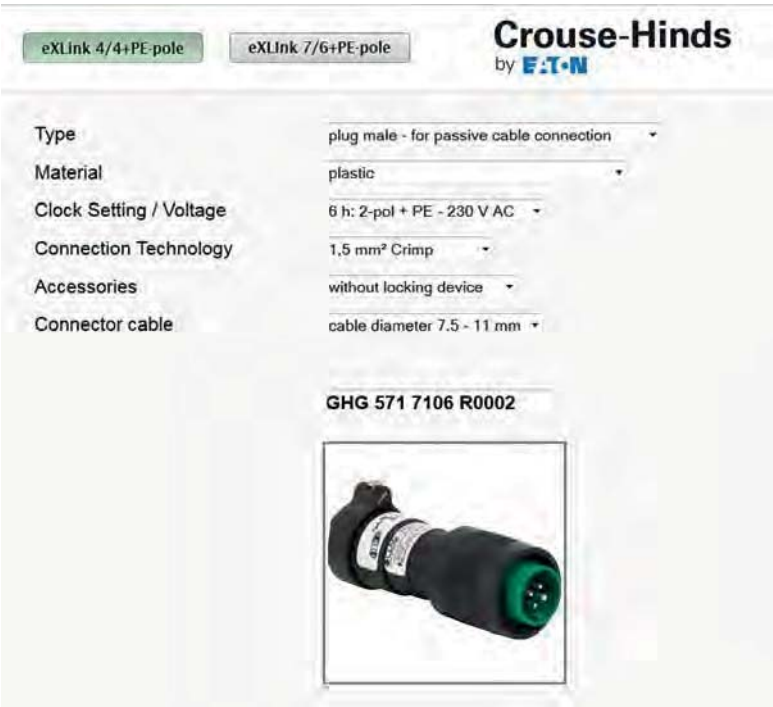
Version for possible configurations

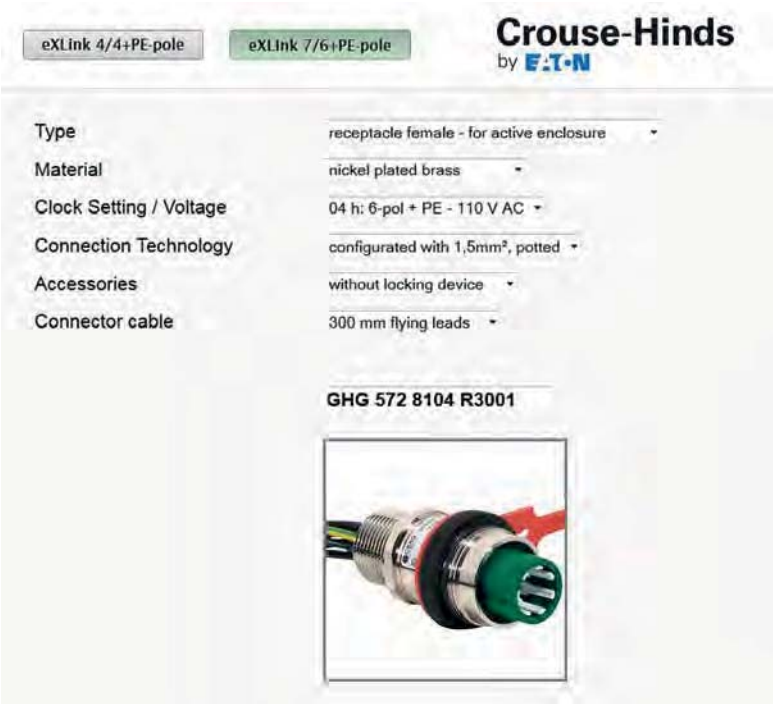
	Plastic	Nickel-plated brass	Stainless steel	Crimp 0.5 mm²	Crimp 1.5 mm²	Crimp 2.5 mm²	Solder	Cage clamp	15 cm multi wire 1.5 mm²	15 cm multi wire 2.5 mm²	30 cm multi wire 1.5 mm²	30 cm multi wire 2.5 mm²	xx cm multi wire[3)]	Cable gland Ø 4 - 7.5 mm	Cable gland Ø 7.5 - 11 mm	Cable gland Ø 12 - 21 mm	M20 x 1.5	1/2" NPT
Plug 4-pole	x	x	x	x	x	x	x	x						x	x			
Plug 4-pole + PE	x	x	x	x	x	x	x							x	x			
Coupler 4-pole	x	x	x	x	x	x	x	x						x	x			
Coupler 4-pole + PE	x	x	x	x	x	x	x							x	x			
Plug for armoured cables 4-pole		x	x	x	x	x	x	x								x		
Plug for armoured cables 4-pole + PE		x	x	x	x	x	x									x		
Coupler for armoured cables 4-pole		x	x	x	x	x	x	x								x		
Coupler for armoured cables 4-pole + PE		x	x	x	x	x	x									x		
Inlet for Ex e enclosure	x	x	x	x	x	x	x		x	x	x	x	x				x	
Inlet for Ex d enclosure < 2000 cm³		x	x						x	x	x	x	x				x	x
Inlet for Ex d enclosure > 2000 cm³		x	x						x	x	x	x	x				x	x
Flange socket for Ex e enclosure	x	x	x	x	x	x	x		x	x	x	x	x				x	
Flange socket for Ex d enclosure (no restriction on free volume)		x	x						x	x	x	x	x				x	x
Elbow for Ex e enclosure	x	x	x														x	
Elbow for Ex d enclosure		x	x														x	x

[3)] **on customers request**

For customers who wants to configure the needed **eXLink** easily and fast Eaton|s Crouse-Hinds Business offers via the Internet separate tool to select the right type and order No.: http://exlink.internezzo.de/

From a selection of nearly 2000 variants of eXLink connector products you will find **YOUR eXLink** product fast, reliable and easy usung our product configurator







Plastic



Metal



with padlocking facility

Ordering key eXLink plug 4-pole

GHG 571 7XXX RXX0X

1. Connection technology	2. Coding	3. Material	4. Accessories	5. Connecting cable Ø
1 = Crimp up to 1.5 mm²	02 = 2 h	0 = Plastic	0 = without padlocking facility	1 = 4 – 7.5 mm
2 = Crimp up to 2.5 mm²	04 = 4 h	1 = Stainless steel AISI 316L	8 = with protection cap	2 = 7.5 – 11 mm
6 = Cage clamp	06 = 6 h	3 = nickel-plated brass	9 = with padlocking facility	
Option: Crimp up to 0.5 mm²	08 = 8 h			
	12 = 12 h			

Ordering details

Voltage	No. of poles	Coding	Power connection	Connecting cable Ø 4 – 7.5 mm Order No.	7.5 – 11 mm Order No.
Plug made of plastic					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm²	GHG 571 7102 R0001	**GHG 571 7102 R0002**
BUS	3-pol + PA	2 h	Cage clamp	GHG 571 7602 R0001	**GHG 571 7602 R0002**
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm²	GHG 571 7104 R0001	**GHG 571 7104 R0002**
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm²	GHG 571 7204 R0001	**GHG 571 7204 R0002**
110 V AC	2-pol + PE	4 h	Cage clamp	GHG 571 7604 R0001	**GHG 571 7604 R0002**
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm²	GHG 571 7106 R0001	**GHG 571 7106 R0002**
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm²	GHG 571 7206 R0001	**GHG 571 7206 R0002**
230 V AC	2-pol + PE	6 h	Cage clamp	GHG 571 7606 R0001	**GHG 571 7606 R0002**
24 V DC	4-pol	8 h	Crimp up to 1.5 mm²	GHG 571 7108 R0001	**GHG 571 7108 R0002**
24 V DC	4-pol	8 h	Crimp up to 2.5 mm²	GHG 571 7208 R0001	**GHG 571 7208 R0002**
230 V AC		10 h	Crimp up to 2.5 m		**571 7210 R3002**
Plug made of nickel-plated brass					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm²	GHG 571 7102 R3001	**GHG 571 7102 R3002**
BUS	3-pol + PA	2 h	Cage clamp	GHG 571 7602 R3001	**GHG 571 7602 R3002**
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm²	GHG 571 7104 R3001	**GHG 571 7104 R3002**
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm²	GHG 571 7204 R3001	**GHG 571 7204 R3002**
110 V AC	2-pol + PE	4 h	Cage clamp	GHG 571 7604 R3001	**GHG 571 7604 R3002**
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm²	GHG 571 7106 R3001	**GHG 571 7106 R3002**
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm²	GHG 571 7206 R3001	**GHG 571 7206 R3002**
230 V AC		6 h	Cage clamp		**571 7606 R3002**
Plug made of stainless steel					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm²	GHG 571 7102 R1001	**GHG 571 7102 R1002**
BUS	3-pol + PA	2 h	Cage clamp	GHG 571 7602 R1001	**GHG 571 7602 R1002**
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm²	GHG 571 7104 R1001	**GHG 571 7104 R1002**
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm²	GHG 571 7204 R1001	**GHG 571 7204 R1002**
110 V AC	2-pol + PE	4 h	Cage clamp	GHG 571 7604 R1001	**GHG 571 7604 R1002**
230 V AC		6 h	Crimp up to 1.5		**571 7106 R1002**

Example



with padlocking facility



Plastic



Metall

Ordering key eXLink plug 4-pole + PE

GHG 574 7XXX RXX0X

1. Connection technology	2. Coding	3. Material	4. Accessories	5. Connecting cable Ø
1 = Crimp up to 1.5 mm²	01 = 1 h	0 = Plastic	0 = without padlocking facility	1 = 4 – 7.5 mm
2 = Crimp up to 2.5 mm²	05 = 5 h	1 = Stainless steel AISI 316L	8 = with protection cap	2 = 7.5 – 11 mm
Option: Crimp up to 0.5 mm²	10 = 10 h	3 = Nickel-plated brass	9 = with padlocking facility	

Ordering details

Voltage	No. of poles	Coding	Power connection	Connecting cable Ø 4 – 7.5 mm Order No.	7.5 – 11 mm Order No.
Plug made of plastic					
Ethernet/Bus	4 pol + PA	1 h	Crimp up to 1.5 mm²	**GHG 574 7101 R0001**	**GHG 574 7101 R0002**
24 V DC	4 pol + PE	5 h	Crimp up to 1.5 mm²	**GHG 574 7105 R0001**	**GHG 574 7105 R0002**
24 V DC	4 pol + PE	5 h	Crimp up to 2.5 mm²	**GHG 574 7205 R0001**	**GHG 574 7205 R0002**
230 V AC	4 pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 574 7110 R0001**	**GHG 574 7110 R0002**
230 V AC	4 pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 574 7210 R0001**	**GHG 574 7210 R0002**
Plug made of nickel-plated brass					
Ethernet/Bus	4 pol + PE	1 h	Crimp up to 1.5 mm²	**GHG 574 7101 R3001**	**GHG 574 7101 R3002**
24 V DC	4 pol + PE	5 h	Crimp up to 1.5 mm²	**GHG 574 7105 R3001**	**GHG 574 7105 R3002**
24 V DC	4 pol + PE	5 h	Crimp up to 2.5 mm²	**GHG 574 7205 R3001**	**GHG 574 7205 R3002**
230 V AC	4 pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 574 7110 R3001**	**GHG 574 7110 R3002**
230 V AC	4 pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 574 7210 R3001**	**GHG 574 7210 R3002**
Plug made of stainless steel					
Ethernet/Bus	4 pol + PE	1 h	Crimp up to 1.5 mm²	**GHG 574 7101 R1001**	**GHG 574 7101 R1002**
24 V DC	4 pol + PE	5 h	Crimp up to 1.5 mm²	**GHG 574 7105 R1001**	**GHG 574 7105 R1002**
24 V DC	4 pol + PE	5 h	Crimp up to 2.5 mm²	**GHG 574 7205 R1001**	**GHG 574 7205 R1002**
230 V AC	4 pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 574 7110 R1001**	**GHG 574 7110 R1002**
230 V AC	4 pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 574 7210 R1001**	**GHG 574 7210 R1002**



Plastic



Metal



with padlocking facility

Ordering key eXLink coupler 4-pole

GHG 571 3XXX RXX0X

1. Connection technology	2. Coding	3. Material	4. Accessories	5. Connecting cable Ø
1 = Crimp up to 1.5 mm²	02 = 2 h	0 = Plastic	0 = without padlocking facility	1 = 4 – 7.5 mm
2 = Crimp up to 2.5 mm²	04 = 4 h	1 = Stainless steel AISI 316L	9 = with padlocking facility	2 = 7.5 – 11 mm
6 = Cage clamp	06 = 6 h	3 = Nickel-plated brass		
Optional: Crimp up to 0.5 mm²	08 = 8 h			
	12 = 12 h			

All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Connecting cable Ø 4 – 7.5 mm Order No.	7.5 – 11 mm Order No.
Coupler made of plastic					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm²	**GHG 571 3102 R0001**	**GHG 571 3102 R0002**
BUS	3-pol + PA	2 h	Cage clamp	**GHG 571 3602 R0001**	**GHG 571 3602 R0002**
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 571 3104 R0001**	**GHG 571 3104 R0002**
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 571 3204 R0001**	**GHG 571 3204 R0002**
110 V AC	2-pol + PE	4 h	Cage clamp	**GHG 571 3604 R0001**	**GHG 571 3604 R0002**
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 571 3106 R0001**	**GHG 571 3106 R0002**
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 571 3206 R0001**	**GHG 571 3206 R0002**
230 V AC	2-pol + PE	6 h	Cage clamp	**GHG 571 3606 R0001**	**GHG 571 3606 R0002**
24 V DC	4-pol	8 h	Crimp up to 1.5 mm²	**GHG 571 3108 R0001**	**GHG 571 3108 R0002**
24 V DC		8 h	Crimp up to 2.5		**571 3208 R0002**
Coupler made of nickel-plated brass					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm²	**GHG 571 3102 R3001**	**GHG 571 3102 R3002**
BUS	3-pol + PA	2 h	Cage clamp	**GHG 571 3602 R3001**	**GHG 571 3602 R3002**
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 571 3104 R3001**	**GHG 571 3104 R3002**
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 571 3204 R3001**	**GHG 571 3204 R3002**
110 V AC	2-pol + PE	4 h	Cage clamp	**GHG 571 3604 R3001**	**GHG 571 3604 R3002**
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 571 3106 R3001**	**GHG 571 3106 R3002**
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 571 3206 R3001**	**GHG 571 3206 R3002**
230 V AC	2-pol + PE	6 h	Cage clamp	**GHG 571 3606 R3001**	**GHG 571 3606 R3002**
24 V DC	4-pol	8 h	Crimp up to 1.5 mm²	**GHG 571 3108 R3001**	**GHG 571 3108 R3002**
24 V DC		8 h	Crimp up to 2.5		**571 3208 R3002**
Coupler made of stainless steel					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm²	**GHG 571 3102 R1001**	**GHG 571 3102 R1002**
BUS	3-pol + PA	2 h	Cage clamp	**GHG 571 3602 R1001**	**GHG 571 3602 R1002**
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 571 3104 R1001**	**GHG 571 3104 R1002**
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 571 3204 R1001**	**GHG 571 3204 R1002**
110 V AC		4 h	Cage clamp		**571 3604 R1002**

Example



with padlocking facility



Plastic



Metal

Ordering key eXLink coupler 4-pole + PE

GHG 574 3XXX RXX0X

1. Connection technology	2. Coding	3. Material	4. Accessories	5. Connecting cable Ø
1 = Crimp up to 1.5 mm²	01 = 1 h	0 = Plastic	0 = without padlocking facility	1 = 4 – 7.5 mm
2 = Crimp up to 2.5 mm²	05 = 5 h	1 = Stainless steel	9 = with padlocking facility	2 = 7.5 – 11 mm
Optional:	10 = 10 h	AISI 316L		
Crimp up to 0.5 mm²		3 = Nickel-plated brass		

All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Connecting cable Ø 4 – 7.5 mm Order No.	7.5 – 11 mm Order No.
Coupler made of plastic					
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm²	**GHG 574 3101 R0001**	**GHG 574 3101 R0002**
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm²	**GHG 574 3105 R0001**	**GHG 574 3105 R0002**
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm²	**GHG 574 3205 R0001**	**GHG 574 3205 R0002**
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 574 3110 R0001**	**GHG 574 3110 R0002**
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 574 3210 R0001**	**GHG 574 3210 R0002**
Coupler made of nickel-plated brass					
Ethernet/Bus	4-pol + PE	1 h	Crimp up to 1.5 mm²	**GHG 574 3101 R3001**	**GHG 574 3101 R3002**
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm²	**GHG 574 3105 R3001**	**GHG 574 3105 R3002**
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm²	**GHG 574 3205 R3001**	**GHG 574 3205 R3002**
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 574 3110 R3001**	**GHG 574 3110 R3002**
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 574 3210 R3001**	**GHG 574 3210 R3002**
Coupler made of stainless steel					
Ethernet/Bus	4-pol + PE	1 h	Crimp up to 1.5 mm²	**GHG 574 3101 R1001**	**GHG 574 3101 R1002**
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm²	**GHG 574 3105 R1001**	**GHG 574 3105 R1002**
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm²	**GHG 574 3205 R1001**	**GHG 574 3205 R1002**
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 574 3110 R1001**	**GHG 574 3110 R1002**
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 574 3210 R1001**	**GHG 574 3210 R1002**



Plastic



Metal

Ordering key eXLink flange socket 4-pole

Metal version also for Ex-d applications without restriction of volume

GHG 571 8XXX RXX0X — X = Count No.

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = Crimp[1]/30 cm multi wire up to 1.5 mm²	02 = 2 h	0 = Plastic	0 = without padlocking facility
2 = Crimp[1]/30 cm multi wire up to 2.5 mm²	04 = 4 h	1 = Stainless steel AISI 316L with M20 thread	9 = with padlocking facility
[1] Crimp only plastic version	06 = 6 h	3 = Nickel-plated brass with M20 thread	
Optional: Crimp up to 0.5 mm²	08 = 8 h	5 = Stainless steel AISI 316L with 1/2" NPT thread	
	12 = 12 h	6 = Nickel-plated brass with 1/2" NPT thread	

Metal version only potted with multi-wire.
All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Thread M20 x 1.5 Order No.	Thread 1/2" NPT Order No.
Flange socket made of plastic					
BUS	3-pol + PA	2 h	Crimp up to 1.5 mm²	**GHG 571 8102 R0001**	
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 571 8104 R0001**	
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 571 8204 R0001**	
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 571 8106 R0001**	
230 V AC	2-pol + PE	6 h	Crimp up to 2,.5 mm²	**GHG 571 8206 R0001**	**Only available in metal version!**
24 V DC	4-pol	8 h	Crimp up to 1.5 mm²	**GHG 571 8108 R0001**	
24 V DC	4-pol	8 h	Crimp up to 2.5 mm²	**GHG 571 8208 R0001**	
24 V AC	2-pol + PE	12 h	Crimp up to 1.5 mm²	**GHG 571 8112 R0001**	
24 V AC	2-pol + PE	12 h	Crimp up to 2.5 mm²	**GHG 571 8212 R0001**	
BUS	3-pol + PA	2 h	30 cm multi wire 1.5 mm²	**GHG 571 8102 R0002**	
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 571 8104 R0002**	
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 571 8204 R0002**	
230 V AC	2-pol + PE	6 h	11 cm multi wire 1.5 mm²	**GHG 571 8106 R0002**	
230 V AC	2-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 571 8106 R0003**	**Only available in metal version!**
230 V AC	2-pol + PE	6 h	30 cm multi wire 2.5 mm²	**GHG 571 8206 R0002**	
24 V DC	4-pol	8 h	30 cm multi wire 1.5 mm²	**GHG 571 8108 R0002**	
24 V DC	4-pol	8 h	30 cm multi wire 2.5 mm²	**GHG 571 8208 R0002**	
24 V AC	2-pol + PE	12 h	30 cm multi wire 1.5 mm²	**GHG 571 8112 R0002**	
24 V AC	2-pol + PE	12 h	30 cm multi wire 2.5 mm²	**GHG 571 8212 R0002**	
Flange socket made of nickel-plated brass					
BUS	3-pol + PA	2 h	30 cm multi wire 1.5 mm²	**GHG 571 8102 R3001**	**GHG 571 8102 R6001**
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 571 8104 R3001**	**GHG 571 8104 R6001**
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 571 8204 R3001**	**GHG 571 8204 R6001**
230 V AC		6 h	30 cm multi wire 1.5		**571 8106 R6001**
Flange socket made of stainless steel					
BUS	3-pol + PA	2 h	30 cm multi wire 1.5 mm²	**GHG 571 8102 R1001**	**GHG 571 8102 R5001**
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 571 8104 R1001**	**GHG 571 8104 R5001**
110 V AC		4 h	30 cm multi wire 2.5		**571 8204 R5001**

Example

Example



Plastic



Metal

Ordering key eXLink flange socket 4-pole + PE

Metal version also for Ex-d applications without restriction of volume

GHG 574 8XXX RXX0X — X = Count No.

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = Crimp[1]/30 cm multi wire up to 1.5 mm²	01 = 1 h	0 = Plastic	0 = without padlocking facility
2 = Crimp[1]/30 cm multi wire up to 2.5 mm²	05 = 5 h	1 = Stainless steel AISI 316L with M20 thread	9 = with padlocking facility
[1] Crimp only plastic version	10 = 10 h	3 = Nickel-plated brass with M20 thread	
Optional: Crimp up to 0.5 mm²		5 = Stainless steel AISI 316L with 1/2" NPT thread	
		6 = Nickel-plated brass with 1/2" NPT thread	

Metal version only potted with multi-wire.
All versions including protection cap.

Bestellangaben

Voltage	No. of poles	Coding	Power connection	Thread M20 x 1.5 Order No.	Thread 1/2" NPT Order No.
Flange socket made of plastic					
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm²	**GHG 574 8101 R0001**	
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm²	**GHG 574 8105 R0001**	
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm²	**GHG 574 8205 R0001**	**Only available in metal version!**
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 574 8110 R0001**	
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 574 8210 R0001**	
Ethernet/Bus	4-pol + PA	1 h	30 cm multi wire 1.5 mm²	**GHG 574 8101 R0002**	
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm²	**GHG 574 8105 R0002**	
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm²	**GHG 574 8205 R0002**	**Only available in metal version!**
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm²	**GHG 574 8110 R0002**	
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm²	**GHG 574 8210 R0002**	
Flange socket made of nickel-plated brass					
Ethernet/Bus	4-pol + PE	1 h	30 cm multi wire 1.5 mm²	**GHG 574 8101 R3001**	**GHG 574 8101 R6001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm²	**GHG 574 8105 R3001**	**GHG 574 8105 R6001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm²	**GHG 574 8205 R3001**	**GHG 574 8205 R6001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm²	**GHG 574 8110 R3001**	**GHG 574 8110 R6001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm²	**GHG 574 8210 R3001**	**GHG 574 8210 R6001**
Flange socket made of stainless steel					
Ethernet/Bus	4-pol + PE	1 h	30 cm multi wire 1.5 mm²	**GHG 574 8101 R1001**	**GHG 574 8101 R5001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm²	**GHG 574 8105 R1001**	**GHG 574 8105 R5001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm²	**GHG 574 8205 R1001**	**GHG 574 8205 R5001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm²	**GHG 574 8110 R1001**	**GHG 574 8110 R5001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm²	**GHG 574 8210 R1001**	**GHG 574 8210 R5001**



Plastic



Metal

Ordering key eXLink inlet 4-pole

Metal version also for Ex-d applications with free volume < 2000 cm³

GHG 571 9XXX RXX0X

X = Count No.

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = Crimp[1]/30 cm multi wire up to 1.5 mm²	02 = 2 h	0 = Plastic	0 = without padlocking facility
2 = Crimp[1]/30 cm multi wire up to 2.5 mm²	04 = 4 h	1 = Stainless steel AISI 316L with M20 thread	9 = with padlocking facility
[1] Crimp only plastic version	06 = 6 h	3 = Nickel-plated brass with M20 thread	
Optional: Crimp up to 0.5 mm²	08 = 8 h	5 = Stainless steel AISI 316L with 1/2" NPT thread	
	12 = 12 h	6 = Nickel-plated brass with 1/2" NPT thread	

Metal version only potted with multi-wire. All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Thread M20 x 1.5 Order No.	1/2" NPT Order No.
Inlet made of plastic					
Ethernet/Bus	3-pol + PA	2 h	Crimp up to 1.5 mm²	**GHG 571 9102 R0001**	
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 571 9104 R0001**	
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 571 9204 R0001**	
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 571 9106 R0001**	
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 571 9206 R0001**	**Only available in metal version!**
24 V DC	4-pol	8 h	Crimp up to 1.5 mm²	**GHG 571 9108 R0001**	
24 V DC	4-pol	8 h	Crimp up to 2.5 mm²	**GHG 571 9208 R0001**	
24 V AC	2-pol + PE	12 h	Crimp up to 1.5 mm²	**GHG 571 9112 R0001**	
24 V AC	2-pol + PE	12 h	Crimp up to 2.5 mm²	**GHG 571 9212 R0001**	
Ethernet/Bus	3-pol + PA	2 h	30 cm multi wire 1.5 mm²	**GHG 571 9102 R0002**	
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 571 9104 R0002**	
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 571 9204 R0002**	
230 V AC	2-pol + PE	6 h	15 cm multi wire 1.5 mm²	**GHG 571 9106 R0003**	
230 V AC	2-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 571 9106 R0002**	
230 V AC	2-pol + PE	6 h	30 cm multi wire 2.5 mm²	**GHG 571 9206 R0002**	
24 V DC	4-pol	8 h	21 cm multi wire 1.5 mm²	**GHG 571 9108 R0002**	**Only available in metal version!**
24 V DC	4-pol	8 h	30 cm multi wire 1.5 mm²	**GHG 571 9108 R0003**	
24 V DC	4-pol	8 h	30 cm multi wire 2.5 mm²	**GHG 571 9208 R0002**	
24 V AC	2-pol + PE	12 h	11 cm multi wire 0.75 mm²	**GHG 571 9112 R0002**	
24 V AC	2-pol + PE	12 h	30 cm multi wire 1.0 mm²	**GHG 571 9112 R0003**	
24 V AC	2-pol + PE	12 h	30 cm multi wire 1.5 mm²	**GHG 571 9112 R0004**	
24 V AC	2-pol + PE	12 h	30 cm multi wire 2.5 mm²	**GHG 571 9212 R0002**	
Inlet made of nickel-plated brass V < 2000 cm³					
Ethernet/Bus	3-pol + PA	2 h	30 cm multi wire 1.5 mm²	**GHG 571 9102 R3001**	**GHG 571 9102 R6001**
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 571 9104 R3001**	**GHG 571 9104 R6001**
110 V AC			30 cm multi wire		**9204 R6001**
Inlet made of stainless steel V < 2000 cm³					
Ethernet/Bus	3-pol + PA	2 h	30 cm multi wire 1.5 mm²	**GHG 571 9102 R1001**	**GHG 571 9102 R5001**
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 571 9104 R1001**	**GHG 571 9104 R5001**
110 V AC			30 cm Litze 2.5		**9204 R5001**

Example

Example



Plastic



Metal

Ordering key eXLink inlet 4-pole + PE

Metal version for Ex-d applications with free volume < 2000 cm³

GHG 574 9XXX RXX0X

X = Count No.

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = Crimp[1]/30 cm multi wire up to 1.5 mm²	01 = 1 h	0 = Plastic	0 = without padlocking facility
2 = Crimp[1]/30 cm multi wire up to 2.5 mm²	05 = 5 h	1 = Stainless steel AISI 316L with M20 thread	9 = with padlocking facility
[1] Crimp only plastic version	10 = 10 h	3 = Nickel-plated brass with M20 thread	
Optional: Crimp up to 0.5 mm²		5 = Stainless steel AISI 316L with 1/2" NPT thread	
		6 = Nickel-plated brass with 1/2" NPT thread	

Metal version only potted with multi-wire. All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Thread M20 x 1.5 Order No.	1/2" NPT Order No.
Inlet made of plastic					
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm²	**GHG 574 9101 R0001**	
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm²	**GHG 574 9105 R0001**	**Only available in metal version!**
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm²	**GHG 574 9205 R0001**	
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 574 9110 R0001**	
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 574 9210 R0001**	
Ethernet	4-pol + PE	1 h	30 cm multi wire 1.5 mm²	**GHG 574 9101 R0002**	
24 V AC	4-pol + PE	5 h	30 cm multi wire 1.0 mm²	**GHG 574 9105 R0002**	**Only available in metal version!**
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm²	**GHG 574 9110 R0002**	
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm²	**GHG 574 9210 R0002**	
Inlet made of nickel-plated brass V < 2000 cm³					
Ethernet/Bus	4-pol + PE	1 h	30 cm multi wire 1.5 mm²	**GHG 574 9101 R3001**	**GHG 574 9101 R6001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm²	**GHG 574 9105 R3001**	**GHG 574 9105 R6001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm²	**GHG 574 9205 R3001**	**GHG 574 9205 R6001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm²	**GHG 574 9110 R3001**	**GHG 574 9110 R6001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm²	**GHG 574 9210 R3001**	**GHG 574 9210 R6001**
Inlet made of stainless steel V < 2000 cm³					
Ethernet/Bus	4-pol + PE	1 h	30 cm multi wire 1.5 mm²	**GHG 574 9101 R1001**	**GHG 574 9101 R5001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm²	**GHG 574 9105 R1001**	**GHG 574 9105 R5001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm²	**GHG 574 9205 R1001**	**GHG 574 9205 R5001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm²	**GHG 574 9110 R1001**	**GHG 574 9110 R5001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm²	**GHG 574 9210 R1001**	**GHG 574 9210 R5001**



Metal

Ordering key eXLink inlet 4-pole

Metal version also for Ex-d applications with free volume > 2000 cm³

GHG 571 6XXX RXX01

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = 30 cm multi wire up to 1.5 mm²	02 = 2 h	1 = Stainless steel AISI 316L with M20 thread	0 = without padlocking facility
2 = 30 cm multi wire up to 2.5 mm²	04 = 4 h	3 = Nickel-plated brass with M20 thread	9 = with padlocking facility
	06 = 6 h	5 = Stainless steel AISI 316L with 1/2" NPT thread	
	08 = 8 h	6 = Nickel-plated brass with 1/2" NPT thread	
	12 = 12 h		

Metal version only potted with multi-wire. All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Thread M20 x 1.5 Order No.	1/2" NPT Order No.
Flange socket made of stainless steel for V > 2000 cm³					
BUS	3-pol + PA	2 h	30 cm multi wire 1.5 mm²	**GHG 571 6102 R1001**	**GHG 571 6102 R5001**
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 571 6104 R1001**	**GHG 571 6104 R5001**
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 571 6204 R1001**	**GHG 571 6204 R5001**
230 V AC	2-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 571 6106 R1001**	**GHG 571 6106 R5001**
230 V AC	2-pol + PE	6 h	30 cm multi wire 2.5 mm²	**GHG 571 6206 R1001**	**GHG 571 6206 R5001**
24 V DC	4-pol	8 h	30 cm multi wire 1.5 mm²	**GHG 571 6108 R1001**	**GHG 571 6108 R5001**
24 V DC	4-pol	8 h	30 cm multi wire 2.5 mm²	**GHG 571 6208 R1001**	**GHG 571 6208 R5001**
24 V AC	2-pol + PE	12 h	30 cm multi wire 1.5 mm²	**GHG 571 6112 R1001**	**GHG 571 6112 R5001**
24 V AC	2-pol + PE	12 h	30 cm multi wire 2.5 mm²	**GHG 571 6212 R1001**	**GHG 571 6212 R5001**
Inlet made of nickel-plated brass V > 2000 cm³					
BUS	3-pol + PA	2 h	30 cm multi wire 1.5 mm²	**GHG 571 6102 R3001**	**GHG 571 6102 R6001**
110 V AC	2-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 571 6104 R3001**	**GHG 571 6104 R6001**
110 V AC	2-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 571 6204 R3001**	**GHG 571 6204 R6001**
230 V AC	2-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 571 6106 R3001**	**GHG 571 6106 R6001**
230 V AC	2-pol + PE	6 h	30 cm multi wire 2.5 mm²	**GHG 571 6206 R3001**	**GHG 571 6206 R6001**
24 V DC	4-pol	8 h	30 cm multi wire 1.5 mm²	**GHG 571 6108 R3001**	**GHG 571 6108 R6001**
24 V DC	4-pol	8 h	30 cm multi wire 2.5 mm²	**GHG 571 6208 R3001**	**GHG 571 6208 R6001**
24 V AC	2-pol + PE	12 h	30 cm multi wire 1.5 mm²	**GHG 571 6112 R3001**	**GHG 571 6112 R6001**
24 V AC	2-pol + PE	12 h	30 cm multi wire 2.5 mm²	**GHG 571 6212 R3001**	**GHG 571 6212 R6001**



Metal

Ordering key eXLink inlet 4-pole + PE

Metal version also for Ex-d applications with free volume > 2000 cm³

GHG 574 6XXX RXX01

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = 30 cm multi wire up to 1.5 mm²	01 = 1 h	1 = Stainless steel AISI 316L with M20 thread	0 = without padlocking facility
2 = 30 cm multi wire up to 2.5 mm²	05 = 5 h	3 = Nickel-plated brass with M20 thread	9 = with padlocking facility
	10 = 10 h	5 = Stainless steel AISI 316L with 1/2" NPT thread	
		6 = Nickel-plated brass with 1/2" NPT thread	

Metal version only potted with multi-wire. All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Thread M20 x 1.5 Order No.	1/2" NPT Order No.
Inlet made of stainless steel for V > 2000 cm²					
Ethernet/Bus	4-pol + PA	1 h	30 cm multi wire 1.5 mm²	**GHG 574 6101 R1001**	**GHG 574 6101 R5001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm²	**GHG 574 6105 R1001**	**GHG 574 6105 R5001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm²	**GHG 574 6205 R1001**	**GHG 574 6205 R5001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm²	**GHG 574 6110 R1001**	**GHG 574 6110 R5001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm²	**GHG 574 6210 R1001**	**GHG 574 6210 R5001**
Inlet made of nickel-plated brass V > 2000 cm²					
Ethernet/Bus	4-pol + PE	1 h	30 cm multi wire 1.5 mm²	**GHG 574 6101 R3001**	**GHG 574 6101 R6001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 1.5 mm²	**GHG 574 6105 R3001**	**GHG 574 6105 R6001**
24 V DC	4-pol + PE	5 h	30 cm multi wire 2.5 mm²	**GHG 574 6205 R3001**	**GHG 574 6205 R6001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 1.5 mm²	**GHG 574 6110 R3001**	**GHG 574 6110 R6001**
230 V AC	4-pol + PE	10 h	30 cm multi wire 2.5 mm²	**GHG 574 6210 R3001**	**GHG 574 6210 R6001**



Coupler



Plug

Ordering key eXLink plug/coupler for armoured cables 4-pole

GHG 571 XXXX RXX01

1. Content	2. Connection technology	3. Coding	4. Material	5. Accessories
3 = Coupler	1 = Crimp up to 1.5 mm²	02 = 2 h	2 = Stainless steel AISI 316L[1]	0 = without padlocking facility
7 = Plug	2 = Crimp up to 2.5 mm²	04 = 4 h	4 = Nickel-plated brass	8 = Plug with protection cap
		06 = 6 h	[1] Strain relief in nickel-plated brass	9 = with padlocking facility
		08 = 8 h		
		12 = 12 h		

Coupler with protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Connecting cable Ø 12 - 21 mm Plug Order No.	Coupler Order No.
Plug/coupler made of stainless steel for armoured cables[1]					
Bus	3-pol + PA	2 h	Crimp up to 1.5 mm²	**GHG 571 7102 R2001**	**GHG 571 3102 R2001**
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 571 7104 R2001**	**GHG 571 3104 R2001**
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 571 7204 R2001**	**GHG 571 3204 R2001**
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 571 7106 R2001**	**GHG 571 3106 R2001**
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 571 7206 R2001**	**GHG 571 3206 R2001**
24 V DC	4-pol	8 h	Crimp up to 1.5 mm²	**GHG 571 7108 R2001**	**GHG 571 3108 R2001**
24 V DC	4-pol	8 h	Crimp up to 2.5 mm²	**GHG 571 7208 R2001**	**GHG 571 3208 R2001**
24 V AC	2-pol + PE	12 h	Crimp up to 1.5 mm²	**GHG 571 7112 R2001**	**GHG 571 3112 R2001**
24 V AC	2-pol + PE	12 h	Crimp up to 2.5 mm²	**GHG 571 7212 R2001**	**GHG 571 3212 R2001**
Plug/coupler made of nickel-plated brass for armoured cables					
Bus	3-pol + PE	2 h	Crimp up to 1.5 mm²	**GHG 571 7102 R4001**	**GHG 571 3102 R4001**
110 V AC	2-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 571 7104 R4001**	**GHG 571 3104 R4001**
110 V AC	2-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 571 7204 R4001**	**GHG 571 3204 R4001**
230 V AC	2-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 571 7106 R4001**	**GHG 571 3106 R4001**
230 V AC	2-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 571 7206 R4001**	**GHG 571 3206 R4001**
24 V DC	4-pol	8 h	Crimp up to 1.5 mm²	**GHG 571 7108 R4001**	**GHG 571 3108 R4001**
24 V DC	4-pol	8 h	Crimp up to 2.5 mm²	**GHG 571 7208 R4001**	**GHG 571 3208 R4001**
24 V AC	2-pol + PE	12 h	Crimp up to 1.5 mm²	**GHG 571 7112 R4001**	**GHG 571 3112 R4001**
24 V AC	2-pol + PE	12 h	Crimp up to 2.5 mm²	**GHG 571 7212 R4001**	**GHG 571 3212 R4001**

[1] Strain relief in nickel-plated brass



Plug



Coupler

Ordering key eXLink plug/coupler for armoured cables 4-pole + PE

GHG 574 XXXX RXX01

1. Voltage	2. Connection technology	3. Coding	4. Material	5. Accessories
3 = Coupler	1 = Crimp up to 1.5 mm²	01 = 1 h	2 = Stainless steel AISI 316L[1]	0 = without padlocking facility
7 = Plug	2 = Crimp up to 2.5 mm²	05 = 5 h	4 = Nickel-plated brass	8 = Stecker with protection cap
	Optional: Crimp up to 0.5 mm²	10 = 10 h	[1] Strain relief in nickel-plated brass	9 = with padlocking facility

Coupler with protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Connecting cable Ø 12 - 21 mm	
				Plug Order No.	Coupler Order No.
Plug/coupler made of stainless steel for armoured cables[1]					
Ethernet/Bus	4-pol + PE	1 h	Crimp up to 1.5 mm²	**GHG 574 7101 R2001**	**GHG 574 3101 R2001**
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm²	**GHG 574 7105 R2001**	**GHG 574 3105 R2001**
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm²	**GHG 574 7205 R2001**	**GHG 574 3205 R2001**
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 574 7110 R2001**	**GHG 574 3110 R2001**
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 574 7210 R2001**	**GHG 574 3210 R2001**
Plug/coupler made of nickel-plated brass for armoured cables					
Ethernet/Bus	4-pol + PE	1 h	Crimp up to 1.5 mm²	**GHG 574 7101 R4001**	**GHG 574 3101 R4001**
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm²	**GHG 574 7105 R4001**	**GHG 574 3105 R4001**
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm²	**GHG 574 7205 R4001**	**GHG 574 3205 R4001**
230 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 574 7110 R4001**	**GHG 574 3110 R4001**
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 574 7210 R4001**	**GHG 574 3210 R4001**

[1] Strain relief in nickel-plated brass



Elbow plastic



Elbow metal



Plug pins



Detail: Anti torsion device

Ordering key eXLink elbow

GHG 571 1000 RX001

Material

0 = Plastic
1 = Stainless steel AISI 316L
3 = Nickel-plated brass

Ordering details

Type	Material	Order No.
Elbow M20[1)]	Plastic	**GHG 571 1000 R0001**
Elbow M20[1)]	Stainless steel AISI 316L	**GHG 571 1000 R1001**
Elbow M20[1)]	Nickel-plated brass	**GHG 571 1000 R3001**

[1)] Usage depends on wire cross section and number of wires

Accessories

Type	OU	Content 3+PE	4 pol.	4+PE	Order No.
Set of socket contacts 0.5 mm², 4-pole	1	X	X	–	**GHG 570 1905 R0007**
Set of socket contacts 1.5 mm², 4-pole	1	X	X	–	**GHG 570 1905 R0001**
Set of socket contacts 2.5 mm², 4-pole	1	X	X	–	**GHG 570 1905 R0002**
Set of socket contacts 1.5 mm², 4-pole + PE contact	1	–	–	X	**GHG 570 1905 R0003**
Set of socket contacts 2.5 mm², 4-pole + PE contact	1	–	–	X	**GHG 570 1905 R0004**
Crimp tool for eXLink	1	X	X	X	**GHG 570 1902 R0001**
Plastic protection cap connector/receptacle	1	X	X	X	**GHG 570 1903 R0001**
Plastic protection cap plug/inlet	1	X	X	X	**GHG 570 1903 R0002**
Brass protection cap connector/receptacle	1	X	X	X	**GHG 570 1903 R0003**
Brass protection cap plug/inlet	1	X	X	X	**GHG 570 1903 R0004**
Set of plug pins 0.5 mm², 3-pole + PE (PE leading AC)	1	X	–	–	**GHG 570 1904 R0012**
Set of plug pins 0.5 mm², 4-pole (lagging DC)	1	–	X	–	**GHG 570 1904 R0011**
Set of plug pins 1.5 mm², 3-pole + PE (PE leading AC)	1	X	–	–	**GHG 570 1904 R0003**
Set of plug pins 1.5 mm², 4-pole (lagging DC)	1	–	X	–	**GHG 570 1904 R0001**
Set of plug pins 2.5 mm², 3-pole + PE (PE leading AC)	1	X	–	–	**GHG 570 1904 R0004**
Set of plug pins 2.5 mm², 4-pole (lagging DC)	1	–	X	–	**GHG 570 1904 R0002**
Set of plug pins 1.5 mm², 4-pole + PE contact	1	–	–	X	**GHG 570 1904 R0005**
Set of plug pins 2.5 mm², 4-pole + PE contact	1	–	–	X	**GHG 570 1904 R0006**
Screw driver for cage clamp	1	X	X	–	**GHG 570 1908 R0001**
Strain relief and seal 4 - 7.5 mm	1	X	X	X	**GHG 570 1907 R0001**
Strain relief and seal 7.5 - 11 mm	1	X	X	X	**GHG 570 1907 R0002**
Anti torsion device M20	1	X	X	X	**GHG 570 1901 R0001**



Plug



Coupler

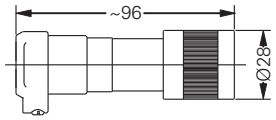


Inlet

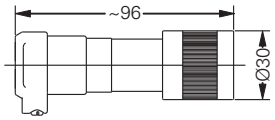


Flange socket

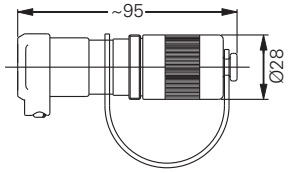
Dimension drawing eXLink



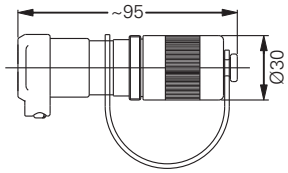
Plug metal version



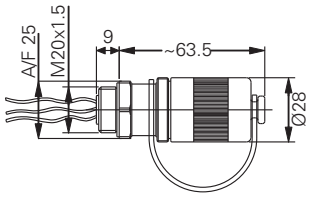
Plug plastic version



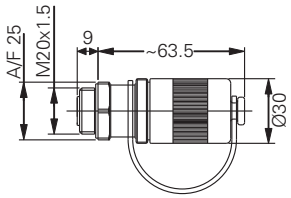
Coupler metal version



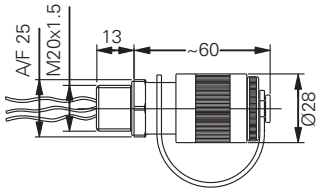
Coupler plastic version



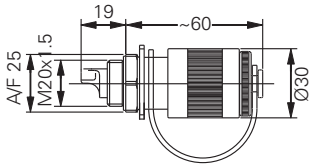
Flange socket metal version



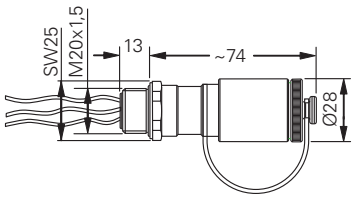
Flange socket plastic version



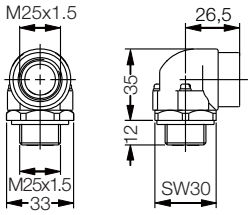
Inlet metal version: V < 2000 cm³



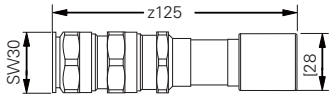
Inlet plastic version



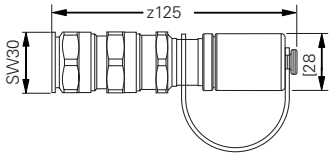
Inlet metal version: V > 2000 cm³



Elbow



Plug for armoured cable



Coupler for armoured cable

Dimensions in mm

eXLink®- Ethernet/USB

1 eXLink 4-pole + PA for Zone 1 and Zone 21

Ethernet/USB in hazardous environment

The inlets and receptacles **eXLink** Ethernet and **eXLink** USB extend the proven connector series **eXLink** for hazardous areas. They can be used for plug-in connection for industrial LAN/ Ethernet and USB applications with each other in areas with an explosion hazard. The normally used electrical isolation of an intrinsically safe interface is no longer necessary. The Ex-de technology of the connectors allows the use of full industrial Ethernet power without barriers. This increases the efficiency of the bus architecture and reduces the susceptibility to faults and therefore the costs.

The sockets of the inlets and receptacles designed with Ex-de degree of protection have the proven CEAG contacts of shutter-like, punched and specially treated copper-beryllium band which provides a perfect electrical connection continuously with its large number of contact points. An Ex-d space around each plug pin provides a reliable ex-d chamber for explosion protection during connection and disconnection of the connectors in zones 1, 2, 21 and 22. To rule out incorrect assignment, the inlets and receptacles are coded according to time similar to the IEC 60309 system.

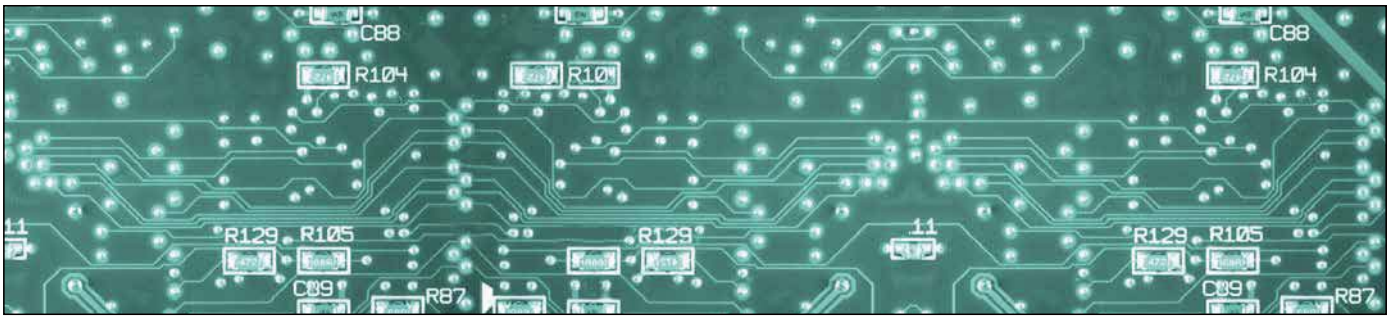
In accordance with the requirements of a contemporary, safe and time-saving assembly, all the components are equipped with earthing cables, cable stub and pre-assembled RJ plug male/female or USB plug male/ female.

With the M20 screw-in thread the nickel-plated brass components (optionally stainless steel) can be integrated in all flameproof design enclosures, allowing the use of industrial Ethernet cards/instruments inside without limits.



Features

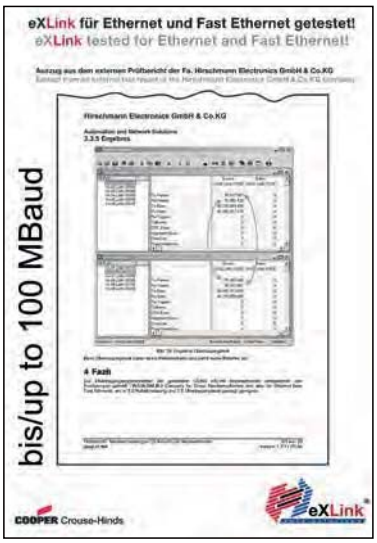
- **Hot swap**
- **Compact design**
- **High degree of protection IP66 / IP68**
- **Simple assembly**
- **Frequency range up to 100 MHz or USB 2.0**
- **Transfer rate up to 100 MBaud (Ethernet)**
- **Available for 10 BASE-T, 100 BASE-T**



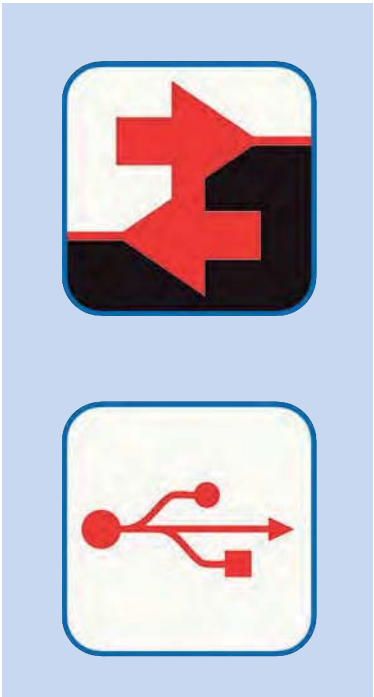
Innovative connectors for Ethernet systems

Combine the safety of an innovative explosion-protected connector system with the advantages of a homogeneous communication structure between the host, control and process level! With **eXLink Ethernet** and **eXLink USB** you can also use efficient, Ethernet-based communication systems in the hazardous areas. This enables you to use a modern information architecture at the same time as efficiently satisfying all criteria for explosion protection.

Conventional field bus systems are designed exclusively for data communication with the process and production control. With Ethernet as a communication medium you can implement a homogeneous infrastructure from the host level via the control level to the process level. In the industrial environment, **eXLink** connector systems replace the familiar connectors of the IT office world. Therefore this systems also offers you the real time performance of Ethernet networks – hot swap – in addition to high safety standards in areas with an explosion hazard. Adapt your control to the changing production processes. Child's play with **eXLink** connectors because Ethernet components and explosion protection have a modular structure. This means that you can update your information architecture without having to change your explosion-protected installation by simply changing the components in their pressurised enclosures. You can use conventional industrial components because the explosion-protected connection to your network is provided by the **eXLink** installed in the enclosure which also enables hot swapping of your terminating equipment without isolating and without hot work permit. The **eXLink** also put your data transmission on the safe side. Independent measurements of a well-known laboratory have classified the use of the **eXLink 4-pole + PA** up to 100 MHz and with transfer rates up to 100 Mbaud according to the requirements layed out in TIA/EIA-568-B.2 Category 5e as safe. The **eXLink 4-pole + PA** system can therefore be used in **Fast Ethernet®** or **Ethernet®** networks as well as for the implementation of explosion-protected USB interfaces such as hard disk driver.



Advanced technology with eXLink available by now





eXLink Ethernet with inlet



eXLink Ethernet with flange socket

Technical data

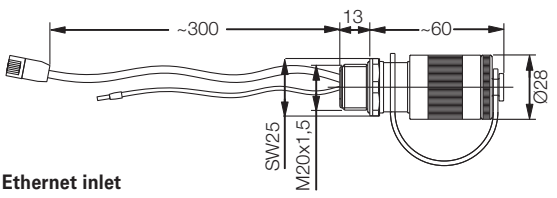
	eXLink Ethernet 4-pole + PA
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6 / Ⓔx II 2 D tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 03 ATEX 1016 X
IECEx Certificate of Conformity	IECEx BKI 06.0005X
Marking accd. to IECEx	Ex ed IIC T6 / Ex ia/ib IIC T6 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-55°C up to +40°C
Store temperature in original wrapping	-55°C up to +80°C
Rated voltage	BUS
Rated current	max. 1 A
Frequency range	0-100 MHz, Fast Ethernet® compatible
Terminal cross section	Ethernet-cable 300 mm CAT 5e with plug RJ 45 male/female[1)]
Protection class acc. to EN 60598	I
Transmission performance acc. to TIA/EIA-568-B.2	Category 5e up to 100 Mbaud
Degree of protection accd. to EN 60529	IP66/IP68 with closed and locked protective caps or duly plugged and locked components
Enclosure material	Nickel-plated brass / stainless steel 316L
Coding	1 h
Cable gland inlet and flange socket	M20 x 1.5 / 1/2" NPT
Accessories (option)	Padlocking facility

Ordering details

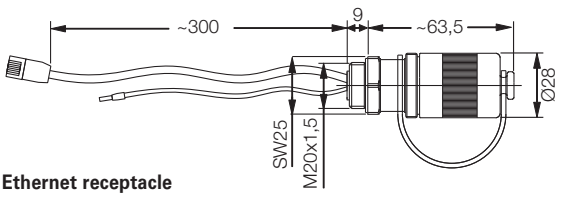
Scope of delivery	Order No.
eXLink Ethernet inlet with cable and RJ plug male (nickel-plated brass)	**GHG 574 9101 R3002**
eXLink Ethernet receptacle with cable and RJ plug male (nickel-plated brass)	**GHG 574 8101 R3002**

[1)] other length on request
All versions including protective caps

Dimension drawing



Ethernet inlet



Ethernet receptacle

Pin allocation eXLink:
Pin 1: white/green
Pin 2: white/orange
Pin 3: green
Pin 4: orange

Dimensions in mm



eXLink USB with inlet



eXLink USB with flange socket

Technical data

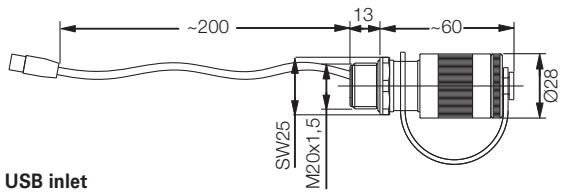
	eXLink USB 4-pole
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6 / Ⓔx II 2 D tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 03 ATEX 1016 X
IECEx Certificate of Conformity	IECEx BKI 06.0005X
Marking accd. to IECEx	Ex ed IIC T6 / Ex ia/ib IIC T6 Ex tD A21 IP66 T80 °C
Permissible ambient temperature	-55°C up to +40°C
Store temperature in original wrapping	-55°C up to +80°C
Rated voltage	BUS
Rated current	max. 1 A
Frequency range	USB 2.0
Terminal cross section	Data cable 200 mm with USB plug male/female1)
Protection class acc. to EN 60598	I
Degree of protection accd. to EN 60529	IP66/IP68 with closed and locked protective caps or duly plugged and locked components
Enclosure material	Nickel-plated brass / stainless steel 316L
Coding	2 h
Cable gland inlet and flange socket	M20 x 1.5 / 1/2" NPT
Accessories (option)	Padlocking facility

Ordering details

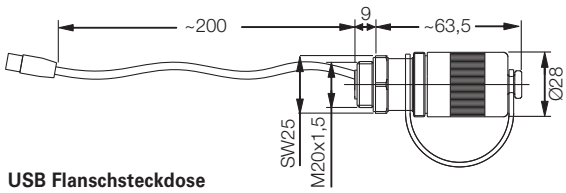
Scope of delivery	Order No.
eXLink inlet with cable and USB plug male (Nickel-plated brass)	**GHG 571 9102 R3003**
eXLink inlet with cable and USB coupler female (nickel-plated brass)	**GHG 571 9102 R3004**
eXLink receptacle with cable and USB plug female (nickel-plated brass)	**GHG 571 8102 R3003**
eXLink receptacle with cable and USB plug male (nickel-plated brass)	**GHG 571 8102 R3004**

[1] other length on request
All versions including protective caps

Dimension drawing



USB inlet



USB Flanschsteckdose

Pin allocation eXLink:
Pin 1: white/green
Pin 2: white/orange
Pin 3: green
Pin 4: orange

Dimensions in mm

eXLink®- the Miniature-Power Connector

1 eXLink 7-pole / 6-pole + PE - 16 A for Zone 1 and Zone 22

From BUS-technology to 16 A

Providing flexible power supply and signal – connection there, where it is needed – even in hazardous areas for the Zones 1and 2.

The **eXLink** 7 pole / 6- pole + PE is a complete system for connecting and disconnecting product electrically. Supplying from low voltage BUS signals up to 400 V AC / 16 A electrical power the full range of connectors and receptacles are available with moulded plastic enclosures as well as nickel-plated brass or stainless steel enclosures materials.

Time code for safety

A coding system following to IEC 60309 system secures from misconnections of non-compatible voltage levels. Only connectors and plugs with the same voltage level can be plugged into.

Proven connectivity

The well-known and reliable bonding technique "crimp connection" for wire size of 0.75 mm² up to 1.5 mm² and optional 2.5 mm² is used for wire connection to the pins. Additionally a screw-less technique "cage clamp" can be used for selected types. A special plug and connector for the use of armoured cable is available.

The Receptacle and the Inlet are equipped with metric thread M25 x 1.5 or 3/4" NPT thread to screw directly into electrical apparatus. The factory potted metal versions can be used directly into Ex-d enclosures without additionally certification to be applied.

No "Hot Work Permit"

All **eXLink** plugs, inlets, receptacle and connectors are designed for hot swapping of apparatus in hazardous areas without disconnecting terminals, without shutting down circuits and without a "hot work permit"!



Features

- **Hot swap**
- **Standard IP protection IP66/IP68**
- **Permissible ambient temperature from -55 to +70 °C**
- **Up to 400 V 16 A**
- **Stainless steel or nickel plated brass enclosures for highest mechanical protection**
- **Max. 7-pole (6-pole + PE) connections**
- **Mining (EX I M2) certified**



Flange socket



Inlet



Coupler



Plug

Technical data

		eXLink 6+1-pole / 7-pole
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6 Ex ia/ib IIC T6 / Ⓔx II 3 D Ex tc IIIC T80 °C DC
EC-Type Examination Certificate		PTB 06 ATEX 1031 X
EC-Declaration of Conformity		CCH 13 ATEX 1010 X
IECEx Certificate of Conformity		IECEx BKI 06.0005X
Marking accd. to IECEx		Ex ed IIC T6 / Ex ia/ib IIC T6
Permissible ambient temperature		–20 °C to +40 °C (rated current 16 A)
Extended temperature range		–55 °C to +75 °C (metal, rated current 1 A)
Store temperature in original wrapping		–55 °C to +80 °C
Rated voltage		AC up to 400 V, 50/60 Hz / DC up to 60 V
Rated current		max. 3 x 16 A
Rated making / Rated breaking capacity accd. EN 60 947-4	AC-3: DC-3:	U_e 400 V / I_e 1 A U_e 60 V / I_e 0.5 A
External back-up fuse max. without therm. protection		16 A
External back-up fuse max. with therm. protection		20 A gG
Protection class acc. to EN 60598		II: plastic / I: Metal
Terminal cross section Plug, coupler Inlet, receptacle in plastic		 Crimp 1.5 mm^2: 0.75 - 1.5 mm^2/ Solder Crimp 2.5 mm^2: 2.5 mm^2 Cage clamp: 0.5 - 1.0 mm^2 multi wire, 0.5 - 1.5 mm^2 single wire Crimp 1.5 mm^2: 0.75 - 1.5 mm^2/ Solder Crimp 2.5 mm^2: 2.5 mm^2
Inlet, receptacle in metal		30 cm multi wire[1]: 1.5 mm^2 / 2.5 mm^2
Cable gland plug and coupler		Ø 7 - 11 mm / Ø 11 - 15 mm
Cable gland plug and coupler for armoured cables		external isol. Ø 16- 26 mm / internal isol. Ø 8.5 - 16 mm / armouring 0 - 1.5 mm
Cable gland inlet and flange socket		M25 x 1.5 / 3/4" NPT
Degree of protection accd. to EN 60529		IP66/IP68 with closed and locked protective caps or duly plugged and locked components
Enclosure material Plug, coupler, inlet < 2000 cm^3 and flange socket Inlet > 2000 cm^2 and plug/coupler for armoured cables		 Polyamide, nickel plated brass or stainless steel AISI 316L Nickel plated brass or stainless steel AISI 316L

[1] other length on request

Ordering key eXLink 6+1-pole

1. Type

- 1 = Elbow
- 3 = Coupler
- 6 = Inlet > 2000 cm³
- 7 = Plug
- 8 = Flange socket
- 9 = Inlet

2. Connection technology

- 1 = Crimp up to 1.5 mm²
- 2 = Crimp up to 2.5 mm²
- 6 = Cage clamp

3. Coding

- 04 = 4 h / 110 V AC 6p + PE
- 06 = 6 h / 230 V AC 6p + PE
- 08 = 8 h / 24 V DC 7p
- 10 = 10 h / 400 V AC 6p + PE
- 12 = 12 h / 24 V AC 6p + PE

GHG 572 XXXX RXX0X

4. Material

- 0 = Plastic
- 1 = Stainless steel AISI 316L
- 2 = Stainless steel AISI 316L for armoured cables
- 3 = Nickel-plated brass
- 4 = Brass for armoured cables
- 5 = Stainless steel AISI 316L NPT
- 6 = Nickel-plated brass NPT

5. Accessories

- 0 = without padlocking facility
- 8 = Protection cap for plug
- 9 = with padlocking facility

6. Connecting cable Ø (plug and coupler)

- 1 = 7 – 11 mm/16 – 26 mm[1)]
- 2 = 11 – 15 mm

[1)] Version for armoured cables

7. Connection (inlet and receptacle)

Connecting cable	Plastic	Nickel-plated brass	Stainless steel
Crimp	...R0XX1	n.a.	n.a.
30 cm	...R0XX2	...R3XX1	...R1XX1
50 cm	...R0XX3	...R3XX2	...R1XX2
75 cm	...R0XX4	...R3XX3	...R1XX3
150 cm	...R0XX5	...R3XX4	...R1XX4

Version for possible configurations

	Plastic	Nickel-plated brass	stainless steel	Crimp 1.5 mm²	Crimp 2.5 mm²	Solder	Cage clamp	30 cm multi wire 1.5 mm²	30 cm multi wire 2.5 mm²	Cable gland Ø 7 - 11 mm	Cable gland Ø 11 - 15 mm	Cable gland Ø 16 - 26 mm	M25 x 1.5	3/4" NPT
Plug	x	x	x	x	x	x	x			x	x			
Coupler	x	x	x	x	x	x	x			x	x			
Plug for armoured cables		x	x	x	x	x	x					x		
Coupler for armoured cables		x	x	x	x	x	x					x		
Inlet for Ex e enclosure	x	x	x	x	x			x[2)]	x[2)]				x	x
Inlet for Ex d enclosure < 2000 cm³		x	x					x[2)]	x[2)]				x	x
Inlet for Ex d enclosure > 2000 cm³		x	x					x[2)]	x[2)]				x	x
Flange socket for Ex e enclosure	x	x	x	x	x			x[2)]	x[2)]				x	x
Flange socket for Ex d enclosure (no restriction on free volume)		x	x					x[2)]	x[2)]				x	x
Elbow for Ex e enclosure	x	x											x	x
Elbow for Ex d enclosure		x											x	x

[2)] on customers request available with cable length 500/750/1500 mm, on request

For customers who wants to configure the needed **eXLink** easily and fast Eaton|s Crouse-Hinds Business offers via the Internet separate tool to select the right type and order No.: http://exlink.internezzo.de/

From a selection of nearly 2000 variants of eXLink connector products you will find **YOUR eXLink** product fast, reliable and easy usung our product configurator







Plastic



Metal

Ordering key eXLink plug 6+1-pole/7-pole

GHG 572 7XXX RXX0X

1. Connection technology	2. Coding	3. Material	4. Accessories	5. Connecting cable Ø
1 = Crimp up to 1.5 mm²	04 = 4 h	0 = Plastic	0 = without padlocking facility	1 = 7 – 11 mm
2 = Crimp up to 2.5 mm²	08 = 8 h	1 = Stainless steel AISI 316L	8 = with protection cap	2 = 11 – 15 mm
6 = Cage clamp	10 = 10 h	3 = Nickel-plated brass	9 = with padlocking facility	
	12 = 12 h			

Ordering details

Voltage	No. of poles	Coding	Power connection	Connecting cable Ø 7-11 mm Order No.	Connecting cable Ø 11 - 15 mm Order No.
Plug made of plastic					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 572 7104 R0001**	**GHG 572 7104 R0002**
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 572 7204 R0001**	**GHG 572 7204 R0002**
110 V AC	6-pol + PE	4 h	Cage clamp	**GHG 572 7604 R0001**	**GHG 572 7604 R0002**
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 572 7106 R0001**	**GHG 572 7106 R0002**
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 572 7206 R0001**	**GHG 572 7206 R0002**
230 V AC	6-pol + PE	6 h	Cage clamp	**GHG 572 7606 R0001**	**GHG 572 7606 R0002**
24 V DC	7-pol	8 h	Crimp up to 1.5 mm²	**GHG 572 7108 R0001**	**GHG 572 7108 R0002**
24 V DC		8 h	Crimp up to 2.5		7208 R0002
Plug made of nickel-plated brass					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 572 7104 R3001**	**GHG 572 7104 R3002**
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 572 7204 R3001**	**GHG 572 7204 R3002**
110 V AC	6-pol + PE	4 h	Cage clamp	**GHG 572 7604 R3001**	**GHG 572 7604 R3002**
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 572 7106 R3001**	**GHG 572 7106 R3002**
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 572 7206 R3001**	**GHG 572 7206 R3002**
230 V AC		6 h	Cage clamp		7606 R3002
Plug made of stainless steel					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 572 7104 R1001**	**GHG 572 7104 R1002**
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 572 7204 R1001**	**GHG 572 7204 R1002**
110 V AC	6-pol + PE	4 h	Cage clamp	**GHG 572 7604 R1001**	**GHG 572 7604 R1002**
230 V AC	6 pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 572 7106 R1001**	**GHG 572 7106 R1002**
230 V AC	6 pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 572 7206 R1001**	**GHG 572 7206 R1002**
230 V AC	2-pol + PE	6 h	Cage clamp	**GHG 572 7606 R1001**	**GHG 572 7606 R1002**
24 V DC	7-pol	8 h	Crimp up to 1.5 mm²	**GHG 572 7108 R1001**	**GHG 572 7108 R1002**
24 V DC	7-pol	8 h	Crimp up to 2.5 mm²	**GHG 572 7208 R1001**	**GHG 572 7208 R1002**
24 V DC	7-pol.	8 h	Cage clamp	**GHG 572 7608 R1001**	**GHG 572 7608 R1002**
400 V AC	6-p + PE	10 h	Crimp up to 1.5 mm²	**GHG 572 7110 R1001**	**GHG 572 7110 R1002**
400 V AC	6-p + PE	10 h	Crimp up to 2.5 mm²	**GHG 572 7210 R1001**	**GHG 572 7210 R1002**
24 V AC	6-p + PE	12 h	Crimp up to 1.5 mm²	**GHG 572 7112 R1001**	**GHG 572 7112 R1002**
24 V AC	6-p + PE	12 h	Crimp up to 2.5 mm²	**GHG 572 7212 R1001**	**GHG 572 7212 R1002**

Example

Example



Padlocking facility | Metal | Plastic

Ordering key eXLink coupler 6+1-pole/7-pole

GHG 572 3XXX RXX0X

1. Connection technology	2. Coding	3. Material	4. Accessories	5. Connecting cable Ø
1 = Crimp up to 1.5 mm²	04 = 1 h	0 = Plastic	0 = without padlocking facility	1 = 7 – 11 mm
2 = Crimp up to 2.5 mm²	06 = 5 h	1 = Stainless steel AISI 316L	9 = with padlocking facility	2 = 11 – 15 mm
6 = Cage clamp	08 = 6 h	3 = Nickel-plated brass		
	10 = 10 h			
	12 = 12 h			

All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Connecting cable Ø 7-11 mm Order No.	Connecting cable Ø 11 - 15 mm Order No.
Coupler made of plastic					
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 572 3204 R0001**	**GHG 572 3204 R0002**
110 V AC	6-pol + PE	4 h	Cage clamp	**GHG 572 3604 R0001**	**GHG 572 3604 R0002**
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 572 3106 R0001**	**GHG 572 3106 R0002**
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 572 3206 R0001**	**GHG 572 3206 R0002**
230 V AC	6-pol + PE	6 h	Cage clamp	**GHG 572 3606 R0001**	**GHG 572 3606 R0002**
24 V DC	7-pol	8 h	Crimp up to 1.5 mm²	**GHG 572 3108 R0001**	**GHG 572 3108 R0002**
24 V DC		8 h	Crimp up to 2.5		**GHG 572 3208 R0002**
Coupler made of nickel-plated brass					
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 572 3204 R3001**	**GHG 572 3204 R3002**
110 V AC	6-pol + PE	4 h	Cage clamp	**GHG 572 3604 R3001**	**GHG 572 3604 R3002**
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 572 3106 R3001**	**GHG 572 3106 R3002**
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 572 3206 R3001**	**GHG 572 3206 R3002**
230 V AC		6 h	Cage clamp		**GHG 572 3606 R3002**
Coupler made of stainless steel					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 572 3104 R1001**	**GHG 572 3104 R1002**
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 572 3204 R1001**	**GHG 572 3204 R1002**
110 V AC	6-pol + PE	4 h	Cage clamp	**GHG 572 3604 R1001**	**GHG 572 3604 R1002**
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 572 3106 R1001**	**GHG 572 3106 R1002**
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 572 3206 R1001**	**GHG 572 3206 R1002**
24 V DC	7-pol	8 h	Crimp up to 1.5 mm²	**GHG 572 3108 R1001**	**GHG 572 3108 R1002**
24 V DC	7-pol	8 h	Crimp up to 2.5 mm²	**GHG 572 3208 R1001**	**GHG 572 3208 R1002**
400 V AC	6p + PE	10 h	Crimp up to 1.5 mm²	**GHG 572 3110 R1001**	**GHG 572 3110 R1002**
400 V AC	6p + PE	10 h	Crimp up to 2.5 mm²	**GHG 572 3210 R1001**	**GHG 572 3210 R1002**
24 V AC	6p + PE	12 h	Crimp up to 1.5 mm²	**GHG 572 3112 R1001**	**GHG 572 3112 R1002**
24 V AC	6p + PE	12 h	Crimp up to 2.5 mm²	**GHG 572 3212 R1001**	**GHG 572 3212 R1002**

Example



Plastic



Metal

Ordering key eXLink receptacle 6+1-pole/7-pole
Metal version for Ex-d application for volume >2000 cm³

GHG 572 8XXX RXX0X — **X = Count No.** see page 2.1.140 point 7.

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = Crimp[1]/30 cm multi wire up to 1.5 mm²	04 = 4 h	0 = Plastic	0 = without padlocking facility
2 = Crimp[1]/30 cm multi wire up to 2.5 mm²	06 = 6 h	1 = Stainless steel AISI 316L with M25 thread	9 = with padlocking facility
[1] Crimp only in plastic version	08 = 8 h	3 = Nickel-plated brass with M25 thread	
	10 = 10 h	5 = Stainless steel AISI 316L with 3/4" NPT thread	
	12 = 12 h	6 = Nickel-plated brass with 3/4" NPT thread	

Metal version only potted with multi-wire.
All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Thread M25 x 1.5 Order No.	Thread 3/4" NPT Order No.
Flange socket made of plastic					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 572 8104 R0001**	
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 572 8204 R0001**	
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 572 8106 R0001**	
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 572 8206 R0001**	
24 V DC	7-pol	8 h	Crimp up to 1.5 mm²	**GHG 572 8108 R0001**	**Only available in metal version!**
24 V DC	7-pol	8 h	Crimp up to 2.5 mm²	**GHG 572 8208 R0001**	
400 V AC	6-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 572 8110 R0001**	
400 V AC	6-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 572 8210 R0001**	
24 V AC	6-pol + PE	12 h	Crimp up to 1.5 mm²	**GHG 572 8112 R0001**	
24 V AC	6-pol + PE	12 h	Crimp up to 2.5 mm²	**GHG 572 8212 R0001**	
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 572 8104 R0002**	
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 572 8204 R0002**	
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 572 8106 R0002**	**Only available in metal version!**
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm²	**GHG 572 8206 R0002**	
24 V DC	7-pol	8 h	30 cm multi wire 1.5 mm²	**GHG 572 8108 R0002**	
24 V DC		8 h	30 cm multi wire 2.5		
Flange socket made of nickel-plated brass					
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 572 8104 R3001**	**GHG 572 8104 R6001**
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 572 8204 R3001**	**GHG 572 8204 R6001**
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 572 8106 R3001**	**GHG 572 8106 R6001**
230 V AC		6 h	30 cm multi wire 2.5		**572 8106 R6001**
Flange socket made of stainless steel					
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 572 8104 R1001**	**GHG 572 8104 R5001**
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 572 8204 R1001**	**GHG 572 8204 R5001**
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 572 8106 R1001**	**GHG 572 8106 R5001**
230 V AC		6 h	30 cm multi wire 2.5		**572 8106 R5001**

Example



Padlocking facility



Metal



Plastic

Ordering key eXLink inlet 6+1-pole/7-pole < 2000 cm3

Metal version for Ex-d applications with free volume < 2000 cm³

GHG 572 9XXX RXX0X

X = Count No.

see page 2.1.140 point 7.

1. Connection technology	2. Coding	3. Material	4. Accessories
1 = Crimp[1]/30 cm multi wire up to 1.5 mm²	04 = 4 h	0 = Plastic	0 = without padlocking facility
2 = Crimp[1]/30 cm multi wire up to 2.5 mm²	06 = 6 h	1 = Stainless steel AISI 316L with M25 thread	9 = with padlocking facility
[1] Crimp only in plastic version	08 = 8 h	3 = Nickel-plated brass with M25 thread	
	10 = 10 h	5 = Stainless steel AISI 316L with 3/4" NPT thread	
	12 = 12 h	6 = Nickel-plated brass with 3/4" NPT thread	

Metal version only potted with multi-wire.
All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Thread M25 x 1.5 Order No.	Thread 3/4" NPT Order No.
Inlet made of plastic					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 572 9104 R0001**	
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 572 9204 R0001**	
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 572 9106 R0001**	
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 572 9206 R0001**	
24 V DC	7-pol	8 h	Crimp up to 1.5 mm²	**GHG 572 9108 R0001**	**Only available in metal version!**
24 V DC	7-pol	8 h	Crimp up to 2.5 mm²	**GHG 572 9208 R0001**	
400 V AC	6-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 572 9110 R0001**	
400 V AC	6-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 572 9210 R0001**	
24 V AC	6-pol + PE	12 h	Crimp up to 1.5 mm²	**GHG 572 9112 R0001**	
24 V AC	6-pol + PE	12 h	Crimp up to 2.5 mm²	**GHG 572 9212 R0001**	
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 572 9104 R0002**	
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 572 9204 R0002**	
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 572 9106 R0002**	**Only available in metal version!**
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm²	**GHG 572 9206 R0002**	
24 V DC	7-pol	8 h	30 cm multi wire 1.5 mm²	**GHG 572 9108 R0002**	
24 V DC		8 h	30 cm multi wire 2.5		
Inlet made of nickel-plated brass					
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 572 9104 R3001**	**GHG 572 9104 R6001**
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 572 9204 R3001**	**GHG 572 9204 R6001**
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 572 9106 R3001**	**GHG 572 9106 R6001**
230 V AC		6 h	30 cm multi wire 2.5		**572 9106 R6001**
Inlet made of stainless steel					
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 572 9104 R1001**	**GHG 572 9104 R5001**
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 572 9204 R1001**	**GHG 572 9204 R5001**
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 572 9106 R1001**	**GHG 572 9106 R5001**
230 V AC		6 h	30 cm multi wire 2.5		**572 9106 R5001**

Example
Example
Example



Inlet

Ordering key eXLink inlet 6+1-pole/7-pole > 2000 cm³
Metal version also for Ex-d applications with free volume > 2000 cm³

GHG 572 6XXX RXX0X

1. Connection technology	2. Coding	3. Material	4. Accessories	5. multi wire
1 = multi wire 1.5 mm²	04 = 4 h	1 = Stainless steel AISI 316L with M25 thread	0 = without padlocking facility	1 = multi wire 30 cm
2 = multi wire 2.5 mm²	06 = 6 h	3 = Nickel-plated brass with M25 thread	9 = with padlocking facility	2 = multi wire 50 cm
	08 = 8 h	5 = Stainless steel AISI 316L with 3/4" NPT thread		3 = multi wire 75 cm
	10 = 10 h	6 = Nickel-plated brass with 3/4" NPT thread		4 = multi wire 150 cm
	12 = 12 h			

Metal version only potted with multi-wire.
All versions including protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Thread M25 x 1.5 Order No.	Thread 3/4" NPT Order No.
Inlet made of stainless steel for V > 2000 cm³					
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 572 6104 R1001**	**GHG 572 6104 R5001**
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 572 6204 R1001**	**GHG 572 6204 R5001**
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 572 6106 R1001**	**GHG 572 6106 R5001**
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm²	**GHG 572 6206 R1001**	**GHG 572 6206 R5001**
24 V DC	7-pol	8 h	30 cm multi wire 1.5 mm²	**GHG 572 6108 R1001**	**GHG 572 6108 R5001**
24 V DC	7-pol	8 h	30 cm multi wire 2.5 mm²	**GHG 572 6208 R1001**	**GHG 572 6208 R5001**
400 V AC	6-pol + PE	10 h	30 cm multi wire 1.5 mm²	**GHG 572 6110 R1001**	**GHG 572 6110 R5001**
400 V AC	6-pol + PE	10 h	30 cm multi wire 2.5 mm²	**GHG 572 6210 R1001**	**GHG 572 6210 R5001**
24 V AC	6-pol + PE	12 h	30 cm multi wire 1.5 mm²	**GHG 572 6112 R1001**	**GHG 572 6112 R5001**
24 V AC	6-pol + PE	12 h	30 cm multi wire 2.5 mm²	**GHG 572 6212 R1001**	**GHG 572 6212 R5001**
Inlet made of nickel-plated brass V > 2000 cm³					
110 V AC	6-pol + PE	4 h	30 cm multi wire 1.5 mm²	**GHG 572 6104 R3001**	**GHG 572 6104 R6001**
110 V AC	6-pol + PE	4 h	30 cm multi wire 2.5 mm²	**GHG 572 6204 R3001**	**GHG 572 6204 R6001**
230 V AC	6-pol + PE	6 h	30 cm multi wire 1.5 mm²	**GHG 572 6106 R3001**	**GHG 572 6106 R6001**
230 V AC	6-pol + PE	6 h	30 cm multi wire 2.5 mm²	**GHG 572 6206 R3001**	**GHG 572 6206 R6001**
24 V DC	7-pol	8 h	30 cm multi wire 1.5 mm²	**GHG 572 6108 R3001**	**GHG 572 6108 R6001**
24 V DC	7-pol	8 h	30 cm multi wire 2.5 mm²	**GHG 572 6208 R3001**	**GHG 572 6208 R6001**
400 V AC	6-pol + PE	10 h	30 cm multi wire 1.5 mm²	**GHG 572 6110 R3001**	**GHG 572 6110 R6001**
400 V AC	6-pol + PE	10 h	30 cm multi wire 2.5 mm²	**GHG 572 6210 R3001**	**GHG 572 6210 R6001**
24 V AC	6-pol + PE	12 h	30 cm multi wire 1.5 mm²	**GHG 572 6112 R3001**	**GHG 572 6112 R6001**
24 V AC	6-pol + PE	12 h	30 cm multi wire 2.5 mm²	**GHG 572 6212 R3001**	**GHG 572 6212 R6001**



Coupler



Plug

Ordering key eXLink plug/coupler for armoured cables

GHG 572 XXXX RXX01

1. Version	2. Connection technology	3. Coding	4. Material	5. Accessories
3 = Coupler	1 = Crimp up to 1.5 mm²	04 = 4 h	2 = Stainless steel AISI 316L*	0 = without padlocking facility
7 = Plug	2 = Crimp up to 2.5 mm²	06 = 6 h	4 = Nickel-plated brass	8 = Plug with protection cap
		08 = 8 h	* Strain relief in nickel-plated brass	9 = with padlocking facility
		10 = 10 h		
		12 = 12 h		

Coupler with protection cap.

Ordering details

Voltage	No. of poles	Coding	Power connection	Connecting cable Ø 16 - 26 mm	
				Plug Order No.	Coupler Order No.
Plug/coupler made of stainless steel for armoured cables					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 572 7104 R2001**	**GHG 572 3104 R2001**
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 572 7204 R2001**	**GHG 572 3204 R2001**
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 572 7106 R2001**	**GHG 572 3106 R2001**
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 572 7206 R2001**	**GHG 572 3206 R2001**
24 V DC	7-pol	8 h	Crimp up to 1.5 mm²	**GHG 572 7108 R2001**	**GHG 572 3108 R2001**
24 V DC	7-pol	8 h	Crimp up to 2.5 mm²	**GHG 572 7208 R2001**	**GHG 572 3208 R2001**
400 V AC	6-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 572 7110 R2001**	**GHG 572 3110 R2001**
400 V AC	6-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 572 7210 R2001**	**GHG 572 3210 R2001**
24 V AC	6-pol + PE	12 h	Crimp up to 1.5 mm²	**GHG 572 7112 R2001**	**GHG 572 3112 R2001**
24 V AC	6-pol + PE	12 h	Crimp up to 2.5 mm²	**GHG 572 7212 R2001**	**GHG 572 3212 R2001**
Plug/coupler made of nickel-plated brass for armoured cables					
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 572 7104 R4001**	**GHG 572 3104 R4001**
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 572 7204 R4001**	**GHG 572 3204 R4001**
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 572 7106 R4001**	**GHG 572 3106 R4001**
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 572 7206 R4001**	**GHG 572 3206 R4001**
24 V DC	7-pol	8 h	Crimp up to 1.5 mm²	**GHG 572 7108 R4001**	**GHG 572 3108 R4001**
24 V DC	7-pol	8 h	Crimp up to 2.5 mm²	**GHG 572 7208 R4001**	**GHG 572 3208 R4001**
400 V AC	6-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 572 7110 R4001**	**GHG 572 3110 R4001**
400 V AC	6-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 572 7210 R4001**	**GHG 572 3210 R4001**
24 V AC	6-pol + PE	12 h	Crimp up to 1.5 mm²	**GHG 572 7112 R4001**	**GHG 572 3112 R4001**
24 V AC	6-pol + PE	12 h	Crimp up to 2.5 mm²	**GHG 572 7212 R4001**	**GHG 572 3212 R4001**



Elbow metal



Elbow plastic



Plug pins



Detail: Anti torsion device

Ordering key eXLink elbow

GHG 572 1000 RX001

Material

0 = Plastic

3 = Nickel-plated brass

Ordering details

Type	Material	Order No.
Elbow M25[1)]	Plastic	**GHG 572 1000 R0001**
Elbow M25[1)]	Nickel-plated brass	**GHG 572 1000 R3001**

[1)] Usage depends on wire cross section and number of wires

Accessories

Type	OU	Order No.
Set of socket contacts 0.5 mm², 7-pole	1	**GHG 570 1905 R0008**
Set of socket contacts 1.5 mm², 7-pole	1	**GHG 570 1905 R0005**
Set of socket contacts 2.5 mm², 7-pole	1	**GHG 570 1905 R0006**
Crimp tool for eXLink	1	**GHG 570 1902 R0001**
Plastic protection cap connector/receptacle 7-pole	1	**GHG 570 1903 R0005**
Plastic protection cap plug/inlet 7-pole	1	**GHG 570 1903 R0006**
Brass protection cap connector/receptacle 7-pole	1	**GHG 570 1903 R0007**
Brass protection cap plug/inlet 7-pole	1	**GHG 570 1903 R0008**
Set of plug pins 0.5 mm², 6-pole + PE (PE leading AC)	1	**GHG 570 1904 R0014**
Set of plug pins 0.5 mm², 7-pole (lagging DC)	1	**GHG 570 1904 R0013**
Set of plug pins 1.5 mm², 6-pole + PE (PE leading AC)	1	**GHG 570 1904 R0007**
Set of plug pins 1.5 mm², 7-pole (lagging DC)	1	**GHG 570 1904 R0008**
Set of plug pins 2.5 mm², 6-pole + PE (PE leading AC)	1	**GHG 570 1904 R0009**
Set of plug pins 2.5 mm², 7-pole (lagging DC)	1	**GHG 570 1904 R0010**
Screw driver for cage clamp	1	**GHG 570 1908 R0001**
Strain relief and seal 7 - 11 mm	1	**GHG 570 1907 R0003**
Strain relief and seal 11 - 15 mm	1	**GHG 570 1907 R0004**
Strain relief and seal + PE connection 7 - 11	1	**GHG 570 1907 R0005**
Strain relief and seal + PE connection 11-15	1	**GHG 570 1907 R0006**
Anti torsion device for inlet and receptacle M25	1	**GHG 570 1901 R0002**



Plug metal



Plug plastic

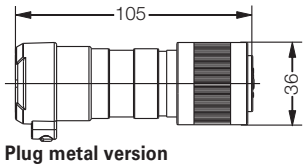


flange socket metal

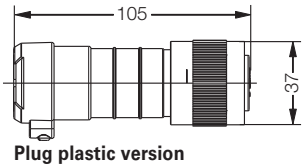


Inlet plastic

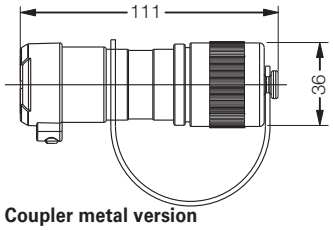
Dimension drawing eXLink 6+1-pole



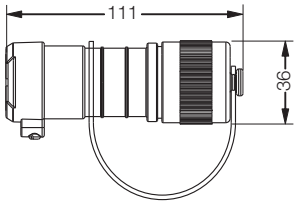
Plug metal version



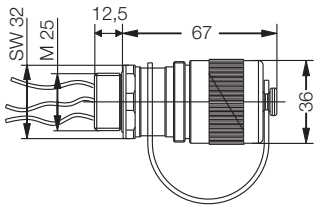
Plug plastic version



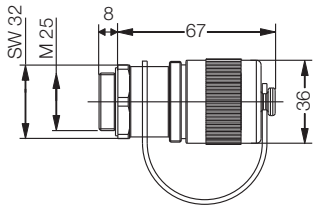
Coupler metal version



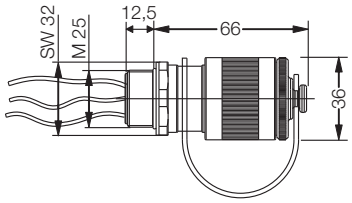
Coupler plastic version



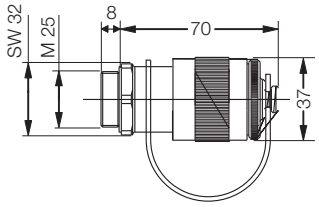
Flange socket metal version



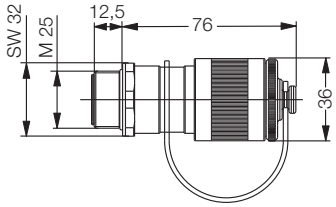
Flange socket plastic version



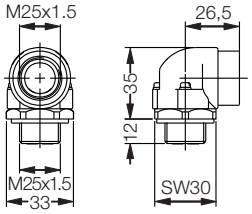
Inlet metal version: V < 2000 cm³



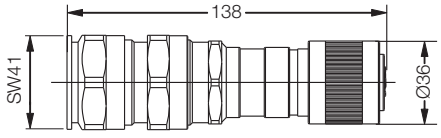
Inlet plastic version



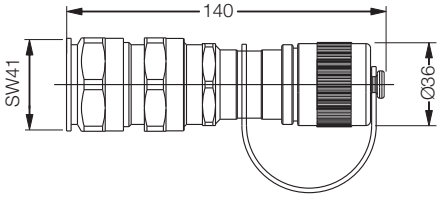
Inlet metal version: V > 2000 cm³



Elbow



Plug for armoured cable



Coupler for armoured cable

Dimensions in mm



1

Miniature electrical connectors for mining

Connecting and disconnecting electrical equipment in underground mining – without tools, without switching off and without hot work permit – is a decisive step into a future where the assembly, maintenance and repair of electrical equipment can be handled simply, safely and at low cost. With connectors for armoured cables approved for operation in areas where there is danger of fire damp you can connect lamps, indicators, sensors, motors etc. with a current consumption of up to 16 A easily by plugging.

For example, lamps connected via **eXLink** can be serviced or changed at any time without having to switch off the entire lamp line. Actuators and sensors with **eXLink** connection can be changed quickly and safely at any time. Components of large machines can be changed easily by plugging and with the **eXLink** 6+1 any current consumers with 3 phases up to 16 A, PE and 2-wire control cable can be connected by just one small plug.

The plugs and coupler of the **eXLink** series designed in Exde type of protection are handy and small. The sockets have the proven CEAG contacts of shutter-like punched and specially treated copper beryllium strip which provide a continuously perfect electrical connection with the large number of contact points.

An Ex-d space around the plug pins provides reliable explosion protection in fire damp hazard areas when connecting and disconnecting the apparatus. The plugs and sockets can be coded similarly to the CEE system. Depending on the area of application you can choose between the versions 4-pole plus PE (**eXLink** 4+1) or 6-pole plus PE (**eXLink** 6+1). Housing material is available in AISI 316L.

According to the requirements of a modern, reliable and time-saving assembly, all components are designed without screws and are available with crimp and spring terminal types.

Quick connection and disconnection in areas where there is a risk of fire damp

Secure electrical and mechanical connection in compact housings

- No switching off and disconnection necessary
- Reduction in downtimes
- Maximum type of protection IP 66/IP 68
- Wide operating temperature range
- Infinite flexibility due to different versions and codings
- Reverse polarity protected connections by coding





DEKRA

Translation

EC-Type Examination Certificate

- Directive 94/9/EC -
Equipment and protective system intended for use in potentially explosive atmospheres

BVS 07 ATEX E 020 X

(4) Equipment: Connectors type eXLink 4+1 and type eXLink 6+1

(5) Manufacturer: Cooper Crouse-Hinds GmbH

(6) Address: 08412 Eberbach, Germany

(12) The marking of the equipment shall include the following:

Ex I M2 Ex de I

DEKRA EXAM GmbH



Plug 4-pol.



Coupler 4-pol.



Plug 6-pol.



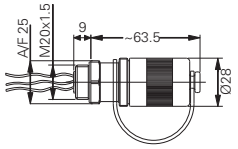
Coupler 6-pol.

Technical data

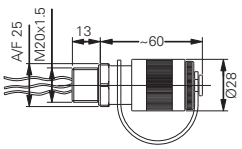
		eXLink 4-pole / 4-pole + PE / 6-pole + PE / 7-pole
Marking accd. to 2014/34/EU		Ⓔx I M2 Ex de I
Type of protection		Ex de IIC T6
EC-Type Examination Certificate		BVS 07 ATEX E 020 X
Frequency range		0-100 MHz, fast Ethernet compatible
Transmission performance acc. to TIA/EIA-568-B.2		Category 5e up to 100 Mbaud
Degree of protection accd. to EN 60529		IP 66/IP 68 with closed and locked protective caps or duly plugged and locked components
Enclosure material		Stainless steel AISI 316L
Terminal cross section	Plug/coupler: Flange socket/inlet:	Crimp 1.5 mm²: 0.75 - 1.5 mm² / Solder Crimp 2.5 mm²: 1.5 - 2.5 mm² 30 cm multi wire: 1.5 mm² / 2.5 mm²

eXLink		4-pole/4-pole + PE	6-pole + PE/7-pole
Permissible ambient temperature		–55°C up to +40°C (Rated current 10 A)	–20 °C to +40 °C (Rated current 16 A)
Extended temperature range		–55°C up to +75°C (Rated current 2 A)	–55°C up to +75°C (Rated current 2 A)
Store temperature in original wrapping		–55°C up to +80°C	–55°C up to +80°C
Rated voltage		AC up to 250 V, 50/60 Hz / DC up to 60 V	AC up to 400 V, 50/60 Hz / DC up to 60 V
Rated current		max. 10 A	max. 3x16 A
Switching capacity accd. EN 61 984	AC: DC:	250 V / 10 A 60 V / 2.5 A	400 V / 16 A
Switching capacity accd. EN 60 947-4	AC-3: DC-3:	250 V / 1 A 60 V / 0.5 A	250 V / 1 A 60 V / 0.5 A
Max. Back-up fuse without therm. protection		10 A	16 A
Max. Back-up fuse with therm. protection		20 A gG	20 A gG
Protection class acc. to EN 60598		I	I
Cable gland	Plug/coupler: Flange socket/inlet:	external isol. Ø 12 - 21 mm / internal isol. Ø 8.5 - 16 mm / armouring 0 - 1.5 mm M20 x 1.5 / opt. 1/2" NPT	external isol. Ø 16 - 26 mm / internal isol. Ø 8.5 - 16 mm / armouring 0 - 1.5 mm M25 x 1.5 / opt. 3/4" NPT

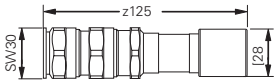
Dimension drawing



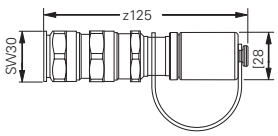
exLink 4-pole – flange socket



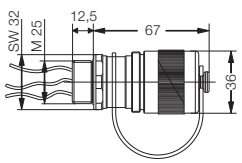
exLink 4-pole – inlet



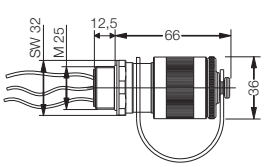
eXLink 4-pole – plug for armoured cables



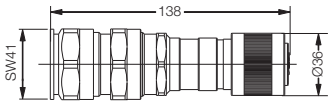
eXLink 4-pole – coupler for armoured cables



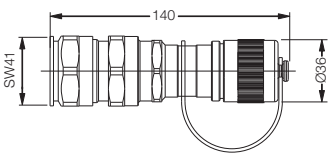
exLink 6-pole – flange socket



exLink 6-pole – inlet



eXLink 6-pole – plug for armoured cables



eXLink 6-pole – coupler for armoured cables

Dimensions in mm



Plug



Flange socket



Inlet



Coupler

Ordering key eXLink 4-pole + PE for armoured cables

GHG 574 XXXX R7X0X

1. Content	2. Connection technology	3. Coding	4. Accessories
3 = Coupler[1)]	1 = Crimp up to 1.5 mm²	01 = 1 h	0 = without padlocking facility
7 = Plug[1)]	2 = Crimp up to 2.5 mm²	05 = 5 h	9 = with padlocking facility
8 = Flange socket		10 = 10 h	
9 = Inlet			

Ordering details

Voltage	No. of poles	Coding	Power connection	Diameter of connection cable 12 - 21 mm	
				Order No.	Order No.
Plug/coupler made of stainless steel AISI 316L for armoured cable[1)]				**Plug**	**Coupler**
Ethernet/Bus	4-pol + PA	1 h	Crimp up to 1.5 mm²	**GHG 574 7101 R7003**	**GHG 574 3101 R7003**
24 V DC	4-pol + PE	5 h	Crimp up to 1.5 mm²	**GHG 574 7105 R7003**	**GHG 574 3105 R7003**
24 V DC	4-pol + PE	5 h	Crimp up to 2.5 mm²	**GHG 574 7205 R7003**	**GHG 574 3205 R7003**
30 V AC	4-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 574 7110 R7003**	**GHG 574 3110 R7003**
230 V AC	4-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 574 7210 R7003**	**GHG 574 3210 R7003**
Inlet/receptacle made of stainless steel AISI 316L				**Inlet**	**Flange socket**
Ethernet/Bus	4-pol + PA	1 h	300 mm 1.5 mm²	**GHG 574 9101 R7001**	**GHG 574 8101 R7001**
24 V DC	4-pol + PE	5 h	300 mm 1.5 mm²	**GHG 574 9105 R7001**	**GHG 574 8105 R7001**
24 V DC	4-pol + PE	5 h	300 mm 2.5 mm²	**GHG 574 9205 R7001**	**GHG 574 8205 R7001**
230 V AC	4-pol + PE	10 h	300 mm 1.5 mm²	**GHG 574 9110 R7001**	**GHG 574 8110 R7001**
230 V AC	4-pol + PE	10 h	300 mm 2.5 mm²	**GHG 574 9210 R7001**	**GHG 574 8210 R7001**

[1)] Strain relief in nickel-plated brass



Plug



Flange socket



Inlet



Coupler

Ordering key eXLink 4-pole for armoured cables

GHG 571 XXXX R7X0X

1. Content	2. Connection technology	3. Coding	4. Accessories
3 = Coupler[1)]	1 = Crimp up to 1.5 mm²	06 = 6 h	0 = without padlocking facility
7 = Plug[1)]	2 = Crimp up to 2.5 mm²	08 = 8 h	9 = with padlocking facility
8 = Flange socket		12 = 12 h	
9 = Inlet			

Ordering details

Voltage	No. of poles	Coding	Power connection	Diameter of connection cable 12 - 21 mm	
				Order No.	Order No.
Plug/coupler made of stainless steel AISI 316L for armoured cable[1)]				**Plug**	**Coupler**
230 V AC	2-pol + PE	6 h	1.5 mm² Crimp	**GHG 571 7106 R7003**	**GHG 571 3106 R7003**
230 V AC	2-pol + PE	6 h	2.5 mm² Crimp	**GHG 571 7206 R7003**	**GHG 571 3206 R7003**
24 V DC	4-pol	8 h	1.5 mm² Crimp	**GHG 571 7108 R7003**	**GHG 571 3108 R7003**
24 V DC	4-pol	8 h	2.5 mm² Crimp	**GHG 571 7208 R7003**	**GHG 571 3208 R7003**
24 V AC	2-pol + PE	12 h	1.5 mm² Crimp	**GHG 571 7112 R7003**	**GHG 571 3112 R7003**
24 V AC	2-pol + PE	12 h	2.5 mm² Crimp	**GHG 571 7212 R7003**	**GHG 571 3212 R7003**
Inlet/receptacle made of stainless steel AISI 316L				**Inlet**	**Flange socket**
230 V AC	2-pol + PE	6 h	300 mm 1.5 mm²	**GHG 571 9106 R7001**	**GHG 571 8106 R7001**
230 V AC	2-pol + PE	6 h	300 mm 2.5 mm²	**GHG 571 9206 R7001**	**GHG 571 8206 R7001**
24 V DC	4-pol	8 h	300 mm 1.5 mm²	**GHG 571 9108 R7001**	**GHG 571 8108 R7001**
24 V DC	4-pol	8 h	300 mm 2.5 mm²	**GHG 571 9208 R7001**	**GHG 571 8208 R7001**
24 V AC	2-pol + PE	12 h	300 mm 1.5 mm²	**GHG 571 9112 R7001**	**GHG 571 8112 R7001**
24 V AC	2-pol + PE	12 h	300 mm 2.5 mm²	**GHG 571 9212 R7001**	**GHG 571 8212 R7001**

[1)] Strain relief in nickel-plated brass



Plug



Coupler

Ordering key eXLink 6-pole + PE for armoured cables

GHG 572 XXXX R7X0X

1. Content	2. Connection technology	3. Coding	4. Accessories
3 = Coupler[1)]	1 = Crimp up to 1.5 mm²	04 = 4 h	0 = without padlocking facility
7 = Plug[1)]	2 = Crimp up to 2.5 mm²	06 = 6 h	9 = with padlocking facility
8 = Flange socket		08 = 8 h	
9 = Inlet		10 = 10 h	
		12 = 12 h	

Ordering details

Voltage	No. of poles	Coding	Power connection	Diameter of connection cable 12 - 21 mm	
				Order No.	Order No.
Plug/coupler made of stainless steel AISI 316L for armoured cable[1)]				**Plug**	**Coupler**
110 V AC	6-pol + PE	4 h	Crimp up to 1.5 mm²	**GHG 572 7104 R7003**	**GHG 572 3104 R7003**
110 V AC	6-pol + PE	4 h	Crimp up to 2.5 mm²	**GHG 572 7204 R7003**	**GHG 572 3204 R7003**
230 V AC	6-pol + PE	6 h	Crimp up to 1.5 mm²	**GHG 572 7106 R7003**	**GHG 572 3106 R7003**
230 V AC	6-pol + PE	6 h	Crimp up to 2.5 mm²	**GHG 572 7206 R7003**	**GHG 572 3206 R7003**
24 V DC	7-pol	8 h	Crimp up to 1.5 mm²	**GHG 572 7108 R7003**	**GHG 572 3108 R7003**
24 V DC	7-pol	8 h	Crimp up to 2.5 mm²	**GHG 572 7208 R7003**	**GHG 572 3208 R7003**
400 V AC	6-pol + PE	10 h	Crimp up to 1.5 mm²	**GHG 572 7110 R7003**	**GHG 572 3110 R7003**
400 V AC	6-pol + PE	10 h	Crimp up to 2.5 mm²	**GHG 572 7210 R7003**	**GHG 572 3210 R7003**
24 V AC	6-pol + PE	12 h	Crimp up to 1.5 mm²	**GHG 572 7112 R7003**	**GHG 572 3112 R7003**
24 V AC	6-pol + PE	12 h	Crimp up to 2.5 mm²	**GHG 572 7212 R7003**	**GHG 572 3212 R7003**
Inlet/receptacle made of stainless steel AISI 316L				**Inlet**	**Flange socket**
110 V AC	6-pol + PE	4 h	300 mm 1.5 mm²	**GHG 572 9104 R7001**	**GHG 572 8104 R7001**
110 V AC	6-pol + PE	4 h	300 mm 2.5 mm²	**GHG 572 9204 R7001**	**GHG 572 8204 R7001**
230 V AC	6-pol + PE	6 h	300 mm 1.5 mm²	**GHG 572 9106 R7001**	**GHG 572 8106 R7001**
230 V AC	6-pol + PE	6 h	300 mm 2.5 mm²	**GHG 572 9206 R7001**	**GHG 572 8206 R7001**
24 V DC	7-pol	8 h	300 mm 1.5 mm²	**GHG 572 9108 R7001**	**GHG 572 8108 R7001**
24 V DC	7-pol	8 h	300 mm 2.5 mm²	**GHG 572 9208 R7001**	**GHG 572 8208 R7001**
400 V AC	6-pol + PE	10 h	300 mm 1.5 mm²	**GHG 572 9110 R7001**	**GHG 572 8110 R7001**
400 V AC	6-pol + PE	10 h	300 mm 2.5 mm²	**GHG 572 9210 R7001**	**GHG 572 8210 R7001**
24 V AC	6-pol + PE	12 h	300 mm 1.5 mm²	**GHG 572 9112 R7001**	**GHG 572 8112 R7001**
24 V AC	6-pol + PE	12 h	300 mm 2.5 mm²	**GHG 572 9212 R7001**	**GHG 572 8212 R7001**

[1)] Strain relief in nickel-plated brass



Pre-Assembled Branching/Terminal Boxes

1 eXLink technology combined with terminal boxes for Zone 1 and Zone 21

Safe costs for installation and maintenace

Each user can enjoy the benefits of the **eXLink** with the pre-assembled branching boxes without having to first perform additional wiring work.

Typical applications such as energy distribution, power supply for modules or bus technology can be performed at a reasonable price. For example, a control unit can be quickly and safely connected to a pre-assembled **eXLink** branching box and disconnected using **eXLink** plugs, leading to cost and time savings during service- and repair work. An additional switch is no longer required.

All connectors can be plugged or disconnect during operation ("hot swap").

If terminal boxes are used for distributing bus cables, these can also be plugged during operation „hot swap" with **eXLink**. No re-boot or shutdown of the system is necessary. This makes diagnosis or re-configuration much easier. There is no need to waste time isolating devices, and possibly having to shut down a machine in the process.

Cables made to your requirements

Cables with **eXLink** plugs and coupler can be ordered ready made according your requirements in different lengths and versions. This is a tremendous cost reduction factor for your commissioning of the system. You can plug together all necessary bus lines, power supply systems and monitoring lines without commissioning of cables, terminals and connectors. No additional cost for re-assembling of cables, re-wiring of connections and testing procedures will arise.



Features

- **Hot swap**
- **Customized solutions**
- **Pre-assembled eXLink connectors wired on terminals**
- **for all standard connection types up to 7-pole**
- **Nominal current up to 16 A per connector**
- **Compatible with Ethernet® and Fast Ethernet®-Bus**



GHG 731 12



GHG 791 02



GHG 791 w. locking device

Technical data

	Type 791 01 / Type 791 02
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC T5/T6 Gb / Ⓔx II 2 D Ex tb IIIC T80°C Db
EC-Type Examination Certificate	BVS 16 ATEX E 031
IECEx Certificate of Conformity	IECEx BVS 16.0024
Marking accd. to IECEx	Ex e IIC T5/T6 Gb Ex tb IIIC T80°C Db
Permissible ambient temperature	–20 °C to +40 °C / -55 C to +55 °C (option)
Rated voltage	690 V / 250 V eXLink
Rated current	limited by terminal arrangement and eXLink
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure material	Polyamide

	Type 791 01
Connecting terminals	up to 4 mm²
Cable glands/enclosure drilling	max. 2 x M25 or 1 x M25 + 2 x M12
Dimensions (L x W x H)	81.5 x 100 x 61 mm
Weight	approx. 0.5 kg

	Type 791 02
Connecting terminals	up to 6 mm²
Cable glands/enclosure drilling	max. 2 x M25 or 1 x M32 + 1 x M25 or 1 x M25 + 4 x M12
Dimensions (L x W x H)	117.5 x 113.5 x 73.5 mm
Weight	approx. 0.7 kg

	Type 731 11
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de ia/ib [ia/ib] m IIC T4 Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	–20 °C to +40 °C –55 °C to +55 °C (option)
Rated voltage	690 V / 250 V eXLink
Rated current	limited by terminal arrangement and eXLink
Connecting terminals	up to 16 mm²
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure material	glass-fibre reinforced polyester
Dimensions (L x W x H)	140 x 120 x 95 mm
Weight	approx. 1.2 kg



GHG 791 with locking device

Ordering details

Coding	Components	Cable gland	Terminals	Order No.
Ordering details for readey made, prewired terminal boxes GHG 791 01				
230 V AC 10h	2 x flange socket GHG 574 8110 R000x	2 x M20	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5006**
230 V AC 10h	2 x flange socket GHG 574 8110 R300x	2 x M20	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5106**
24 V DC 08h	1 x flange socket GHG 571 8108 R000x	2 x M20 1 x M20 screw plug	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5201**
24 V DC 02h	1 x flange socket GHG 571 8102 R000x	1 x M20	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5202**
230 V AC 10h	1 x flange socket GHG 574 8110 R000x	1 x M25	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5203**
24 V AC 12h	1 x flange socket GHG 571 8212 R000x	1 x M20	2 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5204**
230 V AC 06h	1 x flange socket GHG 571 8106 R000x	2 x M20 1 x M20 screw plug	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5206**
24 V DC 08h	1 x flange socket GHG 571 8208 R000x	2 x M20 1 x M20 screw plug	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5208**
230 V AC 10h	1 x flange socket lockable GHG 574 8110 R090x	1 x M25	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5210**
24 V AC 12h	1 x flange socket GHG 571 8112 R000x	1 x M20 1 x M20 screw plug	2 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5212**
24 V DC 08h	1 x flange socket GHG 571 8108 R000x	1 x M20	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5213**
230 V AC 06h	1 x flange socket GHG 571 8106 R000x	1 x M20	2 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5214**
24 V DC 05h	1 x flange socket GHG 574 8105 R000x	1 x M25	6 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5215**
230 V AC 06h	1 x flange socket GHG 571 8106 R000x	1 x M20	2 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5216**
24 V DC 08h	1 x flange socket GHG 571 8208 R000x	1 x M25	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5217**
24 V DC 08h	1 x inlet GHG 571 9108 R300x	2 x M12	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5218**
230V AC 06h	1 x inlet GHG 571 9106 R000x	1 x M20	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5219**
BUS Ex-i 02h	1 x flange socket GHG 571 8102 R300x	1 x M20 Ex-i	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5220**
BUS Ex-i 08	1 x flange socket GHG 571 8108 R300x	1 x M20 Ex-i	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5221**
24V DC 08h	1 x inlet GHG 571 9108 R000x	1 x M20	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5222**
24V DC 05h	1 x inlet GHG 574 9105 R000x	2 x M16	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5223**
BUS Ex-i 08	1 x flange socket GHG 571 8108 R000x	1 x M20 Ex-i	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5224**

Other types on request



GHG 731 12



GHG 791 02

Ordering details

Coding	Components	Cable gland	Terminals	Order No.
Ordering details for ready made, prewired terminal boxes GHG 791 01				
02h / 08h	1 x flange socket GHG 571 8102 R300x 1 x flange socket GHG 571 8108 R300x	2 x M20	8 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5226**
BUS 02h	1 x flange socket GHG 571 8102 R000x	2 x M20 1 x M20 screw plug	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5227**
BUS Ethernet 01h	1 x flange socket GHG 574 8101 R000x 1 x plug (enclosed) GHG5747101R0001	1 x M12	2 x 2.5 mm² 1 x PE/PA	**GHG 791 0101 R5228**
Ordering details for ready made, prewired terminal boxes GHG 791 02				
230 V AC 06h	3 x flange socket GHG 571 8106 R 000x	1 x M25	5 x 2.5 mm² 2 x PE/PA	**GHG 791 0201 R5001**
24 V DC 08h 24 V DC 12h	1 x flange socket GHG 571 8108 R000x 1 x flange socket GHG 571 8112 R000x	1 x M20 Ex-i	12 x 2.5 mm² 1 x PE/PA	**GHG 791 0201 R5002**
230 V AC 10h	1 x flange socket GHG 574 8210 R000x	3 x M25	12 x 2.5 mm² 2 x PE/PA	**GHG 791 0201 R5003**
230 V AC 10h	1 x flange socket GHG 574 8210 R000x	1 x M25 1 x M25 screw plug	4 x 2.5 mm² 1 x PE/PA	**GHG 791 0201 R5004**
230 V AC 06h	2 x flange socket GHG 571 8106 R000x	2 x M20 trumpet shape 2 x M20 screw plug	6 x 2.5 mm² 2 x PE/PA	**GHG 791 0201 R5005**
230 V AC 10h	2 x flange socket GHG 574 8110 R300x	2 x M25	8 x 2.5 mm² 2 x PE/PA	**GHG 791 0201 R5006**
230 V AC 06h	2 x flange socket GHG 571 8206 R000x	2 x M25	4 x 2.5 mm² 2 x PE/PA	**GHG 791 0201 R5007**
24 V DC 08h	1 x flange socket GHG 572 8108 R300x	2 x M16	12 x 2.5 mm² 2 x PE/PA	**GHG 791 0201 R5008**
24V AC 12h	1 x flange socket GHG 571 8112 R000x 1 x flange socket GHG 572 8112 R000x	1 x M20 1 x M25	8 x 2.5 mm² 1 x PE/PA	**GHG 791 0201 R5009**
24V DC 08h	1 x flange socket GHG 571 8108 R000x	1 x M16 Ex-i 1 x M16 screw plug 1 x M20 Ex-i	6 x 2.5 mm² 1 x PE/PA	**GHG 791 0201 R5011**
Ordering details for ready made, prewired terminal boxes GHG 731 12				
24 V DC 8h	3 x flange socket GHG 571 8108 R000x	1 x M25 Ex-i	12 x 2.5 mm²	**GHG 731 1201 R5001**
230 V AC 6h 230 V AC 10h	1 x inlet GHG 574 9103 R000x 1 x inlet GHG 574 9110 R000x	2 x M20	8 x 2.5 mm² 2 x PE/PA	**GHG 731 1201 R5002**

Other types and sizes on request



GHG 791 w. locking device

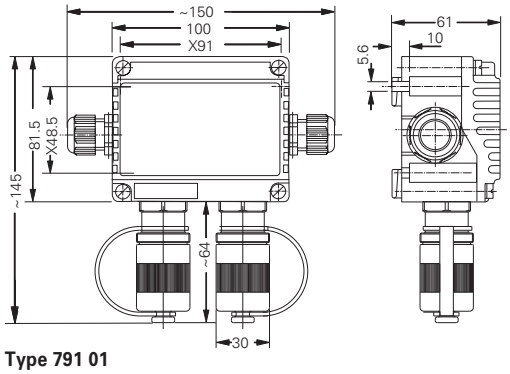


GHG 791 02

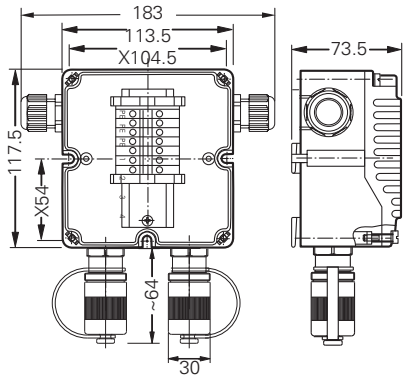


GHG 731 12

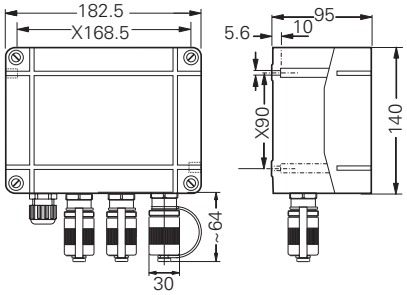
Dimension drawing eXLink



Type 791 01



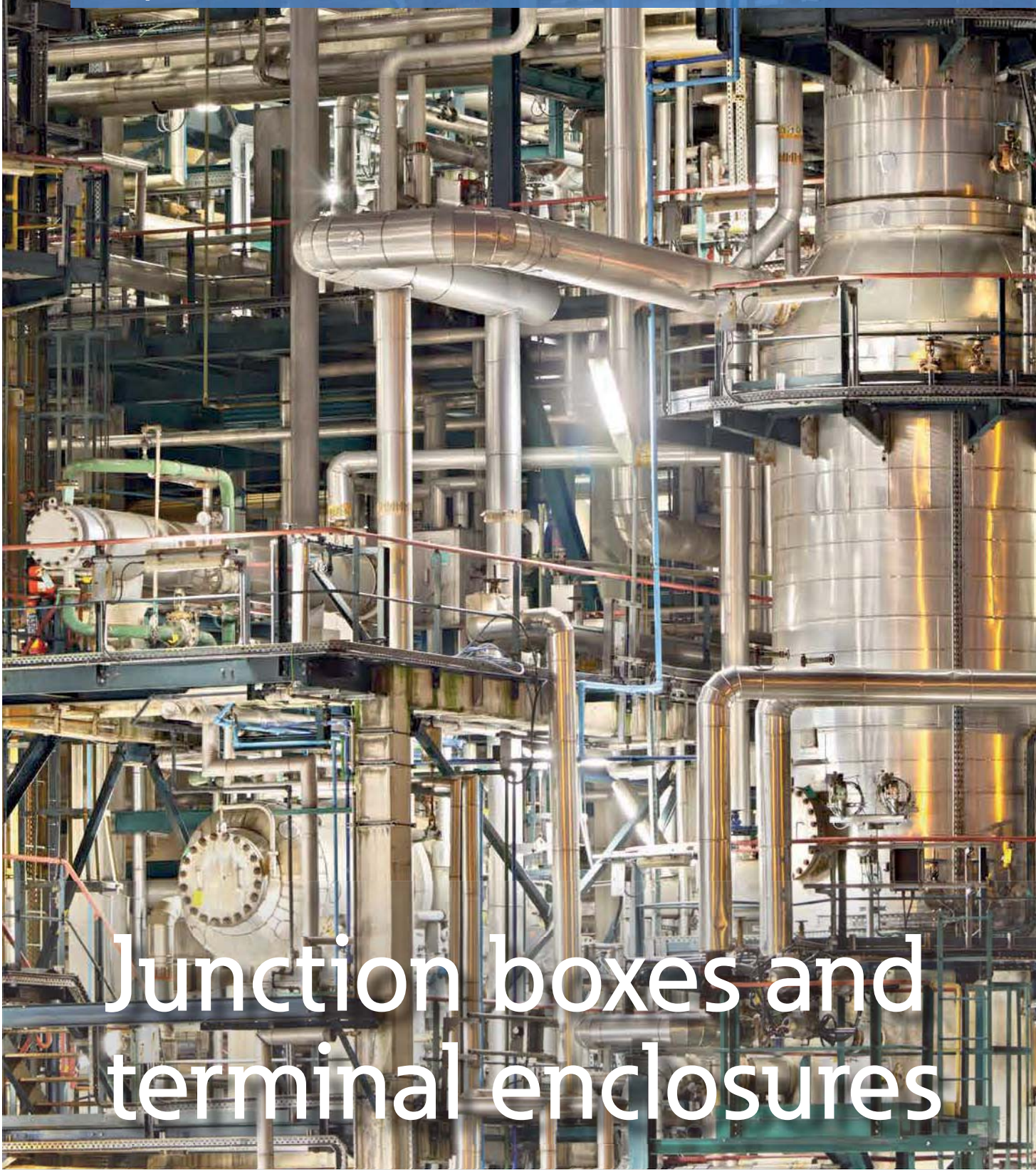
Type 791 02



Type 731 12

X = fixing dimensions

Dimensions in mm



Junction boxes and terminal enclosures



Table of contents



Overview Ex-terminal and junction boxes ... 2.2.4
2.1 GHG 791 Ex-Junction Box ... 2.2.6
Ex-junction box GHG 791 ... 2.2.7
2.2 GHG 793 Ex-Junction Box ... 2.2.10
Ex-junction boxes GHG 793 ... 2.2.11
2.3 Universal Terminal Boxes ... 2.2.12
Overview terminal boxes / plastic version for Zone 1 ... 2.2.13
GHG 791 Ex-e/Ex-i terminal box ... 2.2.14
GHG731 Ex-e/Ex-i terminal box ... 2.2.17
GHG721 Ex-e/Ex-i terminal box ... 2.2.19
GHG 744/ GHG745Ex-e/Ex-i terminal box ... 2.2.22
GHG 746/ GHG749 Ex-e/Ex-i terminal box ... 2.2.25
2.4 Universal Terminal Boxes ... 2.2.28
Overview of terminal boxes light metal ... 2.2.29
GHG793 Ex-e/Ex-i terminal box ... 2.2.30
GHG723 Ex-e/Ex-i terminal box ... 2.2.31
2.5 Ex-d Terminal Boxes ... 2.2.34
C30 / C31 Ex-d terminal box ... 2.2.35
2.6 Ex-e/Ex-i Terminal Enclosures ... 2.2.38
Overview of terminal enclosures stainless steel ... 2.2.39
2.7 N-TB Ex-e/Ex-i Terminal Enclosures ... 2.2.40
N-TB Ex-e terminal enclosures ... 2.2.41
2.8 Ex-Cell Ex-e/Ex-i Terminal Enclosures ... 2.2.44
Ex-Cell Ex-e/Ex-i terminal box ... 2.2.45
2.9 S-TB Ex-e Terminal Enclosures ... 2.2.50
S-TB-Ex-e terminal enclosures ... 2.2.51
GHG 744 21/ GHG 745 22 Ex-e terminal enclosures ... 2.2.54
GHG 746 23/ GHG 749 24 Ex-e terminal enclosures ... 2.2.55
2.10 Ex-Intermediate Motor Terminal Boxes ... 2.2.56
GHG 791 02 Ex-Intermediate motor terminal boxes 4 mm² ... 2.2.57
GHG 721 Ex-intermediate motor terminal boxes 10 mm²/16 mm² ... 2.2.58
GHG 745 Ex-intermediate motor terminal boxes 35 mm²/70 mm² ... 2.2.59
GHG 746 Ex-intermediate motor terminal boxes 185 mm²/240 mm² ... 2.2.60
2.11 Fixing Materials and Accessories ... 2.2.62
Mounting plates and accessories ... 2.2.63





Ex-e Terminal and Junction boxes

Apparatus which do not create arcing or sparking or exceed max. permissible surface temperatures during normal operating conditions can be used in accordance with the European standard EN 60079-7 - „Ex-e“ in hazardous areas of Zone 1, 2, 21 and 22.
All CEAG junction and terminal boxes are manufactured according to this standard.
Unused 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 glands according to national regulations and the manufacturers recommendations.
The requirements of EMC terminal boxes for use in instrumentation and control applications are met with our metal and interior coated housings.
The coating in combination with the affordable cable entries shield off the sensitive instrumentation areas against unwanted external radiation fields.
Increased safety Ex-e type connection or terminal boxes are used in nearly every country in the world. In comparison to the flame-proof encapsulates versions, they are much cheaper and generally easier to install.

User-friendly technology and cost saving installation

Large terminal compartments allow for easy installation or retrofitting of wiring. In addition cost-saving terminal arrangements according to the customer's specification speed up the total installation time.
Our innovative clip-on mounting system has, in conjunction with the special designed apparatus, 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.





Various solutions for your individual installation tasks

Terminal boxes made of moulded plastic with type of protection Ex-e are the most economic solution for wiring tasks. Lightweight design, corrosion resistance as well as wide thermal range are only a few of the advantages. Light metal termination boxes combine light weight with heavy duty enclosure material. External earth connectors as well as metal cable glands directly screwed into the wall material offers some advantages using armoured cables.



High chemical resistance of the housing is ensured by the use of impact-resistant plastic powder coating. Cover screws and all outside and inside metallic parts are made of stainless steel.

The robust design of the stainless steel terminal enclosures 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.



Various terminal configurations as well as gland plates pre-manufactured according to the customer's requirements offer more flexibility for instrumentation and control installations using the Ex-e and Ex-i technologies.

All CEAG terminal enclosures will fulfil the latest testing requirements according to international standards.

n addition to ATEX certification testing, many other certification procedures are performed prior to the product leaving the factory.

Additional type approvals from UL, GOST or Nepsi allow a world wide use.

GHG 791 Ex-Junction Box

Plastic version for Zone 1, 2, 21 and 22

Robust enclosures for harsh environments

The robust junction boxes made of plastic and light alloy are featured by their simple 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 problem-free access to the connection terminals for installation.

Easy to install

With the CEAG mounting system, the plastic junction boxes can be economically used for mounting on walls, trellis and pipes.

With wire and cable entries in the sizes M25 or M32 for Ø 8 – 17 mm or Ø 12 – 21 mm respectively, all requirements for the modern day installation technology are fulfilled.

Metal glands available

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).





Features

- **Decisive cost reduction with the CEAG mounting system**
- **Free accessible connection terminals**
- **Safety standard IP66**
- **Version for metal entries available**



GHG 791 0201 R0001



GHG 791 0201 R0006



GHG 791 0101 R0002



GHG 791 0101 R0001

Technical data

	GHG 791 01 up to 6 terminals / GHG 791 02 up to 8 terminals
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC T5/T6 Gb / Ⓔx II 2 D Ex tb IIIC T80°C Db
EU-Type Examination Certificate	BVS 16 ATEX E 031
IECEx Certificate of Conformity	IECEx BVS 16.0024
Marking accd. to IECEx	Ex e IIC T5/T6 Gb Ex tb IIIC T80°C Db
Permissible ambient temperature	–20 °C to +40 °C / -55 C to +55 °C (option)
Rated voltage	690 V / 550 V[1)]
Terminal cross section	max. 3 x 4 mm² max. 3 x 6 mm² or 4 x 4 mm² solid-wire
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure material	Polyamide

	GHG 791 01 up to 6 terminals
Cable entry/enclosure drilling	max. 4 x M25 Ø 10 - 17 mm max. 4 x M20 metal thread
Connecting terminals	4 x + 1 PE
Rated current	max. 32 A, depends on terminal cross section
Dimensions (L x W x H)	81.5 x 100 x 61 mm
Weight	approx. 0.3 kg

	GHG 791 02 up to 8 terminals
Cable entry/enclosure drilling	max. 6 x M25 Ø 10 - 17 mm max. 6 x M32 cable gland max. 6 x M20 metal thread
Connecting terminals	6 x + 2 PE
Rated current	max. 28 A, depends on terminal cross section
Dimensions (L x W x H)	117.5 x 113.5 x 73.5 mm
Weight	approx. 0.5 kg

[1)] for cage clamp terminals



GHG 791 0101 R0001



GHG 791 0101 R0019

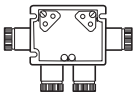
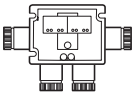
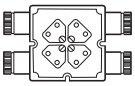
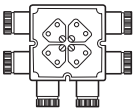


GHG 791 0101 R0068



GHG 791 0201 R0006

Ordering details

Content	Cable gland	No. of terminals	Order No.
GHG 791 01 up to 6 terminals			
	2 x M25 Ø 10-17 mm	4 x Ex-e, 1 x PE	**GHG 791 0101 R0001**
	4 x M25 Ø 10-17 mm incl. 2 x blanking plug M25	4 x Ex-e, 1 x PE	**GHG 791 0101 R0002**
	4 x M20 metal thread incl. 2 x threaded plug M20	4 x Ex-e, 1 x PE	**GHG 791 0101 R0019**
	4 x M25 Ø 10-17 mm incl. 2 x blanking plug M25	4 x 4 Ex-e[1)], 2 x PE	**GHG 791 0101 R0069**
	4 x M20 metal thread incl. 2 x threaded plug M20	4 x 4 Ex-e[1)], 2 x PE	**GHG 791 0101 R0068**
GHG 791 02 up to 8 terminals			
	4 x M25 Ø 10-17 mm incl. 2 x blanking plug M25	6 x Ex-e, 2 x PE	**GHG 791 0201 R0006**
	4 x M32 cable gland incl. 2 x blanking plug M32	6 x Ex-e, 2 x PE	**GHG 791 0201 R0007**
	6 x M25 Ø 10-17 mm incl. 4 x blanking plug M25	6 x Ex-e, 2 x PE	**GHG 791 0201 R0001**
	6 x M32 cable gland incl. 4 x blanking plug M32	6 x Ex-e, 2 x PE	**GHG 791 0201 R0002**
	6 x M20 metal thread incl. 4 x threaded plug M20	8 x Ex-e, 1 x PE	**GHG 791 0201 R0003**

Other applications available on request.

[1)] Cage clamp terminal, certified only according ATEX directive. Permissible ambient temperature -20°C up to + 40 °C

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for junction box 791 01			
Size 1	Wall mounting	snap on	**GHG 610 1953 R0101**
Size 1	for trellis mounting	snap on	**GHG 610 1953 R0103**
Size 1	pipe clamp	snap on	**GHG 610 1953 R0102**
Protective canopy size 2	for mounting plate size 1		**GHG 610 1955 R0101**

Type	Application	Fixing method	Order No.
Mounting plate for junction box 791 02			
Size 2	Wall mounting	snap on	**GHG 610 1953 R0104**
Size 2	for trellis mounting	snap on	**GHG 610 1953 R0106**
Size 2	pipe clamp	snap on	**GHG 610 1953 R0105**
Protective canopy size 2	for mounting plate size 2		**GHG 610 1955 R0102**

Details for accessories see page 2.2.80 up to 2.2.84.



GHG 791 0201 R0006



GHG 791 0101 R0068

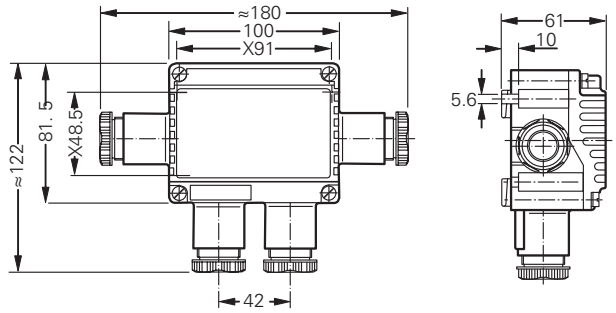


GHG 791 0101 R0019

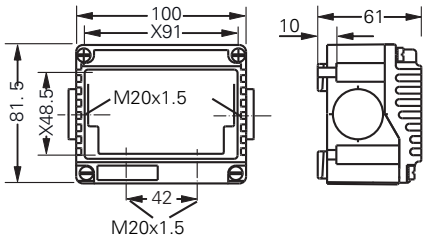


GHG 791 0101 R0001

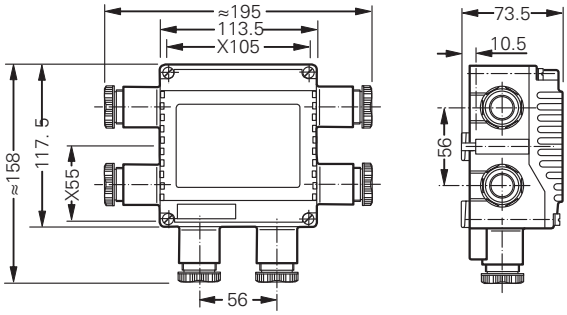
Dimension drawing



Type 791 01

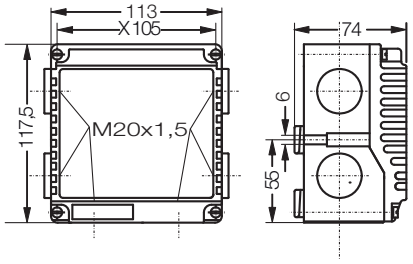


Type 791 01 for metal cable glands



Type 791 02

X = fixing dimensions



Type 791 02 for metal cable glands

Dimensions in mm

GHG 793 Ex-Junction Box

Light metal design for Zone 1, 2, 21 and 22

Light metal for harsh environments

The sturdy CEAG junction boxes made of light metal are used to distribute and conduct electricity in Zone 1 and Zone 2 areas with no risk of explosion. Optionally, mantle terminals with a terminal range of 6 mm² 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

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.



Features

- **Mechanical, chemical and thermal resistance**
- **Impact-resistant plastic powder coating**



GHG 793 0101 R0002

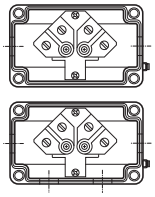


GHG 793 0101 R0001

Technical data

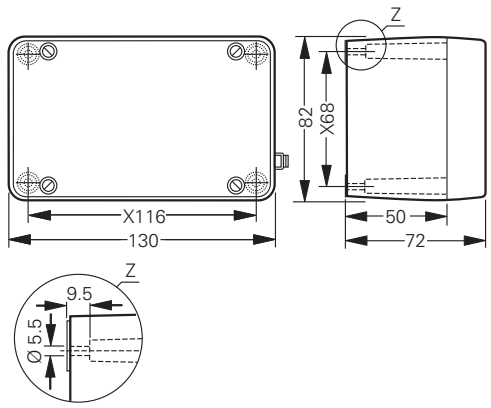
	Type 793 01 up to 5 terminals
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex dem ia II, IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 3108
Permissible ambient temperature	–20 °C to +40 °C –55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	depends on terminal cross section
Terminal cross section	max. 3 x 4 mm² or 1 x 10 mm² with pin cable lug + 1 x 2.5 mm² fine wire max. 3 x 6 mm² or 4 x 4 mm² solid-wire
Protection class	I
Degree of protection accd. to EN 60529	IP66
Cable entry/enclosure drilling	max. 4 x M20 drilling
Dimensions (L x W x H)	82 x 130 x 72 mm
Weight	approx. 0.8 kg
Enclosure material	light alloy die-casting (AISI)
Enclosure colour	light grey

Ordering details

Content	Cable gland	No. of terminals	Order No.
GHG 793 01 up to 4 terminals			
	2 x M20 drilling	4 x Ex-e, 1 x PE	**GHG 793 0101 R0001**
	4 x M20 drilling incl. 2 x blanking plug M20	4 x Ex-e, 1 x PE	**GHG 793 0101 R0002**

Other applications available on request.

Dimension drawing



Type 793

X = fixing dimensions

Dimensions in mm

Universal Terminal Boxes

Ex-e/Ex-i Technology

2 plastic version measuring and controlling for Zone 1, 2, 21 and 22

Connecting your field devices

The terminal boxes were designed for measuring and controlling utilization in Ex-e and Ex-i applications. 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.

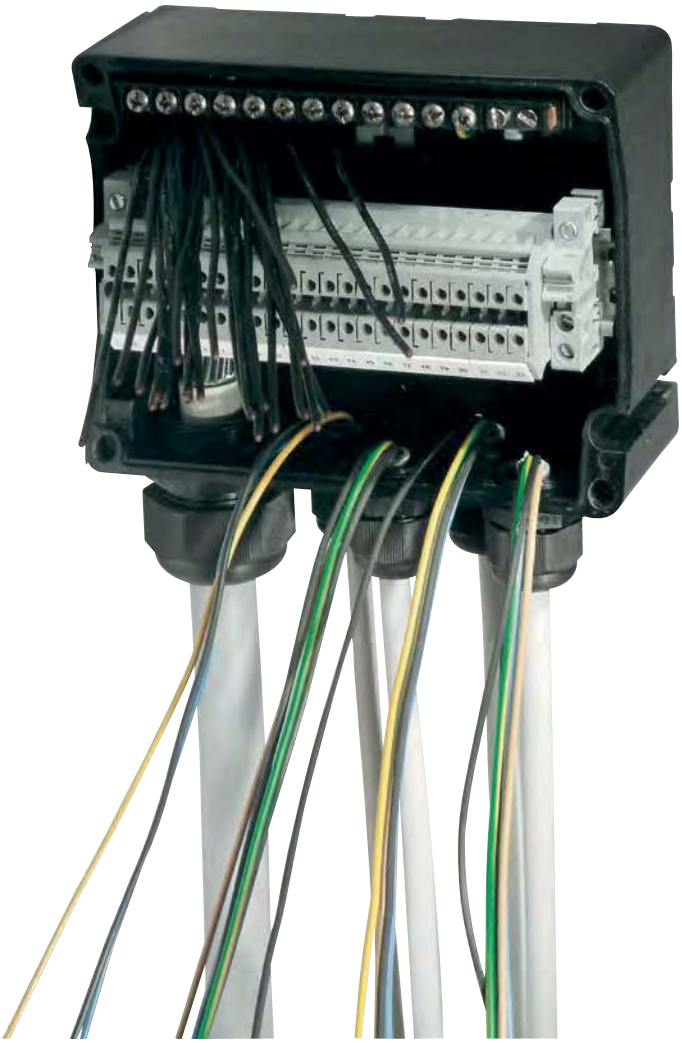
The new terminal boxes for instrumentation installations are available in 5 sizes, ranging from 6 to max. 60 connection terminals. The optional interior coating protects your data cable connections against external radiation fields. The choice between screw and tension spring (screwless) terminals for single and multi-wire conductors makes it possible for engineers to select the type of connection most suitable for the particular application.

Easy to install

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.





Features

- **Decisive cost saving**
- **with the CEAG installation system**
- **Safety standard IP66**
- **Freely 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 table "Max. number of terminals" is based on the mechanical conditions of the terminal enclosure such as length of mounting rail and height the terminals. It is based on common terminal types such as Phoenix© or Wago©. The permissible number of terminals in terms of the type examination certificate must be checked in each individual case based on the current load tables in the operating instructions.

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.

Maximum number of terminals acc. to certification

Type	Terminal cross section 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	Length	x	Height
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 Plastic	Diameter 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

Type	Width	x	Height
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



GHG 791 0101 R0003



GHG 791 0101 R0005



GHG 791 0201 R0011



GHG 791 0201 R0008

Technical data

	GHG 791 01 up to 6 terminals I GHG 791 02 up to 12 terminals
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC T5/T6 Gb / Ⓔx II 2 D Ex tb IIIC T80°C Db
EC-Type Examination Certificate	BVS 16 ATEX E 031
IECEx Certificate of Conformity	IECEx BVS 16.0024
Marking accd. to IECEx	Ex e IIC T5/T6 Gb Ex tb IIIC T80°C Db
Permissible ambient temperature	–20 °C to +40 °C / -55 C to +55 °C (option)
Rated voltage	690 V
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure material	Polyamide
Enclosure colour	black

	GHG 791 01 up to 6 terminals
Rated current	max. 32 A
Connecting terminals	up to 6 mm^2
Cable entry/enclosure drilling	max. 2 x M25 or 1 x M25 + 2 x M12
Dimensions (L x W x H)	81.5 x 100 x 61 mm
Weight	approx. 0.3 kg

	GHG 791 02 up to 12 terminals
Rated current	max. 28 A
Connecting terminals	up to 6 mm^2
Cable entry/enclosure drilling	max. 2 x M25 or 1 x M32 + 1 x M25 or 1 x M25 + 4 x M12
Dimensions (L x W x H)	117.5 x 113.5 x 73.5 mm
Weight	approx. 0.5 kg



GHG 791 0201 R0008



GHG 791 0201 R0011



GHG 791 0101 R0005



GHG 791 0101 R0003

Ordering details

Content	Cable gland	No. of terminals	Order No.
Type 791 01 up to 6 terminals assembled with screw terminals 2 x 2.5 mm² + PE/PA-terminals 2 x 4 mm²			
Ex-e	1 x M25 cable gland 1 x M25 for 2 cable 1 x blanking plug for Ø 4.5-7 mm	6 x Ex-e 4 x PE/PA	**GHG 791 0101 R0003**
Ex-i	1 x M25 cable gland 1 x M25 for 2 cable 1 x blanking plug for Ø 4.5-7 mm	6 x Ex-i 4 x PE/PA	**GHG 791 0101 R0004**
Ex-e	1 x M25 cable gland 2 x M12 cable gland 1 x blanking plug for M12	6 x Ex-e 4 x PE/PA	**GHG 791 0101 R0005**
Ex-i	1 x M25 cable gland 2 x M12 cable gland 1 x blanking plug for M12	6 x Ex-i 4 x PE/PA	**GHG 791 0101 R0006**
Type 791 01 up to 6 terminals assembled with screwless terminals 2 x 2.5 mm² + PE/PA-terminals 2 x 4 mm²			
Ex-i	1 x M25 cable gland 1 x M25 for 2 cable 1 x blanking plug for Ø 4.5-7 mm	6 x Ex-i 1 x PE/PA	**GHG 791 0101 R0008**
Ex-e	1 x M25 cable gland 2 x M12 cable gland 1 x blanking plug for M12	6 x Ex-e 1 x PE/PA	**GHG 791 0101 R0009**
Ex-i	1 x M25 cable gland 1 x M12 cable gland 1 x blanking plug for M12	6 x Ex-i 1 x PE/PA	**GHG 791 0101 R0010**
Type 791 02 up to 12 terminals assembled with screw terminals 2 x 2.5 mm² + PE/PA-terminals 2 x 4 mm²			
Ex-e	1 x M25 cable gland 1 x M32 for 4 cable 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 cable gland 1 x M32 for 4 cable 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 cable gland 4 x M12 cable gland 2 x blanking plug for M12	12 x Ex-e 4 x PE/PA	**GHG 791 0201 R0010**
Ex-i	1 x M25 cable gland 4 x M12 cable gland 2 x blanking plug for M12	12 x Ex-i 4 x PE/PA	**GHG 791 0201 R0011**
Type 791 02 up to 12 terminals assembled with screwless terminals 2 x 2.5 mm² + PE/PA-terminals 2 x 4 mm²			
Ex-i	1 x M25 cable gland 1 x M32 for 4 cable 1 x blanking plug for Ø 4.5-7 mm	12 x Ex-i 4 x PE/PA	**GHG 791 0201 R0013**
Ex-e	1 x M25 cable gland 4 x M12 cable gland 2 x blanking plug for M12	12 x Ex-e 4 x PE/PA	**GHG 791 0201 R0014**
Ex-i	1 x M25 cable gland 4 x M12 cable gland 2 x blanking plug for M12	12 x Ex-i 4 x PE/PA	**GHG 791 0201 R0015**

Other applications available on request.



GHG 791 0101 R0003



GHG 791 0101 R0005



GHG 791 0201 R0011



GHG 791 0201 R0008

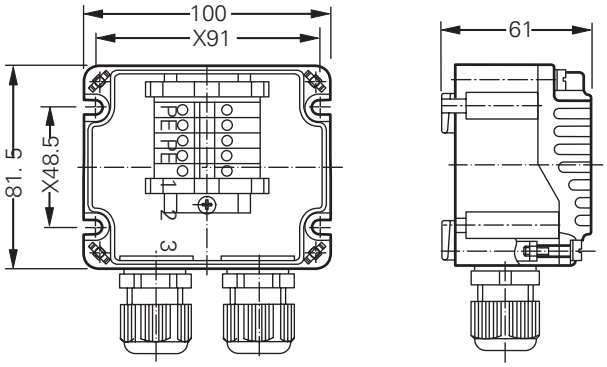
Accessories

Type	Application	Fixing method	Order No.
Mounting plate for junction box 791 01			
Size 1	Wall mounting	snap on	**GHG 610 1953 R0101**
Size 1	Trellis mounting	snap on	**GHG 610 1953 R0103**
Size 1	Pipe clamp	snap on	**GHG 610 1953 R0102**
Protective canopy size 1	for mounting plate size 1		**GHG 610 1955 R0101**

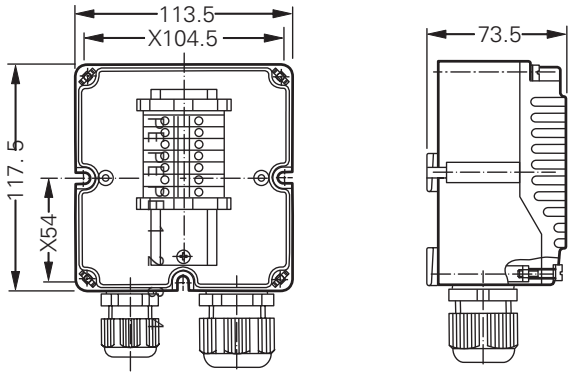
Type	Application	Fixing method	Order No.
Mounting plate for junction box 791 02			
Size 2	Wall mounting	snap on	**GHG 610 1953 R0104**
Size 2	Trellis mounting	snap on	**GHG 610 1953 R0106**
Size 2	Pipe clamp	snap on	**GHG 610 1953 R0105**
Protective canopy size 2	for mounting plate size 2		**GHG 610 1955 R0102**

Details for accessories see page 2.2.80 up to 2.2.84.

Dimension drawing



Type 791 01



Type 791 02

X = fixing dimensions

Dimensions in mm



GHG 731 1202 R0976



GHG 731 1202 R0387



GHG 731 1102 R1088



GHG 731 1102 R0531

Technical data

	GHG 731 11 up to 16 terminals I GHG 731 12 up to 24 terminals
Marking accd. to 2014/34/EU	Ex II 2 G Ex e IIC T4/T5/T6 Gb / Ex II 2 D Ex tb IIIC T80 °C/T95 °C Db IP6X
EC-Type Examination Certificate	BVS 13 ATEX E 037X
IECEx Certificate of Conformity	IECEx BVS 13.0045X
Marking accd. to IECEx	Ex e IIC T6/T5 Gb Ex tb IIIC T80 °C/T95 °C Db IP6X
Permissible ambient temperature	–20 °C to +40 °C –55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	depends on terminal mounting
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black

	GHG 731 11 up to 16 terminals						
Connecting terminals	up to 16 mm^2						
Dimensions (L x W x H)	140 x 120 x 95 mm						
Weight	approx. 0.8 kg						
Drillings/cable glands Max. number up/down	M12 15	M16 8	M20 6	M25 4	M32 2	M40 2	M50 1
Terminal mounting space on the terminal rail	107 mm						
Max. number of terminals acc. to certification	2.5 mm^2 16	4 mm^2 14	6 mm^2 10	10 mm^2 8	16 mm^2 8		

	GHG 731 12 up to 24 terminals						
Connecting terminals	up to 16 mm^2						
Dimensions (L x W x H)	140 x 182.5 x 95 mm						
Weight	approx. 1.1 kg						
Drillings/cable glands Max. number up/down	M12 24	M16 17	M20 10	M25 6	M32 3	M40 3	M50 2
Terminal mounting space on the terminal rail	169 mm						
Max. number of terminals acc. to certification	2.5 mm^2 28	4 mm^2 24	6 mm^2 18	10 mm^2 18	16 mm^2 14		



GHG 731 1102 R0531



GHG 731 1102 R1485



GHG 731 1202 R0387



GHG 731 1202 R1345

Ordering details

Content	Cable gland	Terminals	Order No.
Type 731 11 up to 16 terminals assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 2.5 mm²			
Ex-e	without drilling	1 x Ex-e*/UT 2.5 N/7 x PE/PA	**GHG 731 1102 R0531**
Ex-e	without drilling	14 x Ex-e/UT 4 N/7 x PE/PA	**GHG 731 1102 R1088**
Ex-e	4 x M25	16 x Ex-e/UT 2.5 N/7 x PE/PA	**GHG 731 1102 R1485**
Type 731 12 up to 24 terminals assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 2.5 mm²			
Ex-e	without drilling	1 x Ex-e*/UT 2.5 N/14 x PE/PA	**GHG 731 1202 R0387**
Ex-e	without drilling	24 x Ex-e/UT 4 N/14 x PE/PA	**GHG 731 1202 R0976**
Ex-e	6 x M25	28 x Ex-e/UT 2.5 N/14 x PE/PA	**GHG 731 1202 R1345**

* according to type examination certificate individual extensible

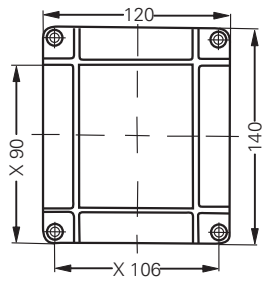
Accessories

Type	Application	Fixing method	Order No.
Mounting plate for junction box 731 11			
Size 2	Wall mounting	snap on	**GHG 610 1953 R0104**
Size 2	Trellis mounting	snap on	**GHG 610 1953 R0106**
Size 2	Pipe clamp	snap on	**GHG 610 1953 R0105**
Protective canopy size 2	for mounting plate size 2		**GHG 610 1955 R0102**

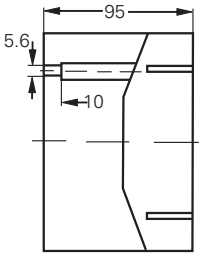
Type	Application	Fixing method	Order No.
Mounting plate for junction box 731 12			
Size 2A	Wall mounting	snap on	**GHG 610 1953 R0107**
Size 2A	Trellis mounting	snap on	**GHG 610 1953 R0109**
Size 2A	Pipe clamp	snap on	**GHG 610 1953 R0108**
Protective canopy size 2A	for mounting plate size 2A		**GHG 610 1955 R0103**

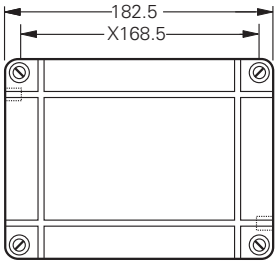
Details for accessories see page 2.2.80 up to 2.2.84.

Dimension drawing

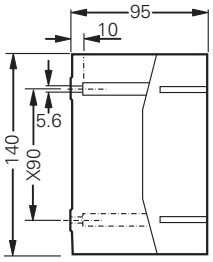


Type 731 11





Type 731 12



X = fixing dimensions

Dimensions in mm



GHG 721 1001 R0013



GHG 721 1001 R0003



GHG 721 0001 R0005



GHG 721 0001 R0001

Technical data

	GHG 721 00 up to 26 terminals I GHG 721 10 up to 48 terminals
Marking accd. to 2014/34/EU	Ex II 2 G Ex e IIC T4/T5/T6 Gb / Ex II 2 D Ex tb IIIC T80 °C/T95 °C Db IP6X
EC-Type Examination Certificate	BVS 13 ATEX 013X
IECEx Certificate of Conformity	IECEx BVS 13.0031X
Marking accd. to IECEx	Ex e IIC T4/T5 Gb Ex tb IIIC T80 °C/T95 °C/ Db IP6X
Permissible ambient temperature	–20 °C to +40 °C –55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	depends on terminal mounting
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black

	GHG 721 00 up to 26 terminals							
Connecting terminals	up to 16 mm^2							
Dimensions (L x W x H)	165 x 165 x 131.5 mm							
Weight	approx. 1.1 kg							
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63
Max. number down	35	20	12	11	6	4	2	2
Max. number flange plastic	11	6	4	3	2	1	1	–
Max. number flange metal	–	–	3	2	1	–	–	–
Terminal mounting space on the terminal rail	140 mm							
Max. number of terminals acc. to certification	2.5 mm^2 26	4 mm^2 22	6 mm^2 17	10 mm^2 13	16 mm^2 11			

	GHG 721 10 up to 48 terminals							
Connecting terminals	up to 16 mm^2							
Dimensions (L x W x H)	165 x 285 x 150 mm							
Weight	approx. 1.7 kg							
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63
Max. number down	75	42	32	21	11	8	4	3
Max. number flange plastic	46	25	20	11	8	4	3	2
Max. number flange metal	–	–	12	9	5	3	3	2
Terminal mounting space on the terminal rail	262 mm							
Max. number of terminals acc. to certification	2.5 mm^2 48	4 mm^2 40	6 mm^2 30	10 mm^2 24	16 mm^2 20			



GHG 721 0001 R0001



GHG 721 0001 R0011



GHG 721 1001 R0003



GHG 721 1001 R0004

Ordering details

Content	Cable gland	No. of terminals	Order No.
Type 721 00 up to 26 terminals assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 2.5 mm²			
Ex-e	1 x M32 cable gland 3 x M32 for 4 cable	24 x Ex-e 12 x PE/PA	**GHG 721 0001 R0005**
Ex-i	1 x M32 cable gland 3 x M32 for 4 cable	24 x Ex-i 12 x PE/PA	**GHG 721 0001 R0006**
Ex-e	1 x M32 cable gland 12 x M20 cable gland	24 x Ex-e 12 x PE/PA	**GHG 721 0001 R0007**
Ex-i	1 x M32 cable gland 12 x M20 cable gland	24 x Ex-i 12 x PE/PA	**GHG 721 0001 R0008**
Type 721 00 up to 26 terminals assembled with screwless terminals 2 x 2.5 mm² + PE/PA-rail 2.5 mm²			
Ex-i	1 x M32 cable gland 3 x M32 for 4 cable	24 x Ex-i 12 x PE/PA	**GHG 721 0001 R0010**
Ex-e	1 x M32 cable gland 12 x M20 cable gland	24 x Ex-e 12 x PE/PA	**GHG 721 0001 R0011**
Ex-i	1 x M32 cable gland 12 x M20 cable gland	24 x Ex-i 12 x PE/PA	**GHG 721 0001 R0012**
Type 721 10 up to 48 terminals assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 2.5 mm²			
Ex-e	without drilling	1 x Ex-e[1] / 24 x PE	**GHG 721 1001 R0003**
Type 721 10 up to 48 terminals assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 2.5 mm²			
Ex-i	1 x M40 Ø 16-28 mm 6 x M32 for 4 cable	48 x Ex-i 24 x PE/PA	**GHG 721 1001 R0013**
Ex-e	1 x M40 Ø 16-28 mm 24 x M20 cable gland	48 x Ex-e 24 x PE/PA	**GHG 721 1001 R0004**
Ex-i	1 x M40 Ø 16-28 mm 24 x M20 cable gland	48 x Ex-i 24 x PE/PA	**GHG 721 1001 R0015**
Type 721 10 up to 48 terminals assembled with screwless terminals 2 x 2.5 mm² + PE/PA-rail 2.5 mm²			
Ex-i	1 x M40 Ø 16-28 mm 6 x M32 for 4 cable	48 x Ex-i 24 x PE/PA	**GHG 721 1001 R0017**
Ex-e	1 x M40 Ø 16-28 mm 24 x M20 cable gland	48 x Ex-e 24 x PE/PA	**GHG 721 1001 R0018**
Ex-i	1 x M40 Ø 16-28 mm 24 x M20 cable gland	48 x Ex-i 24 x PE/PA	**GHG 721 1001 R0019**

[1] according to type examination certificate individual extensible
Other versions available on request



GHG 721 1001 R0004



GHG 721 1001 R0003



GHG 721 0001 R0011



GHG 721 0001 R0001

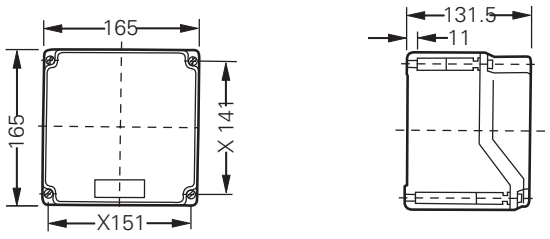
Accessories

Type	Application	Fixing method	Order No.
Mounting plate for junction box 721 00			
Size 2A	Wall mounting	screwless mounting	**GHG 610 1953 R0107**
Size 2A	Trellis mounting	screwless mounting	**GHG 610 1953 R0109**
Size 2A	Pipe clamp	screwless mounting	**GHG 610 1953 R0108**
Protective canopy size 2A	for mounting plate size 2A		**GHG 610 1955 R0103**

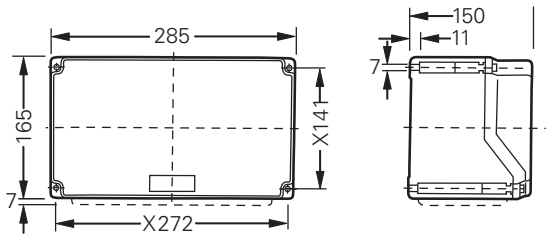
Type	Application	Fixing method	Order No.
Mounting plate for junction box 721 10			
Size 3	Wall mounting	screwless mounting	**GHG 610 1953 R0107**
Size 3	Trellis mounting	screwless mounting	**GHG 610 1953 R0109**
Size 3	Pipe clamp	screwless mounting	**GHG 610 1953 R0108**
Protective canopy size 3	for mounting plate size 3		**GHG 610 1955 R0104**

Details for accessories see page 2.2.80 up to 2.2.84.

Dimension drawing



Type 721 00



Type 721 10

X = fixing dimensions

Dimensions in mm



GHG 744 0101 R0005



Type 745 02



GHG 745 0201 R0012

Technical data

	GHG 744 01 up to 40 terminals I GHG 745 02 up to 82 terminals
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex e IIC T4/T5/T6 Gb / Ex e ib [ia/ib] IIC T4/T5/T6 Gb / ⟨Ex⟩ II 2 D Ex tb IIIC T80 °C/T95 °C Db IP6X
EC-Type Examination Certificate	BVS 12 ATEX E 118X
IECEx Certificate of Conformity	IECEx BVS 12.0071X
Marking accd. to IECEx	Ex e IIC T4/T5/T6 Gb Ex tb IIIC T80 °C/T95 °C Db IP6X
Permissible ambient temperature	–20 °C to +40 °C –55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	depends on terminal mounting
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black

	GHG 744 01 up to 31 terminals							
Connecting terminals	up to 25 mm^2							
Dimensions (L x W x H)	271 x 134 x 136 mm							
Weight	approx. 1.5 kg							
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63
Max. number down	60	36	26	18	10	7	4	3
Max. number flange plastic	46	25	20	11	8	4	3	2
Max. number flange metal	–	–	11	9	5	3	3	2
Terminal mounting space on the terminal rail	1 x 230 mm							
Max. number of terminals acc. to certification	2.5 mm^2	4 mm^2	6 mm^2	10 mm^2	16 mm^2	25 mm^2	35 mm^2	
	38	31	24	20	17	15	7	

	GHG 745 02 up to 82 terminals								
Connecting terminals	up to 70 mm^2								
Dimensions (L x W x H)	271 x 271 x 136 mm								
Weight	approx. 2.5 kg								
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63	
Max. number down	60	36	26	18	10	7	4	3	
Max. number flange plastic	46	25	20	11	8	4	3	2	
Max. number flange metal	–	–	11	9	5	3	3	2	
Terminal mounting space on the terminal rail	2 x 230 mm								
Max. number of terminals acc. to certification	2.5 mm^2	4 mm^2	6 mm^2	10 mm^2	16 mm^2	25 mm^2	35 mm^2	50 mm^2	70 mm^2
	38	31	24	20	17	16	15	9	9



GHG 745 0201 R0012



Type 745 02



GHG 744 0101 R0005

Ordering details

Content	Cable gland	No. of terminals	Order No.
Type 744 01 up to 31 terminals assembled with screw terminals 2 x 4 mm² + PE-rail 4 mm²			
Ex-e	1 x palstic flange down without drilling	1 x Ex-e[1)] 7 x PE	**GHG 744 0101 R0005**
Type 745 02 up to 82 terminals assembled with screw terminals 2 x 4 mm² + PE/PA-rail 4 mm²			
Ex-e	1 x palstic flange down without drilling	1 x Ex-e[1)] 14 x PE	**GHG 745 0201 R0004**
Type 745 02 up to 82 terminals assembled with screw terminals 2 x 2.5 mm² + PE/PA-rail 4 mm²			
Ex-i	1 x M50 cable gland 8 x M32 for 4 cable	60 x Ex-i 27 x PE/PA	**GHG 745 0201 R0012**
Ex-e	1 x M50 cable gland 30 x M16 cable gland	60 x Ex-e 27 x PE/PA	**GHG 745 0201 R0013**
Ex-i	1 x M50 cable gland 30 x M16 cable gland	60 x Ex-i 27 x PE/PA	**GHG 745 0201 R0014**
Ex-e	1 x M50 cable gland 24 x M20 cable gland	60 x Ex-e 27 x PE/PA	**GHG 745 0201 R0015**
Ex-i	1 x M50 cable gland 24 x M20 cable gland	60 x Ex-i 27 x PE/PA	**GHG 745 0201 R0021**
Type 745 02 up to 82 terminals assembled with screwless terminals 2 x 2.5 mm² + PE/PA-rail 4 mm²			
Ex-i	1 x M50 cable gland 8 x M32 for 4 cable	60 x Ex-i 27 x PE/PA	**GHG 745 0201 R0016**
Ex-e	1 x M50 cable gland 30 x M16 cable gland	60 x Ex-e 27 x PE/PA	**GHG 745 0201 R0017**
Ex-i	1 x M50 cable gland 30 x M16 cable gland	60 x Ex-i 27 x PE/PA	**GHG 745 0201 R0018**
Ex-e	1 x M50 cable gland 24 x M20 cable gland	60 x Ex-e 27 x PE/PA	**GHG 745 0201 R0020**
Ex-i	1 x M50 cable gland 24 x M20 cable gland	60 x Ex-i 27 x PE/PA	**GHG 745 0201 R0022**

[1)] according to type examination certificate individual extensible
Other versions available on request



GHG 744 0101 R0005



Type 745 02



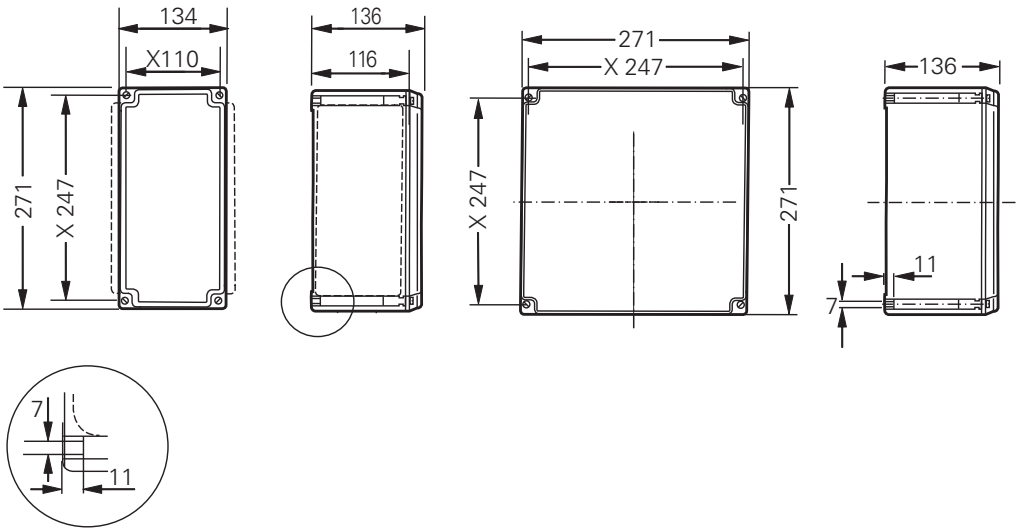
GHG 745 0201 R0012

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for junction box 744 01			
Size 3	Wall mounting	screwless mounting	**GHG 610 1953 R0118**
Size 3	Trellis mounting	screwless mounting	**GHG 610 1953 R0118**
Size 3	Pipe clamp	screwless mounting	**GHG 610 1953 R0110**
Protective canopy size 3	for mounting plate size 3		**GHG 610 1955 R0104**

Details for accessories see page 2.2.80 up to 2.2.84.

Dimension drawing



Type 744 01 **Type 745 02** **X = fixing dimensions**

Dimensions in mm



Type 749 04



Type 746 03

Technical data

	GHG 746 03 up to 188 terminals I GHG 749 04 up to 296 terminals
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC T4/T5/T6 Gb / Ex e ib [ia/ib] IIC T4/T5/T6 Gb / Ⓔx II 2 D Ex tb IIIC T80 °C/T95 °C Db IP6X
EC-Type Examination Certificate	BVS 12 ATEX E 118X
IECEx Certificate of Conformity	IECEx BVS 12.0071X
Marking accd. to IECEx	Ex e IIC T4/T5/T6 Gb Ex tb IIIC T80 °C/T95 °C Db IP6X
Permissible ambient temperature	–20 °C to +40 °C –55 °C to +55 °C (option)
Rated voltage	690 V
Rated current	depends on terminal mounting
Protection class	I
Degree of protection accd. to EN 60529	IP66
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black

	GHG 746 03 up to 188 terminals							
Connecting terminals	300 mm²							
Dimensions (L x W x H)	544 x 271 x 136 mm							
Weight	approx. 4.2 kg							
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63
Max. number down	120	72	52	36	20	14	8	6
Max. number flange plastic	46	25	20	11	8	4	3	2
Max. number flange metal	–	–	11	9	5	3	3	2
Terminal mounting space on the terminal rail	horiz. 2 x 510 mm / vert. 4 x 230 mm							
Max. number of terminals acc. to certification	2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	25 mm²	35 mm²	
	2 x 94	2 x 78	2 x 59	2 x 47	40	40	32	

	GHG 749 04 up to 296 terminals							
Connecting terminals	up to 240 mm²							
Dimensions (L x W x H)	817 x 271 x 136 mm							
Weight	approx. 5.8 kg							
Drillings/cable glands	M12	M16	M20	M25	M32	M40	M50	M63
Max. number down	180	108	78	54	30	21	12	9
Max. number flange plastic	46	25	20	11	8	4	3	2
Max. number flange metal	–	–	11	9	5	3	3	2
Terminal mounting space on the terminal rail	horiz. 2 x 795 mm / vert. 6 x 230 mm							
Max. number of terminals acc. to certification	2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	25 mm²	35 mm²	
	2 x 148	2 x 124	2 x 94	2 x 75	63	63	51	



Type 746 03



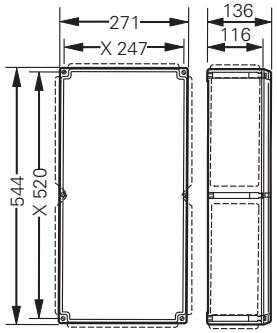
Type 749 04

Ordering details

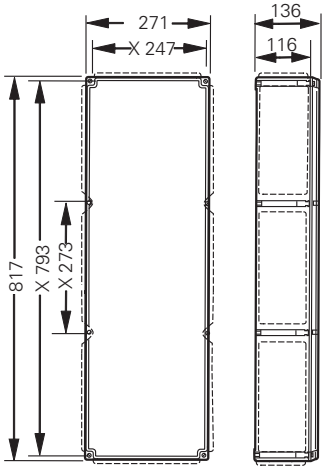
Content	Cable gland	No. of terminals	Order No.
Type 746 03 up to 188 terminals assembled with screw terminals 2 x 4 mm² + PE-rail 4 mm²			
Ex-e	2 x palstic flange down without drilling	1 x Ex-e[1)] 2 x 14 x PE	**GHG 746 0301 R0002**
Type 749 04 up to 296 terminals assembled with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²			
Ex-e	3 x palstic 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 versions available on request

Dimension drawing



Type 746 03



Type 749 04

X = fixing dimensions

Dimensions in mm



Universal Terminal Boxes

Ex-e/Ex-i Technology

Light alloy metal design for Zone 1, 2, 21 and 22

Connecting your field devices

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 mm^2 pursuant to EN 60079-7 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.

Corrosion resistant

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.



Features

- **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.
The table "Max. number of terminals" is based on the mechanical conditions of the terminal enclosure such as length of mounting rail and height the terminals. It is based on common terminal types such as Phoenix© or Wago©. The permissible number of terminals in terms of the type examination certificate must be checked in each individual case based on the current load tables in the operating instructions.
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.

Maximum number of terminals

Type	Terminal cross-section in mm²						
	2.5	4	6	10	16	25	35
GHG 793 0101	6	5	4	–	–	–	–
GHG 723 0001	33	27	20	16	15	–	–
GHG 723 1001	88	72	54	44	40	15	15
GHG 723 2001	136	112	84	68	60	22	22



Terminal rail

Type	Rail 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	Length	x	Height
GHG 793 0101	130 mm	x	82 mm	x	72 mm
GHG 723 0001	220 mm	x	120 mm	x	81 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 wire and cable entries

Type	Interference Plastic	Diameter 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	Height
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

Technical data

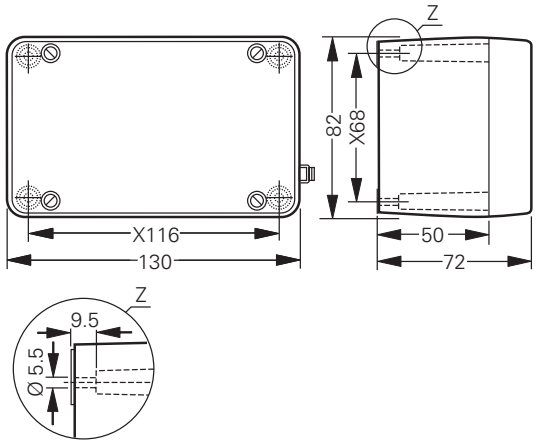
	Type 793 01 up to 11 terminals						
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex dem ia II, IIC T6 / Ⓔx II 2 D tD A21 IP66 T80 °C						
Permissible ambient temperature	–20 °C to +40 °C –55 °C to +55 °C (option)						
EC-Type Examination Certificate	PTB 00 ATEX 3108						
Rated voltage	up to 690 V						
Rated current	depends on terminal mounting						
Degree of protection accd. to EN 60529	IP66						
Enclosure material	light alloy die-casting (AlSi)						
Enclosure colour	light grey						
Terminal cross section	up to 6 mm²						
Weight	approx. 0.68 kg						
Drillings/cable glands Max. number down	M16 5	M20 2	M25 2	M32 1	M40 –	M50 –	M63 –
Max. number of terminals acc. to certification	2.5 mm² 16	4 mm² 14	6 mm² 10				

Ordering details

Content	Cable gland	No. of terminals	Order No.
Type 793 01 up to 11 terminals with screw terminals 2 x 2.5 mm² + PE-terminals 2 x 4 mm²			
Ex-e	without drilling	1 x Ex-e*/1 x PE	GHG 793 0101 R0003

* according to type examination certificate individual extensible

Dimension drawing



Type 793 01

X = fixing dimensions

Dimensions in mm



GHG 723 2001 R0002



GHG 723 1001 R0002



GHG 723 0001 R0002

Technical data

	Type 723 00 l 723 10 l 723 20 up to 96 terminals
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC T4/T5/T6 Gb / Ⓔx II 2 D Ex ctb IIIC T80 °C/T95 °C Db
Permissible ambient temperature	–20 °C to +40 °C –55 °C to +55 °C (option)
EC-Type Examination Certificate	BVS 13 ATEX E013X
IECEx Certificate of Conformity	IECEx BVS 13.0031X
Marking accd. to IECEx	Ex e IIC T4/T5/T6 Gb Ex tb IIIC T80 °C/T95 °C Db IP6X
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of protection accd. to EN 60529	IP66
Enclosure material	light alloy die-casting (AlSi)
Enclosure colour	light grey

	Type 723 00 up to 24 terminals						
Terminal cross section	max. 35 mm²						
Weight	approx. 1.41 kg						
Drillings/cable glands Max. number down	M16 8	M20 4	M25 3	M32 –	M40 –	M50 –	
Dimensions (L x W x H)	220 x 80 x 120 mm						
Terminal mounting space on the terminal rail	1 x 185 mm						
Max. number of terminals acc. to certification	2.5 mm² 15	4 mm² 17	6 mm² 18	10 mm² 18	16 mm² 14	25 mm² –	35 mm² –

	Type 723 10 up to 82 terminals						
Terminal cross section	max. 50 mm²						
Weight	approx. 3.84 kg						
Drillings/cable glands Max. number down	M16 22	M20 10	M25 7	M32 4	M40 3	M50 2	
Dimensions (L x W x H)	220 x 111 x 230 mm						
Terminal mounting space on the terminal rail	2 x 242 mm						
Max. number of terminals acc. to certification	2.5 mm² 2 x 41	4 mm² 2 x 34	6 mm² 2 x 26	10 mm² 2 x 20	16 mm² 1 x 17	25 mm² 1 x 17	35 mm² 1 x 14

	Type 723 20 up to 96 terminals						
Terminal cross section	max. 95 mm²						
Weight	approx. 4.87 kg						
Drillings/cable glands	M16	M20	M25	M32	M40	M50	
Max. number down	30	18	10	6	5	4	
Dimensions (L x W x H)	400 x 111 x 230 mm						
Terminal mounting space on the terminal rail	3 x 362 mm						
Max. number of terminals acc. to certification	2.5 mm² 2 x 48	4 mm² 2 x 48	6 mm² 2 x 36	10 mm² 2 x 36	16 mm² 1 x 28	25 mm² 1 x 23	35 mm² 1 x 22



GHG 723 0001 R0002



GHG 723 1001 R0002



GHG 723 2001 R0002

Ordering details

Content	Cable gland	No. of terminals	Order No.
Type 723 00 assembled with screw terminals 2 x 2.5 mm² + PE-terminals 4 mm²			
Ex-e	without drilling	1 x Ex-e[1)]/1 x PE	**GHG 723 0001 R0002**
Type 723 10 assembled with screw terminals 2 x 2.5 mm² + PE-terminals 4 mm²			
Ex-e	without drilling	1 x Ex-e[1)]/14 x PE	**GHG 723 1001 R0002**
Type 723 20 assembled with screw terminals 2 x 2.5 mm² + PE-terminals 4 mm²			
Ex-e	without drilling	1 x Ex-e[1)]/14 x PE	**GHG 723 2001 R0002**

[1)] according to type examination certificate individual extensible



GHG 723 2001 R0002

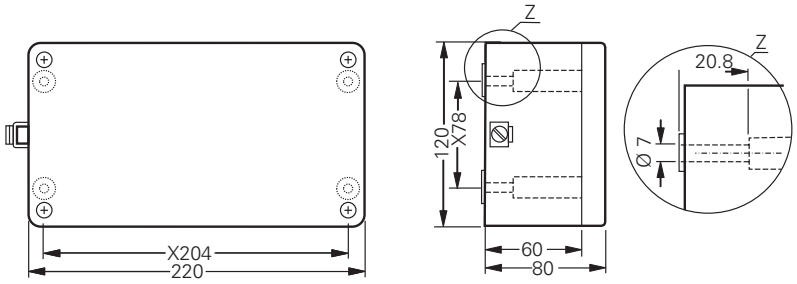


GHG 723 1001 R0002

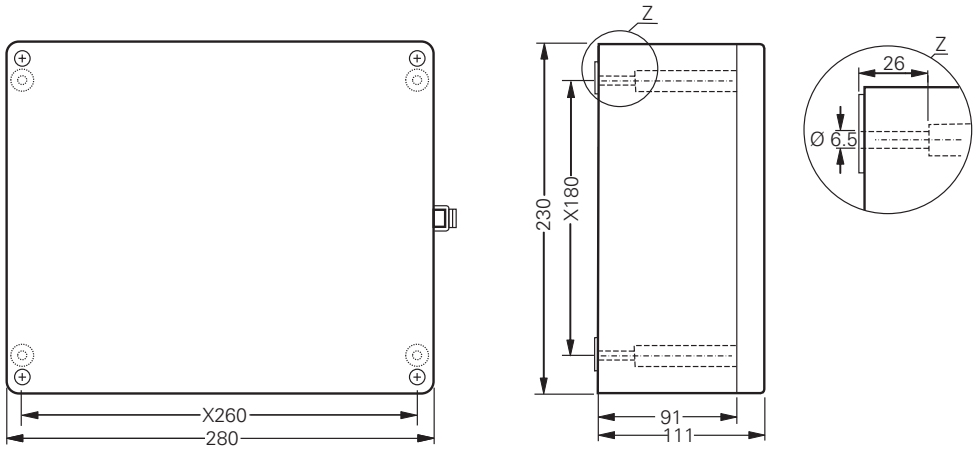


GHG 723 0001 R0002

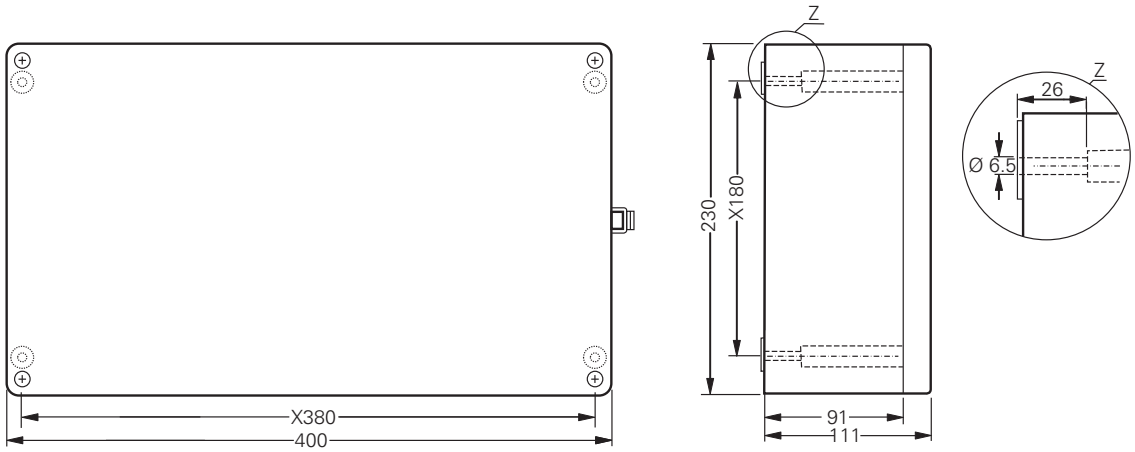
Dimension drawing



Type 723 00



Type 723 10



Type 723 20

X = fixing dimensions

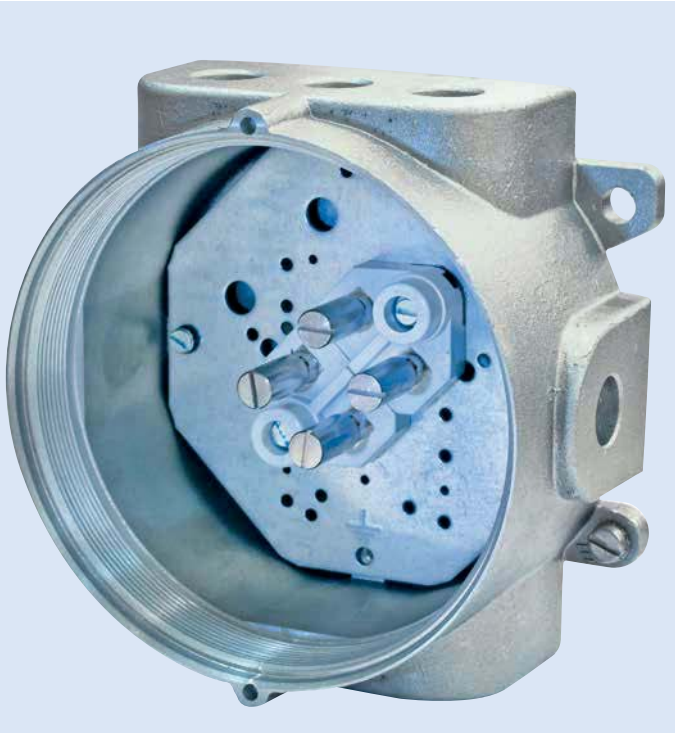
Dimensions in mm

Ex-d Terminal Boxes

Light metal design, explosion-proof for Zone 1, 2, 21 and 22

Connecting your field devices

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 60079-7 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.



Features

- **High mechanical, chemical and thermal resistance**
- **High degree of protection IP67**



Mounting plate + terminals C31



Type C31 A



Mounting plate+ terminals C30



Type C30

Technical data

	Type C30 I Type C31
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIC T6 / Ⓔx II 2 D Ex tD A21 IP67 T85 °C
EC-Type Examination Certificate	KEMA 09 ATEX 0110X
IECEx Certificate of Conformity	IECEx BKI 07.0026
Marking accd. to IECEx	Ex d IIC T6 Ex tD A21 IP67 T85 °C
Permissible ambient temperature	–20 °C to +55 °C
Rated voltage	690 V
Rated current (max.)	C30: 40 A / C31: 61 A
Protection class	I
Degree of protection accd. to EN 60529	IP67
Enclosure material	light alloy
Enclosure colour	natural finish

	Type C30
Connecting terminals	up to 6 mm^2
Weight	approx. 0.8 kg (empty)
Max. number of drillings/cable glands	4
Terminal mounting space on the terminal rail	45 mm

	Type C31
Connecting terminals	up to 10 mm^2
Weight	approx. 1.3 kg (empty)
Max. number of drillings/cable glands	8
Terminal mounting space on the terminal rail	82 mm



Type C30



Mounting plate + terminals C30



Type C31



Mounting plate + terminals C31

Ordering details

Type	Thread entries	Weight	Order No.
Type C30			
C30 T1-M	3 x M20	0.8 kg	**NOR 000 001 151 581**
C30 X1-M	4 x M20	0.8 kg	**NOR 000 001 151 506**
C30 T3-M	3 x M25	0.8 kg	**NOR 000 001 151 599**
C30 X2-M	4 x M25	0.8 kg	**NOR 000 001 151 514**
C30 T1	3 x $^1/_2$"	0.8 kg	**NOR 000 001 151 181**
C30 T2	3 x $^3/_4$"	0.8 kg	**NOR 000 001 151 199**
C30 X1	4 x $^1/_2$"	0.8 kg	**NOR 000 001 151 206**
C30 X2	4 x $^3/_4$"	0.8 kg	**NOR 000 001 151 214**
Type C31			
C31 T1-M	3 x M20	1.30 kg	**NOR 000 111 150 501**
C31 T2-M	3 x M25	1.30 kg	**NOR 000 111 150 502**
C31 X1-M	4 x M20	1.30 kg	**NOR 000 111 150 504**
C31 X2-M	4 x M25	1.30 kg	**NOR 000 111 150 505**
C31 T1	3 x $^1/_2$"	1.30 kg	**NOR 000 111 150 001**
C31 T2	3 x $^3/_4$"	1.30 kg	**NOR 000 111 150 002**
C31 T3	3 x 1"	1.30 kg	**NOR 000 111 150 003**
C31 X1	4 x $^1/_2$"	1.30 kg	**NOR 000 111 150 004**
C31 X2	4 x $^3/_4$"	1.30 kg	**NOR 000 111 150 005**
C31 X3	4 x 1"	1.30 kg	**NOR 000 111 150 006**
C31A T2	3 x $^3/_4$"	1.30 kg	**NOR 000 111 150 013**
C31A X1	4 x $^1/_2$"	1.30 kg	**NOR 000 111 150 011**

Accessories

Type	Version	No. of terminals	Order No.
Build-in components type C30			
BC 30	Mounting plate with pillor terminals 4 x 4 mm^2	4 x Ex-e [2]	**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**

Type	Order No.
Mounting bracket for housing fixing type C30	
SUSC 30	**NOR 000 000 115 311**

Type	Version	No. of terminals	Order No.
Build-in components type C31			
BC31	Mounting plate with pillar terminals	4 x 4 mm^2 [2]	**NOR 000 111 150 009**
P C31	Mounting plate without terminals	–	**NOR 000 000 115 306**
PBPD 31	Terminal rail DIN 46877	–	**NOR 000 000 115 315**

[1] Other threads on request

[2] 4 x 4 mm^2 multi-wire or 2 x 6 mm^2 solid-wire



Mounting plate + terminals C31



Type C31A

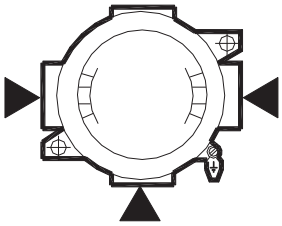


Mounting plate + terminals C30

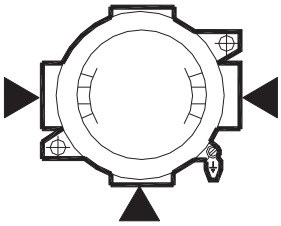


Type C30

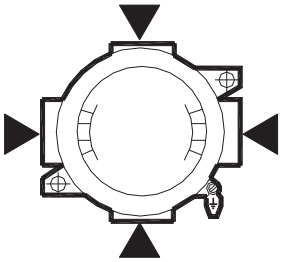
Dimension drawing



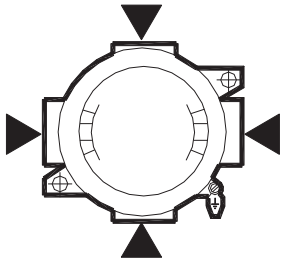
Type C30 T



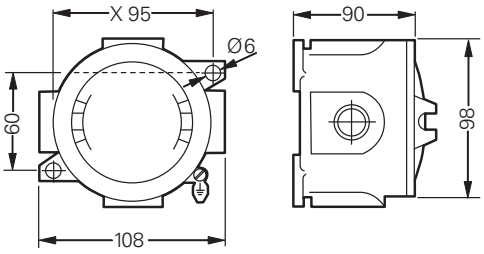
Type C31 T



Type C30 X

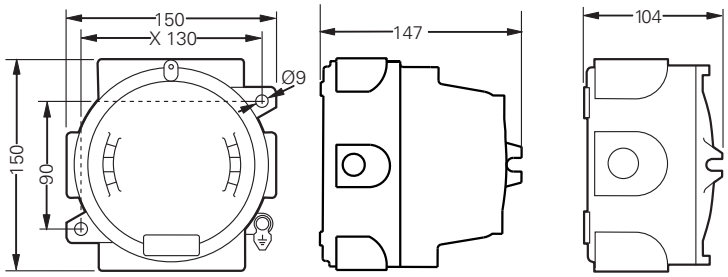


Type C31 X



Typ C30

X = fixing dimensions, ▲ = Thread



Typ C31A

Typ C31

Dimensions in mm

Ex-e/Ex-i Terminal Enclosures

Stainless steel version for Zone 1, 2, 21 and 22

Connecting your field devices

The 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.

Robust design

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 series of terminal enclosures are available in various sizes accommodating up to 7 x 128 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.

Metal flange

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.



Features

- **Stainless steel AISI 316 L, electro-polished surface**
- **Highly resistant silicone seals**
- **Metal flanges available on request**
- **Safety standard IP66**
- **PE/PA rail**

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 lugs for ease of mounting. These provide a secure, reliable means of mounting the enclosure.



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. The "max. terminal capacity" in the tables is based on the mechanical conditions of the terminal enclosure such as length of mounting rail and height the terminals. It is based on common terminal types such as Phoenix© or Wago©.

The permissible number of terminals in terms of the type examination certificate must be checked in each individual case based on the current load tables in the operating instructions.
On the basis of the maximum drilled and the interference diameter of the cable and line duct, you can select the relevant terminal box by means of the number of ducts that you need.

N-TB Range

Type	Max. terminal capacity (2.5 mm²)	Max. entry guide (M16) Top-Bottom/ Left/Right
N-TB 1	1 x 21	6/6/6
N-TB 2	2 x 27	20/9/9
N-TB 3	2 x 27	28/18/18
N-TB 4	2 x 36	26/20/26
N-TB 5	2 x 36	34/28/34
N-TB 6	2 x 51	28/28/28
N-TB 7	2 x 67	29/29/29
N-TB 8	2 x 51	35/35/35
N-TB 9	2 x 67	46/46/46
N-TB 10	3 x 71	53/46/53
N-TB 11	4 x 99	53/53/53
N-TB 12	3 x 128	53/82/82
N-TB 13	5 x 124	60/60/60
N-TB 14	6 x 147	82/80/80
N-TB 15	6 x 171	80/106/106

Ex-Cell Range

Size	Max. terminal capacity (2.5 mm²)	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
40/50/20	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

S-TB Range

Type	Max. terminal capacity (2.5 mm²)	Max. entry guide (M16) Top-Bottom/ Left/Right
S-TB 1	1 x 8	7/7/4
S-TB 2	1 x 13	9/9/6
S-TB 3	1 x 21	18/18/14
S-TB 4	2 x 31	32/32/26
S-TB 5	1 x 55	50/20/44
S-TB 6	3 x 31	54/32/48
S-TB 7	3 x 42	100/100/88
S-TB 8	4 x 61	124/124/118
S-TB 9	5 x 79	108/164/152

GHG 74.2 Range

Size	Max. terminal capacity (2.5 mm²)
744 21	40
745 22	82
746 23	188
749 24	296

N-TB Ex-e/Ex-i Terminal Enclosures

Stainless steel version for Zone 1, 2, 21 and 22

Connecting your field devices

The **N-TB** enclosure has been specifically designed for installation in locations with aggressively hostile environmental conditions. These include such locations as petrochemical hazardous areas, pharmaceutical, food process and utility applications.

Electro-polished

Manufactured from high quality stainless steel that is electro-polished for a highly corrosion resistant "Chromium enriched" surface.

This multi certified enclosure is available in different sizes and 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 **N-TB** range is the benchmark in heavy-duty gauge enclosures of its class.

An integral drainage channel prevents liquids or other solids contaminates from running in or falling into the enclosure when the door is opened, and to minimise gasket path contamination.

Degree of protection

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.

There is an option for the mounting of up to four 3 mm thick gland-plates on each side in 4 possible combinations of 1, 2, 3 or 4 gland-plates.

All units are sealed to IP66 by a high integrity Silicon gasket and secured by stainless steel bolts into blind inserts.







Features

- **S316L Stainless Steel (1.4404 to EN 10088)**
  Superior "corrosion resistant" electro chemically polished
- **high integrity „one piece" silocon gasket**
- **Detachable hinged door, stainless steel hinges with captive stainless steel hex screws**
- **4 x external welded lugs, 11 mm Ø holes / slots**
- **Optional Gland Plate / Entries 3 mm thick**
- **Extended ambient temperatures –40 °C to + 55 °C as option**
- **Certification TR-CU, AEx, cULus and Germanischer Lloyd on request**



Flange plate N-TB



N-TB

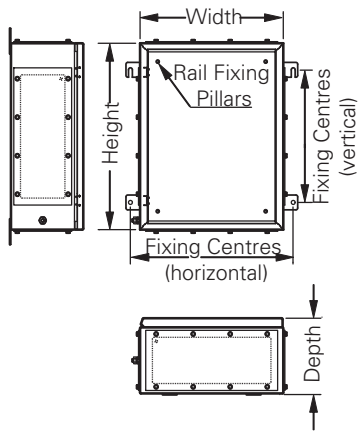
Technical data

	Ex-e terminal enclosures N-TB
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC Gb / Ⓔx II 2 D Ex tb IIIC Db
Temperature class	T6 up to +40 °C / T5 up to +55 °C
EC-Type Examination Certificate	BVS 13 ATEX E 014U
Application temperature	–40 °C to +55 °C [1)]
IECEx Certificate of Conformity	IECEx BVS 13.0026U
Marking accd. to IECEx	Ex e II Gb Ex tb IIIC Db
Rated voltage	up to 1100 V[1)]
Rated current	up to 500 A[1)]
Connecting terminals	up to 240 mm² [1)]
Protection class	I
Degree of protection accd. to EN 60529	IP66
Cable glands/gland plates/enclosure drilling	up to 4 side optional gland plate (3 mm) combination with entries to meet requirements
Type of mounting	4 x 3 mm welded lugs with Ø 11 mm holes/slots horizontal
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)
Components mounting	4 x stand of pillars Ø 9 mm, 15 mm height, thread M6 x 10, for rail or mounting plate, other heights on request
Enclosure earth	M10 external/internal stainless steel earth stud assembly M6 internal stud on lid & painted gland plates
Gasket material	Silicone gasket

[1)] depending on type of terminal and Ex-components used

Additional Approvals:
cULUs Type 3S, 4, 4 x approval suitable for
Class I, Div 2 applications, Class I Zone 1, AExe II T6 (limited range available),
TR-CU, Germanischer Lloyd

Dimension drawing



Dimensions in mm



N-TB

Ordering details N-TB up to 2 x 51 terminals

N-TB Type	Dimensions[2] H x W x D in mm	Fixing Centres[2] $B_{vertikal}$ x $B_{horizontal}$	Weight in kg (empty enclosure)	Terminal mounting rail: Rail fixing vert.	Rail fixing horiz.	Rail length vert.	Rail length horiz.	Terminal content: Row orientation vertical (thickness in mm) 2,5 (5)	4 (6)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
N-TB 1	229x152x130	152x208[3]	3.25	129	52	149	72	1x21	1x17	1x13	1x10
N-TB 2	260x260x160	170x316	5.50	160	160	180	180	2x27	2x23	1x17	1x13
N-TB 3	260x260x205	170x316	5.50	160	160	180	180	2x27	2x23	1x17	1x13
N-TB 4	306x306x160	203x361[3]	7.00	206	260	226	226	2x36	2x30	2x23	2x18
N-TB 5	306x306x205	203x361[3]	7.00	206	206	226	226	2x36	2x30	2x23	2x18
N-TB 6	380x260x205	250x316	7.00	280	180	300	160	2x51	2x43	1x32	1x25
N-TB 7	458x382x160	305x437[3]	9.75	358	282	378	302	2x67	2x56	2x42	2x33

N-TB Größe	Available glanding area (mit Flanschplatten bestückt) in mm: Top & bottom	left	right	Max. entry guide (metric) Top & bottom / left / right: M16	M20	M25	M32	M40	M50	M63	Order No.[4]
Gland entry detail											
N-TB 1	58x108	58x108	58x108	6/6/6	3/3/3	2/2/2	1/1/1	–	–	–	**NXTS12215130**
N-TB 2	214x 80	114x 80	114x 80	20/9/9	10/6/6	6/3/2	3/2/3	3/1/1	2/1/1	–	**NXTS12626160**
N-TB 3	214x124	114x124	114x124	28/18/18	15/9/9	12/5/5	6/4/4	5/2/2	2/1/1	2/1/1	**NXTS12626200**
N-TB 4	261x 80	214x 80	261x 80	26/20/26	14/10/14	8/6/8	4/3/4	3/3/3	3/2/3	–	**NXTS13030160**
N-TB 5	261x124	214x124	261x124	34/28/34	20/15/20	15/12/15	8/6/8	6/5/6	3/2/3	2/2/2	**NXTS13030200**
N-TB 6	214x124	214x124	214x124	28/28/28	15/15/15	12/12/12	6/6/6	5/5/5	2/2/2	2/2/2	**NXTS13826200**
N-TB 7	337x 80	337x 80	337x 80	29/29/29	18/18/18	10/10/10	6/6/6	5/5/5	4/4/4	–	**NXTS14538160**

Options

with 1 gland plate	NXT **S1** XXYYZZ **1**	with 2 gland plate	NXT **S1** XXYYZZ **2**
with 3 gland plate	NXT **S1** XXYYZZ **3**	with 4 gland plate	NXT **S1** XXYYZZ **4**
		Permanent Padlock HASP Facility (Factory Fitted ONLY)	NXT NN XXYYZZ0-**HASP**

Type	Order No.
Example	
N-TB 4 with 3 gland plates, painted and padlock HASP facility	**NXTS13030163-HASP**

Note: 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimension drawing see page 2.2.41
3. 123[3] Subtract 30 mm when no side gland plates
4. Refer to „OPTIONS“ for ordering key



N-TB

Ordering details N-TB up to 6 x 171 terminals

N-TB Size	Dimensions[2] H x W x D in mm	Fixing Centres[2] $B_{vertikal}$ x $B_{horizontal}$	Weight in kg (empty enclosure)	Terminal rail				Terminal content			
				Rail fixing		Rail length		Rail length	Row orientation vertical (thickness in mm)		
				vert.	horiz.	vert.	horiz.	2.5 (5)	4 (6)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
N-TB 8	380x380x230	250x435	8.10	280	280	300	300	2x 51	2x 43	2x32	2x25
N-TB 9	458x382x205	305x437[3]	9.75	358	282	378	302	2x 67	2x 56	2x42	2x33
N-TB 10	480x480x205	327x535[3]	10.40	380	380	400	400	3x 71	3x 59	3x44	3x35
N-TB 11	620x450x205	450x506	17.00	520	350	540	370	4x 99	3x 83	3x62	3x49
N-TB 12	762x508x205	508x564[3]	23.50	662	408	682	428	3x128	3x106	3x80	3x64
N-TB 13	740x550x205	540x606	30.40	640	450	660	470	5x124	4x103	4x77	4x61
N-TB 14	860x640x205	570x696	29.00	760	540	780	560	6x147	5x123	5x 92	4x73
N-TB 15	980x740x205	700x796	38.00	880	640	900	660	6x171	6x143	5x107	5x85

N-TB	Available glanding area			Max. entry guide (metric)							Order No.[4]
	Top & bottom	left	right	Top & bottom / left / right							
Type	(with gland plates fitted) in mm			M16	M20	M25	M32	M40	M50	M63	
Gland entry detail											
N-TB 8	324x150	335x150	335x150	35/35/35	23/23/23	15/15/15	9/9/9/	7/7/7	5/5/5/	2/2/2	**NXTS13838230**
N-TB 9	337x124	337x124	337x124	46/46/46	26/26/26	21/21/21	11/11/11	9/9/9	4/4/4	3/3/3	**NXTS14538200**
N-TB 10	404x124	337x124	404x124	53/46/53	30/26/30	24/21/24	14/11/14	11/9/11	5/4/5	4/3/4	**NXTS14848200**
N-TB 11	404x124	404x124	404x124	53/53/53	30/30/30	24/24/24	14/14/14	11/11/11	5/5/5	4/4/4	**NXTS16245200**
N-TB 12	404x124	594x124	594x124	53/82/82	30/47/47	24/39/39	14/20/20	11/17/17	5/7/7	4/6/6	**NXTS17650200**
N-TB 13	504x124	504x124	504x124	60/60/60	39/39/39	30/30/30	18/18/18	13/13/13	6/6/6	5/5/5	**NXTS17455200**
N-TB 14	594x124	2x (304x124)	2x (304x124)	82/80/80	47/48/48	39/36/36	20/20/20	17/14/14	7/8/8	6/6/6	**NXTS18664200**
N-TB 15	2x (304x124)	2x (404x124)	2x (404x124)	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** XXYYZZ **1**	with 2 gland plate	NXT **S1** XXYYZZ **2**
with 3 gland plate	NXT **S1** XXYYZZ **3**	with 4 gland plate	NXT **S1** XXYYZZ **4**
		Permanent Padlock HASP Facility (Factory Fitted ONLY)	NXT NN XXYYZZ0-**HASP**

Type	Order No.
Example	
N-TB 11 with 3 gland plate, 316L SS and Padlock HASP Facility	**NXTS162445203-HASP**

Note: 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimension drawing see page 2.2.41
3. 123[3] Subtract 30 mm when no side gland plates
4. Refer to „OPTIONS“ for ordering key

Ex-Cell Ex-e/Ex-i Terminal Enclosures

Stainless steel version for Zone 1, 2, 21 and 22

Connecting your field devices

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 petrochemical, 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) along with an impact resistance of a minimum of 7 Nm, making them ideal for wash-down and heavy duty applications.

The Ex-Cell-I series is made for instrumentation with easy access central locking system and hinged cover.

Rapid environmental protection

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.

Gland plates

There is an option for up to 3 gland plates (3 mm thick) on each side with possible combinations of 0, 1, 3 gland plates available. All units are sealed to IP66 by a high integrity chloroprene gasket and secured by rapid fixing "Hytork" fixing bolts.

An integral drainage channel prevents liquids or other solids contaminates from running in or falling into the enclosure when the door is opened, and to minimise gasket path contamination.





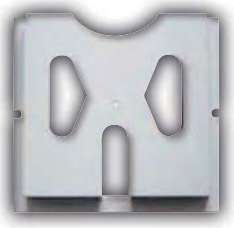


Features

- **Stainless steel 316 L options and 304**
- **Safety standard IP66**
- **Hinges and central locking device for easy access**
- **Extended ambient temperatures up to +60 °C on request**
- **External and internal earthing bolts**



ID TAG label & bracket



Door document holder opti.



Security padlock Hasp opti.



Ex-Cell

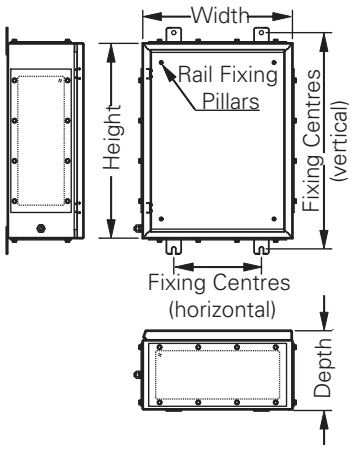
Technical data

	Type Ex-Cell
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex e II / ⟨Ex⟩ II 2 D Ex tD A21 IP66
Temperature class	T6 up to +40 °C / T5 up to +55 °C
EC-Type Examination Certificate	PTB 02 ATEX 1021 U
Application temperature	–20 °C to +40 °C –55 °C to +55 °C (option: closed cell expanded Silicone gasket)
Rated voltage	up to 750 V [1)]
Rated current	up to 500 A [1)]
Connecting terminals	up to 240 mm^2 [1)]
Protection class	I
Degree of protection accd. to EN 60529	IP66
Cable glands/gland plates/enclosure drilling	up to 4 side optional gland plate combination with entries to meet requirements
Type of mounting	4 x 3 mm welded lugs with Ø 11 mm holes/slots, vertical or horizontal
Enclosure material	Stainless steel 316 L or 304 electro chemically polished or sheet steel polyester powder coated (RAL 7032)
Material thickness	1.2 mm (body), 1.5 mm (door)
Components mounting	4 x stand of pillars Ø 9 mm, 25 mm height, thread M6 x 10, for rail or mounting plate
Enclosure earth	M10 external and internal brass earth stud assembly
Gasket material	PUR, Chloroprene gasket (option), closed cell expended Silicone gasket (option)

[1)] depending on type of terminal and Ex-components used

cULUs Typen 3S, 4, 4 x approval, Germanischer Lloyd available on request.

Dimension drawing



Dimensions in mm



1/4 fastening



Bolt fastening

Ordering details Ex-Cell up to 2 x 56 terminals

316L SS-90° Fastening Size	Dimensions[2] H x W x D in mm	Fixing Centres[2] $B_{vertical}$ x $B_{horizontal}$	Weight in kg (empty enclosure)	Terminal rail Rail fixing vert.	Rail fixing horiz.	Rail length vert.	Rail length horiz.	Terminal content Row orientation vertical 2,5 mm²	4 mm²	6 mm²	10 mm²	16 mm²
Enclosure dimensions and terminal content												
23/15/13	229x152x127	152x208	2,35	129	52	149	72	1x21	1x17	1x13	1x10	1x 9
26/26/15	260x260x152	170x316	2,8	160	160	180	180	2x27	2x23	1x17	1x13	1x11
30/20/15	305x203x152	203x259	3,4	205	103	225	123	1x36	1x30	1x23	1x18	1x15
30/30/15	305x305x152	203x361	4,6	205	205	225	225	2x36	2x30	2x23	2x18	2x15
30/30/20	305x305x203	203x361	5,8	205	205	225	225	2x36	2x30	2x23	2x18	2x15
40/30/15	406x305x152	267x361	5,7	306	205	326	225	2x56	2x47	2x35	2x28	2x23
40/30/20	406x305x203	267x361	6,6	306	205	326	225	2x56	2x47	2x35	2x28	2x23

316L SS-90° Fastening Size	Available glanding area Top & bottom (with gland plates fitted) in mm	left	right	Max. entry guide (metric) Top & bottom / left / right M16	M20	M25	M32	M40	M50	M63	Order No.[3]
Gland entry detail											
23/15/13	108x 58	108x 58	108x 58	6/6/6	2/2/2	2/2/2	1/1/1	–	–	–	**XLHS12315130**
26/26/15	214x 80	114x 80	114x 80	21/11/11	10/5/5	4/2/2	3/2/2	3/1/1	2/1/1	–	**XLHS12626150**
30/20/15	156x 80	156x 80	156x 80	15/15/15	7/7/7	3/3/3	2/2/2	2/2/2	2/2/2	–	**XLHS13020150**
30/30/15	261x 80	156x 80	156x 80	26/15/15	13/7/7	5/3/3	4/2/2	3/2/2	3/2/2	–	**XLHS13030150**
30/30/20	261x124	214x124	261x124	34/28/34	18/15/18	15/12/15	8/6/8	6/5/6	3/2/3	2/2/2	**XLHS13030200**
40/30/15	261x 80	261x 80	261x 80	26/26/26	13/13/13	5/5/5	4/4/4	3/3/3	3/3/3	–	**XLHS14030150**
40/30/20	261x124	261x124	261x124	34/34/34	18/18/18	15/15/15	8/8/8	6/6/6	3/3/3	2/2/2	**XLHS14030200**

Options

with 1 gland plate	XLH **S1** XXYYZZ **1**	**with 3 gland plate**	XLH **S1** XXYYZZ **3**
Ex-Cell 316L SS - bolt fastening	XLH **S1** XXYYZZ0-**B**	**Ex-Cell 304 SS - 1/4 fastening**	XLH **S2** XXYYZZ **0**
Ex-Cell 304 SS - bolt fastening	XLH **S2** XXYYZZ0-**B**	**Ex-Cell painted - 1/4 fastening**	XLH **PS** XXYYZZ **0**
Ex-Cell painted - bolt fastening	XLH **PS** XXYYZZ0-**B**	**Permanent Padlock HASP Facility (Factory fitted ONLY)**	XLH NN XXYYZZ0-**HASP**

Type	Order No.
Example	
30/20/15 with 3 gland plate, painted with bolt fastening and Permanent Padlock HASP Facility	**XLHPS 3020153-B-HASP**

Note: 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimension drawing see page 2.2.45
3. Refer to „OPTIONS“ for ordering key



Ex-Cell

Ordering details Ex-Cell up to 3 x 77 terminals

316L SS-90° Fastening Size	Dimensions[2] H x B x T in mm	Rail fixing centres[2] $B_{vertical}$ x $B_{horizontal}$	Weight in kg (empty enclosure)	Terminal rail Rail fixing vert.	Rail fixing horiz.	Rail length vert.	Rail length horiz.	Terminal content Row orientation vertical 2,5 mm²	4 mm²	6 mm²	10 mm²	16 mm²
Enclosure dimensions and terminal content												
40/40/15	406x406x152	267x462	7,1	306	306	326	326	3x56	3x47	3x35	3x28	3x23
40/40/20	406x406x203	267x462	8,1	306	306	326	326	3x56	3x47	3x35	3x28	3x23
40/50/15	406x508x152	267x564	8,5	306	408	326	428	4x56	4x47	4x35	4x28	4x23
40/50/20	406x508x203	267x564	9,7	306	408	326	428	4x56	4x47	4x35	4x28	4x23
50/40/15	508x406x152	354x462	8,5	408	306	428	326	3x77	3x64	3x48	3x38	3x32
50/40/20	508x406x203	354x462	9,7	408	306	428	326	3x77	3x64	3x48	3x38	3x32

316L SS-90° Fastening Size	Available glanding area Top & bottom (with gland plates fitted) in mm	left	right	Max. entry guide (metric) Top & bottom / left / right M16	M20	M25	M32	M40	M50	M63	Order No.[3]
Gland entry detail											
40/40/15	337x 80	261x 80	261x 80	35/26/26	17/13/13	7/5/5	6/4/4	5/3/3	4/3/3	–	**XLHS14040150**
40/40/20	334x124	261x124	261x124	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	464x 80	261x 80	261x 80	48/26/26	24/13/13	10/5/5	8/4/4	7/3/3	6/3/3	–	**XLHS14050150**
40/50/20	460x124	261x124	261x124	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	337x 80	337x 80	337x 80	35/35/35	17/17/17	7/7/7	6/6/6	5/5/5	4/4/4	–	**XLHS15040150**
50/40/20	334x124	334x124	334x124	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** XXYYZZ **1**	**with 3 gland plate**	XLH **S1** XXYYZZ **3**
Ex-Cell 316L SS - bolt fastening	XLH **S1** XXYYZZ0-**B**	**Ex-Cell 304 SS - 1/4 fastening**	XLH **S2** XXYYZZ **0**
Ex-Cell 304 SS - bolt fastening	XLH **S2** XXYYZZ0-**B**	**Ex-Cell painted - 1/4 fastening**	XLH **PS** XXYYZZ **0**
Ex-Cell painted - bolt fastening	XLH **PS** XXYYZZ0-**B**	**Permanent padlock HASP Facility (Factory fitted ONLY)**	XLH NN XXYYZZ0-**HASP**

Type	Order No.
Example	
40/50/20 with 1 gland plates, 316L SS with bolt fastening and Permanent Padlock HASP Facility	**XLHS14050201-B-HASP**

Note: 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimension drawing see page 2.2.45
3. Refer to „OPTIONS" for ordering key



Ex-Cell

Ordering details Ex-Cell up to 4 x 97 terminals

316L SS-90° Fastening Size	Dimensions[2] H x W x D in mm	Rail fixing cenrtres[2] $B_{vertical}$ x $B_{horizontal}$	Weight in kg (empt enclosure)	Terminal rail				Terminal content				
				Rail fixing centres		Rail length		Row orientation vertical				
				vert.	horiz.	vert.	horiz.	2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²
Enclosure dimensions and terminal content												
50/50/15	508x508x152	354x564	10.2	408	408	428	428	4x77	4x64	4x 48	4x38	4x32
50/50/20	508x508x203	354x564	11.4	408	408	428	428	4x77	4x64	4x 48	4x38	4x32
50/60/20	508x610x203	354x666	13.2	408	510	428	530	6x77	6x64	6x 48	6x38	6x32
60/40/15	610x406x152	445x462	9.9	510	306	530	326	3x97	3x81	3x61	3x49	3x40
60/40/20	610x406x203	445x462	11.2	510	306	530	326	3x97	3x81	3x61	3x49	3x40
60/50/15	610x508x152	445x564	11.8	510	408	530	428	4x97	4x81	4x61	4x49	4x40
60/50/20	610x508x203	445x564	13.2	510	408	530	428	4x97	4x81	4x61	4x49	4x40

316L SS-90° Fastening	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	M63	
Gland entry detail											
50/50/15	464x 80	337x 80	337x 80	48/35/35	24/17/17	10/7/7	8/6/6	7/5/5	6/4/4	–	**XLHS15050150**
50/50/20	460x124	334x124	334x124	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	562x124	334x124	334x124	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	337x 80	464x 80	464x 80	35/48/48	17/24/24	7/10/10	6/8/8	5/7/7	4/6/6	–	**XLHS16040150**
60/40/20	334x124	460x124	460x124	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	464x 80	464x 80	464x 80	48/48/48	24/24/24	10/10/10	8/8/8	7/7/7	6/6/6	–	**XLHS16050150**
60/50/20	460x124	460x124	460x124	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** XXYYZZ **1**	**with 3 gland plate**	XLH **S1** XXYYZZ **3**
Ex-Cell 316L SS - bolt fastening	XLH **S1** XXYYZZ0-**B**	**Ex-Cell 304 SS - 1/4 fastening**	XLH **S2** XXYYZZ **0**
Ex-Cell 304 SS - bolt fastening	XLH **S2** XXYYZZ0-**B**	**Ex-Cell painted - 1/4 fastening**	XLH **PS** XXYYZZ **0**
Ex-Cell painted - bolt fastening	XLH **PS** XXYYZZ0-**B**	**Permanent padlock HASP Facility (Factory Fitted ONLY)**	XLH NN XXYYZZ0-**HASP**

Type	Order No.
Example	
60/50/20 with 3 gland plate, painted 1/4 turn lock and Permanent Padlock HASP Facility	**XLHPS6050203-HASP**

Note: 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimension drawing see page 2.2.45
3. Refer to „OPTIONS“ for ordering key



Ex-Cell

Ordering details Ex-Cell up to 7 x 128 terminals

316L SS-90° Fastening Size	Dimensions[2] H x W x D in mm	Rail fixing centres[2] $B_{vertical}$ x $B_{horizontal}$	Weight in kg (empty enclosure)	Terminal rail: Rail fixing centres vert.	Rail fixing centres horiz.	Rail length vert.	Rail length horiz.	Terminal content: Row orientation vertical 2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²
Enclosure dimensions and terminal content												
60/60/15	610x610x152	445x666	13.7	510	510	530	530	6x 97	6x 81	6x61	6x49	6x40
60/60/20	610x610x203	445x666	15.3	510	510	530	530	6x 97	6x 81	6x61	6x49	6x40
60/76/20	610x762x203	445x818	18.3	510	662	530	682	7x 97	7x 81	7x61	7x49	7x40
76/50/20	762x508x203	508x564	15.9	662	408	682	428	4x128	4x106	4x80	4x64	4x53
76/60/20	762x610x203	508x666	18.3	662	510	682	530	6x128	6x106	6x80	6x64	6x53
76/76/20	762x762x203	508x818	21.9	662	662	682	682	7x128	7x106	7x80	7x64	7x53

316L SS-90° Fastening Size	Available glanding area Top & bottom (with gland plates fitted) in mm	left	right	Max. entry guide (metric) Top & bottom / left / right M16	M20	M25	M32	M40	M50	M63	Order No.[3]
Gland entry detail											
60/60/15	562x 80	464x 80	464x 80	59/48/48	29/24/24	12/10/10	10/8/8	8/7/7	7/6/6	–	**XLHS16060150**
60/60/20	562x124	460x124	460x124	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	714x124	460x124	460x124	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	460x124	562x124	562x124	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	562x124	562x124	562x124	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	714x124	562x124	562x124	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** XXYYZZ **1**	**with 3 gland plate**	XLH **S1** XXYYZZ **3**
Ex-Cell 316L SS - bolt fastening	XLH **S1** XXYYZZ0-**B**	**Ex-Cell 304 SS - 1/4 fastening**	XLH **S2** XXYYZZ **0**
Ex-Cell 304 SS - bolt fastening	XLH **S2** XXYYZZ0-**B**	**Ex-Cell painted - 1/4 fastening**	XLH **PS** XXYYZZ **0**
Ex-Cell Painted - bolt fastening	XLH **PS** XXYYZZ0-**B**	**Permanent padlock HASP Facility (Factory Fitted ONLY)**	XLH NN XXYYZZ0-**HASP**

Type	Order No.
Example	
60/76/20 with 3 gland plate, 316 SS with bolt fastening and Permanent Padlock HASP Facility	**XLHS16076203-B-HASP**

Note: 1. The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.
2. Dimension drawing see page 2.2.45
3. Refer to „OPTIONS" for ordering key

S-TB Ex-e Terminal Enclosures

Stainless steel version for Zone 1, 2, 21 and 22

Designed for heavy duty

The **ST-B** 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 EN 60079-0 ff. and EN 6124-0 ff. 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 **S-TB** range is the benchmark in heavy-duty gauge enclosures of its class.

ST-B has unique wrap-round lid cover design that wraps around the body of the enclosures eliminate ingress of both liquids and dusts 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.

Inress protection

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 **ST-B** 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.





Features

- **316L Stainless Steel (1.4404 to EN 10088) Superior "corrosion resistant" electro chemically polished.**
- **Sheet Steel - Polyester powder coated to RAL 7032**
- **Foamed silicone gasket**
- **Safety standard IP66**
- **Extended ambient temperatures –40 °C to +55 °C as option**
- **Certification TR-CU, AEx, cULus and Germanischer Lloyd on request**



S-TB



S-TB

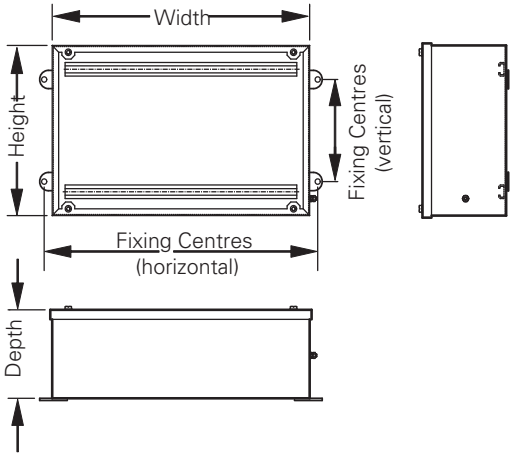
Technical data

	Type S-TB terminal boxes
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC Gb Ⓔx II 2 D Ex tb IIIC Db
Temperature class	T6 up to +40 °C / T5 up to +55 °C
EC-Type Examination Certificate	BVS 13 ATEX E 015 U
Application temperature	–30 °C to +40 °C –40 °C to +55 °C (option)
IECEx Certificate of Conformity	IECEx BVS 13.0025U
Marking accd. to IECEx	Ex e IIC Gb Ex tb IIIC Db
Rated voltage	up to 690 V*
Rated current	up to 500 A*
Connecting terminals	up to 240 mm^2*
Protection class	I
Degree of protection accd. to EN 60529	IP66
Cable glands/gland plates/enclosure drilling	up to 4 side optional gland plate combination with entries to meet requirements (38/38/20 - 60/40/20) combination with entries to meet requirements
Type of mounting	S-TB 1 - S-TB 4 - 2 welded lugs with Ø 8 mm holes S-TB 5 - S-TB 6 - 4 welded lugs with Ø 8 mm holes S-TB 7 - S-TB 9 - 4 welded lugs with Ø 11 mm holes
Enclosure material	Stainless steel 316 L or 304
Material thickness	1.5 mm
Components mounting	S-TB 1 - S-TB 6 - internally welded TAS 20 rail for terminals mounting S-TB 7 - S-TB 9 - 4 x stand of pillars Ø 9 mm, 25 mm height, thread M6 x 10, for rail or mounting plate
Enclosure earth	S-TB 1 - S-TB 6 - M6 external/internal earth stud assembly S-TB 7 - S-TB 9 - M10 external/internal earth stud assembly
Gasket material	Silikon-gasket

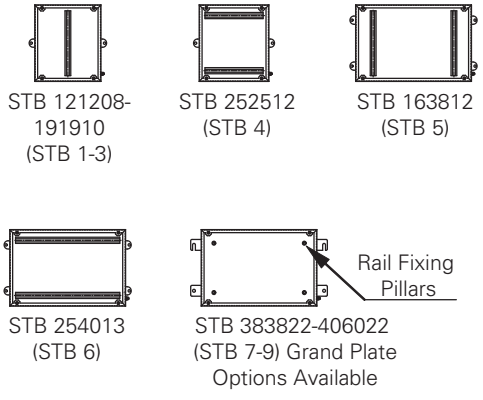
* depending on type of terminal and Ex-components used

Additional certifications:
TR-CU and cULUs types 3S, 4, 4 x on request.

Dimension drawing



Fixing Lug and Rail / Pillar configuration
(not to scale)



Dimensions in mm



S-TB



S-TB

Ordering details S-TB up to 3 x 51 terminals

S-TB Size	Dimensions[2] H x W x D in mm	Fixing centres $B_{vertical}$[2] mm x $B_{horizontal}$ mm	Weight in kg (empty enclosure)	Terminal rail: Rail fixing centres vert.	Rail fixing centres horiz.	Rail length vert.	Rail length horiz.	Terminal content: Row orientation vertical 2.5 (6)	4 (6.5)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
S-TB 1	120x120x 80	145	1.4	62		82		1x 8	1x 6	1x 5	1x 4
S-TB 2	150x150x 90	175	1.9	90		110		1x13	1x11	1x 8	1x 7
S-TB 3	190x190x100	215	3.0	130		150		1x21	1x18	1x13	1x10
S-TB 4	250x250x120	275	3.7	180		200		2x31	2x26	2x19	2x15
S-TB 5	160x380x120	80x405	3.7	300		320		1x55	1x46	1x34	1x28

S-TB Size	Available glanding area (with gland plates fitted) in mm: Top & bottom	left	right	Max. entry guide (metric): Top & bottom / left / right M16	M20	M25	M32	M40	M50	M63	Order No.[3]
Gland entry detail											
S-TB 1	114x 63	114x 63	70x 63	7/7/4	3/3/1	2/2/1	2/2/1	–	–	–	**STBS1121208**
S-TB 2	144x 73	144x 73	100x 73	9/9/6	6/6/4	3/3/2	2/2/1	2/2/1	–	–	**STBS1151509**
S-TB 3	184x 83	184x 83	140x 83	18/18/14	8/8/6	7/7/5	3/3/2	2/2/2	2/2/1	–	**STBS1191910**
S-TB 4	244x103	244x103	200x103	32/32/26	18/18/14	10/10/8	7/7/6	3/3/3	3/3/2	2/2/2	**STBS1252512**
S-TB 5	372x103	154x103	330x103	50/20/44	29/11/24	15/6/14	12/4/10	5/2/5	4/1/4	3/1/3	**STBS1163812**

Options

S-TB with gland 1 plate[3]	STB **S** 1XXYYZZ **1**	**S-TB with additional UL CERT**	STB **S** 1XXYYZZ **UL**
S-TB with gland 3 plate[3]	STB **S** 1XXYYZZ **3**		

Type	Order No.
Example	
S-TB 2 with 3 gland plate and UL-certification	**STBS1151509-UL**

The information provided is based on the physical constraints of the enclosure. Please refer to the certificate for hazardous area applications.

Note: 1. Dimension drawing see page 2.2.51

2. Size S-TB 1 - S-TB 4 has only horizontal fixing lugs (2)
3. Only this types includes UL-Certification and can be ordered with 1 or 3 gland plates
4. Refer to „OPTIONS“ for ordering key



S-TB

Ordering details S-TB up to 5 x 79 terminals

S-TB Size	Dimensions[2] H x W x D in mm	Fixing centres $B_{vertical}$ mm x $B_{horizontal}$ mm	Weight in kg (empty enclosure)	Terminal rail: Rail fixing centres vert.	Rail fixing centres horiz.	Rail length vert.	Rail length horiz.	Terminal content: Row orientation vertical 2.5 (6)	4 (6.5)	6 (8)	10 (10)
Enclosure dimensions and terminal content											
S-TB 6	250x400x130	150x425	5.4	180		200		3x31	3x26	3x19	3x15
S-TB 7[2]	380x380x220	250x435	8.5	280		300		3x42	3x39	3x32	3x25
S-TB 8	480x480x200	340x535	10.5	380		400		4x61	4x56	4x46	4x36
S-TB 9[2]	600x400x220	464x456	13.0	500		520		5x79	5x73	5x59	5x47

S-TB Type	Available glanding area (with gland plates fitted) in mm: Top & bottom	left	right	Max. entry guide (metric) Top & bottom / left / right: M16	M20	M25	M32	M40	M50	M63	Order No.[3]
Gland entry detail											
S-TB 6	394x113	244x113	350x113	54/32/48	30/18/26	16/10/14	13/7/11	6/3/5	5/3/4	4/2/3	**STBS1254013**
S-TB 7[2]	374x203	374x203	324x203	100/100/88	57/57/48	40/40/33	24/24/20	15/15/12	8/8/7	6/6/5	**STBS13838220**
S-TB 8	474x183	474x183	474x183	124/124/118	78/78/74	54/54/50	30/30/28	20/20/18	11/11/9	10/10/8	**STBS14848200**
S-TB 9[2]	337x124	337x124	337x124	108/164/152	60/93/84	40/65/60	26/40/38	17/26/23	9/14/13	7/11/10	**STBS16040220**

Options

S-TB with gland 1 plate[2]	STB **S** 1XXYYZZ **1**	**S-TB with additonal UL CERT**	STB **S** 1XXYYZZ **UL**
S-TB with gland 3 plate[2]	STB **S** 1XXYYZZ **3**		

Type	Order No.
Example	
S-TB 7 316L SS with 3 gland plate 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.

Note: 1. Dimension drawing see page 2.2.51
2. Only this types includes UL-Certification and can be ordered with 1 or 3 gland plates
3. Refer to „OPTIONS“ for ordering key



Type 744 21



Type 745 22

Technical data

	Type 744 21/745 22/746 23/749 24 up to 296 terminals
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIIC T4/T5/T6 Gb / Ⓔx II 2 D Ex e ib [ia/ib] IIC T4/T5/T6 Gb
EC-Type Examination Certificate	BVS ATEX E 118X
IECEx Certificate of Conformity	IECEx BVS 12.0071X
Marking accd. to IECEx	Ex e ib [ia/ib] IIC T4 ... T6 Gb Ex tb IIIC T80 °C/T95 °C Db IP6X
Permissible ambient temperature	–20 °C to +40 °C
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of protection accd. to EN 60529	IP66
Enclosure material	Stainless steel AISI 316 L (1.4404)

	Type 744 21 up to 40 terminals						
Terminal cross section	max. 16 mm²						
Weight	approx. 3.5 kg						
Max. number of drillings/cable glands	M16	M20	M25	M32	M40	M50	M63
down	37	23	15	9	5	3	2
with flange	29	17	12	7	4	2	–
Terminal mounting space on the terminal rail	1 x 230 mm						
Max. number of terminals	2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	25 mm²	35 mm²
acc. to certification	1 x 40	1 x 33	1 x 25	1 x 20	1 x 17	1 x 17	–

	Type 745 22 up to 82 terminals						
Terminal cross section	max. 70 mm²						
Weight	approx. 7.5 kg						
Max. number of drillings/cable glands	M16	M20	M25	M32	M40	M50	M63
down	37	23	15	9	5	3	2
with flange	29	17	12	7	4	2	–
Terminal mounting space on the terminal rail	2 x 230 mm						
Max. number of terminals	2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	25 mm²	35 mm²
acc. to certification	2 x 41	2 x 34	1 x 26	2 x 20	1 x 17	1 x 17	1 x 14

	Type 746 23 up to 188 terminals						
Terminal cross section	max. 240 mm²						
Weight	approx. 11.5 kg						
Max. number of drillings/cable glands	M16	M20	M25	M32	M40	M50	M63
down	71	46	30	18	10	6	4
with flange	58	34	24	14	8	4	–
Terminal mounting space on the terminal rail	2 x 510 mm						
Max. number of terminals	2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	25 mm²	35 mm²
acc. to certification	2 x 94	2 x 78	1 x 59	2 x 47	1 x 40	1 x 40	1 x 32

	Type 749 24 up to 296 terminals						
Terminal cross section	max. 240 mm²						
Weight	approx. 16.5 kg						
Max. number of drillings/cable glands	M16	M20	M25	M32	M40	M50	M63
down	108	69	45	27	15	9	6
with flange	87	51	36	21	12	6	–
Terminal mounting space on the terminal rail	2 x 795 mm						
Max. number of terminals	2.5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	25 mm²	35 mm²
acc. to certification	2 x 148	2 x 124	1 x 94	2 x 75	1 x 63	1 x 63	1 x 51



Type 749 24



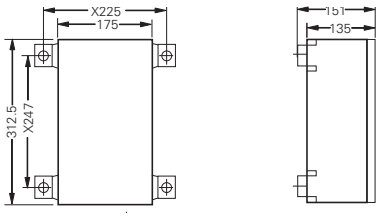
Type 746 23

Ordering details

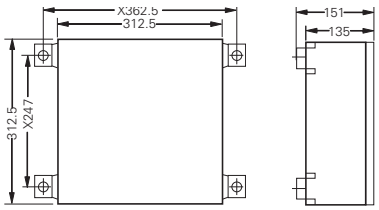
Type	Cable gland	No. of terminals	Order No.
Terminal boxes 744 21 assembled with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²			
Ex-e	1 x stainless steel down without drilling	1 x Ex-e* 7 x PE	**GHG 744 2101 R0001**
Terminal boxes 745 22 assembled with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²			
Ex-e	1 x stainless steel down without drilling	1 x Ex-e* 14 x PE	**GHG 745 2201 R0001**
Terminal boxes 745 22 assembled with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²			
Ex-e	2 x stainless steel down without drilling	1 x Ex-e* 2 x 14 x PE	**GHG 746 2301 R0001**
Terminal boxes 749 24 assembled with screw terminals 2 x 2.5 mm² + PE-rail 4 mm²			
Ex-e	3 x stainless steel down without drilling	1 x Ex-e* 3 x 14 x PE	**GHG 749 2401 R0001**

* according to type examination certificate individual extensible
Other applications available on request.

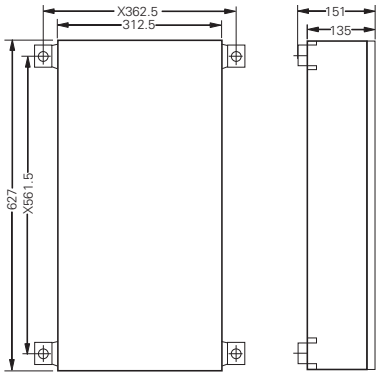
Dimension drawing



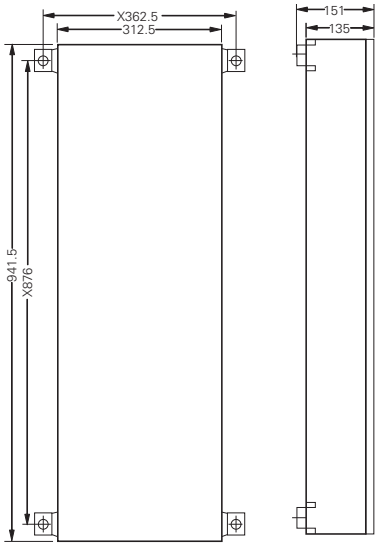
Type 744 21



Type 745 22



Type 746 23



Type 749 24

X = fixing dimensions

Dimensions in mm

Ex-Intermediate Motor Terminal Boxes

up to 240 mm² Plastic version for Zone 1 and Zone 21

Connecting drives

The CEAG connection and junction boxes are 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 60079. 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 and a strain relief or just a strain relief for a flexible cable outlet.





Features

- **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

Technical data

	Type 791 02
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC T5/T6 Gb / Ⓔx II 2 D Ex tb IIIC T80°C Db
EC-Type Examination Certificate	BVS 16 ATEX E 031
IECEx Certificate of Conformity	IECEx BVS 16.0024
Marking accd. to IECEx	Ex e IIC T5/T6 Gb Ex tb IIIC T80°C Db
Permissible ambient temperature	–20 °C to +40 °C / -55 C to +55 °C (option)
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of protection accd. to EN 60529	IP66
Enclosure material	Polyamide
Terminal cross section	up to 6 mm²
Weight	approx. 0.7 kg

Ordering details

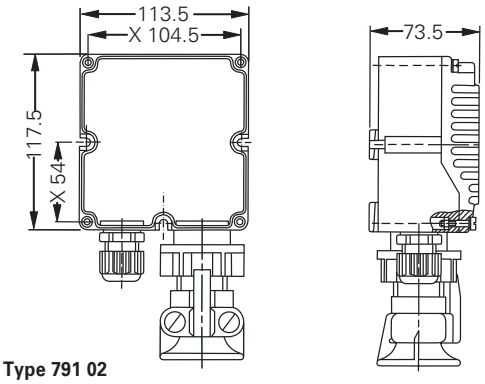
Type	Cable gland	No. of terminals	Order No.
Type 791 02 assembled with screw terminals 2 x 4 mm² + 1 x PE-terminals 2 x 4 mm²			
Ex-e	1 x M25 cable gland 1 x M32 trumpet-shaped gland Ø 15-20 mm	4 x Ex-e 1 x PE	**GHG 791 0201 R0016**

Other versions for cable Ø 15 - 20 mm available on request.

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for intermediate motor terminal box 791 02			
Size 2	Wall mounting	snap on	**GHG 610 1953 R0104**
Size 2	Trellis mounting	snap on	**GHG 610 1953 R0106**
Size 2	Pipe clamp	snap on	**GHG 610 1953 R0105**
Protective canopy size 2	for mounting plate size 2		**GHG 610 1955 R0102**

Dimension drawing



Type 791 02

X = fixing dimensions

Dimensions in mm



Type 721 00 10 mm²



Type 721 00 16 mm²

Technical data

	Type 721 00
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC T4/T5/T6 Gb / Ⓔx II 2 D Ex tb IIIC T80 °C/T95 °C IP6X
EC-Type Examination Certificate	BVS 13 ATEX 013X
IECEx Certificate of Conformity	IECEx BVS 13.0031X
Marking accd. to IECEx	Ex e IIC T4/T5/T6 Ex tb IIIC T80 °C/T95 °C Db IP6X
Permissible ambient temperature	–20 °C to +40 °C
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of protection accd. to EN 60529	IP66
Terminal cross section	max. 10 mm² / max. 16 mm²
Enclosure material	glass-fibre reinforced polyester
Weight	721 00 approx. 1.0 kg / 721 10 approx. 1.1 kg

Ordering details

Type	Cable gland	No. of terminals	Order No.
Type 721 00 assembled with screw terminals 2 x 10 mm² + 1 x PE-terminals 2 x 10 mm²			
Ex-e	1 x M40 cable gland 1 x M40 trumpet-shaped gland Ø 19-27 mm	4 x Ex-e 1 x PE	**GHG 721 0001 R0013**

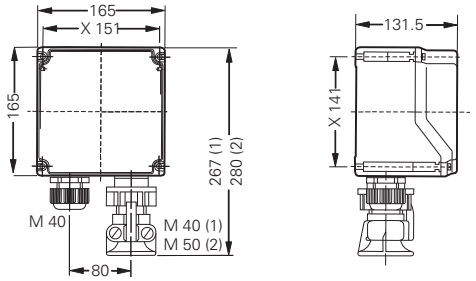
Type	Cable gland	No. of terminals	Order No.
Type 721 00 assembled with screw terminals 2 x 16 mm² + 1 x PE-terminals 2 x 16 mm²			
Ex-e	1 x M50 Ø 21-35 mm 1 x M50 trumpet-shaped gland Ø 26-34 mm	4 x Ex-e 1 x PE	**GHG 721 0001 R0014**

Other applications available on request.

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for intermediate motor terminal box 721 00			
Size 2A	Wall mounting	snap on	**GHG 610 1953 R0107**
Size 2A	Trellis mounting	snap on	**GHG 610 1953 R0109**
Size 2A	Pipe clamp	snap on	**GHG 610 1953 R0108**
Protective canopy size 2A	for mounting plate size 2A		**GHG 610 1955 R0103**

Dimension drawing



Type 721 00

Dimensions in mm



Type 745 02

Technical data

	Type 745 02
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC T4/T5/T6 Gb / Ⓔx II 2 D Ex tb IIIC T80 °C/T95 °C Db IP6X
EC-Type Examination Certificate	BVS 12 ATEX E 118X
IECEx Certificate of Conformity	IECEx BVS 12.0071X
Marking accd. to IECEx	Ex e IIC T4/T5/T6 Gb Ex tD tb III T80 °C/T95 °C Db IP6X
Permissible ambient temperature	–20 °C to +40 °C
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of protection accd. to EN 60529	IP66
Enclosure material	glass-fibre reinforced polyester
Terminal cross section	up to 35 mm² or max. 70 mm²
Weight	745 0201 R0002 approx. 3.0 kg / 745 0201 R0003 approx. 3.2 kg

Ordering details

Type	Cable gland	No. of terminals	Order No.
Type 745 02 assembled with screw terminals 2 x 35 mm² + 1 x PE-terminals 2 x 35 mm²			
Ex-e	1 x M50 Ø 21-35 mm 1 x M63 trumpet-shaped gland Ø 35-46 mm	4 x Ex-e 1 x PE	**GHG 745 0201 R0002**

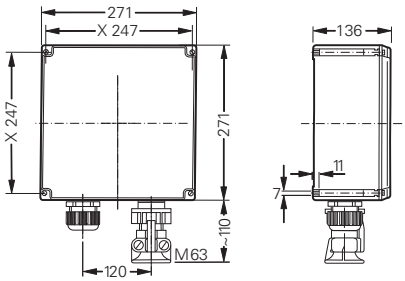
Type	Cable gland	No. of terminals	Order No.
Type 745 02 assembled with screw terminals 2 x 50/70 mm² + 1 x PE-terminals 2 x 50/70 mm²			
Ex-e	1 x M50 Ø 21-35 mm 1 x M63 trumpet-shaped gland Ø 35-46 mm	4 x Ex-e 1 x PE	**GHG 745 0201 R0003**

Other applications available on request.

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for intermediate motor terminal box 745 02			
Size 3	Pipe clamp	screwless mounting on 2 plates	**GHG 610 1953 R0108**
Protective canopy size 3	for mounting plate size 3		**GHG 610 1955 R0104**

Dimension drawing



Type 745 02

X = fixing dimensions

Dimensions in mm



GHG 746 0301 R0001



GHG 746 0301 R0020

Technical data

	Type 746 03
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC T4/T5/T6 Gb / Ⓔx II 2 D Ex tb IIIC T80 °C/T95 °C Db IP6X
EC-Type Examination Certificate	BVS 12 ATEX E 118X
IECEx Certificate of Conformity	IECEx BVS 12.0071X
Marking accd. to IECEx	Ex e IIC T4/T5/T6 Gb Ex tD tb III T80 °C/T95 °C Db IP6X
Permissible ambient temperature	–20 °C to +40 °C
Rated voltage	up to 690 V
Rated current	depends on terminal mounting
Degree of protection accd. to EN 60529	IP54
Cable gland	via double cable pothead
Enclosure material	glass-fibre reinforced polyester
Terminal cross section	up to 180 mm² or max. 240 mm²
Weight	746 0301 R0001 approx. 6.3 kg / 746 0301 R0008 approx. 16.5 kg

Ordering details

Type	Cable gland	No. of terminals	Order No.
Type 746 03 assembled with bold clamp 2 x 185 mm² + PE-bold clamp 2 x 185 mm²			
Ex-e	Double cable pothead 1 x entry sleeve 21-45 mm 1 x entry sleeve 46-72 mm	3 x Ex-e 1 x PE	**GHG 746 0301 R0001**

Type	Cable gland	No. of terminals	Order No.
Type 746 03 assembled with bold clamp 240 mm² + PE-bold clamp 240 mm²			
Ex-e	Double cable pothead 2 x entry sleeve 46-72 mm	6 x Ex-e 2 x PE	**GHG 746 0301 R0008**

Type	Cable gland	No. of terminals	Order No.
Type 746 03 assembled with bold clamp 240 mm² + PE-bold clamp 240 mm²			
Ex-e	Double cable pothead 3 x entry sleeve 46-72 mm	12 x Ex-e 4 x PE	**GHG 746 0301 R0020**

Other applications available on request.

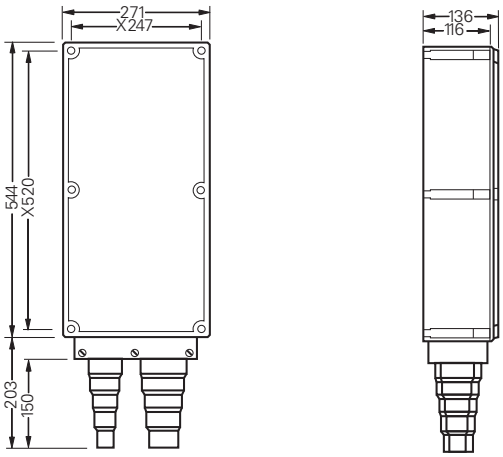


GHG 746 0301 R0020

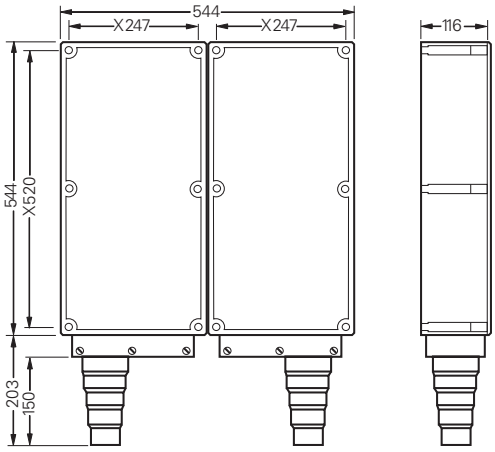


GHG 746 0301 R0001

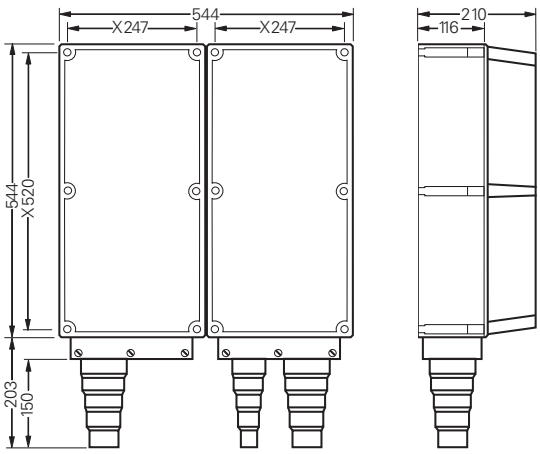
Dimension drawing



GHG 746 0301 R0001



GHG 746 0301 R0008



GHG 746 0301 R0020

X = fixing dimension

Dimensions in mm

Fixing Materials and Accessories

for distribution and junction boxes

Quickly installed

The CEAG mounting plates are the innovative answer to the customer requested ability for mounting apparatus without having to use tools.

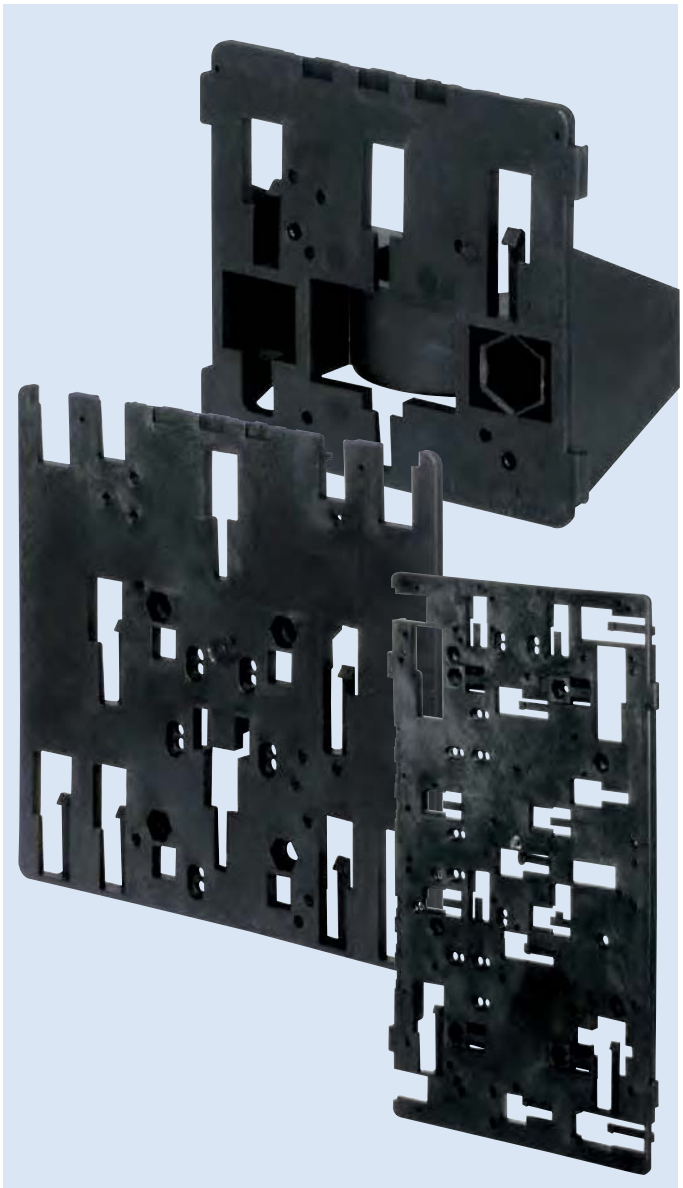
In close cooperation with our customers, this intelligent and innovative solution for the mounting of a variety of terminal boxes and appliances onto trellis, piping and walls was developed.

The clip-on mounting system in connection with the CEAG explosion-protected distribution, plugs and sockets and terminal boxes renders a decisive cost reduction.

No “hot work permits” are needed!

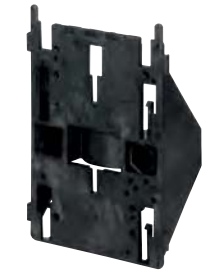
Optional clip-on protection canopies made of stainless steel offer protection against aggressive environmental influences, direct sunlight and rain.





Features

- **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

Mounting plates

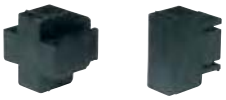
Type	Application	Order No.
Size 1	Wall mounting	**GHG 610 1953 R0101**
Size 1	Trellis mounting	**GHG 610 1953 R0103**
Size 1	Pipe clamp	**GHG 610 1953 R0102**
Size 2	Wall mounting	**GHG 610 1953 R0104**
Size 2	Trellis mounting	**GHG 610 1953 R0106**
Size 2	Pipe clamp	**GHG 610 1953 R0105**
Size 2A	Wall mounting	**GHG 610 1953 R0107**
Size 2A	Trellis mounting	**GHG 610 1953 R0109**
Size 2A	Pipe clamp	**GHG 610 1953 R0108**
Size 3	Wall mounting	**GHG 610 1953 R0118**
Size 3	Trellis mounting	**GHG 610 1953 R0118**
Size 3	Pipe clamp	**GHG 610 1953 R0110**
Size 4	Wall mounting	**GHG 610 1953 R0126**
Size 4	Trellis mounting	**GHG 610 1953 R0126**
Size 4	Pipe clamp	**GHG 610 1953 R0130**
Size 5	Wall mounting	**GHG 610 1953 R0128**
Size 5	Trellis mounting	**GHG 610 1953 R0128**
Size 5	Pipe clamp	**GHG 610 1953 R0132**



Protective canopy



Plug in fastener



Blind plug



Label holder with label

Accessories

Type	OU	Order No.
for mounting plate		
Label holder with type label (blank) for mounting plate 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 that only order units (OU) according to the ordering details can be delivered.

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 vertical	**GHG 610 1955 R0104**
Size 3A	for mounting plates wall/trellis fixing size 3 vertical	**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**



GHG 610 1953 R0105



GHG 610 1953 R0106

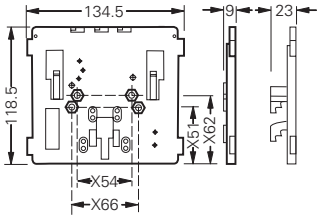


GHG 610 1953 R0102

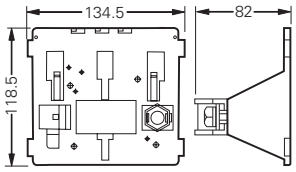


GHG 610 1953 R0103

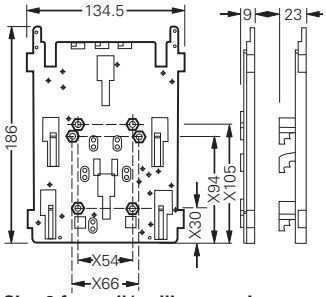
Dimension drawing



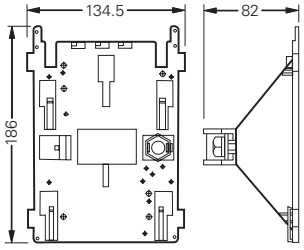
Size 1 for wall/trellis mounting



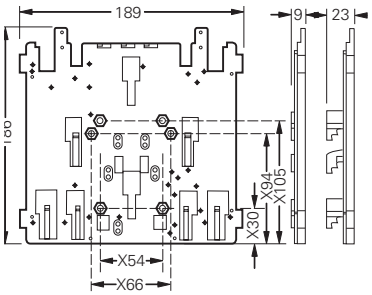
Size 1 for pipe mounting



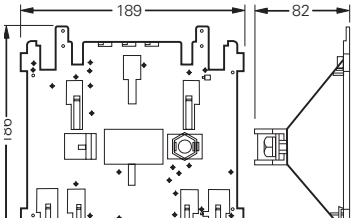
Size 2 for wall/trellis mounting



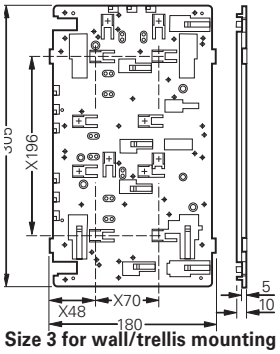
Size 2 for wall/trellis mounting



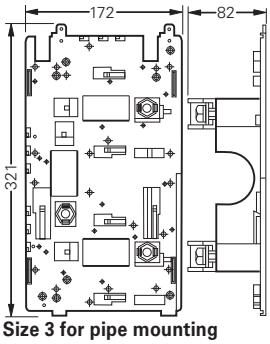
Size 2A for wall/trellis mounting



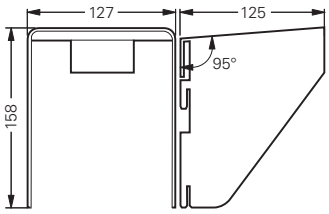
Size 2A for pipe mounting



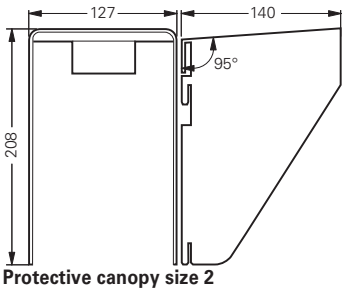
Size 3 for wall/trellis mounting



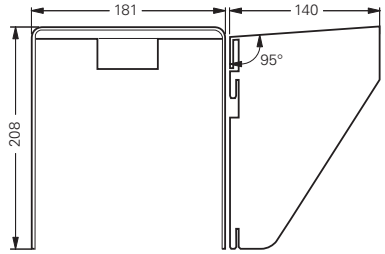
Size 3 for pipe mounting



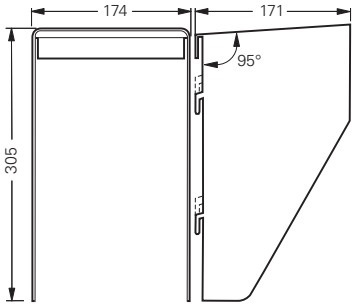
Protective canopy size 1



Protective canopy size 2



Protective canopy size 2A



Protective canopy size 3B

Dimensions in mm



GHG 610 1953 R0105



GHG 610 1953 R0106

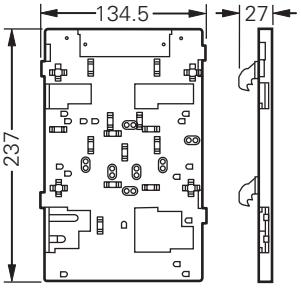


GHG 610 1953 R0108

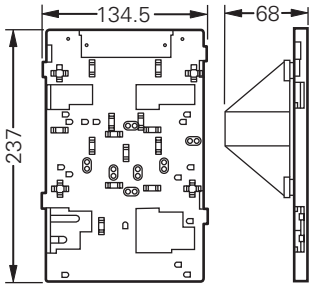


Protective canopy

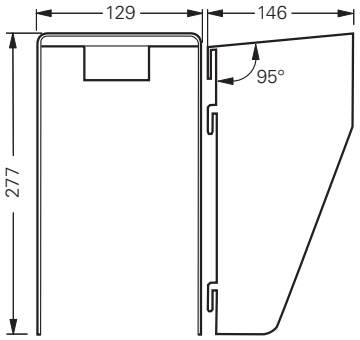
Dimension drawing



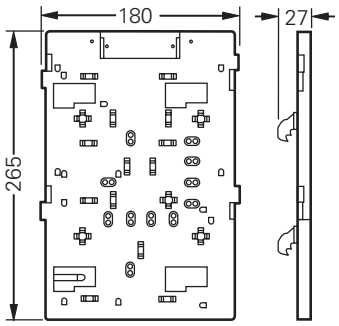
Mounting plate size 4
for wall/trellis mounting



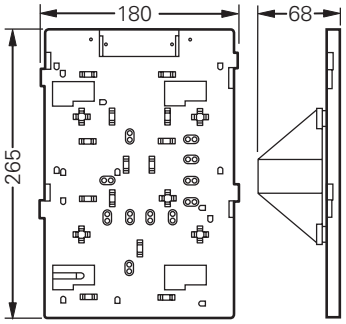
Mounting plate size 4
for pipe mounting



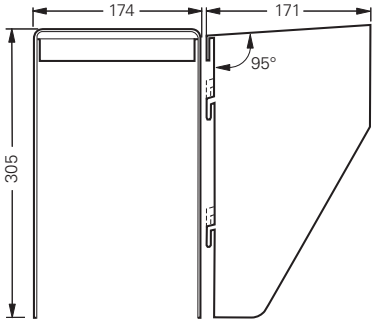
Protective canopy size 4



Mounting plate size 5
for wall/trellis mounting

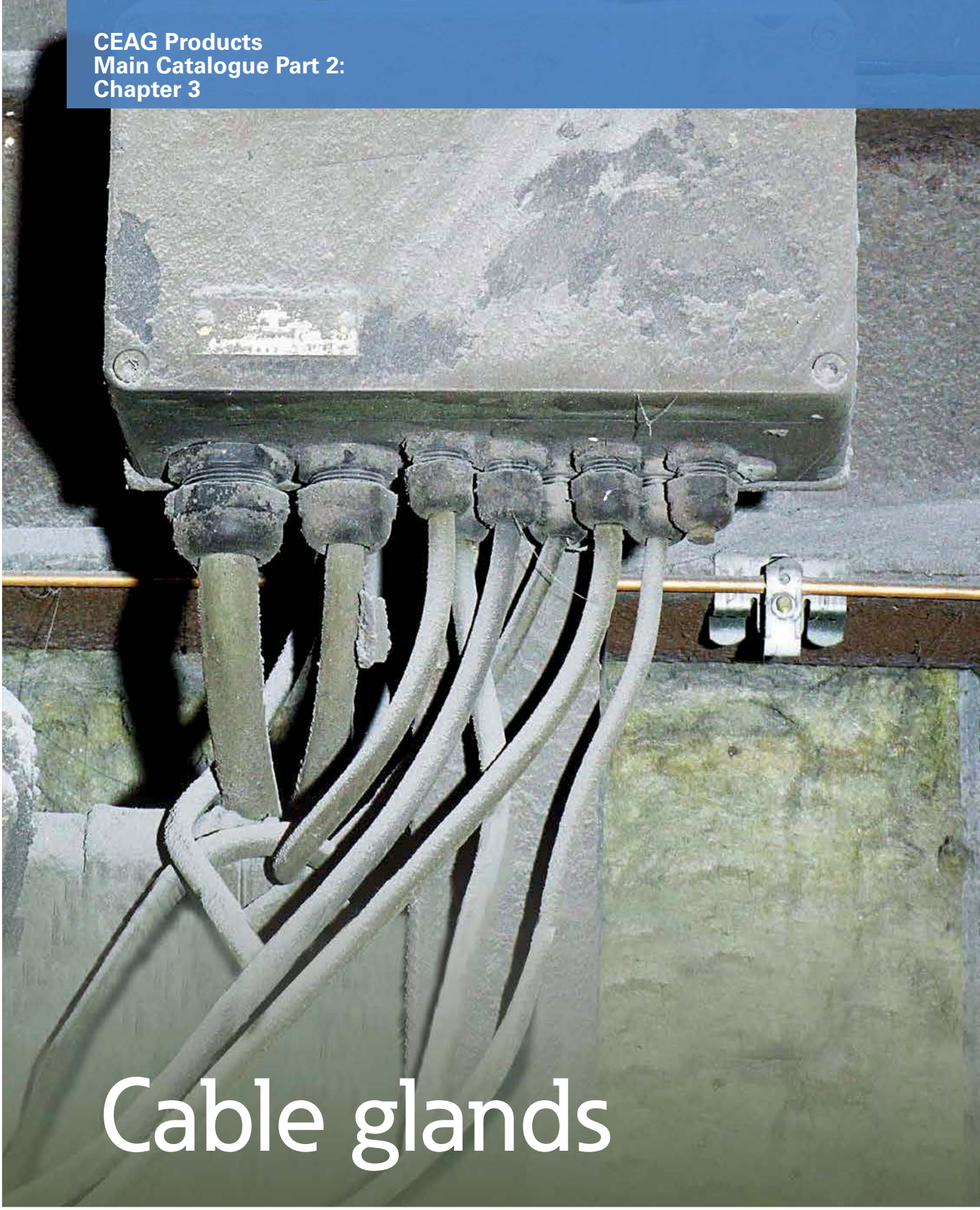


Mounting plate size 5
for pipe mounting



Protective canopy size 5

Dimensions in mm



Cable glands





3.1 Ex-e/i Cable Glands 2.3.4
Ex-Cable plastic glands 2.3.5
Ex-plastic screw plug / blanking plugs 2.3.7
Ex-plastic reducer rings 2.3.8
Ex-trumpet-shaped cable glands 2.3.9
Ex-drainage plug 2.3.10
Accessories for Ex-cable glands 2.3.11
3.2 Ex-d/e Cable Glands Metal Design 2.3.12
Ex-metal cable glands 2.3.13
Ex-cable glands ADE 1F2 ..... 2.3.14
Ex-cable glands ADE 6F 2.3.18
Accessories for Ex-cable glands ADE 2.3.20
Ex-d/e metal reducing rings/screw plugs 2.3.24
Ex-d/e metal adapter 2.3.27

Ex-e/i Cable Glands

Plastic version for Zone 1, 2, 21 and 22 1 - according to EN 60079-0: 2012

Conform with latest standards

Cable glands with metric screw-in threads are now standard and had replace the PG cable glands that were formally used.

The CEAG plastic cable glands are in accordance with EN 60079-0: 2012 and can be used in Ex-e/Ex-i housings in hazardous areas of the Zones 1, 21, 2 and 22.

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.

Degree of protection

A high IP safety standard is achieved with the integrated sealing lip on the screw-in cable entries. Depending on the surface roughness the use of an additional sealing ring may not be necessary. The good mechanical and handling features are achieved by using a modified Polyamide material and a optimized tooling area.



Features

- **Large cable connection area**
- **Same wrench tool for both hexagons**
- **Conform accd. to latest EN 60079-0:2012**
- **Safety standard IP66**
- **Optimized tooling area**
- **Trapezoid thread, for a secure hold**



Screw plug



Blanking plug



Cable gland for Ex-i



Cable gland for Ex-e

Technical data

	Ex e cable glands
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex eb IIC Gb / Ⓔx II 2 D Ex tb IIIC Db
EC-Type Examination Certificate	PTB 14 ATEX 1015 X
IECEx Certificate of Conformity	IECEx PTB 14.0027X
Marking accd. to IECEx	Ex eb IIC Gb / Ex eb IIC Gb
Permissible ambient temperature M20 M25 - M63	–20 °C up to +70 °C (see ordering details) –40 °C up to +70 °C (see ordering details) –55 °C up to +70 °C (see ordering details)
Degree of protection accd. to EN 60529	IP66 / IP68: 1 m water depth for 0.5 h
Enclosure material	Polyamide

	Ex-e screw plug
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e II / Ⓔx II 2 D Ex tb IIIC Db IP66 (M63 only for II 2 G)
EC-Type Examination Certificate	PTB 98 ATEX 3130
IECEx Certificate of Conformity	IECEx PTB 03.0000
Marking accd. to IECEx	Ex e IIC Gb / Ex tb IIIC Db IP66/IP65 (M63 only for II 2 G)
Permissible ambient temperature	-55 °C to +55 °C
Degree of protection accd. to EN 60529	IP66 / IP68: 1 m water depth for 0.5 h
Enclosure material	Polyamide

	Blanking plug I Reducing rings
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex eb IIC Gb / Ⓔx II 2 D Ex tb IIIC Db IP66
EC-Type Examination Certificate	PTB 14 ATEX 1015X
IECEx Certificate of Conformity	IECEx PTB 14.0027X
Marking accd. to IECEx	Ex eb IIC Gb / Ex tb IIIC Db
Permissible ambient temperature	–55 °C bis +70 °C
Degree of protection accd. to EN 60529	IP66
Enclosure material	Polyamide



Cable gland for Ex-e



Cable gland for Ex-i



Multiple cable gland

Ordering details

Thread	Cable Ø mm seal. 1+2+3	seal. 1+2	seal. 1	A/F mm	L mm	E mm	Weight kg	OU	Order No. (–20 °C up to +70 °C)	Order No. (-40/-55 °C up to +70 °C)
Ex-e cable gland with short thread accd. to EN 50262 -black										
M12 x 1.5		---	5 - 7	15	19.3	8	0.003	20	**GHG 960 1955 R0001**	---
M16 x 1.5		---	7 - 10	20	23.0	8	0.006	20	**GHG 960 1955 R0002**	---
M20 x 1.5	5.5 - 7	7 - 9	9.5 - 13	24	25.0	8	0.09	20	**GHG 960 1955 R0003**	---
M20 x 1.5	5.5 - 7	7 - 9	9.5 - 11	24	25.0	8	0.09	20	---	**GHG 960 1955 R0010**
M25 x 1.5	8 - 10	10 - 13	13.5 - 17.5	29	29.5	8	0.017	20	**GHG 960 1955 R0004**	---
M25 x 1.5	8 - 10	10 - 13	13.5 - 15	29	29.5	13	0.018	20	---	**GHG 960 1955 R0009**
M32 x 1.5		14 - 17	17.5 - 21	36	35.5	10	0.026	20	**GHG 960 1955 R0005**	**GHG 960 1955 R0011**
Ex-e cable gland with long thread -black										
M12 x 1.5		---	5 - 7	15	19.3	12	0.003	20	**GHG 960 1955 R0021**	---
M16 x 1.5		---	7 - 10	20	23.0	12	0.007	20	**GHG 960 1955 R0022**	---
M20 x 1.5	5.5 - 7	7 - 9	9.5 - 13	24	25.0	13	0.010	20	**GHG 960 1955 R0023**	---
M20 x 1.5	5.5 - 7	7 - 9	9.5 - 11	24	25.0	13	0.010	20	---	**GHG 960 1955 R0029**
M25 x 1.5	8 - 10	10 - 13	13.5 - 17.5	29	29.5	13	0.018	20	**GHG 960 1955 R0024**	---
M25 x 1.5	8 - 10	10 - 13	13.5 - 15	29	29.5	13	0.018	20	---	**GHG 960 1955 R0030**
M32 x 1.5		14 - 17	17.5 - 21	36	35.5	15	0.029	20	**GHG 960 1955 R0025**	**GHG 960 1955 R0031**
M40 x 1.5		19 - 22	22 - 28	46	39.5	15	0.046	10	---	**GHG 960 1955 R0026**
M50 x 1.5		24 - 28	28 - 35	55	44.0	16	0.073	10	---	**GHG 960 1955 R0027**
M63 x 1.5		29 - 35	36 - 48[1])	68	47.0	16	0.116	5	---	**GHG 960 1955 R0028**
Ex-i cable gland with short thread -blue										
M12 x 1.5		---	5 - 7	15	19.3	8	0.003	20	**GHG 960 1955 R0101**	---
M16 x 1.5		---	7 - 10	20	23.0	8	0.006	20	**GHG 960 1955 R0102**	---
M20 x 1.5	5.5 - 7	7 - 9	9.5 - 13	24	25.0	8	0.009	20	**GHG 960 1955 R0103**	---
M20 x 1.5	5.5 - 7	7 - 9	9.5 - 11	24	25.0	8	0.009	20	---	**GHG 960 1955 R0109**
M25 x 1.5	8 - 10	10 - 13	13.5 - 17.5	29	29.5	8	0.017	20	**GHG 960 1955 R0104**	---
M25 x 1.5	8 - 10	10 - 13	13.5 - 15	29	29.5	8	0.017	20	---	**GHG 960 1955 R0110**
M32 x 1.5		14 - 17	17.5 - 21	36	35.5	10	0.026	20	**GHG 960 1955 R0105**	**GHG 960 1955 R0111**
Ex-i cable gland with long thread -blue										
M12 x 1.5		---	5 - 7	15	19.3	12	0.003	20	**GHG 960 1955 R0121**	---
M16 x 1.5		---	7 - 10	20	23.0	12	0.007	20	**GHG 960 1955 R0122**	---
M20 x 1.5	5.5 - 7	7 - 9	9.5 - 13	24	25.0	13	0.010	20	**GHG 960 1955 R0123**	---
M20 x 1.5	5.5 - 7	7 - 9	9.5 - 11	24	25.0	13	0.010	20	---	**GHG 960 1955 R0129**
M25 x 1.5	8 - 10	10 - 13	13.5 - 17.5	29	29.5	13	0.018	20	**GHG 960 1955 R0124**	---
M25 x 1.5	8 - 10	10 - 13	13.5 - 15	29	29.5	13	0.018	20	---	**GHG 960 1955 R0130**
M32 x 1.5		14 - 17	17.5 - 21	36	35.5	15	0.029	20	**GHG 960 1955 R0125**	**GHG 960 1955 R0131**
M40 x 1.5		19 - 22	22 - 28	46	39.5	15	0.046	10	---	**GHG 960 1955 R0126**
M50 x 1.5		24 - 28	28 - 35	55	44.0	16	0.073	10	---	**GHG 960 1955 R0127**
M63 x 1.5		29 - 35	36 - 48[1])	68	47.0	16	0.116	5	---	**GHG 960 1955 R0128**

[1]) M63 with additional sealing

Cable glands with PG-thread are available on request. The order No. will show 1 pcs. Please note that only order units (OU) can be ordered.



Enlargement cable gland



Reducing rings



Screw plug



Blanking plug

Ordering details

Thread	CableØ mm seal. 1+2	seal. 2	A/F mm	L mm	E mm	Weight kg	OU	Order No. (–20 °C up to +70 °C)	Order No. (-40/-55 °C up to +70 °C)
Multiple cable glands -black									
M25 x 1.5	2 x 4.5 - 7		29	29.5	8	0.019	20	**GHG 960 1955 R0054**	---
M32 x 1.5	4 x 4.5 - 7		36	35.5	10	0.030	20	**GHG 960 1955 R0055**	---
Slotted cable glands for special cables: (Breakout-internal cable type orange/ Ultra-Fox Plus type 903 AG 621 02 709/ Ehret / ICS 24 type 84 305 ... .. 2)									
M20 x 1.5 black [2)]			24	25.0	8	0.010	20	**GHG 960 1955 R0403**	
M20 x 1.5 blue [2)]			24	25.0	8	0.010	20	**GHG 960 1955 R0413**	
Enlargement cable glands (reduced thread diameter)									
M16/M20	7 - 9	9.5 - 13	24	25.0	12	0.010	20	**GHG 960 1956 R0002**	
M20/M25	10 - 13	13.5 - 17.5	29	29.5	13	0.018	20	**GHG 960 1956 R0003**	
M25/M32	14 - 17	17.5 - 21	36	35.5	13	0.029	20		**GHG 960 1956 R0004**
M32/M40	19 - 22	22.0 - 28	46	39.5	15	0.046	10		**GHG 960 1956 R0005**
M40/M50	24 - 28	28.0 - 35	55	44.0	15	0.073	10		**GHG 960 1956 R0006**
M50/M63	29 - 35	36.0 - 48 [1)]	68	47.0	16	0.116	5		**GHG 960 1956 R0007**

	E mm	Ø D mm	Weight kg	OU	Order No. (–55 °C up to +70 °C)
Blanking plug for cable glands					
M12	30.3	6.0	0.001	20	**GHG 960 1944 R0101**
M16	33.0	7.0	0.001	20	**GHG 960 1944 R0102**
M20	34.5	8.5	0.002	20	**GHG 960 1944 R0103**
M25	36.0	11.0	0.003	20	**GHG 960 1944 R0104**
M32	39.5	14.0	0.005	20	**GHG 960 1944 R0105**
M40	42.0	20.0	0.018	10	**GHG 960 1944 R0106**
M50	44.0	26.0	0.033	10	**GHG 960 1944 R0107**
M63	45.0	34.0	0.108	5	**GHG 960 1944 R0108**

Thread	L mm	E mm	Ø D mm	Weight kg	OU	Order No. (–55 °C up to +70 °C)
Screw plug						
M16 x 1.5	4.0	12	21.5	0.002	20	**GHG 960 1952 R0111**
M20 x 1.5	4.0	13	25.5	0.004	20	**GHG 960 1952 R0112**
M25 x 1.5	4.0	13	30.5	0.007	20	**GHG 960 1952 R0113**
M32 x 1.5	5.5	15	37.5	0.013	10	**GHG 960 1952 R0114**
M40 x 1.5	5.5	15	45.5	0.020	10	**GHG 960 1952 R0115**
M50 x 1.5	5.5	16	55.5	0.030	5	**GHG 960 1952 R0116**
M63 x 1.5	6.5	16	85.0	0.040	5	**GHG 960 1952 R0117**

[1)] M63 with additional sealing

[2)] Cable dimensions and ambient temperatures see operating instruction

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs. Please note that only order units (OU) can be ordered.



Cable gland



Screw plug



Blanking plug



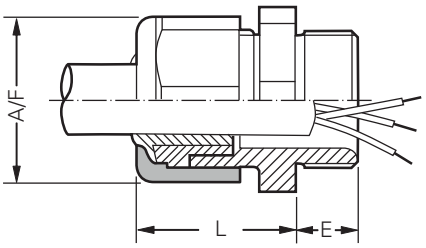
Reducing ring

Thread 1	Thread 2	A/F mm	L mm	E mm	L1 mm	Weight kg	OU	Order No. (–55 °C up to +70 °C)
Reducing rings								
M20 x 1.5	M16 x 1.5	24	6	8	8	0.014	20	**GHG 960 1946 R0071**
M25 x 1.5	M20 x 1.5	29	6	8	8	0.016	20	**GHG 960 1946 R0072**
M32 x 1.5	M20 x 1.5	36	6	10	6	0.017	20	**GHG 960 1946 R0056**
M32 x 1.5	M25 x 1.5	36	6	10	10	0.016	20	**GHG 960 1946 R0074**
M40 x 1.5	M25 x 1.5	46	6	10	8	0.023	10	**GHG 960 1946 R0059**
M40 x 1.5	M32 x 1.5	46	6	10	10	0.021	10	**GHG 960 1946 R0077**
M50 x 1.5	M32 x 1.5	55	6	12	10	0.036	10	**GHG 960 1946 R0062**
M50 x 1.5	M40 x 1.5	68	6	12	10	0.032	10	**GHG 960 1946 R0080**
M63 x 1.5	M40 x 1.5	68	6	12	10	0.040	5	**GHG 960 1946 R0065**
M63 x 1.5	M50 x 1.5	68	6	12	12	0.030	5	**GHG 960 1946 R0083**

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs. Please note that only order units (OU) can be ordered.

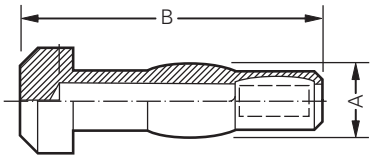
Dimension drawing

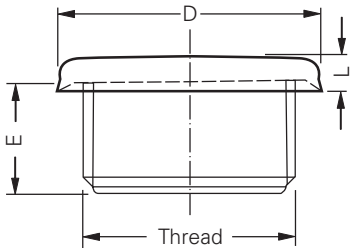


Cable gland

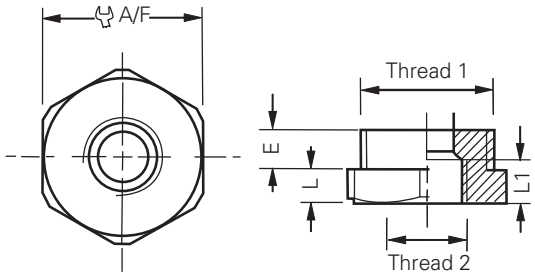


Blanking plug





Screw plug



Reducing rings

Dimensions in mm



Trumpet shaped cable gland

Technical data

	Ex-e Trumpet shaped cable gland
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e II / Ⓔx II 2 D Ex tD A21 IP66
EC-Type Examination Certificate	PTB 00 ATEX 3121
IEC-Ex Certificate of Conformity	IECEx BKI 08.0007
Marking accd. to IECEx	Ex e II / Ex tD A21 IP66 T85°C
Permissible ambient temperature	–40 °C up to +85 °C
Degree of protection accd. to EN 60529	IP66
Enclosure material	Polyamide

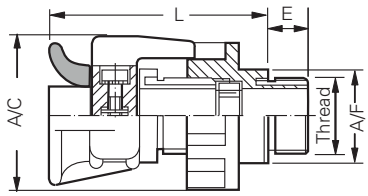
Ordering details

Thread	A/C mm	L mm	E mm	Ø Cable mm	A/F mm	Weight approx. kg	OU	Order No.
Ordering details Trumpet shaped cable gland								
M20 x 1.5	47	64	15	8 – 13	27	0.057	10	**GHG 960 1949 R0111**
M25 x 1.5	51	65	15	11 – 16	32	0.070	10	**GHG 960 1949 R0112**
M32 x 1.5	68	80	15	15 – 20	41	0.140	10	**GHG 960 1949 R0113**
M40 x 1.5	81	86	15	19 – 27	50	0.194	10	**GHG 960 1949 R0114**
M50 x 1.5	96	95	16	28 – 34	60	0.333	1	**GHG 960 1949 R0115**
M63 x 1.5	107	105	16	38 – 46	75	0.742	1	**GHG 960 1949 R0116**

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

Dimension drawing



Trumpet shaped cable gland

Dimensions in mm



Breathing & drainage plug

Technical data

	Ex-e Breathing and drainage plug
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e II
EC-Type Examination Certificate	SIRA 99 ATEX 3050 U
IECEx Certificate of Conformity	IECEx SIR 08.0024X
Marking accd. to IECEx	Ex e IIC Gb / Ex eb IIC Gb / Ex tb IIIC Db IP66
Permissible ambient temperature	–50 °C to +85 °C
Degree of protection accd. to EN 60529	IP66
Enclosure material	Polyamide

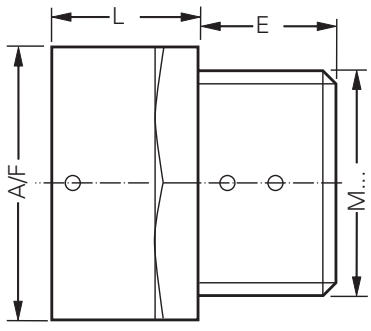
Ordering details

Type	Thread	A/F mm	L mm	E mm	Weight kg	OU	Order No.
Breathing and Drainage plug	M20 x 1.5	40	17	15	0.03	20	**GHG 960 1954 R0014**
	M25 x 1.5	40	17	15	0.03	20	**GHG 960 1954 R0002**

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

Dimension drawing

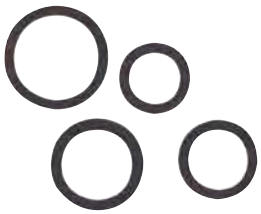


Breathing and Drainage plug

Dimensions in mm



Spanner



Gasket



Lock nut

Accessories

Type	A/F mm	Thickness mm	Weight g	OU	Order No.
Ordering details lock nut for cable glands					
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**

Type	ØD mm	Thickness mm	Weight g	OU	Order No.
Ordering details gasket for glands					
M12 x 1.5	18	1.2	0.44	10	**CAP 221 249**
M16 x 1.5	22	1.2	0.50	10	**CAP 221 649**
M20 x 1.5	24	1.2	0.48	10	**CAP 222 049**
M25 x 1.5	30	1.5	0.69	10	**CAP 222 549**
M32 x 1.5	42	1.5	1.39	10	**CAP 223 249**
M40 x 1.5	52	1.5	2.00	10	**CAP 224 049**
M50 x 1.5	63	1.5	2.00	10	**CAP 225 049**
M63 x 1.5	77	2.0	4.80	10	**CAP 226 349**

Type	Size	SW mm	Weight kg	Order No.
Ordering details special spanner for fastening of cable glands				
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**

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

Ex-d/e Cable Glands Metal Design

For Zone 1, 2, 21 and 22 according EN 60079-0:2012 / IEC 60079-0: 2011

Designed according to the latest standards

For introducing cables or leads 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, 2, 21 and Zone 22 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 Ex-d or Ex-e pursuant to the latest standard EN 60079-1 or EN 60079-7.

For all applications

For special applications, the cable glands are available in high-quality stainless steel 316L, nickel plated 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.



Features

- **Certified accord. to the latest Standard EN 60079-0: 2009**
- **Mechanical, chemical and thermal resistance**
- **Single range with global compliance: NEC, IEC standard and marine approval. All covered with one product.**
- **High-quality alloy**



ADE 6F



ADE 4F



ADE 1F2

Technical data

		Ex e cable glands metal ADE ...
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex db eb IIC / Ⓔx II 2 D Ex tb IIIC
EC-Type Examination Certificate		INERIS 12 ATEX 0032X
IECEx Certificate of Conformity		IECEx INE 12.0025X
Marking accd. to IECEx		Ex db eb IIC / Ex tb IIIC / Ex e II / Ex tD
Permissible ambient temperature	Neoprene Silikon	–30 °C to +80 °C –60 °C to +140 °C (option)
Degree of protection accd. to EN 60529		IP66 / IP68 - 10 bar
Thread		ISO-thread accd. ISO 965/1, ISO 965R and EN 60423
Enclosure material		Nickel-plated brass (CuZn gal. Ni), stainless steel, bronze, natural brass option



ADE 1F2 ISO

Ordering details

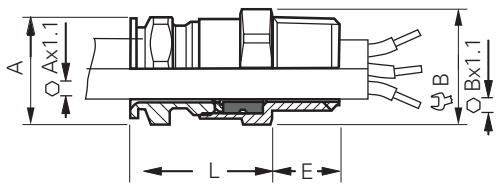
ISO	Type	Cable Ø outside mm	A mm	B mm	E mm	L mm	Order No. CuZn gal. Ni Neoprene	Order No. CuZn gal. Ni Silikon	Order No. stainless steel Neoprene
Cable gland type ADE 1F2 for unarmoured cable with ISO thread									
M12 x 1.5	4	4.5 - 8	17	17	15	26	**CAP 806 404 V1**	**CAP 806 405 V1**	**CAP 806 409 V1**
M16 x 1.5	4	4.5 - 8.5	19	17	15	26	**CAP 806 594 V1**	**CAP 806 595 V1**	**CAP 806 599 V1**
M16 x 1.5	5	7 - 12	19	19	15	29.5	**CAP 806 504 V1**	**CAP 806 505 V1**	**CAP 806 509 V1**
M20 x 1.5	3	2.75 - 5.5	24	15	15	24	**CAP 806 664 V1**	**CAP 806 665 V1**	**CAP 806 669 V1**
M20 x 1.5	4	4.5 - 8.5	24	17	15	26	**CAP 806 674 V1**	**CAP 806 675 V1**	**CAP 806 679 V1**
M20 x 1.5	5	7 - 12	24	19	15	29.5	**CAP 806 694 V1**	**CAP 806 695 V1**	**CAP 806 699 V1**
M20 x 1.5	6	10 - 16	24	24	15	32	**CAP 806 604 V1**	**CAP 806 605 V1**	**CAP 806 609 V1**
M25 x 1.5	5	7 - 12	30	19	15	29.5	**CAP 806 774 V1**	**CAP 806 775 V1**	**CAP 806 779 V1**
M25 x 1.5	6	10 - 16	30	24	15	32	**CAP 806 794 V1**	**CAP 806 795 V1**	**CAP 806 799 V1**
M25 x 1.5	7	13.5 - 20.5	30	30	15	38.5	**CAP 806 704 V1**	**CAP 806 705 V1**	**CAP 806 709 V1**
M32 x 1.5	8	18 - 27.5	41	41	15	46	**CAP 806 804 V1**	**CAP 806 805 V1**	**CAP 806 809 V1**
M40 x 1.5	9	23 - 34	48	48	15	50	**CAP 806 904 V1**	**CAP 806 905 V1**	**CAP 806 909 V1**
M50 x 1.5	10	29 - 41	55	55	16	52	**CAP 807 004 V1**	**CAP 807 005 V1**	**CAP 807 009 V1**
M50 x 1.5	11	35 - 45	64	64	16	56.5	**CAP 807 084 V1**	**CAP 807 085 V1**	**CAP 807 089 V1**
M63 x 1.5	12	42 - 56	72	72	17	60	**CAP 807 204 V1**	**CAP 807 205 V1**	**CAP 807 209 V1**
M75 x 1.5	13	50 - 65	85	85	18	67.5	**CAP 807 304 V1**	**CAP 807 305 V1**	**CAP 807 309 V1**
M90 x 2.0	14	58 - 74	95	95	22	69	**CAP 807 594 V1**	**CAP 807 595 V1**	**CAP 807 599 V1**
M90 x 2.0	15	66 - 83	110	110	22	80	**CAP 807 504 V1**	**CAP 807 505 V1**	**CAP 807 509 V1**
M110 x 2.0	16	75 - 93	120	120	22	80	**CAP 807 604 V1**	**CAP 807 605 V1**	**CAP 807 609 V1**
M110 x 2.0	17	85 - 104	135	135	22	90	**CAP 807 704 V1**	**CAP 807 705 V1**	**CAP 807 709 V1**

Please use sealing washers (see page 2.3.22).

For cable gland kits with washer and lock nut please add "K1" et the end of the order No.

Example: **CAP 806 404 V1 K1 contains a ADE 1F2 M12 x 1.5 type 4 + 1 x MsNi lock nut M12 + 1 x green fibre gasket for M12**

Dimension drawing



Type ADE 1F2

Dimensions in mm



ADE 1F2 NPT

Ordering details

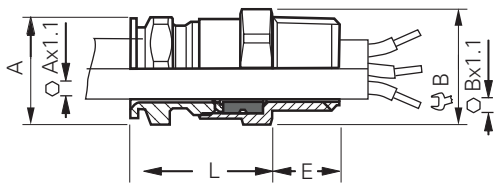
NPT	Type	Cable Ø outside mm	A mm	B mm	E mm	L mm	Order No. CuZn gal. Ni Neoprene	Order No. CuZn gal. Ni Silikon	Order No. stainless steel Neoprene
Cable gland type ADE 1F2 for unarmoured cable with NPT thread									
1/2"	3	2.75 - 5.5	24	15	22.2	24	**CAP 808 664 V1**	**CAP 808 665 V1**	**CAP 808 669 V1**
1/2"	4	4.5 - 8.5	24	17	22.2	26	**CAP 808 674 V1**	**CAP 808 675 V1**	**CAP 808 679 V1**
1/2"	5	7 - 12	24	19	22.2	29.5	**CAP 808 694 V1**	**CAP 808 695 V1**	**CAP 808 699 V1**
1/2"	6	10 - 15.5	24	24	22.2	32	**CAP 808 604 V1**	**CAP 808 605 V1**	**CAP 808 609 V1**
3/4"	5	7 - 12	30	19	22.5	29.5	**CAP 808 774 V1**	**CAP 808 775 V1**	**CAP 808 779 V1**
3/4"	6	10 - 16	30	24	22.5	32	**CAP 808 794 V1**	**CAP 808 795 V1**	**CAP 808 799 V1**
3/4"	7	13.5 - 20.5	30	30	22.5	38.5	**CAP 808 704 V1**	**CAP 808 705 V1**	**CAP 808 709 V1**
1"	8	18 - 26	41	41	27.3	46	**CAP 808 804 V1**	**CAP 808 805 V1**	**CAP 808 809 V1**
1 1/4"	9	23 - 34	48	48	28	50	**CAP 808 904 V1**	**CAP 808 905 V1**	**CAP 808 909 V1**
1 1/2"	10	29 - 41	55	55	28.5	52	**CAP 809 004 V1**	**CAP 809 005 V1**	**CAP 809 009 V1**
2"	11	35 - 48	64	64	29.2	56.5	**CAP 809 294 V1**	**CAP 809 295 V1**	**CAP 809 299 V1**
2"	12	42 - 53	72	72	29.2	60	**CAP 809 204 V1**	**CAP 809 205 V1**	**CAP 809 209 V1**
2 1/2"	13	50 - 62.5	85	85	42.5	67.5	**CAP 809 404 V1**	**CAP 809 405 V1**	**CAP 809 409 V1**
3"	14	58 - 74	95	95	44	69	**CAP 809 594 V1**	**CAP 809 595 V1**	**CAP 809 599 V1**
3"	15	66 - 78	110	110	44	80	**CAP 809 504 V1**	**CAP 809 505 V1**	**CAP 809 509 V1**
3 1/2"	16	75 - 92	120	120	45.2	80	**CAP 809 604 V1**	**CAP 809 605 V1**	**CAP 809 609 V1**
4"	17	82 - 104	135	135	46.5	90	**CAP 809 704 V1**	**CAP 809 705 V1**	**CAP 809 709 V1**

Please use sealing washers (see page 2.3.22).

For cable gland kits with washer and lock nut please add "K1" et the end of the order No.

Example: **CAP 808 604 V1 K1 contains a ADE 1F2 1/2" type 6 + 1 x MsNi lock nut 1/2" + 1 x green fibre gasket for 1/2"**

Dimension drawing



Type ADE 1F2

Dimensions in mm



ADE 4F ISO

Ordering details

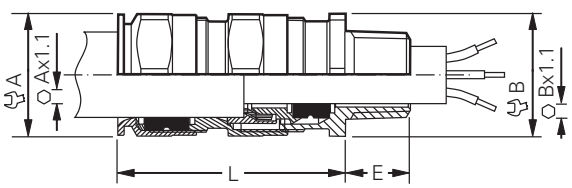
ISO	Type	Cable Ø inside mm	Cable Ø outside mm	A mm	B mm	E mm	L mm	Order No. CuZn gal. Ni Neoprene	Order No. CuZn gal. Ni Silikon	Order No. stainless steel Neoprene
Cable gland type ADE 4F for armoured cable with ISO thread										
M12 x 1.5	5	4.5 - 8.5	7.0 - 12	19	19	15	36	**CAP 846 404 V1**	**CAP 846 405 V1**	**CAP 846 409 V1**
M16 x 1.5	5	4.5 - 8.5	7.0 - 12	19	19	15	36	**CAP 846 594 V1**	**CAP 846 595 V1**	**CAP 846 599 V1**
M16 x 1.5	6	7.0 - 12	10 - 16	19	24	15	36	**CAP 846 504 V1**	**CAP 846 505 V1**	**CAP 846 509 V1**
M20 x 1.5	5	4.5 - 8.5	7.0 - 12	19	24	15	36	**CAP 846 674 V1**	**CAP 846 675 V1**	**CAP 846 679 V1**
M20 x 1.5	6	7.0 - 12	10 - 16	24	24	15	42	**CAP 846 694 V1**	**CAP 846 695 V1**	**CAP 846 699 V1**
M20 x 1.5	7	10 - 16	13.5 - 21	30	30	15	46	**CAP 846 604 V1**	**CAP 846 605 V1**	**CAP 846 609 V1**
M25 x 1.5	6	7.0 - 12	10 - 16	24	30	15	42	**CAP 846 774 V1**	**CAP 846 775 V1**	**CAP 846 779 V1**
M25 x 1.5	7	10 - 16	13.5 - 21	30	30	15	46	**CAP 846 794 V1**	**CAP 846 795 V1**	**CAP 846 799 V1**
M25 x 1.5	8	13.5 - 21	18 - 27.5	41	41	15	56	**CAP 846 704 V1**	**CAP 846 705 V1**	**CAP 846 709 V1**
M32 x 1.5	8	13.5 - 21	18 - 27.5	41	41	15	56	**CAP 846 894 V1**	**CAP 846 895 V1**	**CAP 846 899 V1**
M32 x 1.5	9	18 - 27.5	23 - 34	48	48	15	63	**CAP 846 804 V1**	**CAP 846 805 V1**	**CAP 846 809 V1**
M40 x 1.5	9	18 - 27.5	23 - 34	48	48	15	63	**CAP 846 994 V1**	**CAP 846 995 V1**	**CAP 846 999 V1**
M40 x 1.5	10	23 - 34	29 - 41	55	55	15	68	**CAP 846 904 V1**	**CAP 846 905 V1**	**CAP 846 909 V1**
M50 x 1.5	10	23 - 34	29 - 41	55	55	16	68	**CAP 847 094 V1**	**CAP 847 095 V1**	**CAP 847 099 V1**
M50 x 1.5	11	29 - 41	35 - 48	64	64	16	74	**CAP 847 004 V1**	**CAP 847 005 V1**	**CAP 847 009 V1**
M63 x 1.5	12	35 - 48	42 - 56	72	72	17	77	**CAP 847 294 V1**	**CAP 847 295 V1**	**CAP 847 299 V1**
M63 x 1.5	13	42 - 56	50 - 65	85	85	17	85	**CAP 847 204 V1**	**CAP 847 205 V1**	**CAP 847 209 V1**
M75 x 1.5	13	42 - 56	50 - 65	85	85	18	85	**CAP 847 394 V1**	**CAP 847 395 V1**	**CAP 847 399 V1**
M75 x 1.5	14	50 - 65	58 - 74	95	95	18	92	**CAP 847 304 V1**	**CAP 847 305 V1**	**CAP 847 309 V1**
M80 x 2.0	14	50 - 65	58 - 74	95	95	20	92	**CAP 847 494 V1**	**CAP 847 495 V1**	**CAP 847 499 V1**
M80 x 2.0	15	58 - 74	66 - 83	110	110	20	104	**CAP 847 404 V1**	**CAP 847 405 V1**	**CAP 847 409 V1**
M90 x 2.0	15	58 - 74	66 - 83	110	110	22	104	**CAP 847 594 V1**	**CAP 847 595 V1**	**CAP 847 599 V1**
M90 x 2.0	16	66 - 83	75 - 93	120	120	22	108	**CAP 847 504 V1**	**CAP 847 505 V1**	**CAP 847 509 V1**
M90 x 2.0	17	75 - 93	85 - 104	135	120	22	108	**CAP 847 574 V1**	**CAP 847 575 V1**	**CAP 847 579 V1**

Please use sealing washers (see page 2.3.22).

For cable gland kits with washer and lock nut please add "K1" et the end of the order No.

Example: **CAP 846 804 V1 K1 contains a ADE 4F M32 x 1.5 type 9 + 1 x MsNi lock nut M32 + 1 x green fibre gasket for M32**

Dimension drawing



Type ADE 4F

Dimensions in mm



ADE 4F NPT

Ordering details

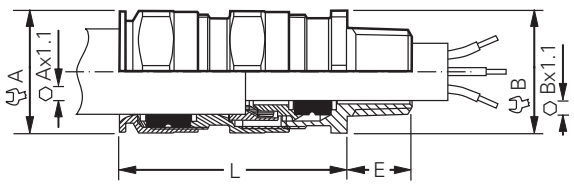
NPT	Type	Cable Ø inside mm	Cable Ø outside mm	A mm	B mm	E mm	L mm	Order No. CuZn gal. Ni Neoprene	Order No. CuZn gal. Ni Silikon	Order No. stainless steel Neoprene
Cable gland type ADE 4F for armoured cable with NPT thread										
1/4"	5	4.5 - 8.5	7.0 - 12	19	19	12	36	**CAP 848 404 V1**	**CAP 848 405 V1**	**CAP 848 409 V1**
3/8"	5	4.5 - 8.5	7.0 - 12	19	19	12	36	**CAP 848 594 V1**	**CAP 848 595 V1**	**CAP 848 599 V1**
3/8"	6	7.0 - 12	10 - 16	24	24	12	42	**CAP 848 504 V1**	**CAP 848 505 V1**	**CAP 848 509 V1**
1/2"	5	4.5 - 8.5	7.0 - 12	19	24	16	36	**CAP 848 674 V1**	**CAP 848 675 V1**	**CAP 848 679 V1**
1/2"	6	7.0 - 12	10 - 16	24	24	16	42	**CAP 848 694 V1**	**CAP 848 695 V1**	**CAP 848 699 V1**
1/2"	7	10 - 16	13.5 - 21	30	30	16	46	**CAP 848 604 V1**	**CAP 848 605 V1**	**CAP 848 609 V1**
3/4"	6	7.0 - 12	10 - 16	24	30	16	42	**CAP 848 774 V1**	**CAP 848 775 V1**	**CAP 848 779 V1**
3/4"	7	10 - 16	13.5 - 21	30	30	16	46	**CAP 848 794 V1**	**CAP 848 795 V1**	**CAP 848 799 V1**
3/4"	8	13.5 - 21	18 - 27.5	41	41	16	56	**CAP 848 704 V1**	**CAP 848 705 V1**	**CAP 848 709 V1**
1"	8	13.5 - 21	18 - 27.5	41	41	20	46	**CAP 848 894 V1**	**CAP 848 895 V1**	**CAP 848 899 V1**
1"	9	18 - 27.5	23 - 34	48	48	20	63	**CAP 848 804 V1**	**CAP 848 805 V1**	**CAP 848 809 V1**
1 1/4"	9	18 - 27.5	23 - 34	48	48	20	63	**CAP 848 994 V1**	**CAP 848 995 V1**	**CAP 848 999 V1**
1 1/4"	10	23 - 34	29 - 41	55	55	20	68	**CAP 848 904 V1**	**CAP 848 905 V1**	**CAP 848 909 V1**
1 1/2"	10	23 - 34	29 - 41	55	55	20	68	**CAP 849 094 V1**	**CAP 849 095 V1**	**CAP 849 099 V1**
1 1/2"	11	29 - 41	35 - 48	64	64	20	74	**CAP 849 004 V1**	**CAP 849 005 V1**	**CAP 849 009 V1**
2"	12	35 - 48	42 - 56	72	72	20	77	**CAP 849 294 V1**	**CAP 849 295 V1**	**CAP 849 299 V1**
2"	13	42 - 56	50 - 65	85	85	20	85	**CAP 849 204 V1**	**CAP 849 205 V1**	**CAP 849 209 V1**
2 1/2"	13	42 - 56	50 - 65	85	85	28	85	**CAP 849 494 V1**	**CAP 849 495 V1**	**CAP 849 499 V1**
2 1/2"	14	50 - 65	58 - 74	95	95	28	92	**CAP 849 404 V1**	**CAP 849 405 V1**	**CAP 849 409 V1**
3"	15	58 - 74	66 - 83	110	110	30	104	**CAP 849 594 V1**	**CAP 849 595 V1**	**CAP 849 599 V1**
3"	16	66 - 83	75 - 93	120	120	30	108	**CAP 849 504 V1**	**CAP 849 505 V1**	**CAP 849 509 V1**

Please use sealing washers (see page 2.3.22).

For cable gland kits with washer and lock nut please add "K1" et the end of the order No.

Example: **CAP 848 994 V1 K1 contains a ADE 4F -1 1/4" type 9 + 1 x MsNi lock nut 1 1/4" + 1 x green fibre gasket for 1 1/4"**

Dimension drawing



Type ADE 4F

Dimensions in mm



ADE 6F ISO

Ordering details

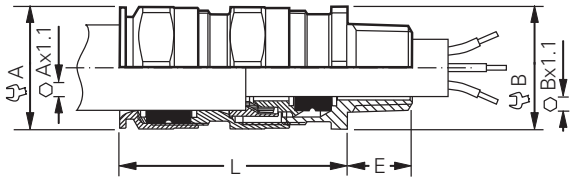
ISO	Type	Cable Ø inside mm	Cable Ø outside mm	A mm	B mm	E mm	L mm	Order No. CuZn gal. Ni Elastomere	Order No. stainless steel Elastomere
Cable gland type ADE 6F for armoured cable with ISO thread									
M16 x 1.5	5	3 - 7.5	6 - 12	19	19	15	46	**CAP 965 594 V1**	**CAP 965 599 V1**
M20 x 1.5	5	3 - 7.5	6 - 12	19	24	15	46	**CAP 965 674 V1**	**CAP 965 679 V1**
M20 x 1.5	6	6.5 - 11	8.5 - 16	24	24	15	53	**CAP 965 694 V1**	**CAP 965 699 V1**
M20 x 1.5	7	9 - 14.5	12 - 21	30	30	15	59	**CAP 965 604 V1**	**CAP 965 609 V1**
M25 x 1.5	7	9 - 14.5	12 - 21	30	30	15	59	**CAP 965 794 V1**	**CAP 965 799 V1**
M25 x 1.5	8	12 - 19.5	16 - 27.5	41	41	15	74.5	**CAP 965 704 V1**	**CAP 965 709 V1**
M32 x 1.5	8	12 - 19.5	16 - 27.5	41	41	15	74.5	**CAP 965 894 V1**	**CAP 965 899 V1**
M32 x 1.5	9	17.5 - 26	21 - 34	48	48	15	83.5	**CAP 965 804 V1**	**CAP 965 809 V1**
M40 x 1.5	9	17.5 - 26	21 - 34	48	48	15	83.5	**CAP 965 994 V1**	**CAP 965 999 V1**
M40 x 1.5	10	23 - 33	27 - 41	55	55	15	92	**CAP 965 904 V1**	**CAP 965 909 V1**
M50 x 1.5	10	23 - 33	27 - 41	55	55	16	92	**CAP 966 094 V1**	**CAP 966 099 V1**
M50 x 1.5	11	27 - 41	33 - 48	64	64	16	104	**CAP 966 004 V1**	**CAP 966 009 V1**

Please use sealing washers (see page 2.3.22).

For cable gland kits with washer and lock nut please add "K1" et the end of the order No.

Example: **CAP 965 794 V1 K1 contains a ADE 6F M25 x 1.5 type 7 + 1 x MsNi lock nut 1 x M25 + 1 x green fibre gasket for M25**

Dimension drawing



Type ADE 6F ISO

Dimensions in mm



ADE 6F NPT

Ordering details

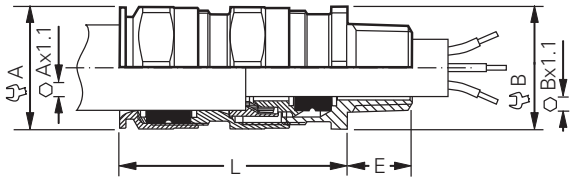
NPT	Type	Cable Ø inside mm	Cable Ø outside mm	A mm	B mm	E mm	L mm	Order No. CuZn gal. Ni Elastomer	Order No. stainless steel Elastomer
Cable gland type ADE 6F for armoured cable with NPT thread									
3/8"	5	3 - 7.5	6 - 12	19	19	12	46	**CAP 967 594 V1**	**CAP 967 599 V1**
1/2"	5	3 - 7.5	6 - 12	19	24	22.2	46	**CAP 967 674 V1**	**CAP 967 679 V1**
1/2"	6	6.5 - 11	8.5 - 16	24	24	22.2	53	**CAP 967 694 V1**	**CAP 967 699 V1**
1/2"	7	9 - 14.5	12 - 21	30	30	22.2	59	**CAP 967 604 V1**	**CAP 967 609 V1**
3/4"	7	9 - 14.5	12 - 21	30	30	22.5	59	**CAP 967 794 V1**	**CAP 967 799 V1**
3/4"	8	12 - 19.5	16 - 27.5	41	41	22.5	74.5	**CAP 967 704 V1**	**CAP 967 709 V1**
1"	8	12 - 19.5	16 - 27.5	41	41	27.3	74.5	**CAP 967 894 V1**	**CAP 967 899 V1**
1"	9	17.5 - 26	21 - 34	48	48	27.3	83.5	**CAP 967 804 V1**	**CAP 967 809 V1**
1 1/4"	9	17.5 - 26	21 - 34	48	48	28	83.5	**CAP 967 994 V1**	**CAP 967 999 V1**
1 1/4"	10	23 - 33	27 - 41	55	55	28	92	**CAP 967 904 V1**	**CAP 967 909 V1**
1 1/2"	10	23 - 33	27 - 41	55	55	28.5	92	**CAP 968 094 V1**	**CAP 968 099 V1**
2"	11	27 - 41	33 - 48	64	64	29.2	104	**CAP 968 294 V1**	**CAP 968 299 V1**

Please use sealing washers (see page 2.3.22).

For cable gland kits with washer and lock nut please add "K1" et the end of the order No.

Example: **CAP 967 704 V1 K1 contains a ADE 6F 3/4" type 8 + 1 x MsNi lock nut 1 x 3/4" + 1 x green fibre gasket for 3/4"**

Dimension drawing



Type ADE 6F NPT

Dimensions in mm



Lead sheath washer



Strain clamp



PVC-Shroud

Accessories for cable glands type ADE

Type ADE	Ø D/mm	OU	Order No.
Ordering details shrouds for cable glands			
4	16	10	**CAP 506 040**
5	20	10	**CAP 506 050**
6	25	10	**CAP 506 060**
7	31	10	**CAP 506 070**
8	43	10	**CAP 506 080**
9	52	10	**CAP 506 090**
10	59	10	**CAP 506 100**
11	67	10	**CAP 506 110**
12	75	10	**CAP 506 120**
13	90	10	**CAP 506 130**
14	100	10	**CAP 506 140**
15	116	10	**CAP 506 150**
16	127	10	**CAP 506 160**

Type ADE	for cable Ø mm	for A/F	B mm	C mm	Weight approx. kg	OU	Order No.
Ordering details for strain clamp							
4	4 – 8.5	17	20	5	0.0085	1	**CAP 810 444**
5	6 – 12	19	22	5	0.007	1	**CAP 810 534**
6	8.5 – 16	24	27.5	6	0.015	1	**CAP 810 634**
7	12 – 21	30	33.5	8	0.028	1	**CAP 810 734**
8	16 – 27.5	41	45	8	0.044	1	**CAP 810 834**
9	21 – 34	48	52	9.5	0.061	1	**CAP 810 934**
10	27 – 41	55	59	9.5	0.069	1	**CAP 811 034**
11	33 – 48	64	69	12	0.13	1	**CAP 811 134**
12	40 – 56	72	78	12	0.16	1	**CAP 811 234**
13	47 – 65	85	92	16	0.37	1	**CAP 811 334**
14	54 – 74	95	103	16	0.42	1	**CAP 811 434**
15	63 – 83	110	118	18	0.64	1	**CAP 811 534**
16	72 – 93	120	128	18	0.68	1	**CAP 811 634**

Type ADE	for outer lead sheath Ø mm	A mm	H mm	Weight/g	OU	Order No.
Ordering details lead sheath washer for use with lead cables in combination with ADE 4F glands						
5	4.5 – 7.5	10	3.2	0.25	10	**CAP 560 530**
6	7 – 11	13.9	4	0.3	10	**CAP 560 630**
7	10 – 15	18.3	4.8	0.6	10	**CAP 560 730**
8	13.5 – 20	23.8	5.7	0.9	10	**CAP 560 830**
9	18 – 26.5	31	7.2	1.5	10	**CAP 560 930**
10	23 – 32.5	38.3	8.2	2.8	10	**CAP 561 030**
11	29 – 39.5	45.3	8.8	3.8	10	**CAP 561 130**
12	35 – 46.5	52.8	9.5	5.8	10	**CAP 561 230**
13	42 – 54.5	60.8	10.1	7.3	10	**CAP 561 330**
14	50 – 61	71	11.4	11	10	**CAP 561 430**
15	58 – 72.5	80.5	12.6	14.5	10	**CAP 561 530**
16	66 – 81.5	89.5	12.6	14.5	10	**CAP 561 630**

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.



Lock nut



Earth tag

Accessories for cable glands type ADE

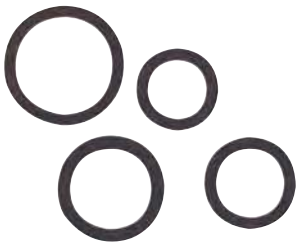
Thread	Dimensions A mm	B mm	ØC mm	ØD mm	E mm	Weight approx. kg	OU	Order No.
Ordering details earth tag for glands								
M12 x 1.5 ISO	48.75	30	6.75	24.5	13	0.008	10	**CAP 567 024**
M16 x 1.5 ISO	48.75	30	6.75	24.5	13	0.008	10	**CAP 567 034**
M20 x 1.5 ISO	53.8	33	7	28.6	13	0.008	10	**CAP 567 054**
M25 x 1.5 ISO	61.5	36	10.5	34	17	0.011	10	**CAP 567 074**
M32 x 1.5 ISO	73	41	12.2	42	22	0.015	10	**CAP 567 094**
M40 x 1.5 ISO	86.5	44.5	13.5	54	30	0.025	1	**CAP 567 124**
M50 x 1.5 ISO	111.5	58	13.5	67	40	0.041	1	**CAP 567 154**
M63 x 1.5 ISO	125.5	67	13.5	77	40	0.044	1	**CAP 567 184**
3/8" NPT	53.8	33	7	28.6	13	0.008	10	**CAP 567 044**
1/2" NPT	61.5	36	10.5	34	17	0.008	10	**CAP 567 064**
3/4" NPT	73	41	12.2	42	22	0.008	10	**CAP 567 084**
1" NPT	73	41	12.2	42	22	0.011	10	**CAP 567 104**
1"1/4 NPT	86.5	44.5	13.5	54	30	0.015	10	**CAP 567 134**
1"1/2 NPT	111.5	58	13.5	67	40	0.025	1	**CAP 567 154**
2" NPT	125.5	67	13.5	77	40	0.041	1	**CAP 567 174**
2"1/2 NPT	137.5	73	13.5	89	40	0.044	1	**CAP 567 194**

Thread ISO/NPT	A/F mm	L mm	OU	Order No.
Ordering details lock nut CuZn gal. Ni				
M12 x 1.5 ISO	14	2.8	10	**CAP 221 294**
M16 x 1.5 ISO	18	2.8	10	**CAP 221 694**
M20 x 1.5 ISO	23	3.0	10	**CAP 222 094**
M25 x 1.5 ISO	28	3.0	10	**CAP 222 594**
M32 x 1.5 ISO	36	3.5	10	**CAP 223 294**
M40 x 1.5 ISO	44	4.0	10	**CAP 224 094**
M50 x 1.5 ISO	54	5.0	10	**CAP 225 094**
M63 x 1.5 ISO	70	6.0	10	**CAP 226 394**
1/4" NPT	16	2.8	10	**CAP 280 104**
3/8" NPT	20	2.8	10	**CAP 280 114**
1/2" NPT	24	3.5	10	**CAP 280 124**
3/4" NPT	30	3.5	10	**CAP 280 134**
1" NPT	37	4.5	10	**CAP 280 144**
1"1/4 NPT	47	4.5	10	**CAP 280 154**
1"1/2 NPT	52	5.0	10	**CAP 280 164**
2" NPT	64	5.5	10	**CAP 280 174**
2"1/2 NPT	77	6.5	10	**CAP 280 184**
3" NPT	95	8.0	10	**CAP 280 194**
3"1/2 NPT	110	10.0	10	**CAP 280 204**
4" NPT	120	11.0	10	**CAP 280 214**

Cable glands with PG-thread are available on request.

The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.



Gasket

Accessories for cable glands type ADE

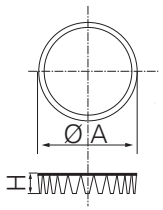
Thread	Ø D mm	L mm	OU	Order No. fibrous material	Order No. neopren
Ordering details gasket for glands					
M12	18	1.2	10	**CAP 221 245**	**CAP 221 249**
M16	22	1.2	10	**CAP 221 645**	**CAP 221 649**
M20	24	1.2	10	**CAP 222 045**	**CAP 222 049**
M25	30	1.5	10	**CAP 222 545**	**CAP 222 549**
M32	42	1.5	10	**CAP 223 245**	**CAP 223 249**
M40	52	1.5	10	**CAP 224 045**	**CAP 224 049**
M50	63	1.5	10	**CAP 225 045**	**CAP 225 049**
M63	77	2.0	10	**CAP 226 345**	**CAP 226 349**
1/4"	20	1.5	10	**CAP 239 014**	**CAP 229 014**
3/8"	22	1.5	10	**CAP 239 038**	**CAP 229 038**
1/2"	27	1.5	10	**CAP 239 012**	**CAP 229 012**
3/4"	33	1.5	10	**CAP 239 034**	**CAP 229 034**
1"	41	1.5	10	**CAP 239 010**	**CAP 229 010**
11/4"	52	1.5	10	**CAP 239 114**	**CAP 229 114**
11/2"	57	1.5	10	**CAP 239 112**	**CAP 229 112**
2"	71	2.0	10	**CAP 239 020**	**CAP 229 020**
21/2"	85	2.0	10	**CAP 239 212**	**CAP 229 212**
3"	104	2.0	10	**CAP 238 049**	**CAP 229 300**
31/2"	120	2.0	10	**CAP 239 312**	**CAP 229 312**

Cable glands with PG-thread are available on request.

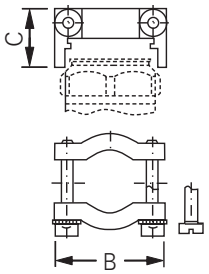
The order No. will show 1 pcs.

Please note that only order units (OU) can be ordered.

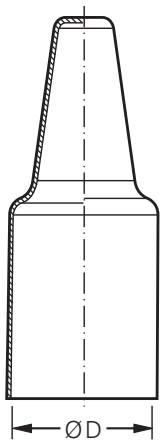
Dimension drawing



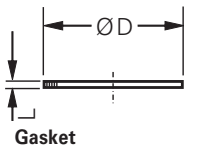
Lead sheath washer



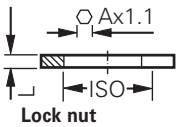
Strain clamp



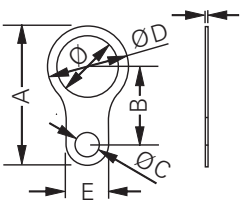
Shroud



Gasket



Lock nut



Earth tag

Dimensions in mm





Reducing rings



Screw plug

Technical data

	Ex-d metal reducing rings I screw plug I adapter ISO-NPT
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e II Gb / Ex d II Gb / Ex d IIC / Ⓔx II 2 D tb IIIC Db
EC-Type Examination Certificate	SIRA 10 ATEX 1225 X
Permissible ambient temperature	–60 °C to +200 °C
Degree of protection accd. to EN 60529	IP66 / IP68 - 10 bar
Enclosure material	Nickel-plated brass (stainless steel, bronze, natural brass option)

Please use sealing washers (see page 2.3.22).



Reducing rings

Ordering details

Thread 1 (male)	Thread 2 (female)	A mm	L mm	E mm	Order No.
Reducing rings ISO for metric thread, CuZn gal. Ni					
M16 x 1.5	M12 x 1.5	18	2.8	15	**CAP 745 834**
M20 x 1.5	M12 x 1.5	23	3.0	15	**CAP 745 844**
M20 x 1.5	M16 x 1.5	23	3.0	15	**CAP 740 024**
M25 x 1.5	M16 x 1.5	28	3.0	15	**CAP 740 034**
M25 x 1.5	M20 x 1.5	28	3.0	15	**CAP 740 294**
M32 x 1.5	M20 x 1.5	36	3.5	15	**CAP 740 304**
M32 x 1.5	M25 x 1.5	36	3.5	15	**CAP 740 564**
M40 x 1.5	M25 x 1.5	44	4.0	15	**CAP 740 574**
M40 x 1.5	M32 x 1.5	44	4.0	15	**CAP 740 834**
M50 x 1.5	M32 x 1.5	54	5.0	16	**CAP 740 844**
M50 x 1.5	M40 x 1.5	54	5.0	16	**CAP 741 104**
M63 x 1.5	M40 x 1.5	67	5.5	17	**CAP 741 114**
M63 x 1.5	M50 x 1.5	67	5.5	17	**CAP 741 374**
M75 x 1.5	M32 x 1.5	80	6.0	18	**CAP 740 864**
M75 x 1.5	M40 x 1.5	80	6.0	18	**CAP 741 124**
M75 x 1.5	M50 x 1.5	80	6.0	18	**CAP 741 384**
M75 x 1.5	M63 x 1.5	80	6.0	18	**CAP 741 644**
M90 x 2.0	M63 x 1.5	95	8.0	22	**CAP 745 854**
M90 x 2.0	M75 x 2.0	95	8.0	22	**CAP 745 864**
M100 x 2.0	M75 x 2.0	110	10.0	22	**CAP 745 874**
M100 x 2.0	M90 x 2.0	120	10.0	22	**CAP 745 914**
M110 x 2.0	M90 x 2.0	120	11.0	22	**CAP 745 924**
M110 x 2.0	M100 x 2.0	120	11.0	22	**CAP 745 934**
Reducing rings NPT, CuZn gal. Ni					
3/8"	1/4"	18	2.8	12	**CAP 745 574**
1/2"	2/4"	22	3.0	16	**CAP 745 584**
1/2"	3/8"	22	3.0	16	**CAP 745 594**
3/4"	3/8"	28	3.0	16	**CAP 745 604**
3/4"	1/2"	28	3.0	16	**CAP 744 884**
1"	1/2"	36	3.5	20	**CAP 744 894**
1"	3/4"	36	3.5	20	**CAP 745 154**
1"1/4	3/4"	44	4.0	20	**CAP 745 164**
1"1/4	1"	44	4.0	20	**CAP 745 424**
1"1/2	1"	50	5.0	20	**CAP 745 434**
1"1/2	1"1/4	50	5.0	20	**CAP 745 694**
2"	1"	64	5.5	20	**CAP 745 444**
2"	1"1/4	64	5.5	20	**CAP 745 704**
2"	1"1/2	64	5.5	20	**CAP 745 964**
2"1/2	1"1/2	75	6.0	28	**CAP 745 974**
2"1/2	2"	75	6.0	28	**CAP 746 234**
3"	2"	90	8.0	30	**CAP 746 244**
3"	2"1/2	90	8.0	30	**CAP 746 504**
3"1/2	2"1/2	110	10.0	32	**CAP 745 654**
3"1/2	3"	110	10.0	32	**CAP 745 664**
4"	3"	120	11.0	32	**CAP 746 834**
4"	3"1/2	120	11.0	32	**CAP 745 734**



Screw plug

3

Ordering details

Thread 1 (male)	A mm	L mm	E mm	Order No.
Screw plug with ISO thread, CuZn gal. Ni				
M12 x 1.5	14	2.8	15	**CAP 190 124**
M16 x 1.5	18	3.0	15	**CAP 190 164**
M20 x 1.5	23	3.0	15	**CAP 190 204**
M25 x 1.5	28	3.5	15	**CAP 190 254**
M32 x 1.5	36	4.0	15	**CAP 190 324**
M40 x 1.5	44	4.0	15	**CAP 190 404**
M50 x 1.5	54	5.0	16	**CAP 190 504**
M63 x 1.5	67	5.5	17	**CAP 190 634**
Screw plug with NPT thread, CuZn gal. Ni				
1/4 "	14	2.8	12	**CAP 190 194**
3/8 "	18	2.8	12	**CAP 190 294**
1/2 "	22	3.0	16	**CAP 190 394**
3/4 "	28	3.0	16	**CAP 190 494**
1 "	36	3.5	20	**CAP 190 594**
1 " 1/4	44	4.0	20	**CAP 190 694**
1 " 1/2	50	5.0	20	**CAP 190 794**
2 "	64	5.5	20	**CAP 190 894**
2 " 1/2	75	6.0	28	**CAP 190 994**
3 "	90	8.0	30	**CAP 191 094**
3 " 1/2	110	10.0	32	**CAP 191 194**
4 "	120	11.0	32	**CAP 191 294**

Please use sealing washers (see page 2.3.22).



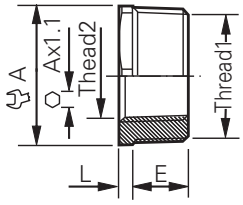
Adapter rings

Ordering details

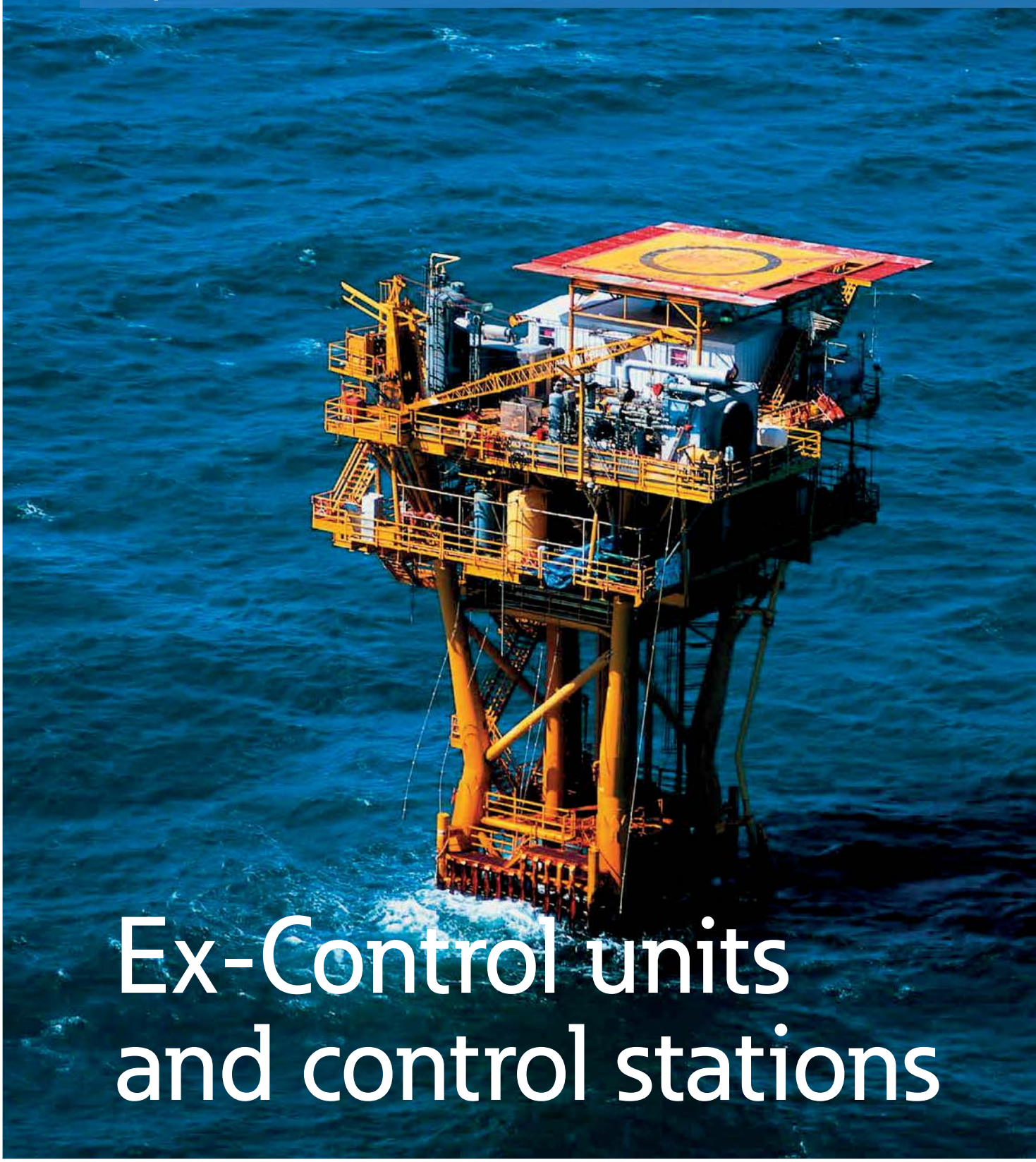
Thread 1 (male)	Thread 2 (female)	A mm	L mm	E mm	Ø D mm	Order No.
Adapter ISO - NPT, CuZn gal. Ni						
M20 x 1.5	1/2 " NPT	24	18	15	15.5	**CAP 744 704**
M20 x 1.5	3/4 " NPT	30	18.5	15	15.5	**CAP 744 964**
M25 x 1.5	3/4 " NPT	30	18.5	15	20.3	**CAP 744 974**
M25 x 1.5	1 " NPT	38	22.5	15	20.3	**CAP 745 234**
M32 x 1.5	1 " NPT	38	22.5	15	27.3	**CAP 745 244**
M32 x 1.5	1 " 1/4 NPT	48	22.5	15	27.3	**CAP 745 504**
M40 x 1.5	1 " 1/4 NPT	48	22.5	15	35.3	**CAP 745 514**
M40 x 1.5	1 " 1/2 NPT	52	22.5	15	35.3	**CAP 745 774**
M50 x 1.5	2 " NPT	64	22.5	16	45.2	**CAP 746 044**
M63 x 1.5	2 " NPT	67	22.5	17	53.6	**CAP 746 054**
M63 x 1.5	2 " 1/2 NPT	77	31	17	57.8	**CAP 746 314**
Adapter NPT - ISO, CuZn gal. Ni						
1/2 „ NPT	M20 x 1.5	23	18.5	16	15.0	**CAP 740 454**
1/2 „ NPT	M25 x 1.5	28	19.0	16	15.0	**CAP 740 714**
3/4 „ NPT	M25 x 1.5	28	19.0	16	20.1	**CAP 740 724**
3/4 „ NPT	M32 x 1.5	36	19.0	16	20.1	**CAP 740 984**
1 „ NPT	M32 x 1.5	36	19.0	20	26.0	**CAP 740 994**
1 „ NPT	M40 x 1.5	44	19.0	20	26.0	**CAP 741 254**
1 „ 1/4 NPT	M40 x 1.5	44	19.0	20	34.8	**CAP 741 264**
1 „ 1/4 NPT	M50 x 1.5	54	20.0	20	34.8	**CAP 741 524**
1 „ 1/2 NPT	M50 x 1.5	54	20.0	20	40.8	**CAP 741 534**
1 „ 1/2 NPT	M63 x 1.5	67	21.0	20	40.8	**CAP 741 794**
2 „ NPT	M63 x 1.5	67	21.0	20	52.4	**CAP 741 804**

Please use sealing washers (see page 2.3.22).

Dimension drawing



Dimensions in mm

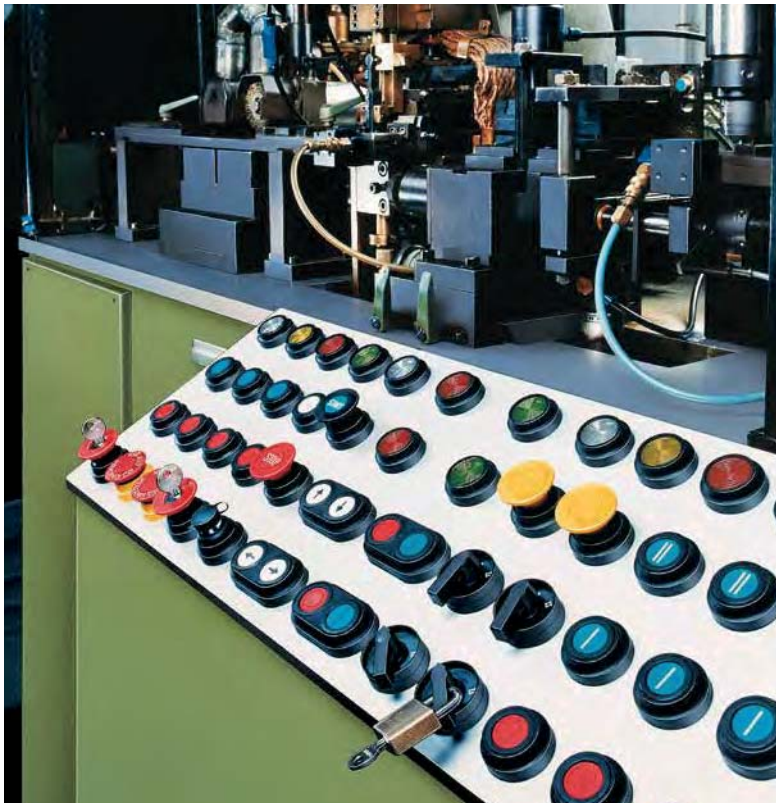


Ex-Control units and control stations





4.1 GHG 273 Ex-Installation Switch 16 A **2.4.6**
4.2 GHG 41 Control Stations 16 A **2.4.8**
Ex-moulded plastic control stations GHG 411 ..... 2.4.10
Ex-moulded plastic control stations GHG 43 ..... 2.4.15
Ex-moulded plastic control stations GHG 432 ..... 2.4.16
4.3 GHG 413 Control Stations 16 A **2.4.22**
Ex-light metal control stations GHG 413 ..... 2.4.23
Ex-light metal control stations GHG 413 85 ..... 2.4.25
4.4 GHG 414 Control Stations 16 A **2.4.28**
Ex-stainless steel control stations GHG 414 81 ..... 2.4.30
Ex-stainless steel control stations GHG 414 82 ..... 2.4.31
4.5 Ex Control Stations for Individual Configuration **2.4.34**
Order code for individual control units 2.4.36
Ex-control stations - enclosures moulded plastic GHG 41 / 43 ..... 2.4.38
Ex-control stations - enclosures GHG 413 / 414 ..... 2.4.41
Ex-control stations - enclosures GHG 44 ..... 2.4.44
Ex-control stations - enclosures GHG 443 ..... 2.4.48
Ex-control stations - enclosures GHG 44. 33 ..... 2.4.50
Built-in components pushbutton 2.4.54
Built-in components - key-operated pushbutton 2.4.58
Built-in components - key-operated switch 2.4.60
Built-in components - mushroom-head pushbutton 2.4.62
Built-in components - mini-control switch 2.4.66
Built-in components - potentiometer 2.4.70
Built-in components - signal lamp 2.4.71
Built-in components - measuring instrument AM 45/AM 72 ..... 2.4.72
Built-in components - control switch Ex 23 and Ex 29 ..... 2.4.74
Built-in components - terminals 2.4.77
4.6 Ex-Control and Signal Units for Panel Mounting **2.4.82**
Ex-pushbutton for panel mounting 2.4.83
Ex-key-operated pushbutton for panel mounting 2.4.87
Ex-key-operated switch for panel mounting 2.4.90
Ex-mushroom-head pushbutton for panel mounting 2.4.93
Ex-mini-control switch for panel mounting 2.4.97
Ex-control switch GHG 249 for panel mounting 2.4.100
Ex-potentiometer for panel mounting 2.4.103
Ex-signal lamp for panel mounting 2.4.105
Ex-measuring instrument AM 72 for panel mounting 2.4.107
Accessories for panel mounting 2.4.110
4.7 Ex-Control Switches with Plastic Enclosure **2.4.114**
Ex-control switch GHG 292 and GHG 293 ..... 2.4.115
4.8 Ex-Light Alloy Control Switches **2.4.120**
Ex-control switch GHG 294 and GHG 295 ..... 2.4.121
4.9 Ex-Light Alloy Control Stations **2.4.126**



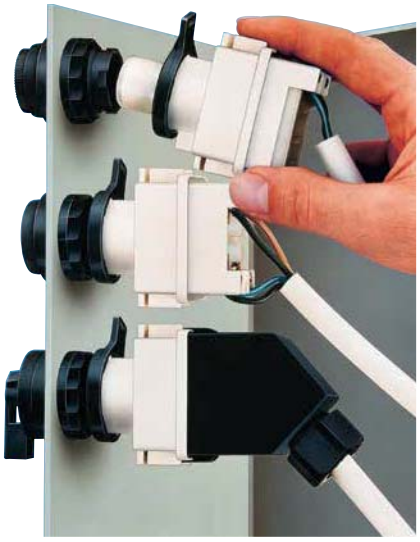
4 Material selection

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 Ω required by EN 60079. 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-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 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.

GHG 273 Ex-Installation Switch 16 A

250 V for Zone 1, 2, 21 and 22

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 offshore 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.



Features

- **Large toggle also for working gloves**
- **Safety standard IP66**
- **Cable entry from the top or bottom**
- **Connecting terminals easily accessible**



Switch/Pushbutton

Technical data

	Ex-installation switch and Ex-pushbuttons
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 98 ATEX 3121
IECEx Certificate of Conformity	IECEx BKI 07.0036
Marking accd. to IECEx	Ex ed IIC T6 Ex tD A21 IP66 T67 °C
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)
Rated voltage	250 V, 50 - 60 Hz
Rated current	16 A
Connecting terminals	Switch terminals: 2 x 2.5 mm² / PE-terminals: 4 x 2.5 mm²
Degree of protection accd. to EN 60529	IP66
Cable glands[1)]	Ex e cable glands max. 2 x M25; 2 x M20 thread
Weight	0.32 kg
Enclosure material	Polyamide

Ordering details

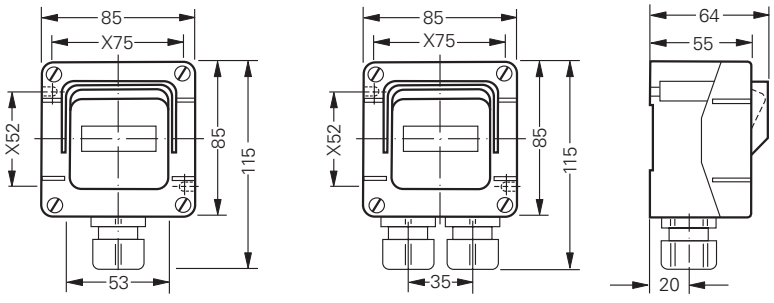
Type	Circuit	Cable glands[1)]	Order No.
ON-OFF switch 2-pole -55 °C up to +55 °C		1 x M25	**GHG 273 2000 R0017**
		2 x M25	**GHG 273 2000 R0018**
		2 x M20[2)]	**GHG 273 2000 R0003**
		1 x M25	**GHG 273 2000 R0022**
Change-over switch -55 °C up to +55 °C		1 x M25	**GHG 273 6000 R0011**
		2 x M20[2)]	**GHG 273 6000 R0003**
		2 x M25	**GHG 273 6000 R0014**
		2 x M25	**GHG 273 2000 R9017**
Pushbutton -55 °C up to +55 °C		1 x M25	**GHG 273 4000 R0004**
		2 x M25	**GHG 273 4000 R0007**
		1 x M25	**GHG 273 4000 R0010**

[1)] Base enclosure can be rotated after wards (entry from top or down)

[2)] Threaded only

Other versions available on request

Dimension drawing



Switch/pushbutton **X = fixing dimension**

Dimensions in mm

GHG 41 Control Stations 16 A

Moulded plastic for Zone 1, 2, 21 and 22

Reliable control of processes

Even under the most adverse conditions, CEAG control stations can be used and operated reliably. The enclosures consist of low-temperature impact-resistant thermoplastic which fulfils the requirements of EN 60079 and provides a high resistance to chemicals. The well thought out design with low side walls allows optimum cable connection.

Modular design

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.

Easy to install

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 10 to 17.5 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



Features

- **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

Technical data

	Ex-control stations Type 411 81 I Type 411 82 I Type 411 83	
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex ed ib m IIC T6 ⟨Ex⟩ II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC	
Rated current	16 A	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 2.5 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66 (standard)	
Cable glands/Gland plates/Enclosure drilling	1 x M25 cable gland or 1 x M20 thread with brass flange	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 411 81
Dimensions (L x W x H)	85 x 85 x 77.5 mm
Weight (empty)	0.25 kg

	Type 411 82
Dimensions (L x W x H)	125 x 85 x 77.5 mm
Weight (empty)	0.35 kg

	Type 411 83
Dimensions (L x W x H)	165 x 85 x 77.5 mm
Weight (empty)	0.45 kg

	Type 411 82 with measuring instrument AM 72	
Movement	Moving iron	Moving coil
Marking accd. to 2014/34/EU	⟨Ex⟩ II G Ex e II	⟨Ex⟩ II G Ex ib IIC
Accuracy	Class 2.5	Class 1.5
Overload range	10-fold -25 sec. 25-fold - 4 sec. 50-fold - 1 sec.	10-fold -5 sec.
Measuring range	n / 1A 0 - 25 A direct	0 - 20 mA 4 - 20 mA
Inductance Li	–	≤ 0.1 mH
Capacitance Ci	–	≤ 0.1 nF
Open circuit voltage max. Ui	–	30 V
Short circuit current max. Ii	–	150 mA
Connecting terminals	2 x 1.5 - 4 mm²	
Weight	0.70 kg	

[1] Base enclosure can be rotated after wards (entry from top or down)
Other versions available on request



Type 411 81...01



Type 411 81...12



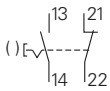
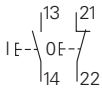
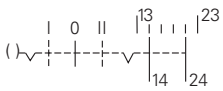
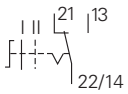
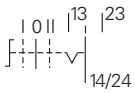
Type 411 81...18



Type 411 81...04

4

Ordering details Type 411 81 with 1 built-in component

Content	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 SGTE 1 NO + 1 NC "Emergency stop"	0.45 kg	**GHG 411 8100 R0002**
	1 x mushroom-head pushbutton SGTE 1 NO + 1 NC "Emergency stop" with key unlocking	0.50 kg	**GHG 411 8100 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 SLS 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 label: "0 – I" label: "I – II"	 0.45 kg 0.45 kg 0.45 kg	 **GHG 411 8100 R0003** **GHG 411 8100 R0004** **GHG 411 8100 R0005**
	1 x control switch SCT 2 NO SW 5 "engaging-engaging-engaging" label: HAND – 0 – AUTO label: "I 0 II" label: "Local Remote Auto"	 0.45 kg 0.45 kg 0.45 kg	 **GHG 411 8100 R0006** **GHG 411 8100 R0007** **GHG 411 8100 R0008**



Type 411 82...18



Type 411 82...17

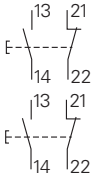
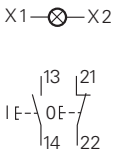
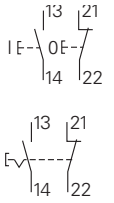
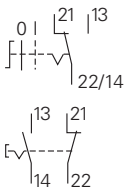
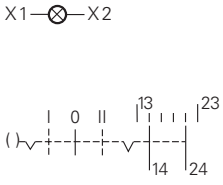


Type 411 82...03



Type 411 82...01

Ordering details Type 411 82 with 2 built-in components

Content	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 SGTE 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**



Type 411 83...01



Type 411 83...03



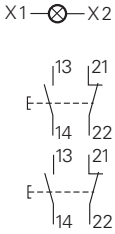
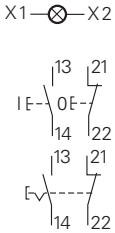
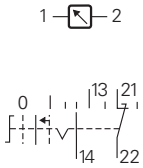
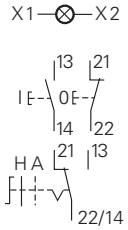
Type 411 83...23



Type 411 83...04

4

Ordering details Type 411 83 with 3 built-in components

Content	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 each label: “0, I, START, STOP“	0.76 kg	**GHG 411 8300 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 x mushroom-head pushbutton SGTE 1 NO + 1 NC “emergency stop“	0.80 kg	**GHG 411 8300 R0003**
	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 return“ label: “0 – I“	0.92 kg	**GHG 411 8300 R0023**
	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“	0.80 kg	**GHG 411 8300 R0004**

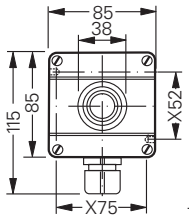


Measuring instrument AM72

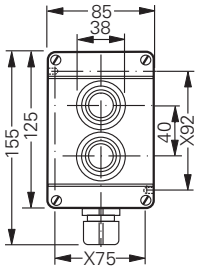
Ordering details measuring instrument AM72, Type 411 82

Content	Movement	Weight	Order No.
Version direct measurement with 1 x entry and cable gland M25			
0 - 1 / 1.5 A	Moving iron	0.70 kg	**GHG 411 8281 R0002**
0 - 2.5 / 3.75 A	Moving iron	0.70 kg	**GHG 411 8281 R0003**
0 - 5 / 7.5 A	Moving iron	0.70 kg	**GHG 411 8281 R0004**
0 - 10 / 15 A	Moving iron	0.70 kg	**GHG 411 8281 R0005**
0 - 16 / 24 A	Moving iron	0.70 kg	**GHG 411 8281 R0007**
0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	Moving coil	0.80 kg	**GHG 411 8285 R0033**
4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	Moving coil	0.80 kg	**GHG 411 8286 R0035**
Version CT connection n/1A with 1 x entry and cable gland M25			
0 - 1 / 1.5 A	Moving iron	0.70 kg	**GHG 411 8282 R0002**
0 - 2.5 / 3.75 A	Moving iron	0.70 kg	**GHG 411 8282 R0003**
0 - 5 / 7.5 A	Moving iron	0.70 kg	**GHG 411 8282 R0004**
0 - 10 / 15 A	Moving iron	0.70 kg	**GHG 411 8282 R0005**
0 - 15 / 22.5 A	Moving iron	0.70 kg	**GHG 411 8282 R0007**
0 - 20 / 30 A	Moving iron	0.70 kg	**GHG 411 8282 R0008**
0 - 30 / 45 A	Moving iron	0.70 kg	**GHG 411 8282 R0009**
0 - 40 / 60 A	Moving iron	0.70 kg	**GHG 411 8282 R0010**
0 - 50 / 75 A	Moving iron	0.70 kg	**GHG 411 8282 R0011**
0 - 60 / 90 A	Moving iron	0.70 kg	**GHG 411 8282 R0012**
0 - 75 / 112.5 A	Moving iron	0.70 kg	**GHG 411 8282 R0013**
0 - 100 / 150 A	Moving iron	0.70 kg	**GHG 411 8282 R0014**
0 – 100% / 150%	Moving iron	0.70 kg	**GHG 411 8282 R0001**

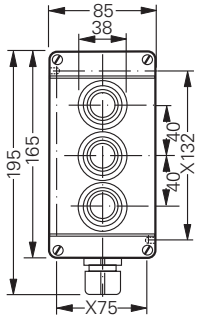
Dimension drawing



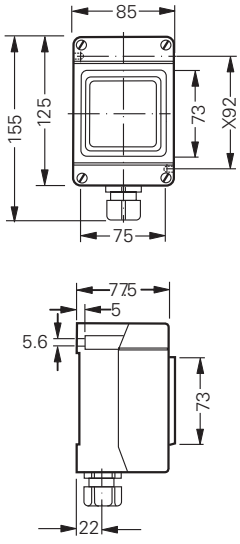
Type 411 81



Type 411 82



Type 411 83



Measuring instrument AM 72

X = fixing dimension

Dimensions in mm



Size 1



Size 2



Size 4

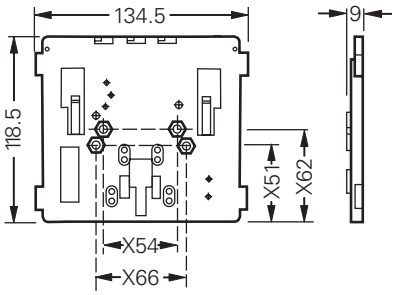
Accessories

Type	Application	Fixing method	OU	Order No.
Mounting plate for type 411 81				
Size 1	Wall mounting	screwless mounting	1	**GHG 610 1953 R0101**
Size 1	Pipe clamp	screwless mounting	1	**GHG 610 1953 R0102**
Size 1	Trellis-work mounting	screwless mounting	1	**GHG 610 1953 R0103**
Size 4	Wall mounting	snap-on1)	1	**GHG 610 1953 R0126**
Size 4	Trellis-work mounting	snap-on1)	1	**GHG 610 1953 R0126**
Size 4	Pipe clamp	snap-on1)	1	**GHG 610 1953 R0130**

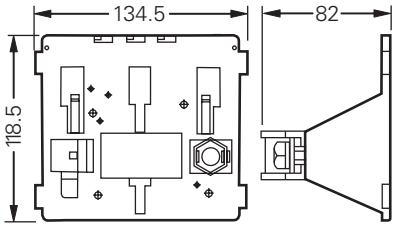
Type	Application	Fixing method	OU	Order No.
Mounting plate for type 411 82 and 411 83				
Size 2	Wall mounting	screwless mounting	1	**GHG 610 1953 R0104**
Size 2	Pipe clamp	screwless mounting	1	**GHG 610 1953 R0105**
Size 2	Trellis-work mounting	screwless mounting	1	**GHG 610 1953 R0106**
Size 4	Wall mounting	snap-on[1)]	1	**GHG 610 1953 R0126**
Size 4	Trellis-work mounting	snap-on[1)]	1	**GHG 610 1953 R0126**
Size 4	Pipe clamp	snap-on[1)]	1	**GHG 610 1953 R0130**
Plug-in fastener for CEAG modules with 5.5 mm and 11 mm mounting size per 4 pieces			10	**GHG 610 1953 R0041**

[1)] snap-on with snap-on mounting 5.5 mm

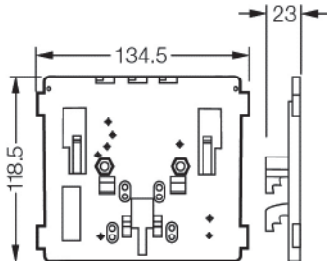
Dimension drawing



Size 1 wall mounting

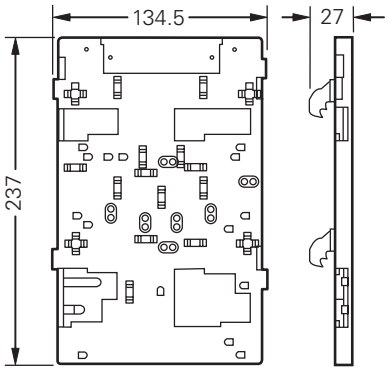


Size 1 pipe mounting



Size 1 trellis-work mounting

X = fixing dimension



Size 4 wall mounting

Dimensions in mm



Type 434...



Type 432...

Technical data

	Ex-control stations Type 432 I Type 434	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.5 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	2 x M25 cable gland incl. 1 blanking plug or optional 2 x M20 thread with internal brass plate	
Enclosure material	Polyamide	
Enclosure colour	black	

	Type 432
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg

	Type 434
Dimensions (L x W x H)	245 x 100 x 90 mm
Weight (empty)	0.70 kg

	Type 434 with measuring instrument AM 72	
Movement	Moving iron	Moving coil
Marking accd. to 2014/34/EU	Ⓔx II G Ex e II	Ⓔx II G Ex 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, optional 1:6, 1:10	10-fold -5 sec.
Measuring range	n / 1A 0 - 25 A direct	0 - 20 mA 4 - 20 mA
Inductance Li	–	≤ 0.1 mH
Capacitance Ci	–	≤ 0.1 nF
Open circuit voltage max. Ui	–	30 V
Short circuit current max. Ii	–	150 mA
Connecting terminals	2 x 1.5 - 4 mm²	
Weight	1.25 kg	

[1] Base enclosure can be rotated after wards (entry from top or down)

Other versions available on request


Type 432...01

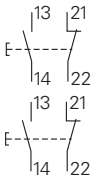
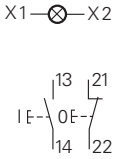
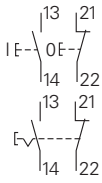
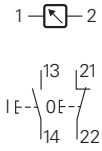

Type 432...02


Type 432...03


Type 432...05

4

Ordering details Type 432 with 2 built-in components

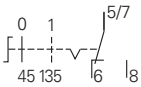
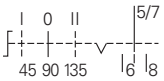
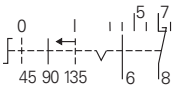
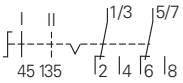
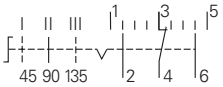
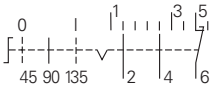
Content	Built-in components	Weight approx.	Order No.
	2 x pushbutton DRT 1 NO + 1 NC each label: "0, I, START, STOP"	0.85 kg	**GHG 432 0011 R0001**
	1 x signal lamp SIL 20-250 V AC/DC coloured lens cover: „white, red, green, yellow" 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP"	0.90 kg	**GHG 432 0011 R0002**
	1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGTE 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 2 NC + 1 NO label: "0, I, START, STOP"	0.95 kg	**GHG 432 0011 R0005**


Type 432...17


Type 432...05


Type 432...03

Ordering details Type 432 with 1 control switch GHG 23

Content	Built-in components	Weight approx.	Order No.
	1 x control switch GHG 23 1 change-over SW 6 "engaging-engaging" label: "HAND - AUTO" label: "0 – I"	 0.70 kg 0.70 kg	 **GHG 432 0001 R0003** **GHG 432 0001 R0004**
	1 x control switch GHG 23 2 NO SW 5 "engaging-engaging-engaging" label: "HAND 0 AUTO" label: "I 0 II"	 0.70 kg 0.70 kg	 **GHG 432 0001 R0005** **GHG 432 0001 R0006**
	1 x control switch GHG 23 1 NO + 1 NC SW 8 "engaging-engaging-spring return" label: "0 – I" label: "AUS-Betrieb-EIN" label: "0 IN START"	 0.70 kg 0.70 kg 0.70 kg	 **GHG 432 0001 R0012** **GHG 432 0001 R0013** **GHG 432 0001 R0014**
	1 x control switch GHG 23 2 C/O SW 6 "engaging-engaging" label: "I – II" label: "HAND – AUTO"	 0.70 kg 0.70 kg	 **GHG 432 0001 R0015** **GHG 432 0001 R0016**
	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" label: "AUS-Betrieb-EIN" label: "0 IN START"	 0.86 kg 0.86 kg 0.86 kg	 **GHG 432 0001 R0018** **GHG 432 0001 R0019** **GHG 432 0001 R0020**



Type 432...10



Type 432...09

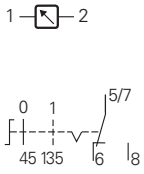
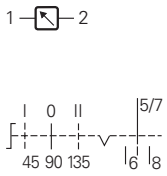
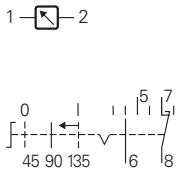


Type 432...08



Type 432...06

4 Ordering details Type 432 with 2 built-in components

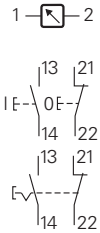
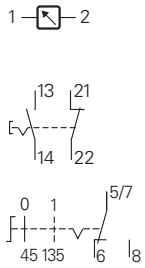
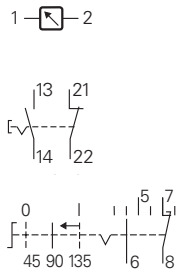
Content	Built-in components	Weight approx.	Order No.
	1 x measuring instrument AM45 CT connection n/1A Scale 0 –100%/150% 1 x control switch GHG 23 1 change-over SW 6 “spring return-engaging” label: “0 – I”	1.35 kg	**GHG 432 0011 R0006**
	1 x measuring instrument AM45 CT connection n/1A Scale 0 –100%/150% 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 return” label: “0 – I”	1.35 kg	**GHG 432 0011 R0009**


Type 434...11


Type 434...10


Type 434...02

Ordering details Type 434 with 4 built-in components

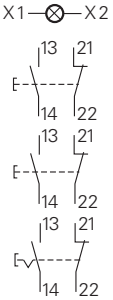
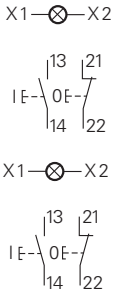
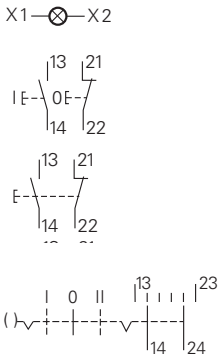
Content	Built-in components	Weight approx.	Order No.
	1 x measuring instrument AM72 CT connection n/1A Scale 0 –100%/150% 1 x double pushbutton DDT 1 NO + 1 NC label: "0, I, START, STOP" 1 x mushroom-head pushbutton SGT 1 NO + 1 NC "emergency stop"	1.40 kg	**GHG 434 0111 R0002**
	1 x measuring instrument AM72 CT connection n/1A Scale 0 –100%/150% 1 x mushroom-head pushbutton SGTE 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 x measuring instrument AM72 CT connection n/1A Scale 0 –100%/150% 1 x mushroom-head pushbutton SGTE 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**


Type 434...04


Type 434...05


Type 434...09

4 Ordering details Type 434 with 4 built-in components

Content	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 SGTE 1 NO + 1 NC “emergency stop“	1.45 kg	**GHG 434 1111 R0004**
	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“	1.45 kg	**GHG 434 1111 R0005**
	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 SGTE 1 NO + 1 NC “emergency stop“ 1 x key-operated switch 2 NO SW 5 “engaging-engaging-engaging“ label: “I 0 II“	1.55 kg	**GHG 434 1111 R0009**


Size 5


Size 3


Size 2

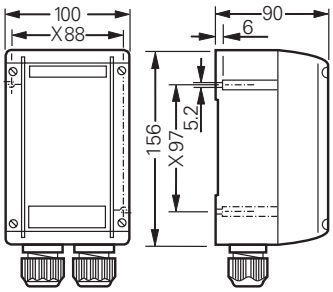
Accessories

Type	Application	Fixing method	OU	Order No.
Mounting plate for type 432				
Size 2	Wall mounting	screwless mounting	1	**GHG 610 1953 R0104**
Size 2	Pipe clamp	screwless mounting	1	**GHG 610 1953 R0105**
Size 2	Trellis-work mounting	screwless mounting	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 clamp	snap on *	1	**GHG 610 1953 R0132**

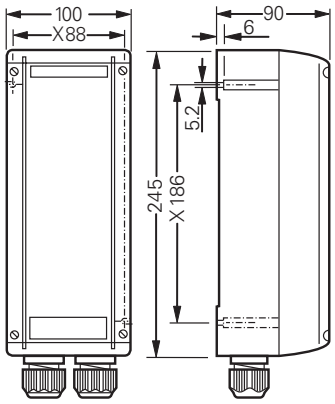
Type	Application	Fixing method	OU	Order No.
Mounting plate for type 434				
Size 3	Wall mounting	screwless mounting	1	**GHG 610 1953 R0118**
Size 3	Pipe clamp	screwless mounting	1	**GHG 610 1953 R0110**
Size 3	Trellis-work mounting	screwless mounting	1	**GHG 610 1953 R0118**
Size 5	Wall mounting	snap on *	1	**GHG 610 1953 R0128**
Size 5	Trellis-work mounting	snap on *	1	**GHG 610 1953 R0128**
Size 5	Pipe clamp	snap on *	1	**GHG 610 1953 R0132**
Plug-in fastener for CEAG modules 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

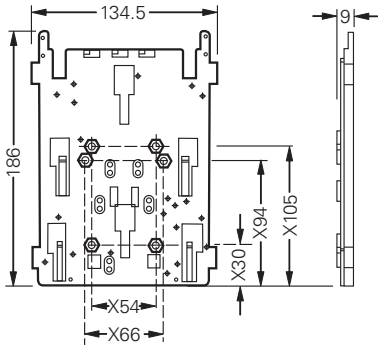
Dimension drawing



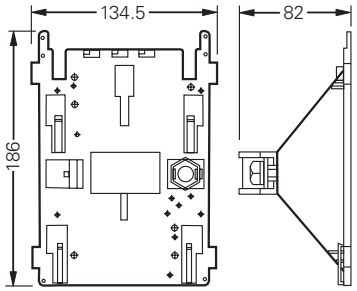
Type 432



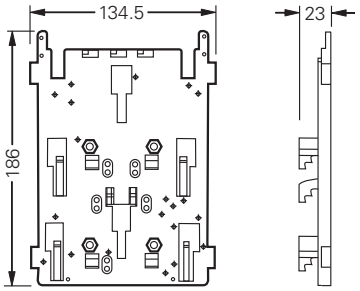
Type 434



Size 2 wall mounting



Size 2



Size 2 trellis-work mounting

X = fixing dimension

Dimensions in mm

GHG 413 Control Stations 16 A

Light alloy version for Zone 1, 2, 21 and 22

Light-alloy control stations in explosion-protected design are 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.



Features

- **High mechanical, chemical and thermal resistance**
- **Individual configuration**
- **Impact-resistant plastic powder coating**



Measuring instrument AM72



Type 413 85



Type 413 84

Technical data

	Ex-control stations Type 413 84 I Type 413 85	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ibm IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ec ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 110 V / I_e 0.8 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	1 x M20 threaded entry	
Enclosure material	High quality cast aluminium (AlSi)	
Enclosure colour	grey RAL 7031	

	Type 413 84	
Dimensions (L x W x H)	122 x 120 x 81 mm	
Weight (empty)	0.85 kg	

	Type 413 85	
Dimensions (L x W x H)	220 x 120 x 81 mm	
Weight (empty)	1.45 kg	

	Type 413 84 with measuring instrument AM 72	
Movement	Moving iron	Moving coil
Marking accd. to 2014/34/EU	Ⓔx II G Ex e II	Ⓔx II G Ex 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, optional 1:6, 1:10	10-fold -5 sec.
Measuring range	n / 1A 0 - 25 A direct	0 - 20 mA 4 - 20 mA
Inductance Li	–	≤ 0.1 mH
Capacitance Ci	–	≤ 0.1 nF
Open circuit voltage max. Ui	–	30 V
Short circuit current max. Ii	–	150 mA
Connecting terminals	2 x 1.5 - 4 mm²	
Weight	1.25 kg	

[1] Base enclosure can be rotated after wards (entry from top or down)

Other versions available on request



Type 413 84...01



Type 413 84...02

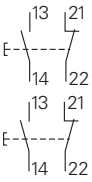
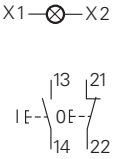
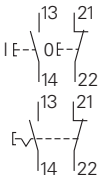
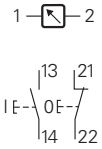


Type 413 84...03



Type 413 84...04

4 Ordering details Type 413 84 with 2 built-in components

Content	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 SGTE 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 85...03

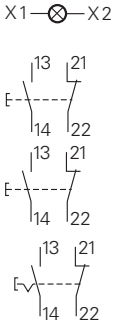
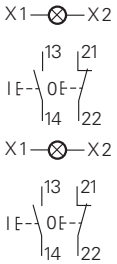
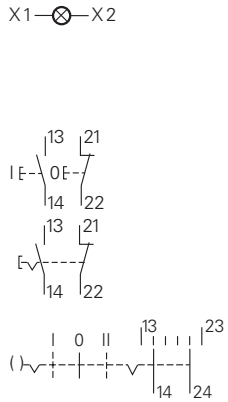


Type 413 85...02



Type 413 85...01

Ordering details Type 413 85 with 4 built-in components

Content	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 SGTE 1 NO + 1 NC “emergency stop“	2.10 kg	**GHG 413 8500 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“	2.10 kg	**GHG 413 8500 R0002**
	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 SGTE 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**



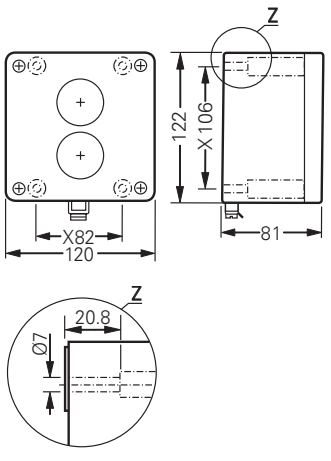
Measuring instrument AM72

4

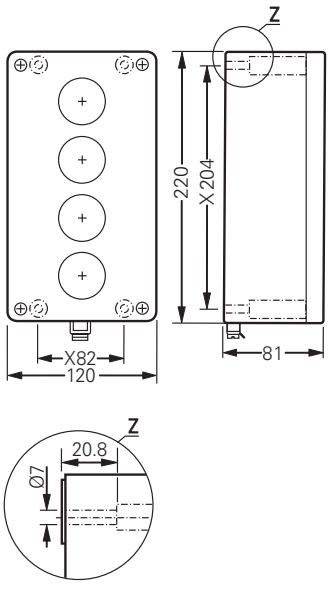
Ordering details Type 413 84 with measuring instrument AM72

Content	Movement	Weight approx.	Order No.
Version direct measurement with 1 x threaded entry M20			
0 – 1 / 1.5 A	Moving iron	1.25 kg	**GHG 413 8481 R0002**
0 - 2.5 / 3.75 A	Moving iron	1.25 kg	**GHG 413 8481 R0003**
0 - 5 / 7.5 A	Moving iron	1.25 kg	**GHG 413 8481 R0004**
0 - 10 / 15 A	Moving iron	1.25 kg	**GHG 413 8481 R0005**
0 - 16 / 24 A	Moving iron	1.25 kg	**GHG 413 8481 R0007**
0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	Moving coil	1.35 kg	**GHG 413 8481 R0033**
4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	Moving coil	1.35 kg	**GHG 413 8481 R0035**
Version CT connection n/1A with 1 x threaded entry M20			
0 – 1 / 1.5 A	Moving iron	1.25 kg	**GHG 413 8482 R0002**
0 - 2.5 / 3.75 A	Moving iron	1.25 kg	**GHG 413 8482 R0003**
0 - 5 / 7.5 A	Moving iron	1.25 kg	**GHG 413 8482 R0004**
0 - 10 / 15 A	Moving iron	1.25 kg	**GHG 413 8482 R0005**
0 - 15 / 22.5 A	Moving iron	1.25 kg	**GHG 413 8482 R0007**
0 - 20 / 30 A	Moving iron	1.25 kg	**GHG 413 8482 R0008**
0 - 30 / 45 A	Moving iron	1.25 kg	**GHG 413 8482 R0009**
0 - 40 / 60 A	Moving iron	1.25 kg	**GHG 413 8482 R0010**
0 - 50 / 75 A	Moving iron	1.25 kg	**GHG 413 8482 R0011**
0 - 60 / 90 A	Moving iron	1.25 kg	**GHG 413 8482 R0012**
0 - 75 / 112.5 A	Moving iron	1.25 kg	**GHG 413 8482 R0013**
0 - 100 / 150 A	Moving iron	1.25 kg	**GHG 413 8482 R0014**
0 – 100% / 150%	Moving iron	1.25 kg	**GHG 413 8482 R0033**

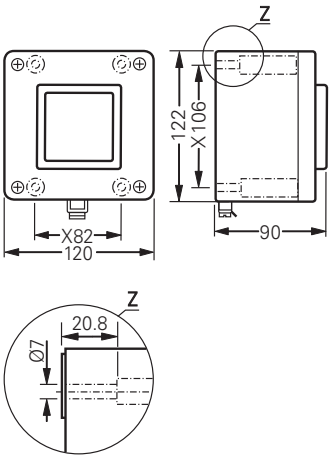
Dimension drawing



Type 413 84



Type 413 85



Type 413 84

X = fixing dimension

Dimensions in mm



GHG 414 Control Stations 16 A

Stainless steel version for Zone 1, 2, 21 and 22

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.



Features

- **High mechanical, chemical and thermal resistance**
- **Individual configuration**



Type 414 81..



Type GHG 414 82



Type GHG 414 81

Technical data

	Ex-control stations Type 414 81 I Type 414 82	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	
EC-Type Examination Certificate	PTB 00 ATEX 3117	
IECEx Certificate of Conformity	IECEx BKI 04.0003	
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ec ed IIC T6 or Ex ed ib IIC T6	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	690 V AC (with control switch GHG 23 up to 500 V)	
Rated current	16 A (with control switch GHG 23 max. 10 A)	
Rated making-/rated breaking capacity accd. EN 60947-5-1	Ex41 AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A with gold contact points max. 0.4 A	Ex23 AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.5 A
Connecting terminals	2 x 4 mm²	
Protection class	I	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	1 x thread Ø 21 mm for cable gland M20	
Enclosure material	Stainless steel AISI 316 L	

	Type 414 81
Dimensions (L x W x H)	166 x 140 x 76 mm
Weight (empty)	1.40 kg

	Type 414 82
Dimensions (L x W x H)	286 x 140 x 76 mm
Weight (empty)	2.10 kg

	Type 414 81 with measuring instrument AM 72	
Movement	Moving iron	Moving coil
Marking accd. to 2014/34/EU	Ⓔx II G Ex e II	Ⓔx II G Ex 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
Inductance Li	–	≤ 0.1 mH
Capacitance Ci	–	≤ 0.1 nF
Open circuit voltage max. Ui	–	30 V
Short circuit current max. Ii	–	150 mA
Connecting terminals	2 x 1.5 - 4 mm²	
Weight	1.25 kg	

[1] Base enclosure can be rotated after wards (entry from top or down)

Other versions available on request



Type 414 81...01



Type 414 81...02



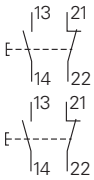
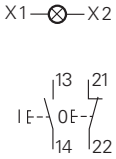
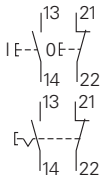
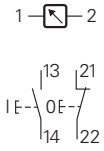
Type 414 81...03



Type 414 81...04

4

Ordering details Type 414 81 with 2 built-in components

Content*	Built-in components	Weight approx.	Order No.
	2 x pushbutton DRT 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 SGTE 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**

*Without external fixing lugs (see accessories NO. 9.30)



Type 414 82...03



Type 414 82...02



Type 414 82...01

Ordering details Type 414 82 with 4 built-in components

Content*	Built-in components	Weight approx.	Order No.
X1 — ⊗ — X2 13 21 14 22 13 21 14 22 13 21 14 22	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**
X1 — ⊗ — X2 13 21 I 0 14 22 X1 — ⊗ — X2 13 21 I 0 14 22	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**
X1 — ⊗ — X2 13 21 I 0 14 22 13 21 14 22 I 0 II 13 23 14 24	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**

*Without external fixing lugs (see accessories NO. 9.30)



Type 414 81..

4

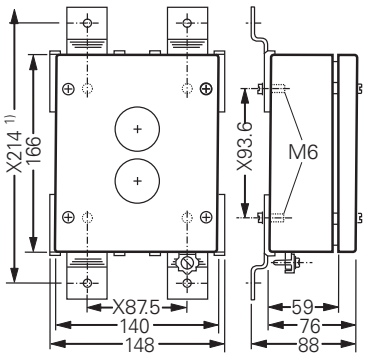
Ordering details Type 414 81 with measuring instrument AM72

Content	Movement	Weight approx.	Order No.
Version direct measurement with 1 x threaded entry Ø 21 mm (without external fixing lugs)			
0 – 1 / 1.5 A	Moving iron	1.25 kg	**GHG 414 8181 R0002**
0 - 2.5 / 3.75 A	Moving iron	1.25 kg	**GHG 414 8181 R0003**
0 - 5 / 7.5 A	Moving iron	1.25 kg	**GHG 414 8181 R0004**
0 - 10 / 15 A	Moving iron	1.25 kg	**GHG 414 8181 R0005**
0 - 16 / 24 A	Moving iron	1.25 kg	**GHG 414 8181 R0007**
0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	Moving coil	1.35 kg	**GHG 414 8181 R0033**
4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	Moving coil	1.35 kg	**GHG 414 8181 R0035**
Version CT connection n/1A with 1 x threaded entry Ø 21 mm (without external fixing lugs)			
0 – 1 / 1.5 A	Moving iron	1.25 kg	**GHG 414 8182 R0002**
0 - 2.5 / 3.75 A	Moving iron	1.25 kg	**GHG 414 8182 R0003**
0 - 5 / 7.5 A	Moving iron	1.25 kg	**GHG 414 8182 R0004**
0 - 10 / 15 A	Moving iron	1.25 kg	**GHG 414 8182 R0005**
0 - 15 / 22.5 A	Moving iron	1.25 kg	**GHG 414 8182 R0007**
0 - 20 / 30 A	Moving iron	1.25 kg	**GHG 414 8182 R0008**
0 - 30 / 45 A	Moving iron	1.25 kg	**GHG 414 8182 R0009**
0 - 40 / 60 A	Moving iron	1.25 kg	**GHG 414 8182 R0010**
0 - 50 / 75 A	Moving iron	1.25 kg	**GHG 414 8182 R0011**
0 - 60 / 90 A	Moving iron	1.25 kg	**GHG 414 8182 R0012**
0 - 75 / 112.5 A	Moving iron	1.25 kg	**GHG 414 8182 R0013**
0 - 100 / 150 A	Moving iron	1.25 kg	**GHG 414 8182 R0014**
0 - 100% / 150%	Moving iron	1.25 kg	**GHG 414 8182 R0033**

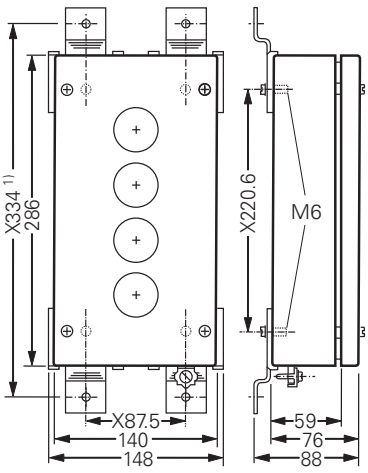
Accessories

Type	Order No.
External fixing lugs (2 pcs)	**GHG 610 1941 R0013**

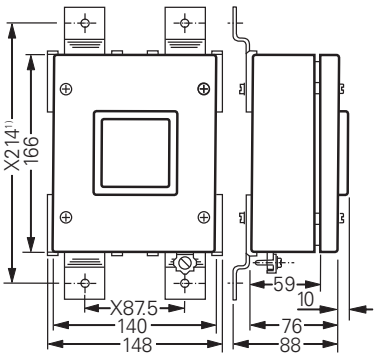
Dimension drawing



Type 414 81



Type 414 82



Type 414 81

X = fixing dimension

1) Scope of delivery without fixing lugs

Dimensions in mm



Ex Control Stations for Individual Configuration

Moulded-plastic version for Zone 1. 21 2 and 21

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 60079 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.

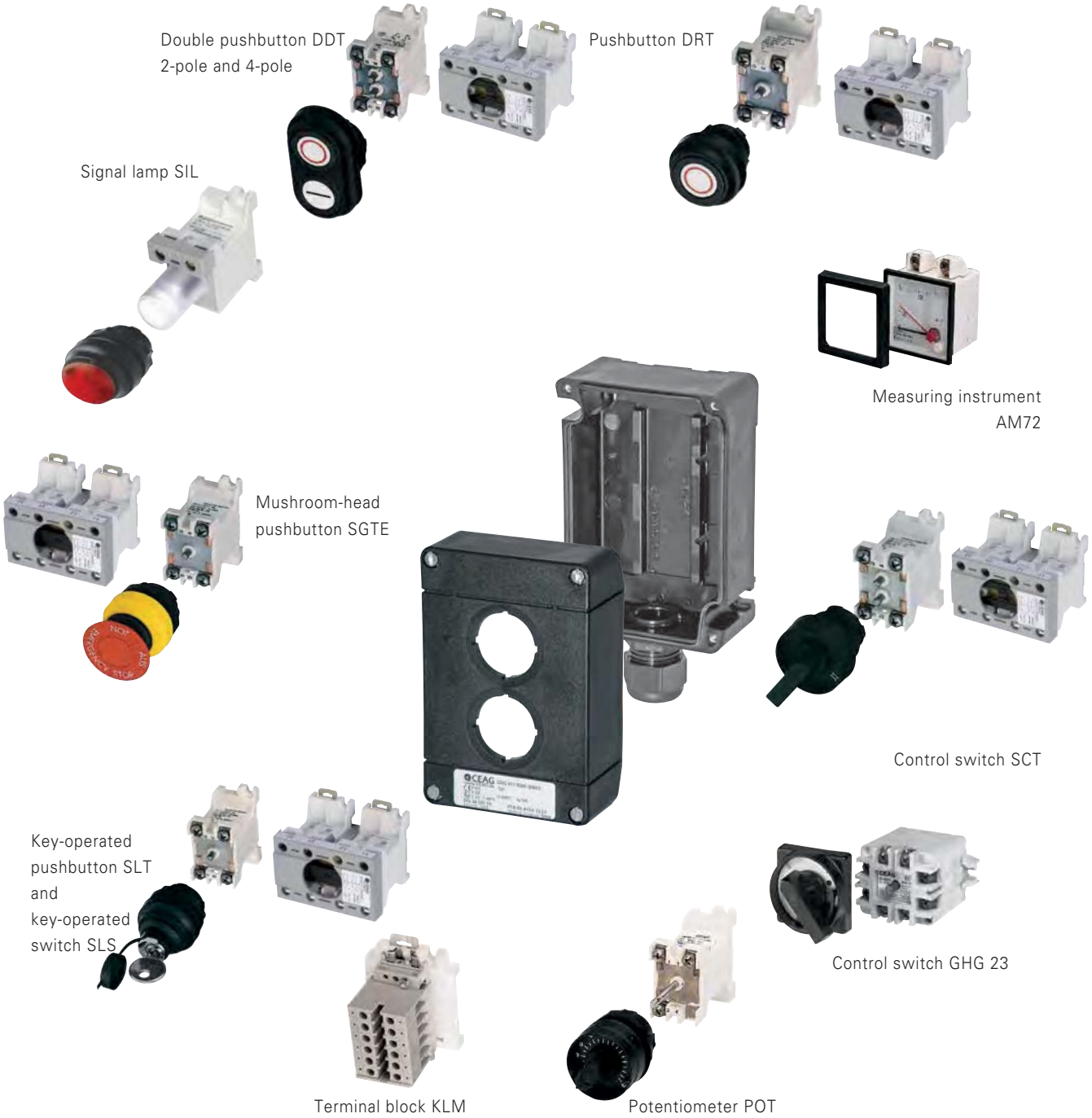
Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.



Features

- **Flat side walls**
- **Quick fixing for 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 2.4.36 pp.



For an easy selection of certified components two temperature information are provided:

1. **Operating temperature range**
   This defines the max. permitted temperature range of component in the installed state. This has to be considered when configuring
2. **Ambient temperature range**
   These temperature range defines the expected ambient temperature range for a fully planned equipment and is based on the experiences of configured devices at normal installation conditions. However, it must be observed in any case, the conditions of the type examination certificate. These temperatures are purely based on explosion protection. Mechanical and electrical function based on the installation situation (e.g. self-heating) have to be considered. For binding function ambient temperatures please refer to the product manual.

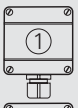
Order code for individual control units

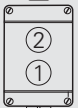
Individual control units can be defined by 4 groups of components:
1. Empty Enclosure
2. Components per mounting area
3. Accessories
4. Cable glands

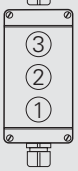
Code 1: Empty enclosure

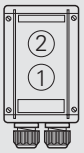
Code for enclosure



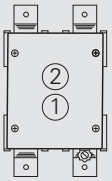


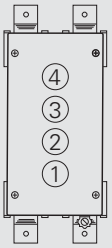




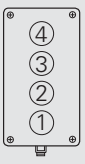






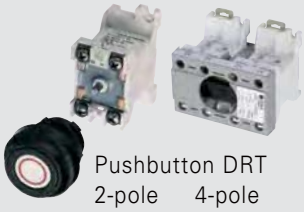






Code 2: Components per mounting area (max. 4)

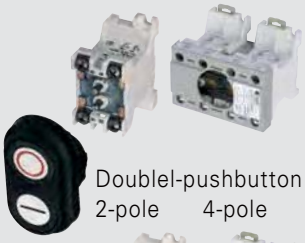
	A	C	D(1)	(D2)	E	F	
Mounting area 1 MA1							
Mounting area 2 MA2							
Mounting area 3 MA3							
Mounting area 4 MA4							



Pushbutton DRT
2-pole 4-pole



Signal lamp
SIL



Doublel-pushbutton DDT
2-pole 4-pole



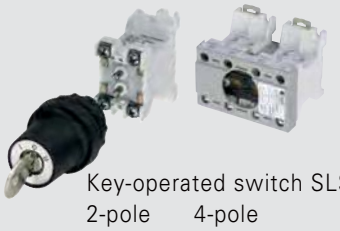
Potentiometer
POT



Key-operated pushbutton SLT
2-pole 4-pole



Control switch
Ex 23 Ex 29



Key-operated switch SLS
2-pole 4-pole



Measuring instrument
AM 45 AM 72



Mushroom-head pushbutton
SGTE SGT



Terminal block
KLM

Example: Enclosure Type 434,
Pushbutton (MA4),
Signal lamp (MA3)
Emergency stop
Mushroom head pushbutton (MA2)
Double pushbutton (MA1)

Code 1: 434..
Code 2 MA4: DRT 14 001
Code 2 MA3: SIL 1 10
Code 2 MA2 SGTE 13 1 1 2
Code 2 MA1: DDT15 001 007

Code 3 MA1: ZUB 19
Code 3 MA2: ZUB 19
Code 3 MA3: ZUB 02
Code 3 MA4: --
Code 4: GEH 1 GK M25 2

Code 3: Labels and padlocking facility

A ☐☐☐☐☐ B ☐..... C ☐☐☐☐☐ Mounting area 1 MA1

A ☐☐☐☐☐ B ☐..... C ☐☐☐☐☐ Mounting area 2 MA2

A ☐☐☐☐☐ B ☐..... C ☐☐☐☐☐ Mounting area 3 MA3

A ☐☐☐☐☐ B ☐..... C ☐☐☐☐☐ Mounting area 4 MA4



Label with holder
ZUB 20



Padlocking facility mushroom-head pushbutton ZUB 14



Padlocking facility with hammer
ZUB 05



Padlocking facility mushroom-head pushbutton ZUB 22



Padlocking facility double pushbutton
ZUB 17

Code 4: Cable entries and flanges

A ☐☐☐ B ☐ C ☐☐ D ☐☐☐ E ☐



Metal flange plate
FLM



Plastic cable gland GK



Plastic trumpet-shaped cable gland TR



Position for drilling/gland


Type 411 81


Type 411 82


Type 432


Type 434

4 Technical data

	Ex-control stations Type 41. and 43. for individual configuration
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 [1] Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 3117 [1]
IECEx Certificate of Conformity	IECEx BKI 04.0003 [1]
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6 [1]
Permissible ambient temperature	–20 °C up to +40 °C [1] –55 °C up to +55 °C (option)
Rated voltage	690 V AC
Rated current	16 A
Connecting terminals	2 x 4 mm²
Protection class	I
Degree of protection accd. to EN 60529	IP66 (standard)
Enclosure material	Polyamide
Enclosure colour	black
	Type 411 81
Cable glands/Gland plates/Enclosure drilling	Ex e cable glands max. 2 x M25; 2 x M20 thread
Dimensions (L x W x H)	85 x 85 x 77.5 mm
Weight (empty)	0.25 kg
Components arrangement	1 mounting area
	Type 411 82
Cable glands/Gland plates/Enclosure drilling	Ex e cable glands max. 2 x M25; 2 x M20 thread
Dimensions (L x W x H)	125 x 85 x 77.5 mm
Weight (empty)	0.35 kg
Components arrangement	2 mounting areas
	Type 411 83
Cable glands/Gland plates/Enclosure drilling	Ex e cable glands max. 2 x M25; 2 x M20 thread
Dimensions (L x W x H)	165 x 85 x 77.5 mm
Weight (empty)	0.45 kg
Components arrangement	3 mounting areas
	Type 432
Cable glands/Gland plates/Enclosure drilling	Ex e cable glands max. 2 x M25; 3 x M20 thread
Dimensions (L x W x H)	156 x 100 x 90 mm
Weight (empty)	0.47 kg
Components arrangement	2 mounting areas
	Type 434
Cable glands/Gland plates/Enclosure drilling	Ex e cable glands max. 2 x M25; 3 x M20 thread
Dimensions (L x W x H)	245 x 100 x 90 mm
Weight (empty)	0.70 kg
Components arrangement	4 mounting areas

[1] Data for ready configurated product


Type 434


Type 432


Type 411 82


Type 411 81

Ordering codes (Code 1)

1. Enclosure	2. Components arrangement/terminals				3. Labels/ padlocking facility	4. Cable glands
	Mounting area 1	Mounting area 2	Mounting area 3	Mounting area 4		
411 81[1]	X	–	–	–	X	X
411 82	X	X	–	–	X	X
411 83	X	X	X	–	X	X
432	X	X	–	–	X	X
434	X	X	X	X	X	X

Possible components (Code 1)

Component	Code	Component	Code
Pushbutton (2-pole or 4-pole[2])	DRT	Measuring instrument	AM72[2]
Double pushbutton (2-pole or 4-pole[2])	DDT	Measuring instrument	AM45
Key-operated pushbutton (2-pole or 4-pole[2])	SLT	Signal lamp	SIL
Key-operated switch (2-pole or 4-pole[2])	SLS	Potentiometer	POT
Control switch (2-pole or 4-pole[2])	SCT	Terminal block (4 mm^2)	KLM
Mushroom-head pushbutton (2-pole or 4-pole[2])	SGT	Blanking element	BLV
Control switch	GHG 23[3]		

[1] 4-pole component not possible

[2] 2 mounting areas are needed

[3] only for type 43., 2 mounting areas are needed



Type 411 81



Type 411 82

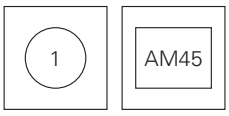


Type 432

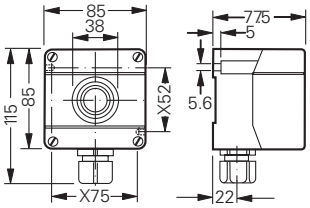


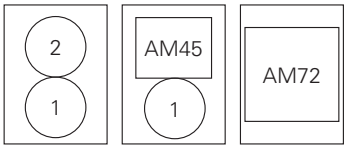
Type 434

4 Mounting areas | Dimension drawing

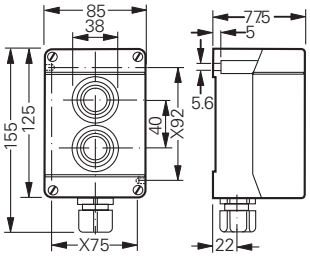


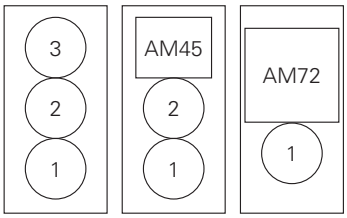
Type 411 81



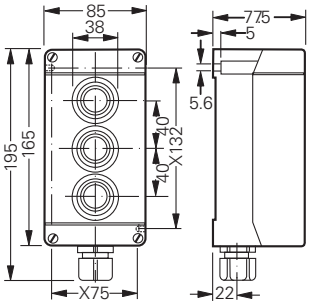


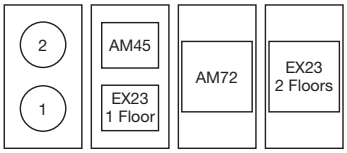
Type 411 82



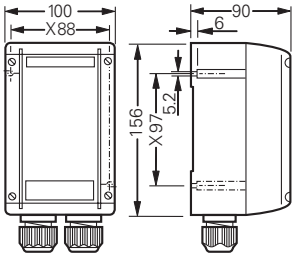


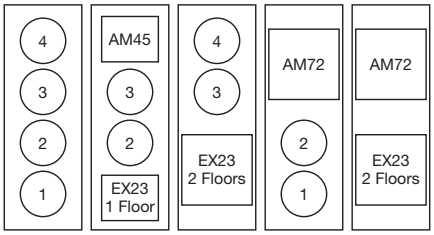
Type 411 83



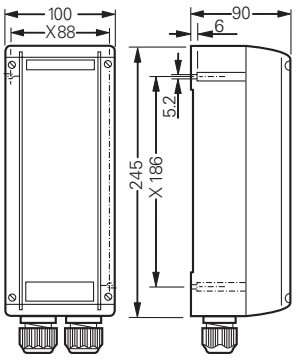


Type 432





Type 434



X = fixing dimension

Dimensions in mm


Type 414 82


Type 414 81


Type 413 85


Type 413 84

Technical data

	Ex-control stations type 413. and 414. for individual configuration
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ib m IIC T6 [1] Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 00 ATEX 3117 [1]
IECEx Certificate of Conformity	IECEx BKI 04.0003 [1]
Marking accd. to IECEx	Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6 [1]
Permissible ambient temperature	–20 °C up to +40 °C [1] –55 °C up to +55 °C (option)
Rated voltage	690 V AC
Rated current	16 A
Connecting terminals	see technical data for built-in components
PE-connecting terminals	2 x 4 mm²
Protection class	I
Degree of protection accd. to EN 60529	IP66 (standard)

	Type 413 84	Type 413 85
Cable glands/Gland plates/Enclosure drilling	max. 2 x M25; 2 x M20	max. 2 x M25; 2 x M20
Dimensions (L x W x H)	122 x 120 x 81 mm	122 x 120 x 81 mm
Weight (empty)	0.85 kg	1.45 kg
Enclosure material	cast aluminium-silicon (AlSi)	cast aluminium-silicon (AlSi)
Enclosure colour	grey RAL 7031	grey RAL 7031
Components arrangement	2 mounting areas	4 mounting areas

	Type 414 81	Type 414 82
Cable glands/Gland plates/Enclosure drilling	max. 3 x Ø 21 for cable gland M20 max. 2 x ø 25.5 for cable gland M25	max. 4 x Ø 21 for cable gland M20 max. 2 x Ø 25.5 for cable gland M25
Dimensions (L x W x H)	166 x 140 x 76 mm	286 x 140 x 76 mm
Weight (empty)	1.40 kg	2.10 kg
Enclosure material	stainless steel AISI 316 L	stainless steel AISI 316 L
Enclosure colour	polished	polished
Components arrangement	2 mounting areas	4 mounting areas

[1] Data for ready configurated product



Type 413 84



Type 413 85



Type 414 81



Type 414 82

Ordering codes (Code 1)

1. Enclosure	2. Components arrangement/terminals				3. Labels/ padlocking facility	4. Cable glands
	Mounting area 1	Mounting area 2	Mounting area 3	Mounting area 4		
413 84	X	X	–	–	X	X
413 85	X	X	X	X	X	X
414 81	X	X	–	–	X	X
414 82	X	X	X	X	X	X

Possible components (Code 1)

Component	Code	Component	Code
Pushbutton (2-pole or 4-pole[1)])	DRT	Measuring instrument	AM72[1)]
Double pushbutton (2-pole or 4-pole[1)])	DDT	Measuring instrument	AM45
Key-operated pushbutton (2-pole or 4-pole[1)])	SLT	Signal lamp	SIL
Key-operated switch (2-pole or 4-pole[1)])	SLS	Potentiometer	POT
Control switch (2-pole or 4-pole[1)])	SCT	Terminal block (4 mm^2)	KLM
Mushroom-head pushbutton (2-pole or 4-pole[1)])	SGT	Blanking element	BLV
Control switch	GHG 23[1)]		

[1)] 2 mounting areas are needed



Type 414 82



Type 414 81

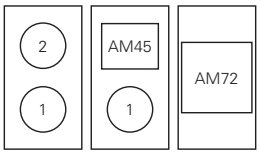


Type 413 85

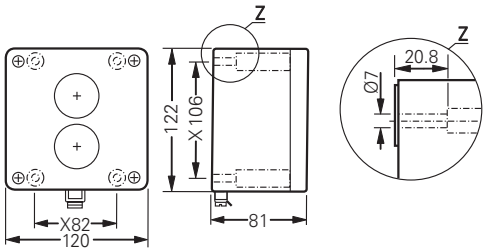


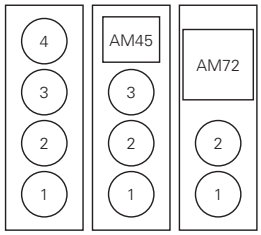
Type 413 84

Mounting areas I Dimension drawing

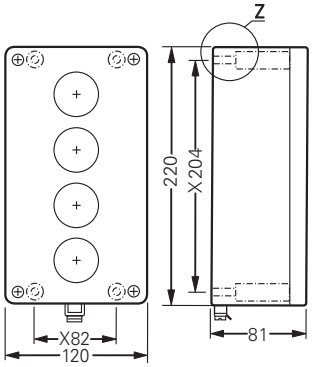


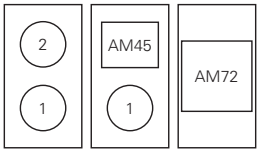
Type 413 84



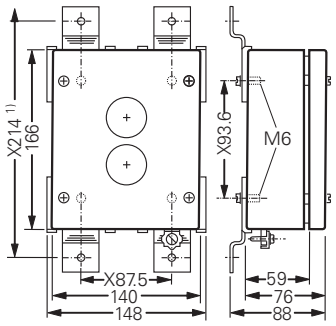


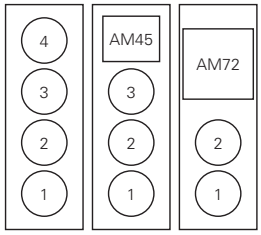
Type 413 85



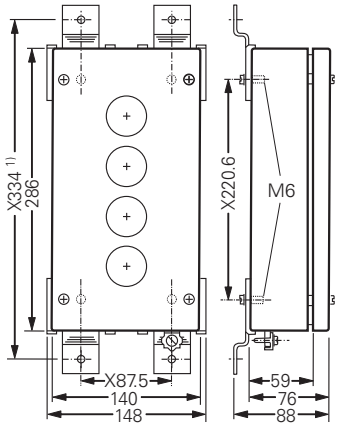


Type 414 81





Type 414 82



X = fixing dimension

Dimensions in mm



Type 444 23



Type 448 23



Type 449 23



Type 447 23

4 Technical data

	Ex-control stations Typ 444, 448, 449, and 447 for individual configuration
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de ia/ib m [ia/ib] IIC T6 [1)] Ⓔx II 2 D Ex tD A21 IP66/IP65 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044 [1)]
IECEx Certificate of Conformity	IECEx BKI 07.0023 [1)]
Marking accd. to IECEx	Ex de ia/ib m [ia/ib] IIC T4 .. T6 [1)] Ex tD A21 IP66 T80 °C
Permissible ambient temperature	–20 °C up to +40 °C [1)] –55 °C up to +55 °C (option)
Rated voltage	690 V AC
Rated current	40 A
Connecting terminals	see technical data for built-in components
PE-Connecting terminals	2 x 4 mm²
Protection class	I
Degree of protection accd. to EN 60529	IP66 (standard)
Cable glands/Gland plates/Enclosure drilling	as ordered accd. to manufacturer's specification
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black

	Type 444 23
Connecting terminals	max. 20 terminals UT 4
Dimensions (L x W x H)	271 x 134 x 136 mm
Weight (empty)	1.5 kg with mounting framework
Components arrangement	6 mounting areas

	Type 448 23
Connecting terminals	max. 30 terminals UT 4
Dimensions (L x W x H)	271 x 271 x 136 mm
Weight (empty)	2.5 kg with mounting framework
Components arrangement	distance 40 mm max. 18 mounting areas distance 50 mm max. 15 mounting areas distance 60 mm max. 12 mounting areas

	Type 449 23
Connecting terminals	max. 60 terminals UT 4
Dimensions (L x W x H)	544 x 271 x 136 mm
Weight (empty)	4.5 kg with mounting framework
Components arrangement	distance 40 mm max. 36 mounting areas distance 50 mm max. 30 mounting areas distance 60 mm max. 24 mounting areas

	Type 447 23
Connecting terminals	max. 90 terminals UT 4
Dimensions (L x W x H)	817 x 271 x 136 mm
Weight (empty)	6.5 kg with mounting framework
Components arrangement	distance 40 mm max. 64 mounting areas distance 50 mm max. 45 mounting areas distance 60 mm max. 36 mounting areas

[1)] Data for ready configurated product



Type 447 23



Type 449 23



Type 448 23



Type 444 23

Ordering codes (Code 1)

1. Enclosure	2. Components arrangement/terminals				3. Labels/ padlocking facility	4. Cable glands
	Mounting 1 ... 6	Mounting 7 ... 18	Mounting 19 ... 27	Mounting 37 ... 64		
444 23	X	–	–	–	X	X
448 23	X	X	–	–	X	X
449 23	X	X	X	–	X	X
447 23	X	X	X	X	X	X

Possible components (Code 1)

Component	Code	Component	Code
Pushbutton (2-pole or 4-pole[2])	DRT	Measuring instrument	AM72[1]
Double pushbutton (2-pole or 4-pole[2])	DDT	Measuring instrument	AM45
Key-operated pushbutton (2-pole or 4-pole[2])	SLT	Signal lamp	SIL
Key-operated switch (2-pole or 4-pole[2])	SLS	Potentiometer	POT
Control switch (2-pole or 4-pole[2])	SCT	Terminal block (4 mm²)	KLM ... A[2]
Mushroom-head pushbutton (2-pole or 4-pole[2])	SGT	Terminal block (4 mm²)	KLM ... B
Control switch	GHG 23[1]	Blanking element	BLV

[1] 2 mounting areas are needed

[2] Serial terminals and PE-Terminal are mounted on a rail below the hinged frame



Type 444 23



Type 448 23

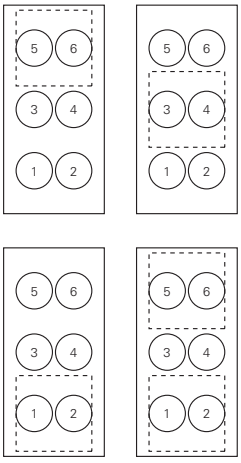


Type 449 23

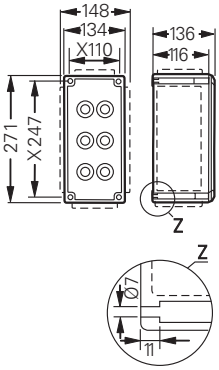


Type 447 23

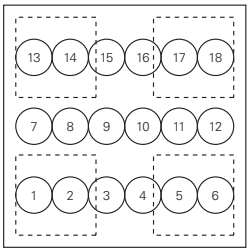
4 Mounting areas I Dimension drawing



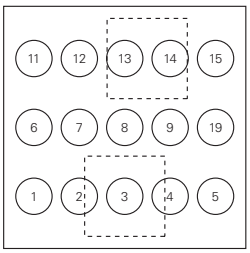
Distance between centres 40, 50 and 60 mm for positioning of built-in components



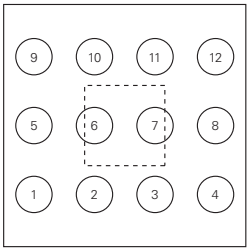
Type 444 23



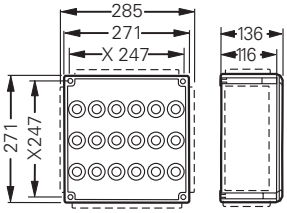
Distance between centres 40 mm



Distance between centres 50 mm



Distance between centres 60 mm



Type 448 23

X = fixing dimension

= mounting space for switch, pushbutton (2-pole) or signal lamp

= mounting space for switch, pushbutton (4-pole) ampere- or voltmeter

Dimensions in mm



Type 447 23



Type 449 23

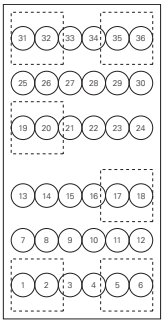


Type 448 23

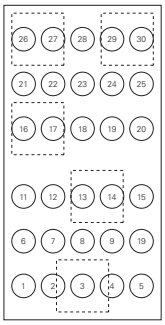


Type 444 23

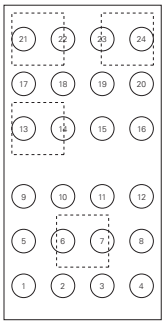
Mounting areas I Dimension drawing



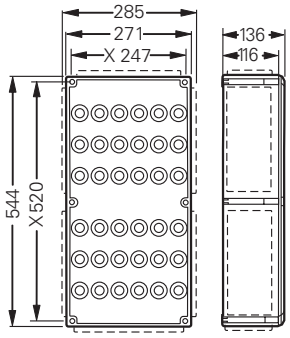
Distance between centres 40 mm



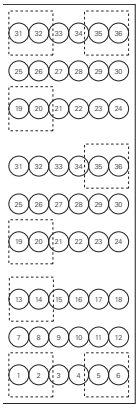
Distance between centres 50 mm



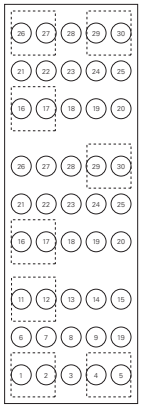
Distance between centres 60 mm



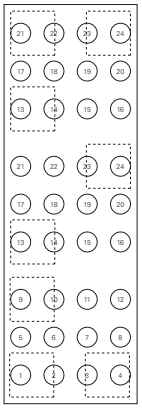
Type 449 23



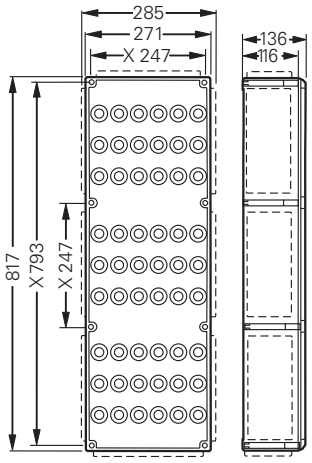
Distance between centres 40 mm



Distance between centres 50 mm



Distance between centres 60 mm



Type 447 23

X = fixing dimension

Dimensions in mm



Type 443 34

4 Technical data

	Ex-control stations Typ 443 34 for individual configuration
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ia/ib m IIC T6 [1] Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 01 ATEX 1115 [1]
Permissible ambient temperature	–20 °C up to +40 °C [1] –55 °C up to +55 °C (option)
Rated voltage	690 V AC
Rated current	63 A
Connecting terminals	as ordered accd. to manufacturer's specification
PE-Connecting terminals	2 x 4 mm²
Protection class	I
Degree of protection accd. to EN 60529	IP66
Cable glands/Gland plates/Enclosure drilling	as ordered accd. to manufacturer's specification
Dimensions (L x W x H)	280 x 180 x 90 mm
Weight	2.3 kg with mounting framework
Enclosure material	cast aluminium-silicon (AlSi)
Enclosure colour	grey RAL 7031
Components arrangement	max. 9 mounting areas

[1] Data for ready configurated product

Ordering codes (Code 1)

1. Enclosure	2. Components arrangement/terminals			3. Labels/ padlocking facility	4. Cable glands
	Mounting 1 ... 3	Mounting 4 ... 6	Mounting 7 ... 9		
443 34	X	X	X	X	X

Possible components (Code 1)

Component	Code	Component	Code
Pushbutton (2-pole or 4-pole[2])	DRT	Measuring instrument	AM72[1]
Double pushbutton (2-pole or 4-pole[2])	DDT	Measuring instrument	AM45
Key-operated pushbutton (2-pole or 4-pole[2])	SLT	Signal lamp	SIL
Key-operated switch (2-pole or 4-pole[2])	SLS	Potentiometer	POT
Control switch (2-pole or 4-pole[2])	SCT	Terminal block (4 mm²)	KLM ... A[2]
Mushroom-head pushbutton (2-pole or 4-pole[2])	SGT	Terminal block (4 mm²)	KLM ... B
Control switch	GHG 23[1]	Blanking element	BLV

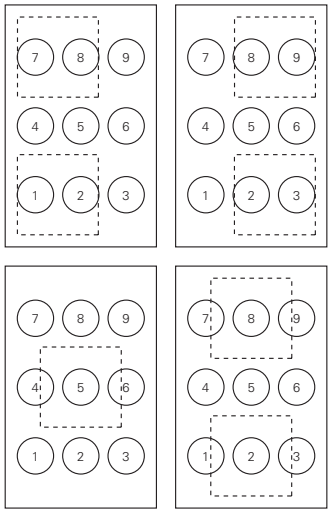
[1] 2 mounting areas are needed

[2] Serial terminals and PE-Terminal are mounted on a rail below the hinged frame

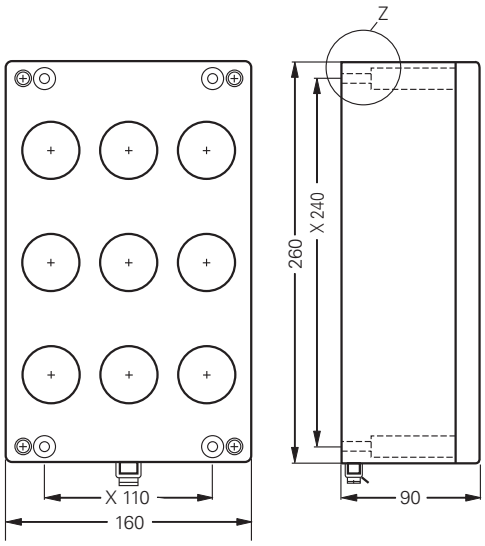


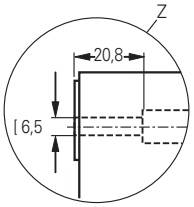
Type 443 34

Mounting areas I Dimension drawing



Distance between centres 40, 50 and 60 mm for positioning of built-in components





Type 443 34

X = fixing dimension

= mounting space for switch, pushbutton (2-pole) or signal lamp

= mounting space for switch, pushbutton (4-pole) ampere- or voltmeter

Dimensions in mm



Type 444 33



Type 448 33



Type 449 33



Type 447 33

4 Technical data

	Ex-control stations Typ 444, 448, 449, and 447 stainless steel for individual configuration
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de ia/ib m [ia/ib] IIC T6 [1] Ⓔx II 2 D Ex tD A21 IP66/IP65 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044 [1]
IECEx Certificate of Conformity	IECEx BKI 07.0023 [1]
Marking accd. to IECEx	Ex de ia/ib m [ia/ib] IIC T4 .. T6 [1] Ex tD A21 IP66 T80 °C
Permissible ambient temperature	–20 °C up to +40 °C [1] –55 °C up to +55 °C (option)
Rated voltage	690 V AC
Rated current	40 A
Connecting terminals	see technical data for built-in components
PE-Connecting terminals	2 x 4 mm2
Protection class	I
Degree of protection accd. to EN 60529	IP66 (standard)
Cable glands/Gland plates/Enclosure drilling	as ordered accd. to manufacturer's specification
Enclosure material	Stainless steel AISI 316 L
Enclosure colour	polished

	Type 444 33
Connecting terminals	max. 20 terminals UT 4
Dimensions (L x W x H)	312.5 x 175 x 135 mm
Weight (empty)	3.5 kg with mounting framework
Components arrangement	6 mounting areas

	Type 448 33
Connecting terminals	max. 30 terminals UT 4
Dimensions (L x W x H)	312.5 x 312.5 x 135 mm
Weight (empty)	7.5 kg with mounting framework
Components arrangement	distance 40 mm max. 18 mounting areas distance 50 mm max. 15 mounting areas distance 60 mm max. 12 mounting areas

	Type 449 33
Connecting terminals	max. 60 terminals UT 4
Dimensions (L x W x H)	627 x 312.5 x 135 mm
Weight (empty)	11.5 kg with mounting framework
Components arrangement	distance 40 mm max. 36 mounting areas distance 50 mm max. 30 mounting areas distance 60 mm max. 24 mounting areas

	Type 447 33
Connecting terminals	max. 90 terminals UT 4
Dimensions (L x W x H)	941.5 x 312.5 x 135 mm
Weight (empty)	16.5 kg with mounting framework
Components arrangement	distance 40 mm max. 54 mounting areas distance 50 mm max. 45 mounting areas distance 60 mm max. 36 mounting areas

[1] Data for ready configurated product



Type 447 33



Type 449 33



Type 448 33



Type 444 33

Ordering codes (Code 1)

1. Enclosure	2. Components arrangement/terminals				3. Labels/ padlocking facility	4. Cable glands
	Mounting 1 ... 6	Mounting 7 ... 18	Mounting 19 ... 27	Mounting 37 ... 64		
444 33	X	–	–	–	X	X
448 33	X	X	–	–	X	X
449 33	X	X	X	–	X	X
447 33	X	X	X	X	X	X

Possible components (Code 1)

Component	Code	Component	Code
Pushbutton (2-pole or 4-pole[2])	DRT	Measuring instrument	AM72[1]
Double pushbutton (2-pole or 4-pole[2])	DDT	Measuring instrument	AM45
Key-operated pushbutton (2-pole or 4-pole[2])	SLT	Signal lamp	SIL
Key-operated switch (2-pole or 4-pole[2])	SLS	Potentiometer	POT
Control switch (2-pole or 4-pole[2])	SCT	Terminal block (4 mm²)	KLM ... A[2]
Mushroom-head pushbutton (2-pole or 4-pole[2])	SGT	Terminal block (4 mm²)	KLM ... B
Control switch	GHG 23[1]	Blanking element	BLV

[1] 2 mounting areas are needed

[2] Serial terminals and PE-Terminal are mounted on a rail below the hinged frame



Type 444 33



Type 448 33

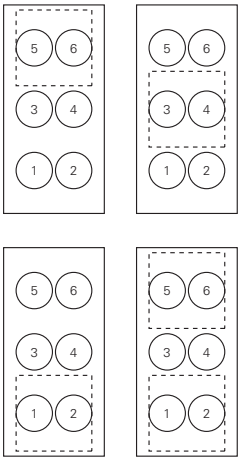


Type 449 33

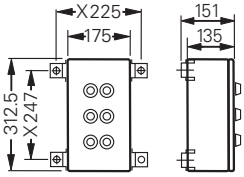


Type 447 33

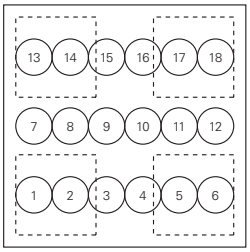
4 Mounting area I Dimension drawing



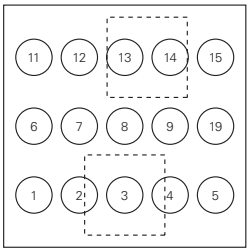
Distance between centres 40, 50 and 60 mm



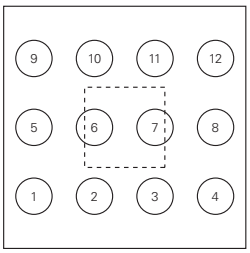
Type 444 33



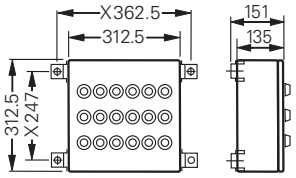
Distance between centres 40 mm



Distance between centres 50 mm



Distance between centres 60 mm



Type 448 33

X = fixing dimension

= mounting space for switch, pushbutton (2-pole) or signal lamp

= mounting space for switch, pushbutton (4-pole) ampere- or voltmeter

Dimensions in mm



Type 447 33



Type 449 33

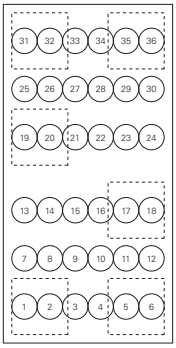


Type 448 33

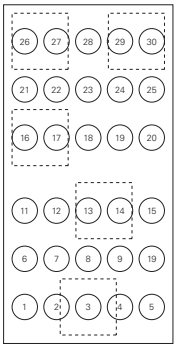


Type 444 33

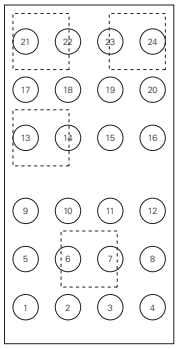
Mounting area I Dimension drawing



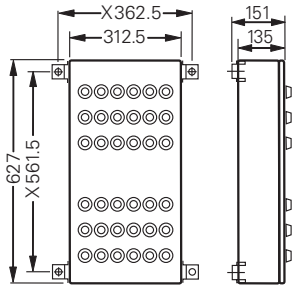
Distance between centres 40 mm



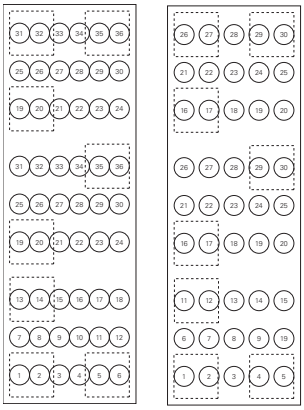
Distance between centres 50 mm



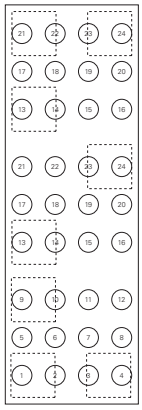
Distance between centres 60 mm



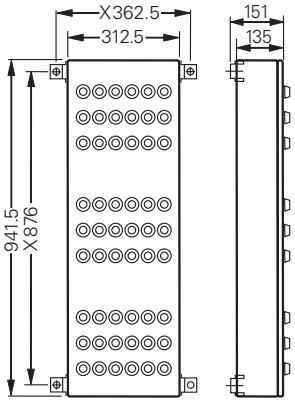
Type 449 33



Distance between centres 40 mm 50 mm



Distance between centres 60 mm



Type 447 33

X = fixing dimension

Dimensions in mm



DRT 1 x 2-pole



DRT 4 x 1-pole



DDT 2 x 1-pole



DDT 2 x 2-pole

4 Technical data

	Ex-pushbutton DRT and double pushbutton DDT
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx IBE 14.0005U
Marking accd. to IECEx	Ex de IIC Gb Ex de IIB Gb Ex de I Mb
Operating temperature	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Application temperature[1)]	–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)
Rated voltage	500 V AC
Rated current	16 A
Rated current with gold contact points	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A
Degree of protection accd. to EN 60529	IP66 (installed condition)
Type of mounting	DIN rail mounting
Enclosure colour	grey
Gasket material	Neoprene (standard), Fluorsilikon or Viton on request

	2-pole version
Connecting terminals	2 x 2.5 mm²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

	4-pole version[2)]
Connecting terminals	4 x 2.5 mm²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.4.34/35.

[2)] The 4-pole pushbutton needs two mounting areas. The actuator will be in the middle of the two mounting areas.



DDT 2 x 2-pole



DDT 2 x 1-pole

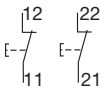
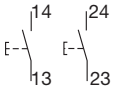
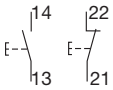
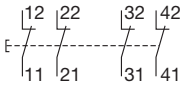
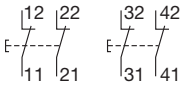
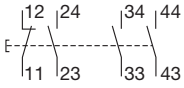
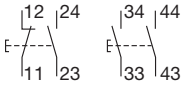
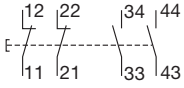
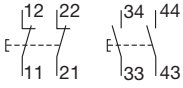
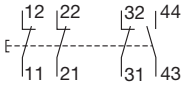
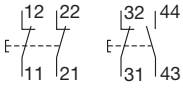
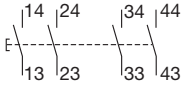
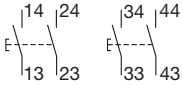


DRT 4 x 1-pole



DRT 1 x 2-pole

Ordering code for component (Code 2)

Code	Component				Code
A	Pushbutton, for enclosure mounting				**DRT**
	Double pushbutton, for enclosure mounting				**DDT**
Code	**Circuit**	**Contacts**		**Code**	
		DRT	**DDT**	**silver contact points**	**gold contact points**
C	2 NC			13	16
	2 NO			**14**	**17**
	1 NO + 1 NC			**15**	**18**
	4 NC			**20**	**25**
	1 NC + 3 NO			**21**	**26**
	2 NC + 2 NO			**22**	**27**
	3 NC + 1 NO			**23**	**28**
	4 NO			**24**	**29**



DRT 1 x 2-pole



DRT 4 x 1-pole



DDT 2 x 1-pole



DDT 2 x 2-pole

4

Ordering code for component (Code 2)

Code	Label	Inscription	Code	Inscription	Code
D1, D2		0, I, Start, Stop	001	0	002
		I	003	I I	004
		☼	005	STOP	006
		START	007	emergency stop	008
		LANGSAM	009	SCHNELL	010
		EMERG.STOP	011	➔	012
		ARRET	014	MARCHE	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 rot	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



DDT 2 x 2-pole



DDT 2 x 1-pole



DRT 4 x 1-pole



DRT 1 x 2-pole

Ordering code for component (Code 2)

Content	Circuit	Code	Ordering code				
			A	B	C	D1	D2
Pushbutton with silver contact points							
Version with 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	---
4 NC	4 NC	20	DRT	0	20	001	---
3 NO + 1 NC	3 NO + 1 NC	21	DRT	0	21	001	---
2 NO + 2 NC	2 NO + 2 NC	22	DRT	0	22	001	---
1 NC + 3 NO	1 NC + 3 NO	23	DRT	0	23	001	---
4 NO	4 NO	24	DRT	0	24	001	---
Double pushbutton with gold contact points							
Version with 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
4 NC	4 NC	25	DRT	0	25	001	001
3 NO + 1 NC	3 NO + 1 NC	26	DRT	0	26	001	001
2 NO + 2 NC	2 NO + 2 NC	27	DRT	0	27	001	001
1 NC + 3 NO	1 NC + 3 NO	28	DRT	0	28	001	001
4 NO	4 NO	29	DRT	0	29	001	001



SLT 1 x 2-pole



SLT 1 x 4-pole

Technical data

	Ex-key-operated pushbutton SLT
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx IBE 14.0005U
Marking accd. to IECEx	Ex de IIC Gb / Ex de IIB Gb / Ex de I Mb
Operating temperature range	–45 °C up to +80 °C (IIC) / –60 °C up to +80 °C (IIB)
Application temperature[1)]	–45 °C up to +55 °C (IIC) / –60 °C up to +55 °C (IIB)
Rated voltage	500 V AC
Rated current	16 A
Rated current with gold contact points	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A / U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A / U_e 220 V / I_e 1 A
Degree of protection accd. to EN 60529	IP66 (installed condition)
Type of mounting	DIN rail mounting
Enclosure colour	grey
Gasket material	Neoprene (standard), Fluoric Silicone or Viton on request
Latch point	CEAG 1 (others on request)

	2-pole version
Connecting terminals	2 x 2.5 mm²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

	4-pole version[1)]
Connecting terminals	4 x 2.5 mm²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.4.34/35.

[2)] The 4-pole pushbutton needs two mounting areas. The actuator wil be in the middle of the two mounting areas.

Ordering code for component (Code 2)

Content	Circuit	Code	Ordering code A	B	C	D1	D2
Key-operated pushbutton with silver contact points Version with contact function: lockable/removable/lockable/removable (Code 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	---
2 NO + 2 NC	2 NO + 2 NC	22	SLT	0	22	10	---
4 NC	4 NC	20	SLT	0	20	10	---
4 NO	4 NO	24	SLT	0	24	10	---
3 NO + 1 NC	3 NO + 1 NC	21	SLT	0	21	10	---
1 NO + 3 NC	1 NO + 3 NC	23	SLT	0	23	10	---
Key-operated pushbutton with gold contact points Version with contact function: lockable/removable/lockable/removable (Code 10)							
2 NO + 2 NC	2 NO + 2 NC	27	SLT	0	27	10	001
4 NC	4 NC	25	SLT	0	25	10	001
4 NO	4 NO	29	SLT	0	29	10	001
3 NO + 1 NC	3 NO + 1 NC	26	SLT	0	26	10	001
1 NO + 3 NC	1 NO + 3 NC	28	SLT	0	28	10	001



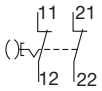
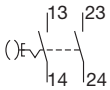
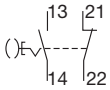
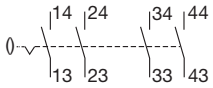
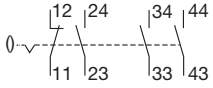
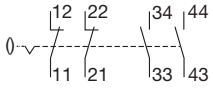
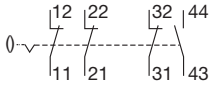
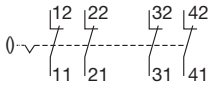
SLT 1 x 4-pole



SLT 1 x 2-pole

Ordering code for component (Code 2)

Code	Component		Code
A	Key-operated pushbutton		**SLT**

Code	Circuit	Contacts	Code	
			silver contact points	gold contact points
C	2 NC		13	16
	2 NO		**14**	**17**
	1 NO + 1 NC		**15**	**18**
	4 NC		**20**	**25**
	1 NC + 3 NO		**21**	**26**
	2 NC + 2 NO		**22**	**27**
	3 NC + 1 NO		**23**	**28**
	4 NO		**24**	**29**

Code	Function	Pushbutton not pressed	Key	Pushbutton pressed	Key	Code
D		lockable	removable	lockable	removable	10
		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	auto lockable	removable	15



SLS 1 x 2-pole



SLS 1 x 4-pole

4 Technical data

	Key-operated switch SLS
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx IBE 14.0005U
Marking accd. to IECEx	Ex de IIC Gb Ex de IIB Gb Ex de I Mb
Operating temperature range	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Application temperature[1)]	–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)
Rated voltage	500 V AC
Rated current	16 A
Rated current with gold contact points	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 60 V / I_e 0.8 A U_e 110 V / I_e 0.5 A
Switching system	engaging – engaging – engaging
Degree of protection accd. to EN 60529	IP66 (installed condition)
Type of mounting	DIN rail mounting
Enclosure colour	grey
Latch point	CEAG 1 (others on request)

	2-pole version
Connecting terminals	2 x 2.5 mm²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

	4-pole version[1)]
Connecting terminals	4 x 2.5 mm²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.4.34/35.

[2)] The 4-pole pushbutton needs two mounting areas. The actuator will be in the middle of the two mounting areas.



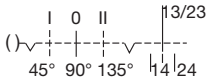
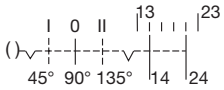
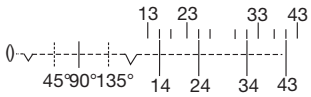
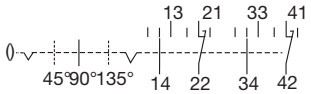
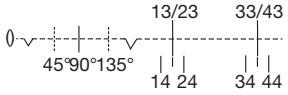
SLS 1 x 4-pole



SLS 1 x 2-pole

Ordering code for component (Code 2)

Code	Component		Code
A	Key-switch		**SLS**

Code	Circuit	Contacts	Code	
			silver contact points	gold contact points
	2 NO		**04**	**14**
	2 NO		**18**	**18**
	4 NO		**29**	**25**
	2 NC + 2 NO		**26**	**26**
	4 NO		**27**	**27**

Code	Contact label	Inscription	Code
D		I 0 II	01
		Fern 0 Ort	02
		Hand 0 Auto	03

Example for ordering code (Code 2)

Contact system	Ordering code		
	A	**C**	**D**
Key switch with silver contact points and label „I 0 II			
04	SLS 5	04	01
05	SLS 5	05	01


SGTE 1 x 2-pole


SGTE 1 x 4-pole


SGT 1 x 2-pole


SGT 1 x 4-pole

4 Technical data

	Ex-mushroom-head pushbutton (emergency stop „SGTE“ and normal version „SGT“)
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx IBE 14.0005U
Marking accd. to IECEx	Ex de IIC Gb Ex de IIB Gb Ex de I Mb
Operating temperature range	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Application temperature[1)]	–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)
Rated voltage	500 V AC
Rated current	16 A
Rated current with gold contact points	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A
Degree of protection accd. to EN 60529	IP66 (installed condition)
Type of mounting	DIN rail mounting
Enclosure colour	grey
Gasket material	Neoprene (standard), Fluoric Silicone or Viton on request

	2-pole version
Connecting terminals	2 x 2.5 mm²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

	4-pole version
Connecting terminals	4 x 2.5 mm²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.4.34/35.

[2)] The 4-pole pushbutton needs two mounting areas.
The actuator will be in the middle of the two mounting areas.
The pushbutton „Emergency Stop“ will be equipped with a black plate in the centre of the pushbutton actuator.



SGT 1 x 4-pole



SGT 1 x 2-pole



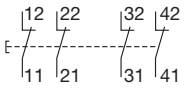
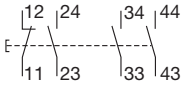
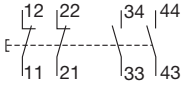
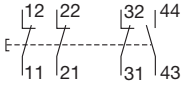
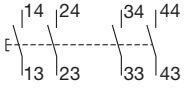
SGTE 1 x 4-pole



SGTE 1 x 2-pole

Ordering code for component (Code 2)

Code	Component	Code
A	Mushroom-head pushbutton	**SGT**
	Mushroom-head pushbutton (emergency stop)	**SGTE**

Code	Circuit	Contacts	Code	
			silver contact points	gold contact points
C	2 NC		13	16
	2 NO		14	17
	1 NO + 1 NC		15	18
	4 NC		20	25
	1 NC + 3 NO		21	26
	2 NC + 2 NO		22	27
	3 NC + 1 NO		23	28
	4 NO		24	29


SGTE 1 x 2-pole


SGTE 1 x 4-pole


SGT 1 x 2-pole


SGT 1 x 4-pole

Ordering code for component (Code 2)

Code	Label	Inscription	Code	Inscription	Code
D		emergency stop (German - Englisch)[1]	1	0	002
		emergency stop (German - French)[1]	4	I I	004
		0, I, START, STOP	01	STOP	006
		0	02	emergency stop	008
		I	03	SCHNELL	010
		I I	04	_	012
		☼	05	MARCHE	015
		STOP	06	AB	017
		START	07	Neutral green	019
		LANGSAM	09	UP	024
		SCHNELL	10	ZU	026
		_	12	OFF	028
		ARRET	14	-	031
		MARCHE	15	Neutral yellow	034
		0, I, Arret, Marche	20	AUS	037
		UP	24	HAND	050
		DOWN	25	HEBEN	052
		ZU	26	RECHTS	054
		ON	27	SLOW	056
		OFF	28	OPEN	058
		+	**30**		
		-	**31**		

Code	Mushroom head inscription	Colour	Code
E		red	1
		yellow[2]	2
		black[2]	3

pushbutton

Code	Function	released	engaged	unlocking	Code
F		not lockable	not lockable	n/a (pushbutton function)	1[2]
		not lockable	lockable	hand released	2
		not lockable	lockable	key released	3

1) only SGTE

2) only SGT



SGT 1 x 4-pole



SGT 1 x 2-pole



SGTE 1 x 4-pole



SGTE 1 x 2-pole

Ordering code for component (Code 2)

Circuit	Ordering code				
	A	C	D	E	F
EMERGENCY STOP mushroom-head pushbutton red, with silver contact points Version with inscription D/E, hand released					
2 NC	SGTE 0	13	1	1	2
2 NO	SGTE 0	14	1	1	2
1 NO + 1 NC	SGTE 0	15	1	1	2
2 NO + 2 NC	SGTE 0	22	1	1	2
4 NC	SGTE 0	20	1	1	2
4 NO	SGTE 0	24	1	1	2
3 NO + 1 NC	SGTE 0	21	1	1	2
1 NO + 3 NC	SGTE 0	23	1	1	2
Mushroom-head pushbutton with silver contact points, without locking, mushroom head, black Version with standard label (0, I, START, STOP)					
2 NC	SGT 0	13	01	3	1
2 NO	SGT 0	14	01	3	1
1 NO + 1 NC	SGT 0	15	01	3	1
2 NO + 2 NC	SGT 0	22	01	3	1
4 NC	SGT 0	20	01	3	1
4 NO	SGT 0	24	01	3	1
3 NO + 1 NC	SGT 0	21	01	3	1
1 NO + 3 NC	SGT 0	23	01	3	1



SCT 1 x 2-pole



SCT 1 x 4-pole

4 Technical data

	Ex-Mini-control switch SCT
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx IBE 14.0005U
Marking accd. to IECEx	Ex de IIC Gb Ex de IIB Gb Ex de I Mb
Operating temperature range	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Application temperature[1)]	–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)
Rated voltage	500 V AC
Rated current	16 A
Rated current with gold contact points	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A
Degree of protection accd. to EN 60529	IP66 (installed condition)
Type of mounting	DIN rail mounting
Enclosure colour	grey

	2-pole version
Connecting terminals	2 x 2.5 mm²
Dimensions in mm (L x W x H)	59 x 31 x 45
Weight	0.15 kg

	4-pole version1)
Connecting terminals	4 x 2.5 mm²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.4.34/35.

[2)] The 4-pole pushbutton needs two mounting areas. The actuator will be in the middle of the two mounting areas.



SCT 1 x 4-pole



SCT 1 x 2-pole

Ordering code for component (Code 2) Code A - C - D - E

Code	Component			Ordering code
A	Mini Control switch			**SCT**
Code	**Switching system**	**Version**		**Code**
C	4	spring – engaging – spring		4
	5	engaging – engaging – engaging		5
	6	engaging – engaging		6
	7	spring – engaging – engaging		7
	8	engaging – engaging – spring		8
	9	engaging – spring		9



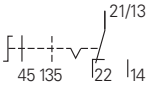
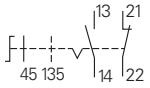
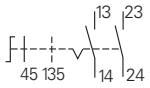
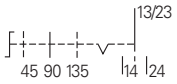
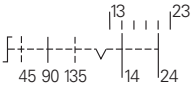
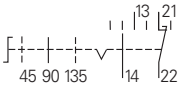
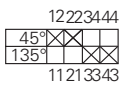
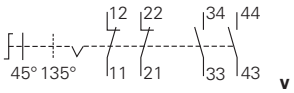
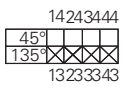
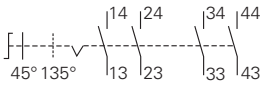
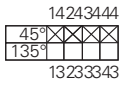
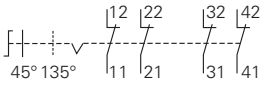
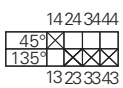
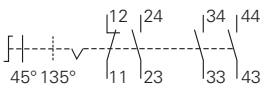
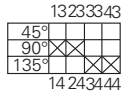
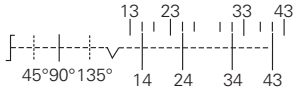
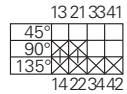
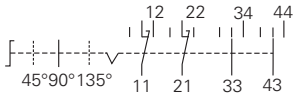
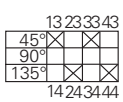
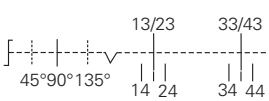
SCT 1 x 2-pole



SCT 1 x 4-pole

4

Ordering code for component (Code 2) Code A - C - D - E

Code	Circuit	Contacts	Code silver contact points	Code gold contact points
D			01	**11**
			02	**12**
			03	**13**
			04	**14**
			05	**15**
			**07**	**17**
		 v	**22**	**32**
	 v		**23**	**33**
			**21**	**31**
			**26**	**36**
			**25**	**35**
			**27**	**37**
			**24**	**34**



SCT 1 x 4-pole



SCT 1 x 2-pole

Ordering code for component (Code 2)

Code	Inscription			Code	Inscription			Code
E	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
	Entriegelt	0	Verriegelt	11	HEBEN		SENKEN	28
	OUT	OF	HAND	12	OFF		ON	29
	LOCAL	REMOTE	AUTO	13	AUS		EIN	30

Other lables on request

Example for ordering code (Code 2)

Circuit	Switching system	Contacts	Ordering code			
		Code	A	C	D	E
Control switch with silver contact points						
Switch can be locked in all positions						
I II	6	01	SCT	6	01 or 21	02
0 I	6	03	SCT	6	03 or 23	01
I II	6	02	SCT	6	02 or 22	02
I 0 II	4	04	SCT	4	04 or 24	07
I 0 II	5	05	SCT	5	05 or 26	07
0 I	7	07	SCT	7	07 or 27	01



Potentiometer

4 Technical data

	Ex-potentiometer POT
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx IBE 14.0005U
Marking accd. to IECEx	Ex de IIC Gb Ex de IIB Gb Ex de I Mb
Operating temperature range	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Application temperature[1)]	–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)
Rated voltage	up to 250 V
Power consumption (VA)	max. 1 W
Resistance range	100 – 10000 Ohm
Tolerance	± 20 %
Connecting terminals	2 x 2.5 mm²
Degree of protection accd. to EN 60529	IP66 (installed condition)
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	DIN rail mounting
Enclosure colour	grey
Angle of rotation	270°
Scale	0 - 100 %

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.4.34/35.

Ordering code for component (Code 2) - code A - C

Code	Component	Code
A	Potentiometer	**POT**
Code	**Resistance**	**Code**
C	0 - 100 Ohm	01
	0 - 220 Ohm	02
	0 - 470 Ohm	03
	0 - 1000 Ohm	04
	0 - 2200 Ohm	07
	0 - 4700 Ohm	05
	0 - 10000 Ohm	06

Example for ordering code (Code 2)

Content	Code
Potentiometer 1 W 25 % tolerance	
0 - 100 Ohm	POT 01
0 - 470 Ohm	POT 03
0 - 4700 Ohm	POT 05



Signal lamp

Technical data

		Ex-signal lamp SIL
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex d e IIC/IIB Gb / Ⓔx II 2 G Ex d ia IIC/IIB Gb
EC-Type Examination Certificate		IBExU 12 ATEX 1047 U
IECEx Certificate of Conformity		IECEx IBE 13.0031U
Marking accd. to IECEx		Ex de IIC/IIB Gb Ex d ia IIC/IIB Gb
Operating temperature range		–45 °C up to +68 °C (IIC) –60 °C up to +68 °C (IIB)
Application temperature [1]		–45 °C up to +60 °C (IIC) –60 °C up to +60 °C (IIB)
Rated voltage (Ex ed IIC) (Ex d ia IIC) (Ex ed IIC)		20 V up to 254 V AC/DC 10 V up to 30 V DC 12 V up to 24 V AC/DC
Rated current	20 V to 254 V 10 V up to 30 V (Ex d ia IIC) 12 V up to 24 V	approx. 4 - 15 mA max. 25 mA max. 24 mA
Max. values for Ex ia		Ui = 30 V DC, Ii = 100 mA, Pi = 750 mW
Connecting terminals		2 x 2.5 mm²
Degree of protection accd. to EN 60529		IP66
Dimensions (L x W x H)		approx. 59 x 31 x 45 mm
Weight		0.15 kg
Type of mounting		DIN rail mounting
Enclosure colour		grey

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.4.34/35.

Ordering code for component (Code 2) - code A - C - D

Code	Component	Code
A	Signal lamp	**SIL**
Code	**Colour of the lens**	**Code**
C	white	1
	yellow	2
	red	3
	blue	4
	green	5
Code	**Voltage**	**Code**
D	20 V - 254 V AC/DC	10
	10 V - 30 V DC (Ex-i)1)	34
	12 V - 24 V AC/DC	11

[1] Supply by valve-driver components, e. gl., with data: Uo = 20 V - 18 V DC with Ri = 200 Ω - 500 Ω or Uo = 10 V - 18 V DC with Ri = 100 Ω - 200 Ω
No effective Ci and Li values.

Example for ordering code (Code 2)

Content	Ordering code		
	A	**C**	**D**
Signal lamp SIL (examples)			
Universal voltage 20 V - 250 V AC/DC white	SIL	1	10
For intrinsically safe circuits 18 V up to 30 V DC blue	SIL	4	34
Low voltage 12 V up to 24 V AC/DC red	SIL	3	11



AM 45



AM 72

4 Technical data

Ex-measuring instrument AM 45/AM 72	Moving iron	Moving coil
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e II / Ⓔx II 2 G Ex e mb II Ⓔx I M 2 Ex e I	Ⓔx II 2 G Ex ib IIC Ⓔx I M 2 Ex ib I
EC-Type Examination Certificate	PTB 99 ATEX 2032 U	
Application temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	up to 420 V (AM 45) up to 750 V (AM 72)	
Power consumption (VA)	max. 0.31 A	
Overload range	10 fold - 25 sec. 25 fold - 4 sec. 50 fold - 1 sec. indicated 1 : 1.5, optional 1:6, 1:10	10 fold - 5 sec.
Measuring range	max. 0 - 25 A direct / n / 1A	0/4 - 24 mA
Inductance Li		< 0.1 mH
Capacitance Ci		< 0.1 nF
Winding specification of moving coil		26.5 windings
Internal resistance		2.5 Ω ±30 %
Open circuit voltage max. Ui		30 V
Connecting terminals max. Ii		150 mA
Accuracy	Class 2.5	Class 1.5
Movement	Moving iron	Moving coil
Connecting terminals	2 x 1.5 - 4 mm^2	
Degree of protection accd. to EN 60529	IP66 (installed condition)	
Display size	40 x 40 mm (AM 45) 68 x 68 mm (AM 72)	
Weight	0.35 kg	
Type of mounting	DIN rail mounting	
Enclosure material	Polycarbonate	



AM 72



AM 45

Ordering code for component (Code 2) Code A - C - D

Code	Component	Code
A	Measuring instrument AM 45	**AM 45**
	Measuring instrument AM 72	**AM 72**

Code	Movement	Code
C	Direct connection	1
	CT connection n/1 A	2
	CT connection n/5 A	3
	Power connection 0 - 20/24 mA (Scale 0-100% / 120%) [1]	5
	Power connection 4 - 20/24 mA (Scale 0-100% / 120%) [1]	6
	Moving-coil connection 0 - 20/24 mA (Scale 0-100% / 120%) [1] [3]	7
	Moving-coil connection 4 - 20/24 mA (Scale 0-100% / 120%) [1] [3]	8

Code	Measuring range	Code	Measuring range	Code
D	0 - 1	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 %v

[2] Version for direct connection or with CT connection n/1 A possible.

[3] Moving coil only for Ex-i or Ex-d flameproof applications - Other interchangeable scales available on request

Example for ordering code (Code 2)

Movement	Measuring range	Ordering code		
Measuring instrument AM 45		**A**	**C**	**D**
Version with direct connection				
Direct (moving iron)	0 - 1 / 1.5 A	AM45	1	02
Direct (moving iron)	0 - 10 / 15 A	AM45	1	05
0 - 20 / 24 mA (moving coil)	0-100% / 120%	AM45	5	33
4 - 20 / 24 mA (moving coil)	0-100% / 120%	AM45	6	33
Moving iron measuring instrument AM 72				
Version with CT connection n/1A				
Converter n / 1A	0 - 100% / 150%	AM72	2	33
Moving-coil measuring instrument AM 45 (Ex-i application only)				
Version with direct connection				
0 - 20 / 24 mA	0-100% / 120%	AM45	7	33
4 - 20 / 24 mA	0-100% / 120%	AM45	8	33



Ex 23



Ex 29

Technical data

Ex-Built-in components for individual control stations Control switch Ex 23 and Ex 29		Ex 23	Ex 29
Marking accd. to 2014/34/EU		Ⓔx I M2 Ex d e I Mb Ⓔx II 2G Ex d e IIB/IIC Gb Ⓔx II 2G Ex d ia/ib IIB/IIC Gb	Ⓔx II 2 G Ex de IIC
IECEx Certificate of Conformity		IECEx IBE 13.0108 U	
Marking accd. to IECEx		Ex d e I Mb Ex d e IIB/IIC Gb Ex d ia/ib IIB/IIC Gb	
EC-Type Examination Certificate		BVS 13 ATEX E 107U	PTB 98 ATEX 1118 U
Operating temperature range		–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)	
Application temperature [1]		–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)	–20 °C up to +40 °C –55 °C up to +55 °C (option)
Rated voltage		up to 500 V	up to 500 V
Rated current		10 A	16 A2)
Rated current with gold contact points		0.4 A	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1		AC-15: U_e 230 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 230 V / I_e 0.5 A	AC-15: U_e 230 V / I_e 6 A U_e 400 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.3 A
Connecting terminals		2 x 0.5 - 2.5 mm²	2 x 0.5 - 2.5 mm² or 1 x 1.0 - 6.0 mm²
Weight	1 level: 2 level: 3 level:	approx. 0.2 kg approx. 0.35 kg –	approx. 0.25 kg approx. 0.40 kg approx. 0.55 kg
Type of mounting		DIN rail mounting	
Enclosure colour		grey	black

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.4.34/35.

[2] min. cross section of used cable ≥ 12 A: 2.5 mm²



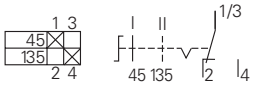
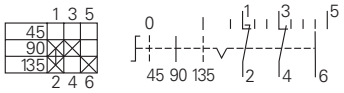
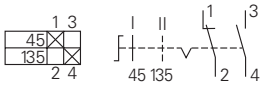
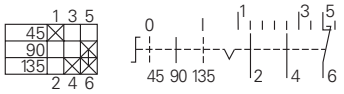
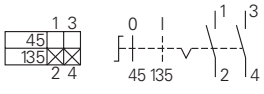
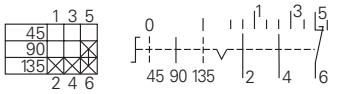
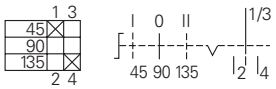
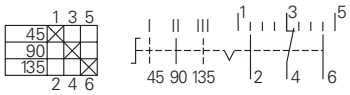
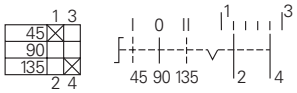
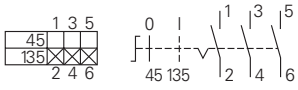
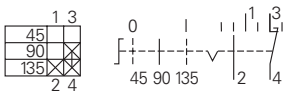
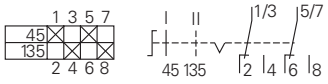
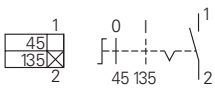
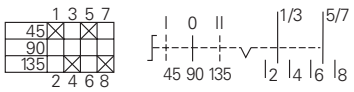
Ex 29



Ex 23

Ordering code for component (Code 2) Code A - C - D - E - F

Code	Component		Code
A	Ex 23		**Ex 23**
	Ex 29		**Ex 29**
Code	**Switching system**		**Code**
C	spring – engaging – spring		4
	engaging – engaging – engaging		5
	engaging – engaging		6
	spring – engaging – engaging		7
	engaging – engaging – spring		8

D	Contacts Silver contact points	Code	Contacts Silver contact points	Code
		**060**		**034**
		**062**		**037**
		**065**		**049**
		**061**		**023**
		**063**		**019**
		**067**		**033**
		**011**		**024**

Versions with gold contact points are available on request.

Versions with compulsory NO are possible.



Ex 23



Ex 29

4

Ordering code for component (Code 2) Code A - C - D - E - F

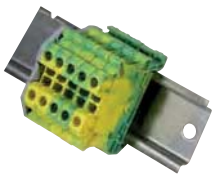
Code	Inscription (labels)			Code	Inscription (labels)			Code
E	0		I	01	0	I	II	18
	I		II	02	AUS	AUTO	EIN	19
	STOP		START	03	AUS	HAND	AUTO	20
	HAND		AUTO	04	ÖRTLICH	AUS	FERN	21
	SENKEN		HEBEN	05	START	NORMAL	STOP	22
	REMOTE		LOCAL	06	OFF	0	ON	23
	I	0	II	07	HAND	OFF	AUTO	24
	AUS	BETRIEB	EIN	08	0	IN	START	25
	AUS	0	EIN	09	MAN		AUTO	26
	AUF	0	AB	10	START		STOP	27
	Entriegelt	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

Code	Padlocking facility		Code
F	none	□	0
	centre	▯	1
	right	▨	2
	left	▧	3

Example for ordering code (Code 2)

Content	Component		Contacts		Label		Padlocking facility			Ordering code				
A	Switching system B		C	Code	D	Code	E			A	B	C	D	E
Ex 23		6		**060**	060 I - II	02	none	□	**0**	**Ex 23**	**6**	**060**	**02**	**0**
Ex 23		5		**034**	034 I - 0 - II	07	centre	▯	**1**	**Ex 23**	**5**	**034**	**07**	**1**
Ex 29		6		**060**	060 I - II	02	left	▧	**3**	**Ex 29**	**6**	**060**	**02**	**3**
Ex 29		6		**065**	065 0 - I	01	right	▨	**2**	**Ex 29**	**6**	**065**	**01**	**2**

Other combination available on request



UT4 PE



UT4



MKX 4

Technical data

Ex-Built-in components for individual control stations
Terminals

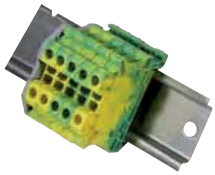
	MXK 4-Ex	UT 4 / UT 4 PE
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e II	Ⓔx II 2 G Ex e II Ⓔx II 2 D Ex e II
EC-Type Examination Certificate	PTB 99 ATEX 3132U	KEMA 04 ATEX 2048 U
IECEx Certificate of Conformity	IECEx KEMA 06.0027U	
Marking accd. to IECEx	Ex e II	
Application temperature	–50 °C up to +55 °C	–50 °C up to +55 °C
Rated voltage	up to 420 V	up to 690 V
Rated current	max. 27 A	max. 30 A
Connecting terminals	4 mm^2	0.14 mm^2 - 4 mm^2 multi-wire 0.14 mm^2 - 6 mm^2 solid-wire
Dimensions (L x W x H)	6.2 mm width	47.7 mm x 6.2 mm
Weight	0.01 kg	0.01 kg
Type of mounting	NS 35 DIN rail mounting	NS 35 DIN rail mounting
Enclosure colour	grey	grey



MKX 4



UT4



UT4 PE

Ordering code for component (Code 2) Code A - C - D - E - F

Code	Component		Code
A	**KLM**	KLM	
Code	Content	Code	
C	Ex-e		1
	Ex-i		2
Code	Terminal type	Code	
D	Terminal block MXK4-Ex max. 6 terminals	B	
	Terminal insert max. 3 terminals		E
	Terminals UT 4 / UT 4 PE		A
Code	Number of terminals	Code	
E	1		001
	2		002
	3		003
	ect.		ect.

Other variants, e.g. modules with resistors or fine-wire fuses, available on request.

Example for ordering code (Code 2)

Content	Number	Ordering code				
		A	C	D	E	F
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**
Terminal UK 4 12 x Ex-e terminals UT 4 + 2 PE-terminals, Ex-e terminals	12	**KLM**	**1**	**A**	**012**	**02**



ZUB 17



ZUB 31



ZUB 22



ZUB 20

Ordering code for labels and locking facilities (Code 3) Code A - B - C - D

Code	Label			Code
A	52.0 x 13 mm			**ZUB 19**
	37.0 x 17 mm with holder			**ZUB 20**
Code	**Inscription**			**Code**
B	text to be determinated			1 ... 4
Code	**Padlocking facility**	**for operating element**	**Material**	**Code**
C	with flap (blank)	pushbutton	stainless steel	**ZUB 12**
	with flap (red)	pushbutton	stainless steel	**ZUB 13**
	with flap without „0“ activated	double pushbutton	stainless steel	**ZUB 16**
	with flap with „0“ activated	double pushbutton	stainless steel	**ZUB 17**
	with flap (blank)	mushroom-head pushbutton	stainless steel	**ZUB 02**
	with flap (red)	mushroom-head pushbutton	stainless steel	**ZUB 01**
	with bolt and chain	mushroom-head pushbutton	stainless steel	**ZUB 14**
	Fire alarm (red) with hammer	mushroom-head pushbutton	stainless steel	**ZUB 15**
	Fire alarm (red) with hammer	activates alarm when broken	stainless steel	**ZUB 05**
	with flap, not activated	pushbutton	plastic	**ZUB 23**
	with flap, with activated	pushbutton	plastic	**ZUB 24**
	with flap, with activated	mushroom-head pushbutton	plastic	**ZUB 22**
	with flap, not activated	mushroom-head pushbutton	plastic	**ZUB 21**
	protective collar yellow	pushbutton / mushroom-head pushbutton	light alloy	**ZUB 30**
	protective collar red	pushbutton / mushroom-head pushbutton	light alloy	**ZUB 31**
Code	**Mounting area**			**Code**
D				**1 ... 4**

Example for ordering code

Content	Number	Ordering code			
		A	**B**	**C**	**D**
Protective collar yellow at mounting area 3	X	–	–	ZUB 30	3



Metal flange FLM



Cable gland GK



Trumpet shaped cable gland TR



Screw plug SV

4

Ordering code for cable glands and flanges (Code 4) Code A - B - C - D - E

Code	Content	Component	Code
A	**Entry type**	**Entry direct in enclosure**	**GEH**
		Entry via plastic flange	FLK
		Entry via metal flange	FLM
Code	**Content**	**Component**	**Code**
B	Entry side	Entry side on bottom (left or right)	1, 2
	Position	Entry side on top (left or right)	3, 4
Code	**Content**	**Component**	**Code**
C	Entry element	Only entry	OE
		Threaded entry	BO
		Screw plug	SV
		Cable plastic gland	GK
		Cable metal* gland	GM*
		Cable entry with plastic plug	GV
		Trumpet-shaped plastic gland	TR
Code	**Content**	**Component**	**Code**
D	Size	M12, M16, M20, M25, M32, M40, M50, M63	M..
		Ø21, Ø26	d..
Code	**Content**	**Component**	**Code**
E	Number	Number of entries	..(No)

Example for ordering code

Content	Number	Ordering code				
		A	**B**	**C**	**D**	**E**
2 cable entries M25 moulded plastic, Version without plug direct from below into the enclosure	2	**GEH**	**1**	**GK**	**M25**	**02**

EIN
EIN
EIN
EIN
AUS
AUS
AUS
AUS

Ex-Control and Signal Units for Panel Mounting

Certified products for individual designed panels

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.



Features

- **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**



Double pushbutton



Pushbutton

Technical data

	Pushbutton Typ 418 811 and double pushbutton Typ 418 814	
	Complete certificate[1]	Component certificate
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6	Ⓔx II 2 G Ex de IIC/IIB Gb Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	PTB 99 ATEX 1034	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity		IECEx IBE 14.0005 U
Marking accd. to IECEx		Ex de IIC/IIB Gb Ex de I Mb
Operating temperature range	-55°C up to + 80 °C	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Permissible ambient temperature	-55 °C up to + 50 °C	
Application temperature [2]		–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)
Rated voltage	400 V AC	500 V AC
Rated current	16 A	16 A
Rated current with gold contact points	0.4 A	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A U_e 400 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A	AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A
Connecting terminals	2 x 2.5 mm²	2 x 2.5 mm²
Degree of protection accd. to EN 60529	IP66[1] / IP65 [1] (double pushbutton)	IP00
Dimensions (L x W x H)	approx. 140 x 38 x 67 mm	approx. 91 x 38 x 57 mm
Weight	0.25 kg	0.20 kg
Cable gland	M25x1.5 Ø 6- 15 mm	--
Type of mounting	Ø 30.3 mm fixing hole	Ø 30.3 mm fixing hole
Enclosure colour	grey	grey
Gasket material	Neoprene (standard), Fluoric Silicone or Viton on request	

[1] with protective cover IP66 / IP65

[2] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account.
See also pages 2.4.34/35.



Pushbutton



Double pushbutton

4 Ordering code for components Code A - B - C1 - (C2)

Code	A	B	C2	C1
Order No.	GHG 418 81_ _	R	__	__

Code	Component			Code
A	Pushbutton			GHG 418 811
	Double pushbutton			GHG 418 814
Code	**Circuit**	**Contacts**	**Code**	
			silver contact points	**gold contact points**
B	2 NC		3	**6**
	2 NO		4	**7**
	1 NO + 1 NC		5	**8**

Code	Inscription (label)	Code	Inscription	Code
C1, C2	0, I, Start, Stop	01	0	02
	I	03	I I	04
	☼	05	STOP	06
	START	07	LANGSAM	09
	SCHNELL	10	EMERG.STOP	11
	➔	12	↑	13
	ARRET	14	MARCHE	15
	AUF	16	AB	17
	Neutral white	18	Neutral grün	19
	0, I, Arret, Marche	20	UP	24
	DOWN	25	ZU	26
	ON	27	OFF	28
	+	30	-	31
	Neutral rot	33	Neutral yellow	34
	EIN	36	AUS	37
	Neutral black	38	AUTO	39
	Neutral blau	40	HAND	50
	SENKEN	51	HEBEN	52
	LINKS	53	RECHTS	54
	FAST	55	SLOW	56
	RESET	57	OPEN	58



Double pushbutton



Pushbutton

Example for order No

Content	Label	Order No.				
Circuit		**A**		**B**	**C1**	**C2**
Pushbutton without protective cover, silver contact points						
2 NC	(0, I, START, STOP)	**GHG 418 811**		**3**	**R0001**	**–**
2 NO	(0, I, START, STOP)	**GHG 418 811**		**4**	**R0001**	**–**
1 NO + 1 NC	(0, I, START, STOP)	**GHG 418 811**		**5**	**R0001**	**–**
Double pushbutton without protective cover, with gold contact points						
2 NC	(0, I, START, STOP)	**GHG 418 814**		**6**	**R00**	**01**
2 NO	(0, I, START, STOP)	**GHG 418 814**		**7**	**R00**	**01**
1 NO + 1 NC	(0, I, START, STOP)	**GHG 418 814**		**8**	**R00**	**01**

Accessories

Type	OU	Order No.
Protective cover to meet IP66	5	**GHG 410 1939 R0002**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

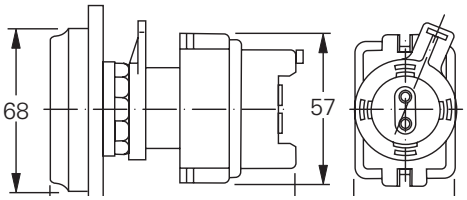


Pushbutton

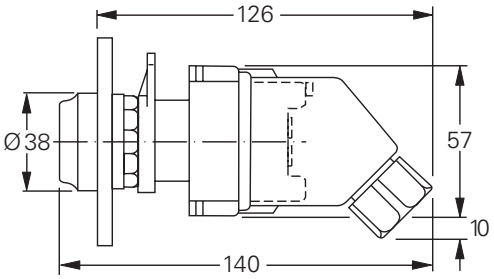


Double pushbutton

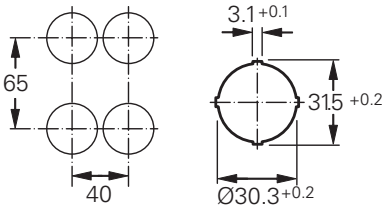
4 Dimension drawing



(Double-)pushbutton without protective cover



(Double-)pushbutton with protective cover



Minimum distances

Dimensions in mm



Key-operated pushbutton

Technical data

	Key-operated pushbutton Typ 418 812	
	Complete certificate1)	Component certificate
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6	Ⓔx II 2 G Ex de IIC/IIB Gb Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	PTB 99 ATEX 1034	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity		IECEx IBE 14.0005 U
Marking accd. to IECEx		Ex de IIC/IIB Gb Ex de I Mb
Operating temperature range	-55°C up to + 80 °C	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Permissible ambient temperature	-55 °C up to + 50 °C	
Application temperature[2)]		–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)
Rated voltage	400 V AC	500 V AC
Rated current	16 A	16 A
Rated current with gold contact points	0.4 A	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A U_e 400 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A	AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A
Connecting terminals	2 x 2.5 mm²	2 x 2.5 mm²
Degree of protection accd. to EN 60529	IP661)	IP00
Dimensions (L x W x H)	approx. 182 x 38 x 67 mm	approx. 133 x 38 x 57 mm
Weight	0.30 kg	0.3 kg
Cable gland	M25x1.5 Ø 6 - 15 mm	--
Type of mounting	Ø 30.3 mm fixing hole	Ø 30.3 mm fixing hole
Enclosure colour	grey	grey
Gasket material	Neoprene (standard), Fluoric Silicone or Viton on request	

1) with protective cover IP66

2) The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account.
See also pages 2.4.34/35.



Key-operated pushbutton

4

Ordering code for components Code A - B - C1 - (C2)

Code	A	B	C
Order No.	GHG 418 812 _	R00	__

Code	Component			Code
A	Key-operated pushbutton			GHG 41 812
Code	**Circuit**	**Contacts**	**Code**	
			silver contact points	**gold contact points**
B	2 NC		3	**6**
	2 NO		4	**7**
	1 NO + 1 NC		5	**8**

Code	released	Key	engaged	Key	Code
C	lockable	removable	lockable	removable	**10**
	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	autom. lockable	removable	15

Example for order No.

Content	Label		Order No		
	released	**engaged**	**A**	**B**	**C**
Key-operated switch with silver contact points, without protective cover					
1 NO + 1 NC	lockable, Key removable	lockable, Key removable	**GHG 418 812**	**5 R00**	**10**
2 NC	lockable, Key removable	lockable, Key not removable	**GHG 418 812**	**3 R00**	**11**
2 NO	lockable, Key removable	not lockable, Key not removable	**GHG 418 812**	**4 R00**	**12**
Key-operated switch with gold contact points, without protective cover					
1 NO + 1 NC	lockable, Key removable	lockable, Key removable	**GHG 418 812**	**8 R00**	**10**
2 NC	lockable, Key removable	lockable, Key not removable	**GHG 418 812**	**6 R00**	**11**
2 NO	lockable, Key removable	not lockable, Key not removable	**GHG 418 812**	**7 R00**	**12**

Accessories

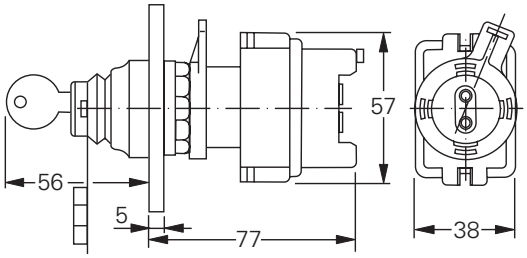
Type	OU	Order No.
Protective cover to meet IP66	5	**GHG 410 1939 R0002**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

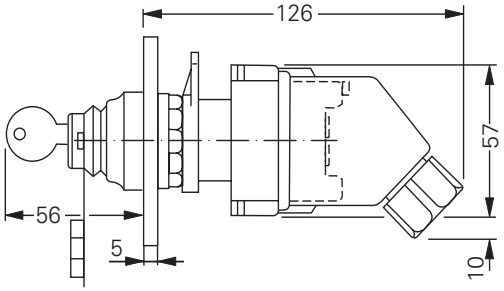


Key-operated pushbutton

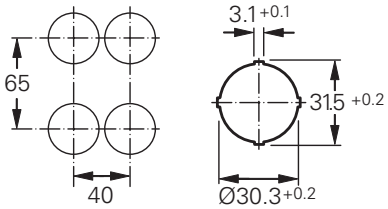
Dimension drawing



Key-operated switch without protective cover



Key-operated switch with protective cover



Minimum distances

Dimensions in mm



Key-operated switch

4 Technical data

	Key-operated switch Type 418 8195	
	Complete certificate[1]	Component certificate
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6	Ⓔx II 2 G Ex de IIC/IIB Gb Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	PTB 99 ATEX 1034	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity		IECEx IBE 14.0005 U
Marking accd. to IECEx		Ex de IIC/IIB Gb Ex de I Mb
Operating temperature range	-55°C up to + 80 °C	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Permissible ambient temperature	-25 °C up to + 50 °C	
Application temperature[2]		–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)
Rated voltage	400 V AC	500 V AC
Rated current	16 A	16 A
Rated current with gold contact points	0.4 A	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A U_e 400 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A	AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A
Connecting terminals	2 x 2.5 mm²	2 x 2.5 mm²
Degree of protection accd. to EN 60529	IP66[1]	IP00
Dimensions (L x W x H)	approx. 188 x 38 x 67 mm	approx. 139 x 38 x 57 mm
Weight	0.30kg	0.25 kg
Cable gland	M25x1.5 Ø 6 - 15 mm	--
Type of mounting	Ø 30.3 mm fixing hole	Ø 30.3 mm fixing hole
Enclosure colour	grey	grey
Gasket material	Neoprene (standard), Fluoric Silicone or Viton on request	

[1] with protective cover IP66

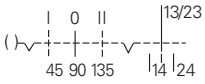
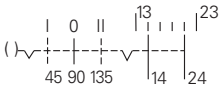
[2] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account.
See also pages 2.4.34/35.



Key-operated switch

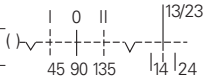
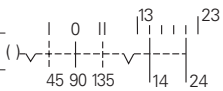
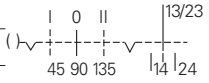
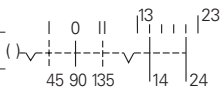
Ordering code for components A - B - C1 - (C2)

Code	A	B	C
Order No.	GHG 418 8195 R5 _		__

Code	Component			Code
A	Key-operated switch			GHG 418 8195
Code	**Circuit**	**Contacts**	**Code**	
			silver contact points	**gold contact points**
B	2 NC		4	7
	2 NO		5	8

Code	Inscription	Code
C	I - 0 - II	07
	Fern - 0 - Ort	08
	Hand - 0 - Auto	09

Example for order No.

Switching mechanism	Contact-system	Label	Order No. A C D
Key-operated switch, 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**
Switch can be locked in all positions and key can be removed in all positions			
Key-operated switch with gold contact points, without protective cover			
4		I 0 II	**GHG 418 8195 R 5 7 07**
4		FERN 0 ORT	**GHG 418 8195 R 5 7 08**
4		HAND 0 AUTO	**GHG 418 8195 R 5 7 09**
5		I 0 II	**GHG 418 8195 R 5 8 07**
5		FERN 0 ORT	**GHG 418 8195 R 5 8 08**
5		HAND 0 AUTO	**GHG 418 8195 R 5 8 09**

Accessories

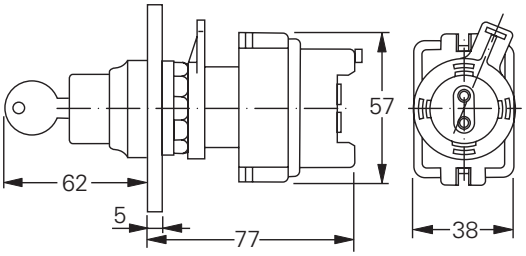
Type	OU	Order No.
Protective cover to meet IP66	5	**GHG 410 1939 R0002**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

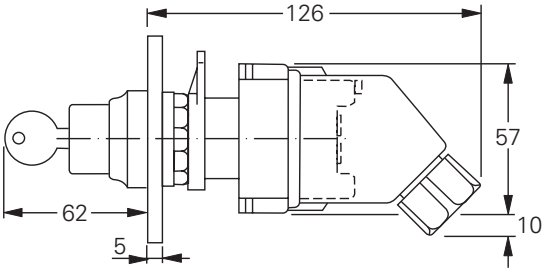


Key-operated switch

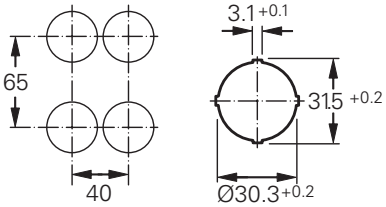
4 Dimension drawing



Key-operated switch without protective cover



Key-operated switch with protective cover



Minimum distances

Dimensions in mm



Mushroom-head pushbutton



Emergency-Stop pushbutton

Technical data

	Mushroom-head pushbutton (Emergency stop and normal version)	
	Complete certificate1)	Component certificate
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6	Ⓔx II 2 G Ex de IIC/IIB Gb Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	PTB 99 ATEX 1034	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity		IECEx IBE 14.0005 U
Marking accd. to IECEx		Ex de IIC/IIB Gb Ex de I Mb
Operating temperature range	-55°C up to + 80 °C	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Permissible ambient temperature	-25 °C up to + 50 °C	
Application temperature[2)]		–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)
Rated voltage	400 V AC	500 V AC
Rated current	16 A	16 A
Rated current with gold contact points	0.4 A	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A U_e 400 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A	AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A
Connecting terminals	2 x 2.5 mm²	2 x 2.5 mm²
Degree of protection accd. to EN 60529	IP661)	IP00
Dimensions (L x W x H)	approx. 156 x 38 x 67 mm	approx. 139 x 38 x 57 mm
Weight	0.30 kg	0.25 kg
Cable gland	M25x1.5 Ø 6 - 15 mm	--
Type of mounting	Ø 30.3 mm fixing hole	Ø 30.3 mm fixing hole
Enclosure colour	grey	grey
Gasket material	Neoprene (standard), Fluoric Silicone or Viton on request	

1) with protective cover IP66

2) The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account.
See also pages 2.4.34/35.



Emergency-Stop pushbutton

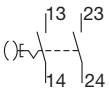
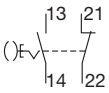


Mushroom-head pushbutton

4

Ordering code for components Code A - B - C - D - E

Code	A	B	C	D	E
Order No.	GHG 418 815 _	R	_	_	—

Code	Component				Code
A	Mushroom-head pushbutton				GHG 418 815
Code	**Circuit**	**Contacts manual**	**Code key released**	**silver contact points**	**gold contact points**
B	2 NC			3	**6**
	2 NO			4	**7**
	1 NO + 1 NC			5	**8**

Code	Mushroom-head pushbutton inscription and colour				Code
C	emergency stop EMERGENCY STOP (German - English)[1]				1
	emergency stop ARRET D'URGENCE (German - French)[1]				4
	red				1
	yellow[1]				2
	black[2]				3
Code	**released**	**engaged**	**unlocking**		**Code**
D	not lockable	not lockable	n/a (pushbutton function)		1 [2]
	not lockable	lockable	hand released		2 [1]
	not lockable	lockable	key released		3 [1]
Code	**Inscription (label)**	**Code**		**Inscription**	**Code**
E	0, I, Start, Stop	01		0	02
	I	03		I I	04
	☼	05		STOP	06
	START	07		NOT-AUS1)	00

[1] only emergency stop mushroom head pushbutton

[2] only mushroom-head pushbutton normal version



Mushroom-head pushbutton



Emergency-Stop pushbutton

Example for order No.

Contact system	Pushbutton colour	Inscription	Order No. A	B	C	D	E
EMERGENCY STOP mushroom-head pushbutton red, with silver contact points, without protective cover content with inscription D/E, hand released							
2 NC	red	German/English	**GHG 418 815**	**3**	**R 1**	**2**	**00**
2 NC	red	German/French	**GHG 418 815**	**3**	**R 4**	**2**	**00**
2 NO	red	German/English	**GHG 418 815**	**4**	**R 1**	**2**	**00**
2 NO	red	German/French	**GHG 418 815**	**4**	**R 4**	**2**	**00**
1 NO + 1 NC	red	German/English	**GHG 418 815**	**5**	**R 1**	**2**	**00**
1 NO + 1 NC	red	German/French	**GHG 418 815**	**5**	**R 4**	**2**	**00**
Version with inscription D/E, key released							
2 NC	red	German/English	**GHG 418 815**	**3**	**R 1**	**3**	**00**
2 NC	red	German/French	**GHG 418 815**	**3**	**R 4**	**3**	**00**
2 NO	red	German/English	**GHG 418 815**	**4**	**R 1**	**3**	**00**
2 NO	red	German/French	**GHG 418 815**	**4**	**R 4**	**3**	**00**
1 NO + 1 NC	red	German/English	**GHG 418 815**	**5**	**R 1**	**3**	**00**
1 NO + 1 NC	red	German/French	**GHG 418 815**	**5**	**R 4**	**3**	**00**
Mushroom-head pushbutton, with silver contact points, without protective cover version with inscription D/E, pushbutton function only							
2 NC	black	0, I, START, STOP	**GHG 418 815**	**3**	**R 3**	**1**	**01**
2 NC	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**
2 NO	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**
1 NO + 1 NC	yellow	0, I, START, STOP	**GHG 418 815**	**5**	**R 2**	**1**	**01**

Accessories

Type	OU	Order No.
Protective cover to meet IP66	5	**GHG 410 1939 R0002**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

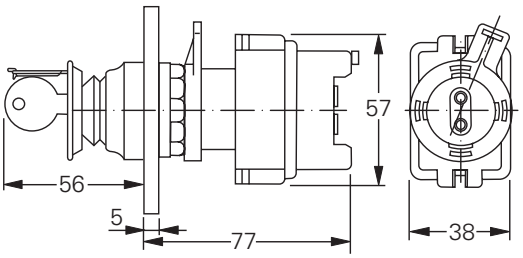


Mushroom-head pushbutton

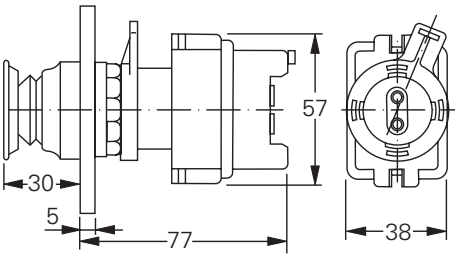


Mushroom-head pushbutton

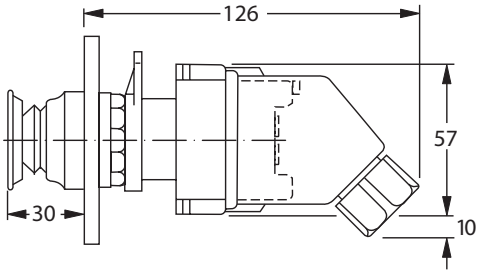
Dimension drawing



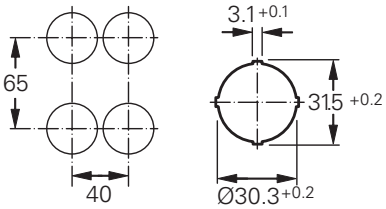
Mushroom-head pushbutton without protective cover with key release



Mushroom-head pushbutton without protective cover



Mushroom-head pushbutton with protective cover



Minimum distances

Dimensions in mm



Mini-control switch

Technical data

	Mini-control switch Type 418 8190	
	Complete certificate[1]	Component certificate
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6	Ⓔx II 2 G Ex de IIC/IIB Gb Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	PTB 99 ATEX 1034	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity		IECEx IBE 14.0005 U
Marking accd. to IECEx		Ex de IIC/IIB Gb Ex de I Mb
Operating temperature range	-55°C up to + 80 °C	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Permissible ambient temperature	-55 °C up to + 50 °C	
Application temperature[2]		–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)
Rated voltage	400 V AC	500 V AC
Rated current	16 A	16 A
Rated current with gold contact points	0.4 A	0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-15: U_e 250 V / I_e 6 A U_e 400 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A	AC-15: U_e 250 V / I_e 6 A U_e 500 V / I_e 4 A DC-13: U_e 24 V / I_e 6 A U_e 220 V / I_e 1 A
Connecting terminals	2 x 2.5 mm²	2 x 2.5 mm²
Degree of protection accd. to EN 60529	IP661)	IP00
Dimensions (L x W x H)	approx. 150 x 38 x 67 mm	approx. 101 x 38 x 57 mm
Weight	0.25 kg	0.20kg
Cable gland	M25x1.5 Ø 6- 15 mm	--
Type of mounting	Ø 30.3 mm fixing hole	Ø 30.3 mm fixing hole
Enclosure colour	grey	grey
Gasket material	Neoprene (standard), Fluoric Silicone or Viton on request	

[1] with protective cover IP66

[2] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account.
See also pages 2.4.34/35.

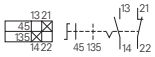
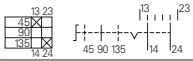
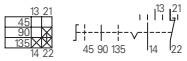


Mini-control switch

4 Ordering code for components Code A - B - C - D - E

Code	A	B	C	D	E
Order No.	GHG 418 819 _	R	_	_	—

Code	Component		Code
A	Mini-control switch		GHG 418 819
Code	**Contact material**		**Code**
B	silver		0
	gold		1
Code	**Switching system**		
C	spring – engaging – spring		4
	engaging – engaging – engaging		5
	engaging – engaging		6
	spring – engaging – engaging		7
	engaging – engaging – spring		8

Code	Contacts	Code
D		0
		1
		**2**
		**3**
		**5**
		**7**

[1] only emergency stop mushroom head pushbutton

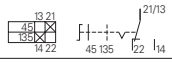
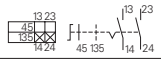
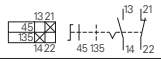
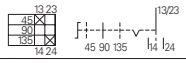
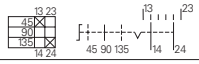
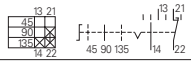
[2] only mushroom-head pushbutton normal version

Code	Inscription (label)			Code	Inscription (label)			Code
E	0		I	01	HAND	0	AUTO	15
	I		II	02	AUF	AUS	ZU	16
	STOP		START	03	HAND	AUS	AUTO	17
	HAND		AUTO	04	0	I	II	18
	SENKEN		HEBEN	05	AUS	AUTO	EIN	19
	REMOTE		LOCAL	06	AUS	HAND	AUTO	20
	I	0	II	07	ÖRTLICH	AUS	FERN	21
	AUS	BETRIEB	EIN	08	START	NORMAL	STOP	22
	AUS	0	EIN	09	OFF	0	ON	23
	AUF	0	AB	10	HAND	OFF	AUTO	24
	STOP	0	START	14	0	IN	START	25



Mini-control switch

Example for order No.

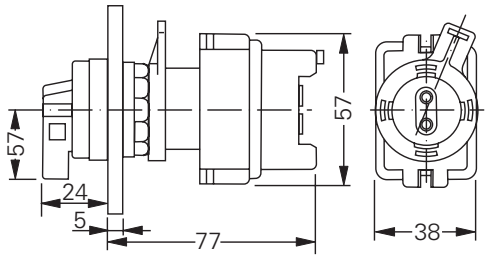
Switching mechanism	Code	Circuit	Code	Label	Order No. A	B	C	D	
Key-operated switch, without protective cover									
	6		0	I II	**GHG 418 819**	**0 R**	**6**	**0**	**02**
	6		2	0 I	**GHG 418 819**	**0 R**	**6**	**2**	**01**
	6		1	I II	**GHG 418 819**	**0 R**	**6**	**1**	**02**
	5		3	I 0 II	**GHG 418 819**	**0 R**	**5**	**3**	**07**
	5		5	I 0 II	**GHG 418 819**	**0 R**	**5**	**5**	**07**
	8		7	0 I	**GHG 418 819**	**0 R**	**8**	**7**	**01**

Accessories

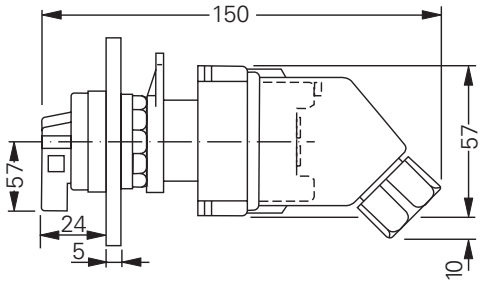
Type	OU	Order No.
Protective cover to meet IP66	5	**GHG 410 1939 R0002**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

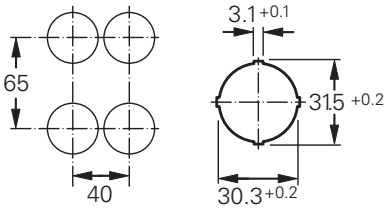
Dimension drawing



Mini-control switch without protective cover



Mini-control switch with protective cover



Minimum distances

Dimensions in mm



Control switch GHG 249

4 Technical data

	Control switch GHG 249
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC/IIB Gb Ⓔx II G Ex de ib [ia/ib] IIC/IIB Gb
EC-Type Examination Certificate	BVS 14 ATEX E 076 U[1]
Operating temperature range	–45 °C up to +80 °C (IIC) –55 °C up to +80 °C (IIB)
Application temperature[2]	–45 °C up to +80 °C (IIC) –55 °C up to +80 °C (IIB)
IECEx Certificate of Conformity	IECEx BVS 14.0047 U
Marking accd. to IECEx	Ex de IIC Gb Ex de IIB Gb
Rated voltage	up to 690 V AC
Rated current	up to 20 A
Rated current with gold contact points	up to 0.4 A
Rated making-/rated breaking capacity accd. EN 60947-5-1	AC-3: U_e 230 V / I_e 8 A U_e 400 V / I_e 6 A AC-11: U_e 24 V / I_e 6 A U_e 230 V / I_e 0.4 A
Connecting terminals	2 x 2.5 mm² flexibel, 6 mm² starr
Weight	0.55 kg
Type of mounting	Ø 30.3 mm fixing hole
Enclosure colour	grey

[1] Must be installed in a certified enclosure

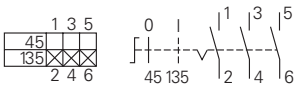
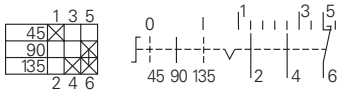
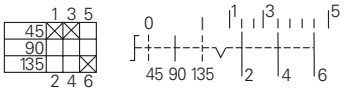
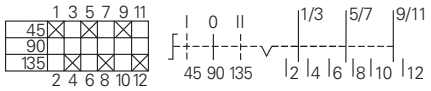
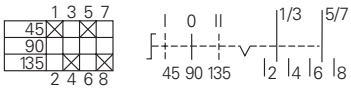
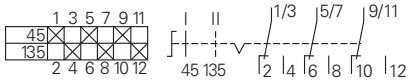
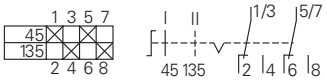
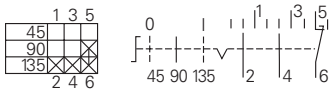
[2] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.4.34/35.



Control switch GHG 249

Ordering code for component (Code 2) Code A - B - C - D [1]

Code	Component		Code
A	Control switch GHG 249		249
Code	**Switching system**		**Code**
B	spring – engaging – spring		4
	engaging – engaging – engaging		5
	engaging – engaging		6
	spring – engaging – engaging		7
	engaging – engaging – spring		8

D	Contacts Silver contact points	Code	Contacts Silver contact points	Code
		**019**		**037**
		**021**		**038**
		**024**		**039**
		**033**		**049**

Code	Inscription (labels)			Code	Inscription (labels)			Code
E	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
	Entriegelt	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

Versions with gold contact points are available on request.

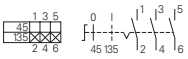
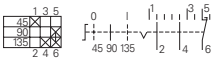
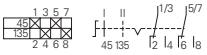
[1] The code will represent only a selected part of configuration.



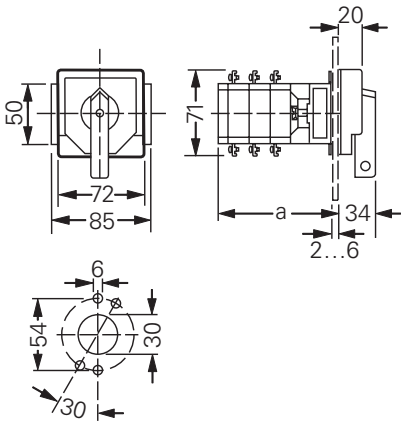
Control switch GHG 249

4

Example for ordering code (Code 2)

Content A	Switching system	Code B	Contact	Code C	Label	Code D	Order code
GHG 249		6		019	0 – I	01	**GHG 249 0004 R0056**
GHG 249		6		037	STOP - 0 - START	14	**GHG 249 0004 R0039**
GHG 249		6		033	I - II	02	**GHG 249 0004 R0084**

Dimension drawing



Control switch with	dimension a
1 switch compartment	63 mm
2 switch compartments	81 mm
3 switch compartments	99 mm

Dimensions in mm



Potentiometer

Technical data

	Potentiometer Type 418 8131	
	Complete certificate1)	Component certificate
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T6	Ⓔx II 2 G Ex de IIC/IIB Gb Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate	PTB 99 ATEX 1034	IBExU 14 ATEX 1030 U
IECEx Certificate of Conformity		IECEx IBE 14.0005 U
Marking accd. to IECEx		Ex de IIC/IIB Gb Ex de I Mb
Operating temperature range	-55°C up to + 80 °C	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Permissible ambient temperature	-55 °C up to + 50 °C	
Application temperature[2)]		–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)
Rated voltage	up to 250 V AC	up to 250 V AC
Power consumption (VA)	max. 1 W	max. 1 W
Resistance range	100 - 10000 Ω	100 - 10000 Ω
Tolerance	± 20 %	± 20 %
Connecting terminals	2 x 2.5 mm2	2 x 2.5 mm^2
Degree of protection accd. to EN 60529	IP661)	IP00
Dimensions (L x W x H)	101 x 38 x 57 mm	150 x 38 x 57 mm
Weight	0.20 kg	0.15 kg
Type of mounting	Ø 30.3 mm fixing hole	Ø 30.3 mm fixing hole
Enclosure colour	grey	grey
Angle of rotation	270°	270°
Scale	0 - 100 %	0 - 100 %

[1)] with protective cover IP66

[2)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account.
See also pages 2.4.34/35.



Potentiometer

4

Ordering code for component (Code 2) - code A - B

Code	A	B
Order No.	GHG 481 8131 R00	__

Ordering code for component (Code 2) - code A - B

Code	Component	Code
A	Potentiometer	GHG 418 8131 R00
Code	**Resistance**	**Code**
C	0 - 100 Ohm	11
	0 - 220 Ohm	12
	0 - 470 Ohm	13
	0 - 1000 Ohm	14
	0 - 2200 Ohm	17
	0 - 4700 Ohm	15
	0 - 10000 Ohm	16

Example for ordering code (Code 2)

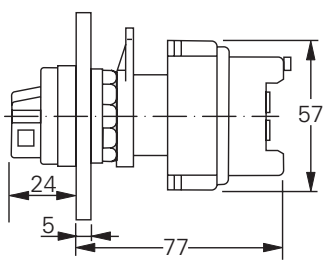
Content	Order No.	
	A	B
Potentiometer 1 W 25 % tolerance, without protective cover		
0 - 100 Ohm	**GHG 418 8131 R00**	**11**
0 - 470 Ohm	**GHG 418 8131 R00**	**12**
0 - 4700 Ohm	**GHG 418 8131 R00**	**15**

Accessories

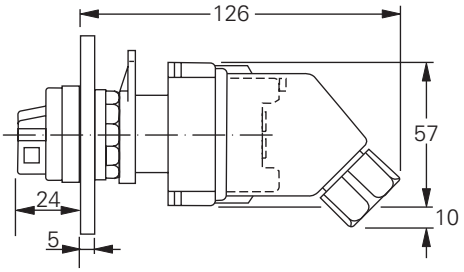
Type	OU	Order No.
Protective cover to meet IP66	5	**GHG 410 1939 R0002**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

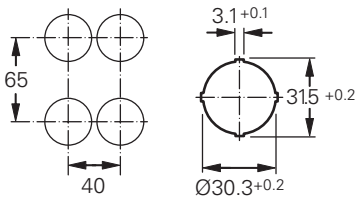
Dimension drawing



Potentiometer without protective cover



Potentiometer with protective cover



Minimum distances

Dimensions in mm



Signal lamp

Technical data

		Signal lamp Type 418 8170	
		Complete certificate[1]	Component certificate
Marking accd. to 2014/34/EU		⟨Ex⟩ II 2 G Ex de IIC T6 ⟨Ex⟩ II 2G Ex d ia IIC/IIB Gb	⟨Ex⟩ II 2 G Ex de IIC/IIB Gb ⟨Ex⟩ I M2 Ex d e IIC/IIB Gb
EC-Type Examination Certificate		PTB 99 ATEX 1034	IBExU 12 ATEX 1047 U
IECEx Certificate of Conformity		IECEx IBE 14.0005 U	
Marking accd. to IECEx		Ex de IIC/IIB Gb Ex de I Mb	
Operating temperature range			–45 °C up to +68 °C (IIC) –60 °C up to +68 °C (IIB)
Permissible ambient temperature		–55 °C up to + 50 °C	
Application temperature[2]		–45 °C up to +60 °C (IIC)	–60 °C up to +60 °C (IIB)
Rated voltage	Ex ed IIC) (LED) (Ex d ia IIC) (Ex ed IIC)	20 V up to 254 V AC/DC 10 V up to 30 V DC 12 V up to 24 V AC/DC	20 V up to 254 V AC/DC 10 V up to 30 V DC 12 V up to 24 V AC/DC
Rated current	(20 V up to 250 V) (LED) (10 V up to 30 V Ex d ia IIC) (12 V up to 24 V) DC	approx. 4 - 15 mA max. 25 mA max. 24 mA	max. 25 mA max. 24 mA
max. value for Ex ia		Ui = 30 V DC, Ii = 100 mA, Pi = 750 mW	Ui = 30 V DC, Ii = 100 mA, Pi = 750 mW
Connecting terminals		2 x 2.5 mm^2	2 x 2.5 mm^2
Degree of protection accd. to EN 60529		IP66[1]	IP00
Dimensions (L x W x H)		147 x 38 x 67 mm	99 x 38 x 57 mm
Weight		0.20 kg	0.15 kg
Type of mounting		Ø 30.3 mm fixing hole	Ø 30.3 mm fixing hole
Enclosure colour		grey	grey
Angle of rotation		270°	270°
Scale		0 - 100 %	0 - 100 %

[1] with protective cover IP66

[2] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account.
See also pages 2.4.34/35.



Signal lamp

4

Ordering code for component (Code 2) - code A - B

Code	A	B
Order No.	GHG 481 81710 R00	__

Ordering code for component (Code 2) - code A - B

Code	Component	Code
A	Signal lamp	GHG 418 8170 R00
Code	**Voltage**	**Code**
B	20 V - 254 V AC/DC	51
	10 V - 30 V DC (Ex-i [1])	52
	12 V - 24 V AC/DC	53

Example for ordering code (Code 2)

Content	Order No.	
	A	B
Version without protective cover with lens cover yellow, red, green and white		
Universal voltage 20 V - 254 V AC/DC	**GHG 418 81 70 R00**	**51**
For intrinsically safe circuits (10 V up to 30 V DC)1)	**GHG 418 81 70 R00**	**52**
Low voltage 12 V up to 24 V AC/DC	**GHG 418 81 70 R00**	**53**

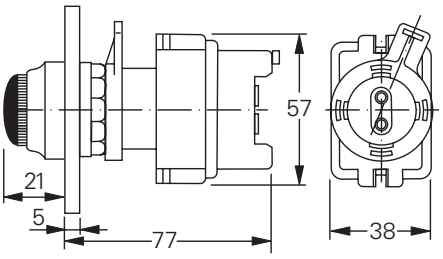
[1] Supply by valve-driver components, e.g., with data
U_o = 20 V – 28 V DC with R_i = 200 Ω – 500 Ω or U_o = 10 V – 18 V DC with R_i = 100 Ω – 200 Ω
No effective Ci and Li values.

Accessories

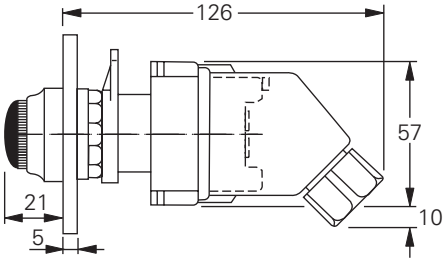
Type	OU	Order No.
Protective cover to meet IP66	5	**GHG 410 1939 R0002**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

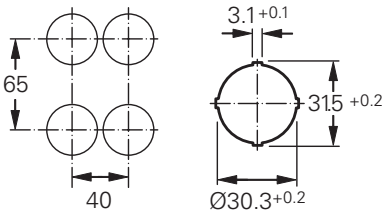
Dimension drawing



Signal lamp without protective cover



Signal lamp with protective cover



Minimum distances

Dimensions in mm



Interchangeable scales



Measuring instrument

Technical data

	Type 412 82 with measuring instrument AM 72	
	Moving iron	Moving coil
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex e II / ⟨Ex⟩ II 2 G Ex e mb II	⟨Ex⟩ II 2 G Ex ib IIC
EC-Type Examination Certificate	PTB 00 ATEX 3117	PTB 00 ATEX 3117
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	–20 °C up to +40 °C –55 °C up to +55 °C (option)
Rated voltage	up to 690 V AC	up to 690 V AC
Power consumption (VA)	max. 0.31 VA	max. 0.31 VA
Overload range	10 fold - 25 sec. 25 fold - 4 sec. 50 fold - 1 sec. indicated 1 : 1.5, optional 1:6	10-fold - 5 sec.
Measuring range	max. 0 - 25 A direct / n / 1A	0/4 - 24 mA
Winding specification of moving coil		26.5 windings
Internal resistance		2.5 Ω ± 30 %
Inductance Li		< 0.1 mH
Capacitance Ci		< 0.1 nF
Open circuit voltage Ui		≤ 30 V
Short circuit current max. Ii		≤ 150 mA
Accuracy	Class 2.5	Class 1.5
Connecting terminals	2 x 1.5 - 4 mm^2	
Degree of protection accd. to EN 60529	IP66	
Cable glands/Gland plates/Enclosure drilling	1 x M25 cable gland	
Dimensions (L x W x H)	160 x 95 x 62 mm	
Display size AM 72	72 x 72 mm	
Weight	0.8 kg	
Type of mounting	DIN rail mounting	
Enclosure colour	grey	



Measuring instrument



Interchangeable scales

4

Ordering code for component (Code 2) - code A - B - C

Code	A	B	C
Order No.	GHG 412 828	__ R0	_

Ordering code for component (Code 2) - code A - B

Code	Component	Code
A	Measuring instrument AM 72	GHG 412 828

Code	Voltage	Code
B	Direct connection	1
	CT connection 1 /A	2
	Power connection 0 - 20/24 mA (Scale 0-100% / 120%) [1]	5
	Power connection 4 - 20/24 mA (Scale 0-100% / 120%) [1]	6
	Moving-coil connection 0 - 20/24 mA (Scale 0-100% / 120%) [1] [3]	7
	Moving-coil connection 4 - 20/24 mA (Scale 0-100% / 120%) [1] [3]	8

Code	Measuring range/Scale	Code C	Measuring range/Scale	Code C
C	0 - 1	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 avilable with scale 0 - 100%/ 120%.

[2] Version for direct connection or with CT connection n/1 A possible.

[3] Moving coil only for Ex-i or Ex-d flameproof applications

Other interchangeable scales available on request.



Interchangeable scales

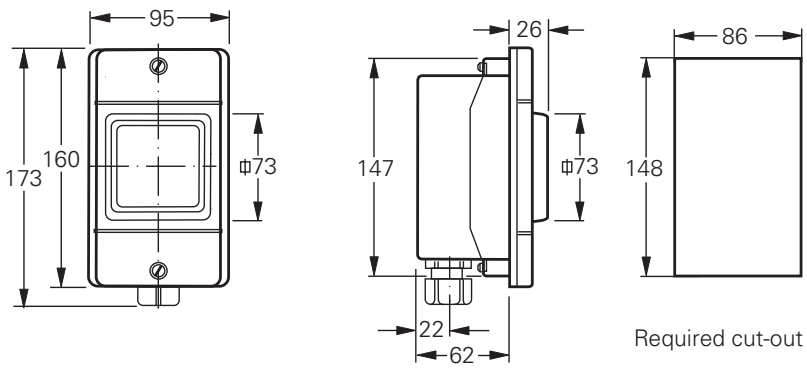


Measuring instrument

Example for order No.

Measuring range	Movement	Order No.
Measuring instrument AM 72, direct measurement Version with 1 x cable gland M25		
0 – 1 /1.5 A	Moving iron	**GHG 412 8281 R0002**
0 - 2.5 / 3.75 A	Moving iron	**GHG 412 8281 R0003**
0 - 5 / 7.5 A	Moving iron	**GHG 412 8281 R0004**
0 - 10 / 15 A	Moving iron	**GHG 412 8281 R0005**
0 - 16 / 24 A	Moving iron	**GHG 412 8281 R0007**
0 - 20 / 24 mA 0-100% / 120% (Ri = 320 Ω)	Moving coil	**GHG 412 8285 R0033**
4 - 20 / 24 mA 0-100% / 120% (Ri = 320 Ω)	Moving coil	**GHG 412 8286 R0035**
Measuring instrument AM 72, CT connection n/1A Version with 1 x cable gland M25		
0 – 1 / 1.5 A	Moving iron	**GHG 412 8282 R0002**
0 - 2.5 / 3.75 A	Moving iron	**GHG 412 8282 R0003**
0 - 5 / 7.5 A	Moving iron	**GHG 412 8282 R0004**
0 - 10 / 15 A	Moving iron	**GHG 412 8282 R0005**
0 - 15 / 22.5 A	Moving iron	**GHG 412 8282 R0006**
0 - 20 / 30 A	Moving iron	**GHG 412 8282 R0008**
0 - 30 / 45 A	Moving iron	**GHG 412 8282 R0009**
0 - 40 / 60 A	Moving iron	**GHG 412 8282 R0010**
0 - 50 / 75 A	Moving iron	**GHG 412 8282 R0011**
0 - 60 / 90 A	Moving iron	**GHG 412 8282 R0012**
0 - 75 / 112.5 A	Moving iron	**GHG 412 8282 R0013**
0 - 100 / 150 A	Moving iron	**GHG 412 8282 R0014**
0 - 150 / 225 A	Moving iron	**GHG 412 8282 R0015**
0 - 200 / 300 A	Moving iron	**GHG 412 8282 R0016**
0 - 250 / 375 A	Moving iron	**GHG 412 8282 R0017**
0 - 300 / 450 A	Moving iron	**GHG 412 8282 R0018**
0 - 400 / 600 A	Moving iron	**GHG 412 8282 R0019**
0 - 500 / 750 A	Moving iron	**GHG 412 8282 R0020**
0 - 600 / 900 A	Moving iron	**GHG 412 8282 R0021**
0 - 100% / 150%	Moving iron	**GHG 412 8282 R0031**

Dimension drawing



Required cut-out

Dimensions in mm



Interchangeable scales

4 Ordering details

Scale	Order unit	Order No. AM45	Order No. AM72
Interchangeable scales for measuring instrument, CT connection n/1A for AM 45/AM 72			
0 - 1 / 1.5 A	10 pieces	**GHG 410 1926 R0001**	**GHG 410 1928 R0001**
0 - 2.5 / 3.75 A	10 pieces	**GHG 410 1926 R0002**	**GHG 410 1928 R0002**
0 - 5 / 7.5 A	10 pieces	**GHG 410 1926 R0003**	**GHG 410 1928 R0003**
0 - 10 / 15 A	10 pieces	**GHG 410 1926 R0004**	**GHG 410 1928 R0004**
0 - 15 / 22.5 A	10 pieces	**GHG 410 1926 R0005**	**GHG 410 1928 R0005**
0 - 20 / 30 A	10 pieces	**GHG 410 1926 R0006**	**GHG 410 1928 R0006**
0 - 25 / 37.5 A	10 pieces	**GHG 410 1926 R0021**	**GHG 410 1928 R0021**
0 - 30 / 45 A	10 pieces	**GHG 410 1926 R0007**	**GHG 410 1928 R0007**
0 - 40 / 60 A	10 pieces	**GHG 410 1926 R0008**	**GHG 410 1928 R0008**
0 - 50 / 75 A	10 pieces	**GHG 410 1926 R0009**	**GHG 410 1928 R0009**
0 - 60 / 90 A	10 pieces	**GHG 410 1926 R0010**	**GHG 410 1928 R0010**
0 - 75 /112.5 A	10 pieces	**GHG 410 1926 R0011**	**GHG 410 1928 R0011**
0 - 100 / 150 A	10 pieces	**GHG 410 1926 R0012**	**GHG 410 1928 R0012**
0 - 150 / 225 A	10 pieces	**GHG 410 1926 R0013**	**GHG 410 1928 R0013**
0 - 200 / 300 A	10 pieces	**GHG 410 1926 R0014**	**GHG 410 1928 R0014**
0 - 250 / 375 A	10 pieces	**GHG 410 1926 R0015**	**GHG 410 1928 R0015**
0 - 300 / 450 A	10 pieces	**GHG 410 1926 R0016**	**GHG 410 1928 R0016**
0 - 400 / 600 A	10 pieces	**GHG 410 1926 R0017**	**GHG 410 1928 R0017**
0 - 500 / 750 A	10 pieces	**GHG 410 1926 R0018**	**GHG 410 1928 R0018**
0 - 600 / 900 A	10 pieces	**GHG 410 1926 R0019**	**GHG 410 1928 R0019**
0 – 100% / 150%	10 pieces	**GHG 410 1926 R0020**	**GHG 410 1928 R0051**

Special scales available on request.



Ordering code

Labels for pushbutton

Inscription	Code	Inscription	Code
0, I, Start, Stop	001	0	002
I	003	I I	004
D	005	STOP	006
START	007	emergency stop	008
LANGSAM	009	SCHNELL	010
EMERG.STOP	011		012
ARRET	014	MARCHE	015
AUF	016	AB	017
Neutral white	018	Neutral grün	019
0, I, Arret, Marche	020	UP	024
DOWN	025	ZU	026
ON	027	OFF	028
+	030	–	031
Neutral rot	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	I I I	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



Flap with 0-activation



Plastic flap



Combination piece



Labels

4

Ordering code

Content	Operating element	OU	Order No.
Padlocking 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)1) with hammer	Mushroom-head pushbutton	1	**GHG 410 1901 R0128**
Fire alarm (red) with hammer	Mushroom-head pushbutton	1	**GHG 410 1901 R0141**
with plastic flap	Mushroom-head pushbutton activated		**GHG 410 1994 R0001**
with plastic flap	Mushroom-head pushbutton non-activated		**GHG 410 1994 R0002**
with plastic flap	Pushbutton activated		**GHG 410 1994 R0003**
with plastic flap	Pushbutton non-activated		**GHG 410 1994 R0004**
with plastic flap	Emergency Stop		**GHG 410 1994 R0005**
with flap (blank)		1	**GHG 410 1901 R0132**
with flap (red)	Pushbutton Pushbutton	1	**GHG 410 1901 R0133**
with lap without „0"-activation (blank)	Double pushbutton	1	**GHG 410 1901 R0134**
with lap with „0"-activation (blank)	Double pushbutton	1	**GHG 410 1901 R0135**
with bracket (1 set)	Switch GHG 23/28	5	**GHG 440 1917 R0001**

[1] released when window is broken – select appropriate activation element.

Type	Content	OU	Order No.
Protective collar			
Protective collar (yellow)	for pushbutton and mushroom-head pushbutton	1	**GHG 410 1901 R1033**
Protective collar (yellow)	for pushbutton and mushroom-head pushbutton	5	**GHG 410 1901 R1034**
Protective collar (yellow)	for pushbutton and mushroom-head pushbutton	10	**GHG 410 1901 R1035**
Protective collar (red)	for pushbutton and mushroom-head pushbutton	1	**GHG 410 1901 R1036**
Protective collar (red)	for pushbutton and mushroom-head pushbutton	5	**GHG 410 1901 R1037**
Protective collar (red)	for pushbutton and mushroom-head pushbutton	10	**GHG 410 1901 R1038**

Type	Content	OU	Order No.
Labels and tools for control switches			
Labels with label holder	Blank (can be engraved)	10	**GHG 410 1953 R0001**
Combination piece for control station type 411	incl. twist protection and sealing	1	**GHG 410 1921 R0001**
Mounting and dismantling tool for lock nuts on operating elements	Spanner	1	**GHG 410 1914 R0001**
Blanking element for control units	incl. seal and lock nut	10	**GHG 410 1920 R0001**
Protective cap	for panel-mounted operating elements	5	**GHG 410 1939 R0002**

Please pay attention that only order units (OU) according to the ordering details can be delivered.



Ex-Control Switches with Plastic Enclosure

With or without measuring instruments for Zone 1 and 21

The 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 IP66. 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.



Features

- **Decisive cost saving with the CEAG mounting system**
- **Easily accessible connection terminals**
- **Degree of protection IP66**
- **Cable connection range up to 6 mm2**
- **Integrated locking facility**
- **Optional forced contact on request**



GHG 293



GHG 292

Technical data

		Ex-control switch Typ 292 without and Typ 293 with measuring instrument	
		with GHG 29 Switch	with GHG 28 Switch
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex ed ia IIC T5/T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	Ⓔx II 2 G Ex ad ia IIC T5/T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 99 ATEX 1163	PTB 99 ATEX 1163
IECEx Certificate of Conformity		IECEx BKI 07.0011	IECEx BKI 07.0011
Marking accord. to IECEx		Ex ed ia IIC T5 or T6 Ex tD A21 IP66 T49 °C	Ex ed ia IIC T5 or T6 Ex tD A21 IP66 T49 °C
Permissible ambient temperature		–20 °C up to +40 °C –55 °C up to +47 °C (T6) ... +55 °C (T5) Option	
Rated voltage		max. 500 V	max. 690 V
Rated current		16 A	20 A
Rated current with gold contact points		0.4 A	
Overload range (Type 293 only)		10 fold - 25 sec. 25 fold - 4 sec. 50 fold - 1 sec. indicated 1 : 1.5	
Measuring range (type only 293)		max. 0 - 25 A direct / n / 1A	
Accuracy (type 293 only)		Class 2.5	
Movement (type 293 only)		Moving iron	
Rated making-/rated breaking capacity accd. EN 60947-5-1		AC-15: U_e 230 V / I_e 6 A U_e 400 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.3 A	AC-15: U_e 230 V / I_e 8 A U_e 400 V / I_e 6 A DC-13: U_e 24 V / I_e 6 A U_e 230 V / I_e 0.4 A
Connecting terminals		2 x 0.5 - 2.5 mm^2 or 1 x 1.0 - 6.0 mm^2	
Degree of protection accd. to EN 60529		IP66	
Cable glands/Gland plates/Enclosure drilling		1 x M25 cable gland[1)2)]	
Dimensions (L x W x H)	GHG 292 GHG 293	170 x 110 x 129 mm 225 x 110 x 129 mm	
Weight	GHG 292 GHG 293	approx. 1.10 kg (1 level) approx. 1.25 kg (2 level) approx. 1.40 kg (3 level) approx. 1.90 kg (1 level) approx. 2.05 kg (2 level) approx. 2.20 kg (3 level)	
Enclosure material		glass-fibre reinforced polyester	
Enclosure colour		black	

[1)] Brass flange for metal entries available on request

[2)] 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.



GHG 292

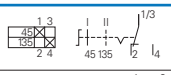
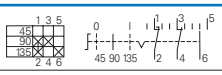
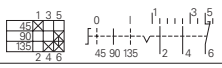
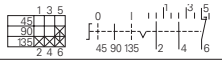
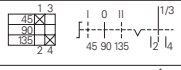
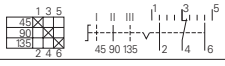
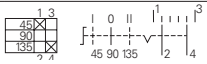
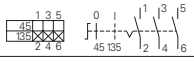
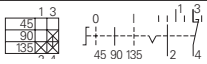
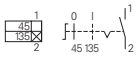
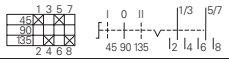


GHG 293

4 Ordering code for control switch (Code 2) Code A - B1 - B2 - C - D - E1 - E2 - F

Code	A	B1	B2	C	D	E	E2	F [1]
Order No.	GHG 29_	_	_ _	_ _	_	—	_ _	_ _

Code	Component		Code
A	Control switch		GHG 292
	Control switch with measuring instrument		GHG 293
Code	**Switching system**		**Code**
B1	spring – engaging – spring		4
	engaging – engaging – engaging		5
	engaging – engaging		6
	spring – engaging – engaging		7
	engaging – engaging – spring		8

Code	Contact	code for silver contact points	Contact	silver contact points
B2		062		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.

Code	Inscription (labels)			Code	Inscription (labels)			Code
C	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				



GHG 293



GHG 292

Ordering code for control switch (Code 2) Code A - B1 - B2 - C - D - E1 - E2 - F

Code	Component		Code
D	**none**	□	**0**
	centre	▯	**1**
	left	▨	**2**
	right	▨	**3**

Code	Movement	Code
E1	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

Code	Measuring range/Scale	Code	Measuring range/Scale	Code
E2	0 - 1	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%	031

Code	Built-in components	Description	
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
		screw plug	SV
		cable entry moulded plastic	GK
		cable entry moulded metal2)	GM2)
		cable entry with plug	GV
F3	Size	M12, M16, M20, M25, M32, M40	M1 Ø ..
		Ø21, Ø26	
F4	Number	number of entries	..

[1] The code will represent only a selected part of configuration.

[2] Only available with metal flange



GHG 292



GHG 293

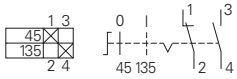
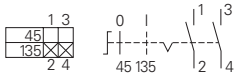
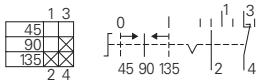
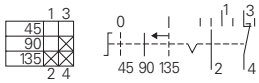
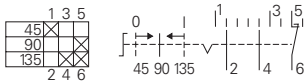
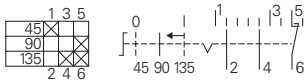
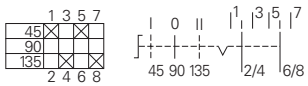
4

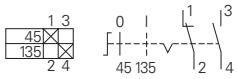
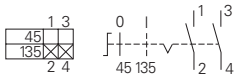
Example for ordering code (Code 2)

Control switch with silver contact points, Switching system „5“, Circuit „063“,
Labels „HAND-0-AUTO“, can be locked at „0“,
Measuring instrument AM72 for CT connection „n/1A“, Scale „0 - 50/75 A“,
Cable gland 1 x threaded entry M25 on bottom direct entry.

Code A	B1	B2	C	D	E1	E2	F1	F2	F3	F4
GHG 293 /	5 /	063 /	015 /	1 /	2 /	011 /	GEH /	BO /	M25 /	1

Ordering details

Switching system	Circuit	Code	Labels	Order No.
Control switch Typ 292 with silver contact points Version with padlocking facility in „0“-, or position „right (Code 3)“, cable gland 1 x M25 bottom.				
6		062	0 I	**GHG 292 1000 R0001**
6		065	0 I	**GHG 292 1000 R0002**
4		067	0 I	**GHG 292 1000 R0003**
8		067	0 I	**GHG 292 1000 R0004**
4		037	0 I	**GHG 292 2000 R0002**
8		037	0 I	**GHG 292 2000 R0003**
5		024	I 0 II	**GHG 292 2000 R0004**
5		023	HAND OFF AUTO	**GHG 292 2001 R0001**

Switching system	Circuit	Code	Labels	Order No.
Control switch with measuring instrument type 293 with silver contact points. Version with padlocking facility in „0“-, or position „left“, measuring instrument AM 72 for CT connection n/1A, Scale 0 - 100/150 %. 1 x M32 bottom.				
6		062	0 I	**GHG 293 1000 R0001**
6		065	0 I	**GHG 293 1000 R0002**



GHG 293



GHG 292

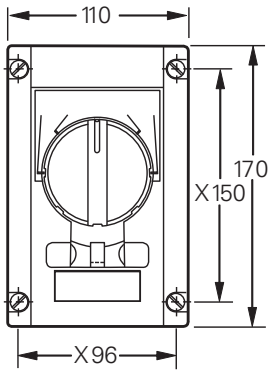
Accessories

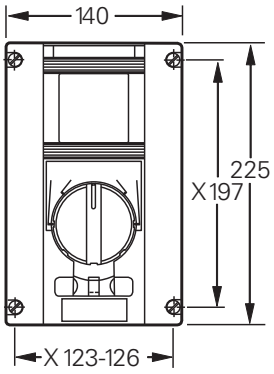
Type	Application	Fixing method	OU	Order No.
Mounting plate for type 292				
Size 2	wall mounting	snap on	1	**GHG 610 1953 R0104**
Size 2	pipe clamp	snap on	1	**GHG 610 1953 R0105**
Size 2	trellis-work mounting	snap on	1	**GHG 610 1953 R0106**
Size 4	wall mounting	snap on *	1	**GHG 610 1953 R0128**
Size 4	trellis-work mounting	snap on *	1	**GHG 610 1953 R0128**
Size 4	pipe clamp	snap on *	1	**GHG 610 1953 R0132**

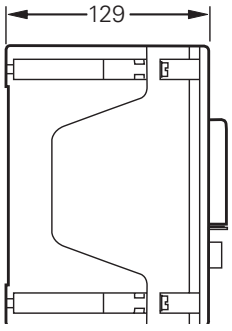
Type	Application	Fixing method	OU	Order No.
Mounting plate for type 293				
Size 3	wall mounting	snap on	1	**GHG 610 1953 R0118**
Size 3	pipe clamp	snap on	1	**GHG 610 1953 R0110**
Size 3	trellis-work mounting	snap on	1	**GHG 610 1953 R0118**
Size 5	wall mounting	snap on *	1	**GHG 610 1953 R0128**
Size 5	trellis-work mounting	snap on *	1	**GHG 610 1953 R0128**
Size 5	pipe clamp	snap on *	1	**GHG 610 1953 R0132**
Plug-in fastener for CEAG modules with 5.5 mm and 11 mm fixing elements 4 pieces			10	**GHG 610 1953 R0041**

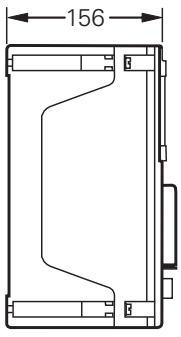
*snap-on with snap-on mounting 5.5 mm

Dimension drawing









GHG 292

GHG 293

X = fixing dimensions

Dimensions in mm

Ex-Light Alloy Control Switches

Light alloy Version for Zone 1 and 21

CEAG explosion-protected control switches are made of 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 allows to secure the switch against unauthorised or inadvertent actuation with a padlock.



Features

- **High mechanical, chemical and thermal resistance**
- **Impact-resistant plastic powder coating**
- **Snap-on switch holder**



GHG 295



GHG 294

Technical data

		Ex-control switch Typ 294 without and Typ 295 with measuring instrument	
		with GHG 29 switch	with GHG 28 switch
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex ed ia IIC T5/T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C	Ⓔx II 2 G Ex ed ia IIC T5/T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 99 ATEX 1163	PTB 99 ATEX 1163
IECEx Certificate of Conformity		IECEx BKI 07.0011	IECEx BKI 07.0011
Marking accord. to IECEx		Ex ed ia IIC T5 or T6 Ex tD A21 IP66 T49 °C	Ex ed ia IIC T5 or T6 Ex tD A21 IP66 T49 °C
Permissible ambient temperature		–20 °C up to +40 °C –55 °C up to +47 °C (T6) ... +55 °C (T5) option	
Rated voltage		max. 500 V	max. 690 V
Rated current		16 A	20 A
Rated current with gold contact points		0.4 A	
Overload range (type 293 only)		10 fold - 25 sec. 25 fold - 4 sec. 50 fold - 1 sec. indicated 1 : 1.5	
Measuring range (type 293 only)		max. 0 - 25 A direct / n / 1A	
Accuracy (type 293 only)		Class 2.5	
Circuit (type 293 only)		Moving iron	
Rated making-/rated breaking capacity accd. EN 60947-5-1		AC-15: U_e 230 V / I_e 6 A U_e 400 V / I_e 4 A DC-13: U_e 24 V / I_e 2 A U_e 230 V / I_e 0.3 A	AC-15: U_e 230 V / I_e 8 A U_e 400 V / I_e 6 A DC-13: U_e 24 V / I_e 6 A U_e 230 V / I_e 0.4 A
Connecting terminals		2 x 0.5 - 2.5 mm^2 or 1 x 1.0 - 6.0 mm^2	
Degree of protection accd. to EN 60529		IP66	
Cable glands/Gland plates/Enclosure drilling		1 x M25 cable gland, 1 x threaded plug M25 [1) 2)]	
Dimensions (L x W x H)	GHG 294 GHG 295	170 x 130 x 129 mm 260 x 160 x 129 mm	
Weight	GHG 294 GHG 295	approx. 1.90 kg (1 level) approx. 2.05 kg (2 level) approx. 2.90 kg (1 level) approx. 3.05 kg (2 level)	
Enclosure material		high quality cast aluminium-silicon (AlSi)	
Enclosure colour		grey RAL 7031	

[1)] Brass flange for metal entries available on request

[2)] 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.



GHG 294



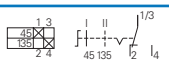
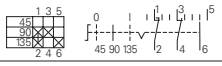
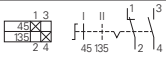
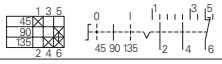
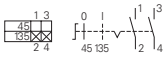
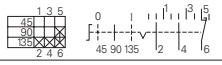
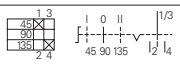
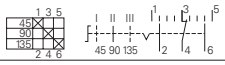
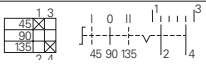
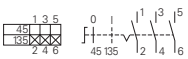
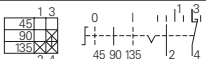
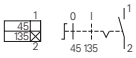
GHG 295

4 Ordering code for control switch (Code 2) Code A - B1 - B2 - C - D - E1 - E2 - F

Code	A	B1	B2	C	D	E	E2	F [1]
Order No.	GHG 29_	_	_ _	_ _	_	—	_ _	_ _

Code	Component	Code
A	Control switch	GHG 294
	Control switch with measuring instrument	GHG 295

Code	Switching system		Code
B1	spring – engaging – spring		4
	engaging – engaging – engaging		5
	engaging – engaging		6
	spring – engaging – engaging		7
	engaging – engaging – spring		8

Code	Contact	code for silver contact points	Contact	silver contact points
B2		062		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.

Code	Inscription (labels)			Code	Inscription (labels)			Code
C	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				



GHG 295



GHG 294

Ordering code for control switch (Code 2) Code A - B1 - B2 - C - D - E1 - E2 - F

Code	Component		Code
D	**none**	☐	**0**
	centre	▯	**1**
	left	▨	**2**
	right	▨	**3**

Code	Movement	Code
E1	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

Code	Measuring range/Scale	Code	Measuring range/Scale	Code
E2	0 - 1	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%	031

Code	Built-in components	Description	
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
		screw plug	SV
		cable entry moulded plastic	GK
		cable entry moulded metal2)	GM2)
		cable entry with plug	GV
F3	Size	M12, M16, M20, M25, M32, M40	M1 Ø ..
		Ø21, Ø26	
F4	Number	number of entries	..

[1] The code will represent only a selected part of configuration.

[2] Only available with metal flange



GHG 294



GHG 295

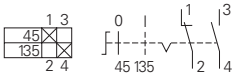
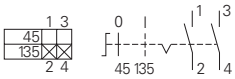
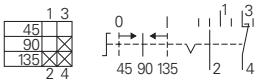
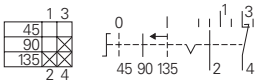
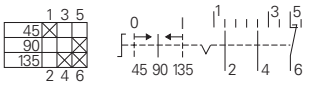
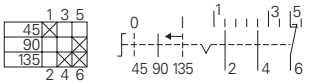
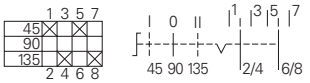
4

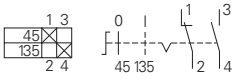
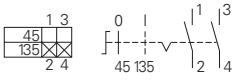
Example for ordering code (Code 2)

Control switch with silver contact points, Switching system „5“, Circuit „063“,
Labels „HAND-0-AUTO“, can be locked „0“,
Measuring instrument AM72 for CT connection „n/1A“, Scale „0 - 50/75 A“,
Cable entry 1 x threaded entry M25 on bottom direct entry.

Code A	B1	B2	C	D	E1	E2	F1	F2	F3	F4
GHG 295 /	5 /	063 /	015 /	1 /	2 /	011 /	GEH /	BO /	M25 /	1

Ordering details

Switching system	Circuit	Code	Labels	Order No.
Control switch type 294 with silver contact points Version with locking facility in „0“-, or position „right (Code 3)“, cable gland 1 x M25 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	**GHG 294 2000 R0004**

Switching system	Circuit	Code	Labels	Order No.
Control switch with measuring instrument type 295 with silver contact points. Version with padlocking facility in „0“-, or position „left“, measuring instrument AM 72 for CT connection n/1A, Scale 0 - 100/150 %. 1 x M32 bottom.				
6		062	0 I	**GHG 295 1000 R0001**
6		065	0 I	**GHG 295 1000 R0002**

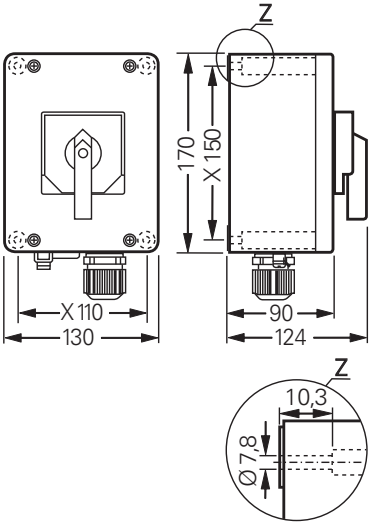


GHG 295

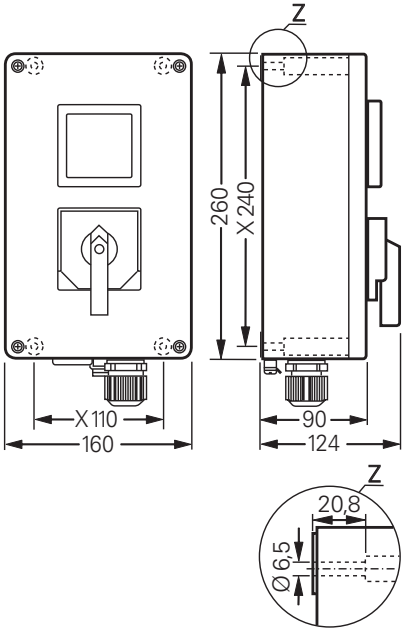


GHG 294

Dimension drawing



GHG 294



GHG 295

X = fixing dimensions

Dimensions in mm

Ex-Light Alloy Control Stations

Ex-d pushbutton and control switches for Zone 1 and 21

Ex-d explosion-protected control stations made of light alloy metal are equipped with up to three components to switch and control processes in areas of Zone 1, 2, 21 and 22 at no risk of explosion.

Built-in components, such as signal lamps, pushbuttons and switches are ready installed inside of the enclosures. To facilitate insertion of cables into the entries, Ex-d threads for 3/4" Ex-d cable glands are available at the enclosures.

A high "IP degree of protection" allows universal use in areas at risk of explosion. The light metal control stations have an outside earthing connection.



Features

- **High degree of protection IP67**
- **High mechanical, chemical and thermal resistance**
- **Individual configuration**



EFS 72



EFS A/A/V



EFS A



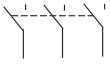
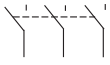
EFS D

Technical data

	Ex-d control stations type EFS
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIC T6 / Ⓔx II 2 D IP67 T 85 °C
EC-Type Examination Certificate	LOM 03 ATEX 2034
IECEx Certificate of Conformity	IECEx BKI 07.0027
Marking accd. to IECEx	Ex d IIC T6 Ex tD A21 IP67 T80 °C
Permissible ambient temperature	–20 °C up to +55 °C
Rated voltage	max. 660 V AC
Rated current	max. 20 A
PE Connecting terminals	2 x 2.5 mm^2 / PE ext.: 2 x 6 mm^2
Protection class	I
Incandescent lamp	230 V 3 W
Degree of protection accd. to EN 60529	IP67
Cable glands/Gland plates/Enclosure drilling	2 x 3/4" drilling, one plugged
Enclosure material	light alloy
Enclosure colour	natural finish

Other versions available on request

Ordering details

Type	Content	Weight	Order No.
Control units			
EFS A	1 x pushbutton, 1 NO + 1 NC, label „white"	0.75 kg	**NOR 000 114 110 511**
EFS A/A	2 x pushbutton, 1 NO + 1 NC, label „I - 0"	0.85 kg	**NOR 000 114 110 553**
EFS D	1 x mushroom-head pushbutton, 1 NO + 1 NC, label „0"	0.80 kg	**NOR 000 114 110 587**
EFS A/D	1 x pushbutton 1 NO, 1 x mushroom-head pushbutton NC, label „I - 0"	0.85 kg	**NOR 000 114 110 540**
EFS L	1 x alarm pushbutton, 1 NO + 1 NC, with window	0.85 kg	**NOR 000 114 110 595**
EFS A/A/A	3 x pushbutton, 1 NO + 1 NC, label „0 - I - II"	1.50 kg	**NOR 000 114 110 747**
EFS A/A/V	2 x pushbutton, 1 NO + 1 NC, label „0 - I - II", 1 x green signal lamp	1.50 kg	**NOR 000 114 110 748**
EFS 72	for measuring instrument AM 72 (72 mm x 72 mm), not part of the delivery	1.20 kg	**NOR 000 114 110 740**
Control switches			
EFS I	0 - 1 	0.90 kg	**NOR 000 003 110 945**
EFS H	1 - 2 	0.90 kg	**NOR 000 003 110 937**
EFS J	1 - 0 - 2 	0.90 kg	**NOR 000 003 110 953**
EFS P	0 - 1 	0.90 kg	**NOR 000 003 110 995**
EFS P40	0 - 1 	0.90 kg	**NOR 000 114 110 738**



EFS 72



EFS A/A/V

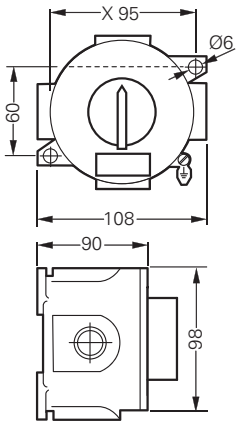


EFS A



EFS D

4 Dimension drawing



EVS...

X = fixing dimensions

Dimensions in mm

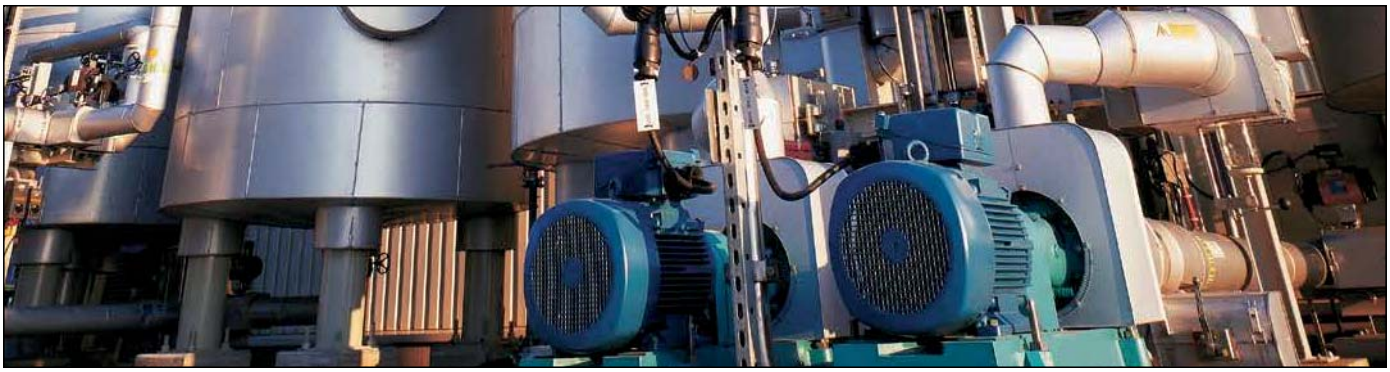


Ex-Safety and main current switches





Overview Ex-safety and main current switches 2.5.4
5.1 GHG 26 / EXKO 2.. Ex-Safety Switches 10 A - 630 A 2.5.6
GHG 261 - Ex-safety switches 10 A 2.5.7
GHG 262 - Ex-safety switches 20 A 2.5.9
GHG 263 - Ex-safety switches 40 A 2.5.12
GHG 264 - Ex-safety switches 80 A 2.5.15
GHG 265 / EXKO 2 - Ex-safety switches 125 A 2.5.17
GHG 266 / EXKO 2 - Ex-safety switches 180 A 2.5.20
EXKO 7317 - Ex-safety switches 210 A 2.5.22
EXKO 7317 - Ex-safety switches 250 A 2.5.24
EXKO 7317 - Ex-safety switches 400 A 2.5.26
EXKO 7317 - Ex-safety switches 630 A 2.5.28
GHG 262 - Ex-safety switches for three-phase drives 20 A 2.5.30
GHG 263 - Ex-safety switches for three-phase drives 40 A 2.5.32
GHG 264 - Ex-safety switches for three-phase drives 80 A 2.5.34
5.2 GHG 9810048 Ex-Safety Switches for Zone 22 ..... 2.5.36
GHG 9810048 - Ex-safety switches for Zone 22 ..... 2.5.38
5.3 GHG 981/KO 7317 Industrial Safety Switches 10 A - 630 A 2.5.44
GHG 981 - Industrial-safety switches 10 A 2.5.45
GHG 981 - Industrial-safety switches 25 A 2.5.47
GHG 981 - Industrial-safety switches 40 A 2.5.50
GHG 981 - Industrial-safety switches 80 A 2.5.53
GHG 981 - Industrial-safety switches 100 A 2.5.55
GHG 981 - Industrial-safety switches 160 A 2.5.58
KO 7317 - Industrial-safety switches 250 A 2.5.61
KO 7317 - Industrial-safety switches 400 A 2.5.63
KO 7317 - Industrial-safety switches 630 A 2.5.65
5.4 GHG 26 Ex-Main Current Switches 10 A - 80 A 2.5.68
GHG 261 - Ex-main current switches 10 A 2.5.69
GHG 262 - Ex-main current switches 20 A 2.5.71
GHG 263 - Ex-main current switches 40 A 2.5.74
GHG 264 - Ex-main current switches 80 A 2.5.77
5.5 EXKO 7318 Ex-Main Circuit Breakers 63 A - 630 A 2.5.80
EXKO 7318 Ex-main circuit breakers 63 A 2.5.81
EXKO 7318 Ex-main circuit breakers 125 A 2.5.83
EXKO 7318 Ex-main circuit breakers 160 A 2.5.85
EXKO 7318 Ex-main circuit breakers 250 A 2.5.87
EXKO 7318 Ex-main circuit breakers 400 A 2.5.89
EXKO 7318 Ex-main circuit breakers 630 A 2.5.91
5.6 GHG 635 Ex-Manual Motor Starters 2.5.94
GHG 635-1 Ex-manual motor starters 2.5.95
GHG 635-12 Ex-manual motor starters 2.5.98



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.

AC 3 switching capacity

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 stop 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 re-activated on site of the drive.

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 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 60947-4-1.

The new standard IEC 62626-1

The new standard IEC 62626-1 defines the requirements for safety switches (switch-disconnectors) that are used to provide isolation of equipment during repair and maintenance. These requirements go above and beyond those of IEC 60947-3, where no standard previously existed.

The standard divides products into two classifications: Class 0 for general use and Class 1 for harsh and rough/heavy duty conditions.

All products installed in ATEX/IECEx hazardous areas should be rated for Class 1. Class 1 requirements include minimum ratings for mechanical strength, IP protection, tamper resistance, heat/vibration/corrosion resistance, switching capacity, and locking capability.

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 light alloy, 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.

GHG 26 / EXKO 2.. Ex-Safety Switches

Rated current from 10 A - 630 A

Safety for your protection

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 switching capacity

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. An additional lagging/leading auxiliary contacts (option) guarantee double safety for extreme switching conditions.

installation-friendly design

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 IP66 for safety switches up 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.

Explosion Group IIB

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.

Enclosed Switch-Disconnectors to provide isolation during repair and maintenance.

GHG 26 switches (10-160 A) and GHG 981 switches (25- 80 A) are now confirmed to comply with the new standard IEC 62626-1, requirements Class 1.

The new standard IEC 62626-1 defines the requirements for safety switches (switch-disconnectors) that are used to provide isolation of equipment during repair and maintenance. These requirements go above and beyond those of IEC 60947-3, where no standard previously existed.

The standard divides products into two classifications: Class 0 for general use and Class 1 for harsh and rough/heavy duty conditions.

All products installed in ATEX/IECEx hazardous areas should be rated for Class 1. Class 1 requirements include minimum ratings for mechanical strength, IP protection, tamper resistance, heat/vibration/corrosion resistance, switching capacity, and locking capability.





Features

- **Full AC-3 switching capacity**
- **Double safety: additional auxiliary contact**
- **Cost-saving installation up to 180 A**
- **Snap-on mounting up to 40 A**
- **IP66 protection up to 180 A**



3-pole EMERGENCY STOP



3-pole

Technical data

		Ex-safety switches 10 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex ed IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 00 ATEX 1074
IECEx Certificate of Conformity		BKI 07.0014
Marking accd. to IECEx		Ex ed IIC T6 Ex tD A21 IP66 T53 °C
Permissible ambient temperature		–20 °C up to +40 °C[1)]
Rated voltage		up to max. 500 V
Rated current		max. 10 A
Frequency		50/60 Hz
Rated making-/ breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 10 A U_e 400 V / I_e 10 A U_e 500 V / I_e 10 A
Switch-disconnector for maintenance accd. to IEC 62262-1		Class 1
Back-up fuse		up to 400 V AC: 20 A gG up to 500 V AC: 16 A gG
Connecting terminals	main contact	2 x 1.5 - 2.5 mm^2
	auxiliary-/Signal contact	2 x 0.5 - 2.5 mm^2 (option)
Degree of protection accd. to EN 60529		IP66
Protection class		I
Cable glands/enclosure drilling		M20 cable gland see ordering details M25 cable gland see ordering details
Weight		0.55 kg
Enclosure material		impact resistant polyamide
Enclosure colour		black
Auxiliary contact (option)		1 x NO making - lagging; breaking - leading
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1)] Other ambient temperatures on request



3-pole



3-pole EMERGENCY STOP

Ordering details

5

Content	Cable gland	Auxiliary contact	Order No.
Safety switch 10 A 3-pole			
3-pole	2 x M25 / 1 x M20	1 NO	**GHG 261 0005 R0009**
3-pole	2 x M25	none	**GHG 261 0007 R0001**
3-pole	2 x M20	1 NO	**GHG 261 0005 R0005**
3-pole EMERGENCY STOP	2 x M25 / 1 x M20	1 NO	**GHG 261 0005 R0010**
3-pole EMERGENCY STOP	2 x M25	none	**GHG 261 0007 R0002**
Safety switch 10 A 4-pole 4-pole	2 x M25	none	**GHG 261 0007 R0003**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

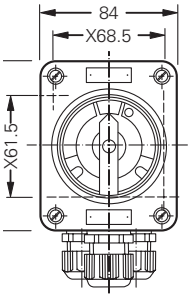
Type	Application	Fixing method	Order No.
Mounting plate for Ex-safety switches 10 A 3-pole			
Size 1	Wall mounting	screwless mounting	**GHG 610 1953 R0101**
Size 1	Pipe clamp	screwless mounting	**GHG 610 1953 R0102**
Size 1	Trellis-work mounting	screwless mounting	**GHG 610 1953 R0103**

Type	OU	Order No.
Accessories for mounting plates		
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

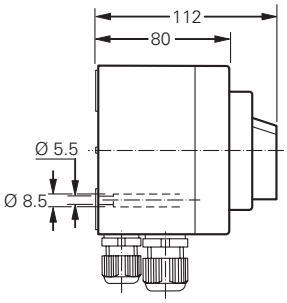
Type	Application	OU	Order No.
Canopies for mounting plates			
Size 1	for mounting plate size 1	1	**GHG 610 1955 R0101**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Dimension drawing



3-pole



X = fixing dimensions

Dimensions in mm



6-pole EMERGENCY STOP



6-pole



3-pole EMERGENCY STOP



3-pole

Technical data

		Ex-safety switches 20 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex ed ia IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 99 ATEX 1161
IECEx Certificate of Conformity		BKI 07.0012
Marking accd. to IECEx		Ex ed ia IIC T6 Ex tD A21 IP66 T55 °C
Permissible ambient temperature		–20 °C up to +40 °C[1)]
Rated voltage		up to max. 690 V
Rated current		max. 20 A
Frequency		50/60 Hz
Rated making-/rated breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 20 A U_e 400 V / I_e 20 A U_e 500 V / I_e 16 A U_e 690 V / I_e 10 A
Rated making-/ breaking capacity DC 1/DC 23 accd. EN 60947-3		U_e 60 V / I_e 20 A (1 contact) U_e 120 V / I_e 20 A (2 contacts in series)
Rated making-/ breaking capacity DC-13 (L/R = 100 ms) accd. EN 60947-3		U_e 60 V / I_e 6 A
Switch-disconnector for maintenance accd. to IEC 62262-1		Class 1
Back-up fuse		up to 400 V AC: 35 A gG up to 500 V AC: 35 A gG up to 690 V AC: 25 A gG
Connecting terminals	main contact auxiliary-/Signal contact	2 x 4 mm² 2 x 0.5 - 2.5 mm² (option)
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M20 cable gland see ordering details M25 cable gland see ordering details M32 cable gland see ordering details Option: metal flange with thread
Weight	3-pole 6-pole	approx. 1.48 kg approx. 2.43 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Auxiliary contact (option)		1 x NO making - lagging; breaking - leading 1 x NC (only 6-pole version) making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1)] Other ambient temperatures on request



3-pole



3-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Ordering details

Content	Cable gland	Auxiliary contact	Order No.
Safety switch 20 A 3-pole			
3-pole	2 x M32 / 1 x M25	1 NO	**GHG 262 2301 R0001**
3-pole	2 x M32	none	**GHG 262 2304 R0001**
3-pole EMERGENCY STOP	2 x M32 / 1 x M25	1 NO	**GHG 262 2301 R0002**
3-pole EMERGENCY STOP	2 x M32	none	**GHG 262 2304 R0002**
Safety switch 20 A 4-pole			
4-pole	2 x M20	1 NO + 1 NC	**GHG 262 2301 R0007**
4-pole	2 x M32 / 1 x M25	1 NO + 1 NC	**GHG 262 2301 R0009**
4-pole	2 x M32	none	**GHG 262 2304 R0004**
4-pole	2 x M20	none	**GHG 262 2304 R0003**
4-pole EMERGENCY STOP	2 x M32 / 1 x M25	1 NO + 1 NC	**GHG 262 2301 R0010**
Safety switch 20 A 6-pole			
6-pole	4 x M32 / 1 x M25	1 NO + 1 NC	**GHG 262 2601 R0001**
6-pole	4 x M25	1 NO + 1 NC	**GHG 262 2601 R0005**
6-pole EMERGENCY STOP	4 x M32 / 1 x M25	1 NO + 1 NC	**GHG 262 2601 R0002**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for Ex-safety switches 20 A 3-pole			
Size 2	Wall mounting	snap on	**GHG 610 1953 R0104**
Size 2	Pipe clamp	snap on	**GHG 610 1953 R0105**
Size 2	Trellis-work mounting	snap on	**GHG 610 1953 R0106**

Type	Application	Fixing method	Order No.
Mounting plate for Ex-safety switches 20 A 6-pole			
Size 3	Wall mounting	snap on	**GHG 610 1953 R0118**
Size 3	Pipe clamp	snap on	**GHG 610 1953 R0110**
Size 3	Trellis-work mounting	snap on	**GHG 610 1953 R0118**

Type		OU	Order No.
Accessories for mounting plates			
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3		10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing		10	**GHG 610 1953 R0020**

Type	Application	OU	Order No.
Canopies			
Size 2	for mounting plate size 2	1	**GHG 610 1955 R0102**
Size 2A	for mounting plate size 2A	1	**GHG 610 1955 R0103**
Size 3	for pipe mounting plate size 3 vertical	1	**GHG 610 1955 R0104**
Size 3A	for mounting plates wall/trellis fixing size 3 vertical	1	**GHG 610 1955 R0105**
Size 3B	for mounting plates pipe fixing size 3 horizontal	1	**GHG 610 1955 R0106**

Please pay attention that only order units (OU) according to the ordering details can be delivered.



6-pole EMERGENCY STOP



6-pole

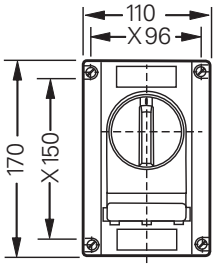


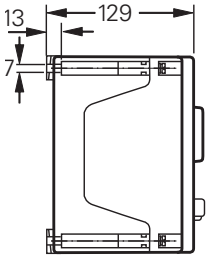
3-pole EMERGENCY STOP



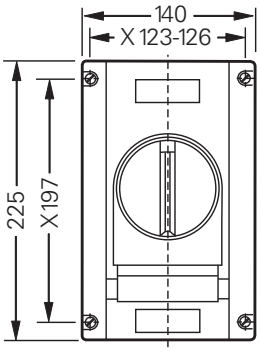
3-pole

Dimension drawing

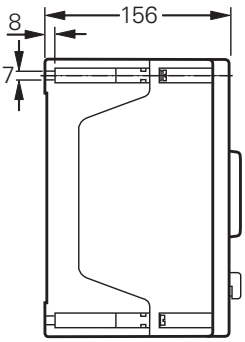




3/4-pole



6-pole



X = fixing dimensions

Dimensions in mm



3-pole



3-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Technical data

		Ex-safety switches 40 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex ed ia IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 99 ATEX 1161
IECEx Certificate of Conformity		BKI 07.0012
Marking accd. to IECEx		Ex ed ia IIC T6 Ex tD A21 IP66 T53 °C
Permissible ambient temperature		–20 °C up to +40 °C[1)]
Rated voltage		up to max. 690 V
Rated current		max. 40 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 40 A U_e 400 V / I_e 40 A U_e 500 V / I_e 40 A U_e 690 V / I_e 32 A
Rated making-/ breaking capacity DC 1/DC 23 accd. EN 60947-3		U_e 60 V / I_e 40 A (1 contact) U_e 120 V / I_e 40 A (2 contacts in series)
Switch-disconnector for maintenance accd. to IEC 62262-1		Class 1
Back-up fuse		up to 400 V AC: 80 A gG up to 500 V AC: 80 A gG up to 690 V AC: 63 A gG
Connecting terminals	main contact auxiliary/signal contact	2 x 16 mm² 2 x 4 mm² (option)
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M40 cable gland see ordering details Option: metal flange with thread
Weight	3-pole 4-pole 6-pole	approx. 2.30 kg approx. 2.75 kg approx. 6.50 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Auxiliary contact (option)		1 x NO making - lagging; breaking - leading 1 x NC (only 6-pole version) making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1)] Other ambient temperatures on request



6-pole EMERGENCY STOP



6-pole



3-pole EMERGENCY STOP



3-pole

Ordering details

Content	Cable gland	Auxiliary contact	Order No.
Safety switch 40 A 3-pole			
3-pole	2 x M40 / 1 x M25	1 NO	**GHG 263 2301 R0001**
3-pole	2 x M40	none	**GHG 263 2303 R0001**
3-pole EMERGENCY STOP	2 x M40 / 1 x M25	1 NO	**GHG 263 2301 R0002**
3-pole EMERGENCY STOP	2 x M40	none	**GHG 263 2303 R0002**
Safety switch 40 A 4-pole			
4-pole	2 x M25	1 NO + 1 NC	**GHG 263 2301 R0007**
4-pole	2 x M25	none	**GHG 263 2303 R0003**
4-pole	2x M40 / 1 x M25	1 NO + 1 NC	**GHG 263 2303 R0009**
4-pole	2x M40	none	**GHG 263 2303 R0004**
Safety switch 40 A 6-pole			
6-pole	4 x M40 / 1 x M25	1 NO + 1 NC	**GHG 263 0050 R0001**
6-pole	4 x M25	1 NO + 1 NC	**GHG 263 0050 R0006**
6-pole EMERGENCY STOP	4 x M40 / 1 x M25	1 NO + 1 NC	**GHG 263 0050 R0002**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for Ex-safety switches 40 A 3-pole			
Size 3	Wall mounting	snap on	**GHG 610 1953 R0118**
Size 3	Pipe clamp	snap on	**GHG 610 1953 R0110**
Size 3	Trellis-work mounting	snap on	**GHG 610 1953 R0118**

Type	Application	Fixing method	Order No.
Mounting plate for Ex-safety switches 40 A 6-pole			
Size 3	2 x pipe clamp	screw-on[1)]	**GHG 610 1953 R0110**

[1)] observe mounting distance

Type	OU	Order No.
Accessories for mounting plates		
Label for label holder and mounting plates size 4 and size 5	10	**GHG 610 1953 R0011**
Blind plug for mounting plate size 4 and size 5 1 set = 1 pcs.	10	**GHG 610 1953 R0134**
Plug-in fastener for CEAG modules with 5.5 mm and 11 mm mounting feet 1 set = 4 pcs.	10	**GHG 610 1953 R0041**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

Type	Application	OU	Order No.
Canopies			
Size 4	for mounting plate size 4	1	**GHG 610 1955 R0107**

Please pay attention that only order units (OU) according to the ordering details can be delivered.



3-pole



3-pole EMERGENCY STOP

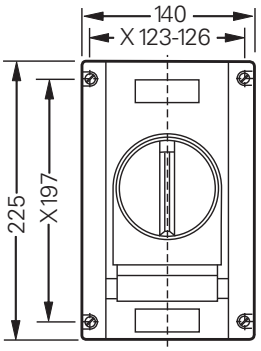


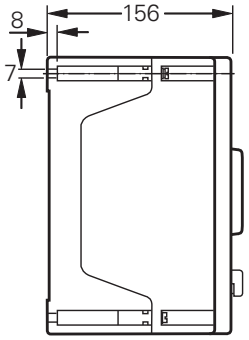
6-pole



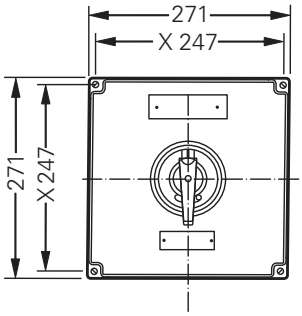
6-pole EMERGENCY STOP

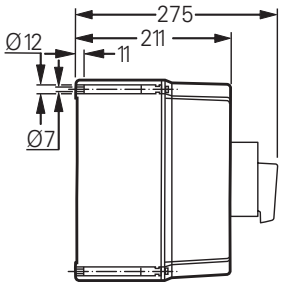
Dimension drawing





3/4-pole





6-pole

X = fixing dimensions

Dimensions in mm



6-pole EMERGENCY STOP



6-pole



3/4-pole EMERGENCY STOP



3/4-pole

Technical data

		Ex-safety switches 80 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex ed ia IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 00 ATEX 1091
IECEx Certificate of Conformity		BKI 07.0010
Marking accd. to IECEx		Ex ed ia IIC T6 Ex tD A21 IP66 T53 °C
Permissible ambient temperature		–20 °C up to +40 °C[1]
Rated voltage		up to max. 690 V
Rated current		max. 80 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 80 A U_e 400 V / I_e 80 A U_e 500 V / I_e 80 A U_e 690 V / I_e 63 A
Rated making-/ breaking capacity DC 1/DC 23 accd. EN 60947-3		U_e 60 V / I_e 80 A (1 contact) U_e 120 V / I_e 80 A (2 contacts in series)
Switch-disconnector for maintenance accd. to IEC 62262-1		Class 1
Back-up fuse		up to 400 V AC: 160 A gG up to 500 V AC: 160 A gG up to 690 V AC: 125 A gG
Connecting terminals	main contact auxiliary/signal contact	2 x 25 mm² 2 x 4 mm² (option)
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M32 cable gland see ordering details M50 cable gland see ordering details Option: metal flange with thread
Weight	3/4-pole 6-pole	approx. 6.5 kg approx. 9.0 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Auxiliary contact (option)		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1] Other ambient temperatures on request



3/4-pole



3/4-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Ordering details

Content	Cable gland	Auxiliary contact	Order No.
Safety switch 80 A 3-pole			
3-pole	2 x M50 / 1 x M25	1 NO + 1 NC	**GHG 264 0020 R0001**
3-pole	2 x M50	none	**GHG 264 0025 R0001**
3-pole EMERGENCY STOP	2 x M50 / 1 x M25	1 NO + 1 NC	**GHG 264 0020 R0002**
3-pole EMERGENCY STOP	2 x M50	none	**GHG 264 0025 R0002**
Safety switch 80 A 4-pole			
4-pole	2 x M50 / 1 x M25	1 NO + 1 NC	**GHG 264 0020 R0012**
4-pole	2 x M50	none	**GHG 264 0025 R0004**
4-pole	2 x M32	1 NO + 1 NC	**GHG 264 0020 R0006**
4-pole	2 x M32	none	**GHG 264 0025 R0003**
Safety switch 80 A 6-pole			
6-pole	4 x M50 / 1 x M25	1 NO + 1 NC	**GHG 264 0021 R0001**
6-pole EMERGENCY STOP	4 x M50 / 1 x M25	1 NO + 1 NC	**GHG 264 0021 R0002**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

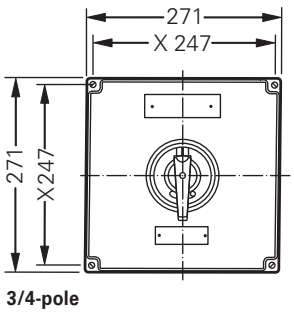
Type	Application	Fixing method	Order No.
Mounting plate for Ex-safety switches 80 A 3/4- and 6-pole			
Size 3	2 x pipe clamp	screw-on[1)]	**GHG 610 1953 R0110**

[1)] observe mounting distance

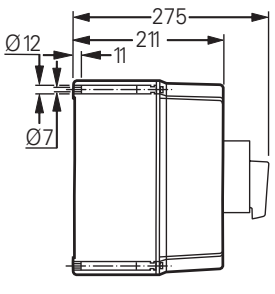
Type	OU	Order No.
Accessories for mounting plates		
Type label for label holder and mounting plates size 4 and size 5	10	**GHG 610 1953 R0011**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

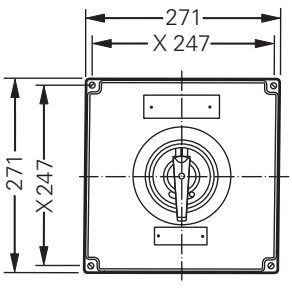
Please pay attention that only order units (OU) according to the ordering details can be delivered.

Dimension drawing

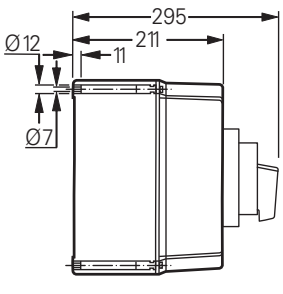


3/4-pole





6-pole



X = fixing dimensions

Dimensions in mm



6-pole EMERGENCY STOP



6-pole



3/4-pole EMERGENCY STOP



3/4-pole

Technical data

		Ex-safety switches 125 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	3/4-pole 6-pole	PTB 99 ATEX 1164 PTB 00 ATEX 1073
IECEx Certificate of Conformity		BKI 07.0005
Marking accd. to IECEx		Ex de IIC T6 Ex tD A21 IP66 T53 °C
Permissible ambient temperature		–20 °C up to +40 °C[1]
Rated voltage		up to max. 690 V
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 125 A U_e 400 V / I_e 125 A U_e 500 V / I_e 125 A U_e 690 V / I_e 110 A
Switch-disconnector for maintenance accd. to IEC 62262-1		Class 1
Back-up fuse		up to 400 V AC: 200 A gG up to 500 V AC: 200 A gG up to 690 V AC: 160 A gG
Connecting terminals	main contact 3/4-pole 6-pole auxiliary/signal contact	1 x 50/70 mm² 6 x 95 mm²/2 x 95 mm² 2 x 4 mm² (option)
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M40 cable gland see ordering details M63 cable gland see ordering details Option: metal flange with 2 x thread
Weight	3/4-pole 6-pole	approx. 16 kg approx. 31 kg
Enclosure material	3/4-pole 6-pole	glass-fibre reinforced polyester sheet steel polyester powder coated
Enclosure colour	3/4-pole 6-pole	RAL 7032 black
Auxiliary contact (option)		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1] Other ambient temperatures on request



3/4-pole



3/4-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Ordering details

Content	Cable gland	Auxiliary contact	Order No.
Safety switch 125 A 3-pole			
3-pole	2 x M63 / 1 x M25	1 NO + 1 NC	**GHG 265 0010 R0001**
3-pole	2 x M63	none	**GHG 265 0015 R0001**
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	1 NO + 1 NC	**GHG 265 0010 R0002**
3-pole EMERGENCY STOP	2 x M63	none	**GHG 265 0015 R0002**
Safety switch 125 A 4-pole			
4-pole	2 x M40	1 NO + 1 NC	**GHG 265 0010 R0005**
4-pole	2 x M63	none	**GHG 265 0015 R0003**
Safety switch 125 A 6-pole			
6-pole	4 x M63 / 1 x M25	1 NO + 1 NC	**EXKO 224716 K 0000**
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	1 NO + 1 NC	**EXKO 224726 K 0000**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for Ex-safety switches 125 A 3/4-pole[2)]			
Size 3	2 x pipe clamp	screw-on[1)]	**GHG 610 1953 R0110**

[1)] observe mounting distance
[2)] 2 pcs. necessary for mounting

Type	OU	Order No.
Accessories for mounting plates		
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

Please pay attention that only order units (OU) according to the ordering details can be delivered.



6-pole EMERGENCY STOP



6-pole

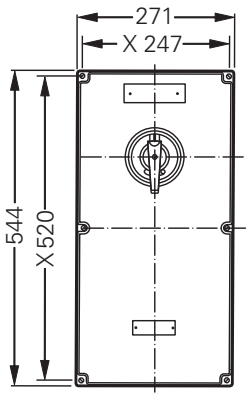


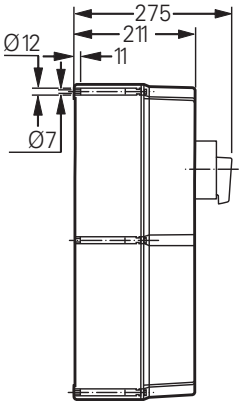
3/4-pole EMERGENCY STOP



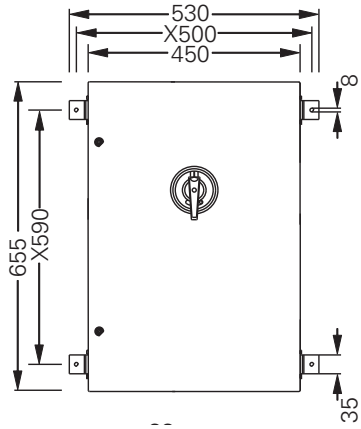
3/4-pole

Dimension drawing

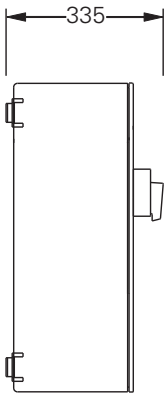




3/4-pole



6-pole



X = fixing dimensions

Dimensions in mm



3/4-pole



3/4-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Technical data

5

		Ex-safety switches 180 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	3/4-pole 6-pole	PTB 99 ATEX 1164 PTB 00 ATEX 1073
IECEx Certificate of Conformity		BKI 07.0005
Marking accd. to IECEx		Ex de IIC T6 –55 °C up to +45 °C Ex tD A21 IP66 T53 °C
Permissible ambient temperature		–20 °C up to +40 °C[1)]
Rated voltage		up to max. 690 V
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 180 A U_e 400 V / I_e 180 A U_e 500 V / I_e 150 A U_e 690 V / I_e 125 A
Switch-disconnector for maintenance accd. to IEC 62262-1		Class 1
Back-up fuse		up to 400 V AC: 250 A gG up to 500 V AC: 250 A gG up to 690 V AC: 200 A gG
Connecting terminals	main contact 3-pole 6-pole auxiliary/signal contact	1 x 120 mm² 6 x 150 mm²/2 x 95 mm² 2 x 4 mm² (option)
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M40 cable gland see ordering details M63 cable gland see ordering details Option: metal flange with 2 x thread
Weight	3/4-pole 6-pole	approx. 16.5 kg approx. 31.5 kg
Enclosure material	3/4-pole 6-pole	glass-fibre reinforced polyester sheet steel polyester powder coated
Enclosure colour	3/4-pole 6-pole	black RAL 7032
Auxiliary contact (option)		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1)] Other ambient temperatures on request



6-pole EMERGENCY STOP



6-pole



3/4-pole EMERGENCY STOP



3/4-pole

Ordering details

Content	Cable gland	Auxiliary contact	Order No.
Safety switch 180 A 3-pole			
3-pole	2 x M63 / 1 x M25	1 NC / 1 NO	**GHG 266 0006 R0001**
3-pole	2 x M63	none	**GHG 266 0011 R0001**
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	1 NC / 1 NO	**GHG 266 0006 R0002**
3-pole EMERGENCY STOP	2 x M63	none	**GHG 266 0011 R0002**
Safety switch 180 A 4-pole			
4-pole	2 x M50	1 NC / 1 NO	**GHG 266 0006 R0005**
4-pole	4 x M63	none	**GHG 266 0011 R0004**
4-pole	2 x M50	none	**GHG 266 0011 R0003**
Safety switch 180 A 6-pole			
6-pole	4 x M63 / 1 x M25	1 NC / 1 NO	**EXKO 224716 L 0000**
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	1 NC / 1 NO	**EXKO 224726 L 0000**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

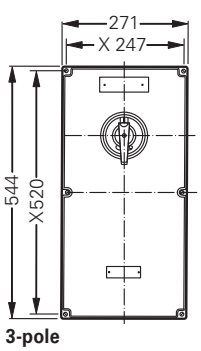
Type	Application	Fixing method	Order No.
Mounting plate for Ex-safety switches 180 A 3/4-pole[2)]			
Size 3	2 x pipe clamp	screw-on[1)]	**GHG 610 1953 R0110**

[1)] observe mounting distance
[2)] 2 pcs. necessary for mounting

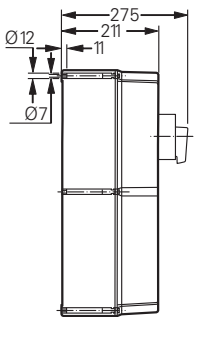
Type	OU	Order No.
Accessories for mounting plates		
Label holder with label (unlabelled) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

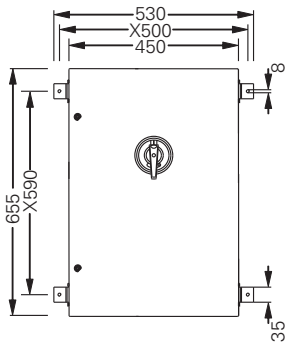
Please pay attention that only order units (OU) according to the ordering details can be delivered.

Dimension drawing

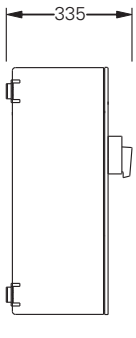


3-pole





6-pole



X = fixing dimensions

Dimensions in mm



3-pole



3-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Technical data

		Ex-safety switches 210 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6, T5 bzw. T4[1] / Ⓔx II 2 D IP66 T80 °C/T95 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEx Certificate of Conformity		IECEx PTB 12.0026
Marking accd. to IECEx		Ex d IIC T6, T5 or T4 Gb / Ex de IIC T6, T5 or T4 Gb Ex d IIB T6, T5 or T4 Gb / Ex de IIB T6, T5 or T4 Gb
Permissible ambient temperature		–20 °C up to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 210 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		Ue 230 V / Ie 210 A Ue 400 V / Ie 210 A Ue 500 V / Ie 210 A Ue 690 V / Ie 210 A
Back-up fuse		up to 400 V AC: 250 A gG up to 500 V AC: 250 A gG up to 690 V AC: 200 A gG
Connecting terminals	main contact 3-pole 6-pole auxiliary/signal contact	3 x 150 mm^2/95 mm^2 6 x 150 mm^2/2 x 95 mm^2 2 x 4 mm^2
Protection class		I
Degree of protection accd. to EN 60529		IP54 (IP65 optional)
Cable glands/enclosure drilling		M25 cable gland see ordering details M63 cable gland see ordering details
Weight	3-pole 6-pole	approx. 41.5 kg approx. 84.5 kg
Enclosure material		aluminium, powder-coated polyester connection box steel, powder-coated
Colour	Enclosure Cover	grey (RAL 7032) dark grey (RAL 7022)
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1] Also available with Explosion Group IIB



6-pole EMERGENCY STOP



6-pole



3-pole EMERGENCY STOP



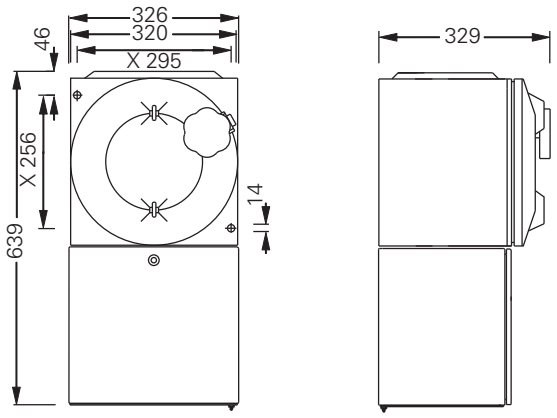
3-pole

Ordering details

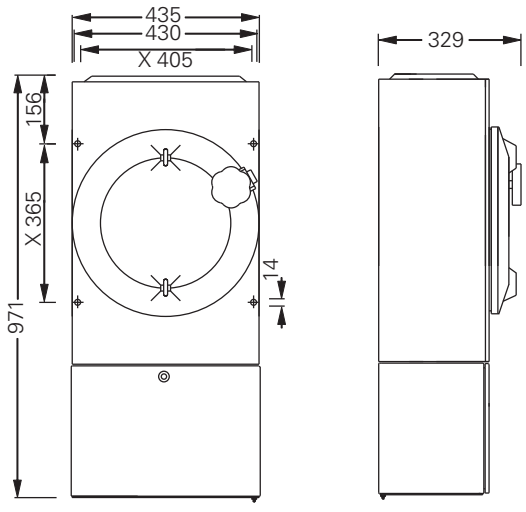
Content	Cable gland	Order No.
Safety switch 210 A 3-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
3-pole	2 x M63 / 1 x M25	**EXKO 731713 S0001**
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	**EXKO 731723 S0001**
Safety switch 210 A 6-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
6-pole	4 x M63 / 1 x M25	**EXKO 731716 S0001**
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	**EXKO 731726 S0001**

Customized version on request, auxiliary contacts in Ex ia available

Dimension drawing



3-pole



6-pole

X = fixing dimensions

Dimensions in mm



3-pole



3-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Technical data

5

		Ex-safety switches 250 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6, T5 bzw. T4[1] / Ⓔx II 2 D IP66 T80 °C/T95 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEx Certificate of Conformity		IECEx PTB 12.0026
Marking accd. to IECEx		Ex d IIC T6, T5 or T4 Gb / Ex de IIC T6, T5 or T4 Gb Ex d IIB T6, T5 or T4 Gb / Ex de IIB T6, T5 or T4 Gb
Permissible ambient temperature		–20 °C up to +40 °C[2]
Rated voltage		up to max. 690 V
Rated current		max. 250 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 250 A U_e 400 V / I_e 250 A U_e 500 V / I_e 250 A U_e 690 V / I_e 250 A
Back-up fuse		up to 400 V AC: 250 A gG up to 500 V AC: 250 A gG up to 690 V AC: 200 A gG
Connecting terminals	main contact 3-pole 6-pole auxiliary/signal contact	3 x 150 mm²/95 mm² 6 x 150 mm²/2 x 95 mm² 2 x 4 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP54 (IP65 optional)
Cable glands/enclosure drilling		M25 cable gland see ordering details M63 cable gland see ordering details
Weight	3-pole 6-pole	approx. 41.5 kg approx. 84.5 kg
Enclosure material		aluminium, powder-coated polyester connection box steel, powder-coated
Colour	Enclosure Cover	grey (RAL 7032) dark grey (RAL 7022)
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1] Also available with Explosion Group IIB

[2] Other ambient temperatures on request



6-pole EMERGENCY STOP



6-pole



3-pole EMERGENCY STOP



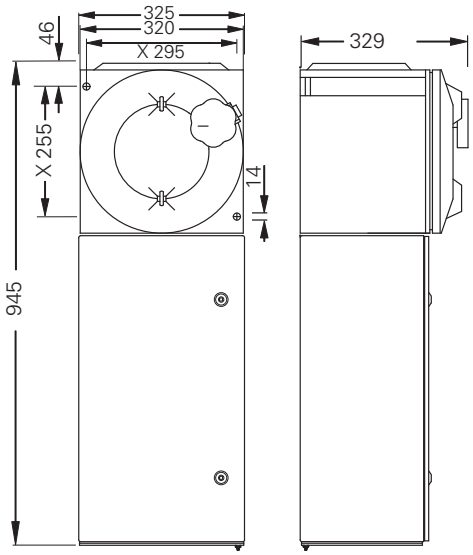
3-pole

Ordering details

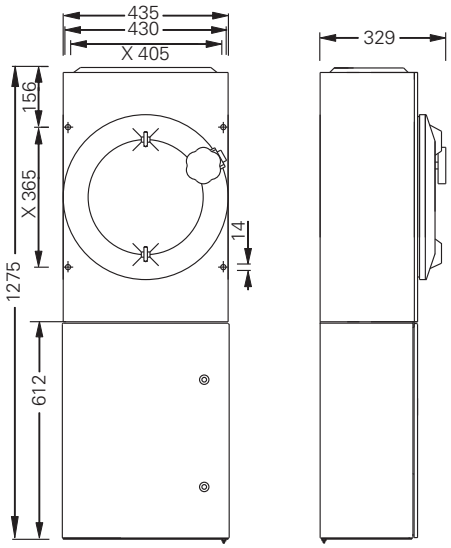
Content	Cable gland	Order No.
Safety switch 250 A 3-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
3-pole	2 x M63 / 1 x M25	**EXKO 731713 T0001**
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	**EXKO 731723 T0001**
Safety switch 250 A 6-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
6-pole	4 x M63 / 1 x M25	**EXKO 731716 T0001**
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	**EXKO 731726 T0001**

Customized version on request, auxiliary contacts in Ex ia available

Dimension drawing



3-pole



6-pole

X = fixing dimensions

Dimensions in mm



3-pole



3-pole EMERGENCY STOP

Technical data

		Ex-safety switches 400 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6, T5 bzw. T4[1] / Ⓔx II 2 D IP66 T80 °C/T95 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEx Certificate of Conformity		IECEx PTB 12.0026
Marking accd. to IECEx		Ex d IIC T6, T5 or T4 Gb / Ex de IIC T6, T5 or T4 Gb Ex d IIB T6, T5 or T4 Gb / Ex de IIB T6, T5 or T4 Gb
Permissible ambient temperature		–20 °C up to +40 °C[2]
Rated voltage		up to max. 690 V
Rated current		max. 400 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 400 A U_e 400 V / I_e 400 A U_e 500 V / I_e 400 A U_e 690 V / I_e 400 A
Back-up fuse		up to 400 V AC: 500 A gG up to 500 V AC: 500 A gG up to 690 V AC: 500 A gG
Connecting terminals	main contact auxiliary/signal contact	6 x 150 mm^2/2 x 95 mm^2 2 x 4 mm^2
Protection class		I
Degree of protection accd. to EN 60529		IP54 (IP65 optional)
Cable glands/enclosure drilling		M25 cable gland see ordering details M63 cable gland see ordering details
Weight		approx. 64.5 kg
Enclosure material		aluminium, powder-coated polyester connection box steel, powder-coated
Colour	Enclosure Cover	grey (RAL 7032) dark grey (RAL 7022)
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1] Also available with Explosion Group IIB

[2] Other ambient temperatures on request



3-pole EMERGENCY STOP



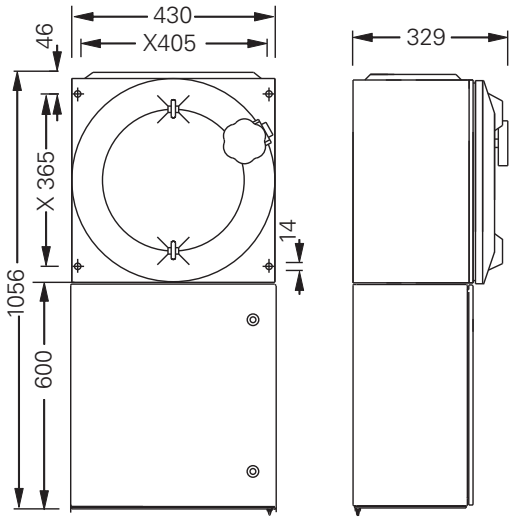
3-pole

Ordering details

Content	Cable gland	Order No.
Safety switch 400 A 3-pole **Version with 2 auxiliary contacts (1 NO; 1 x NC)**		
3-pole	4 x M63 / 1 x M25	**EXKO 731713 U0001**
3-pole EMERGENCY STOP	4 x M63 / 1 x M25	**EXKO 731723 U0001**

Customized version on request, auxiliary contacts in Ex ia available

Dimension drawing



3-pole **X = fixing dimensions**

Dimensions in mm



3-pole

Technical data

		Ex-safety switches 630 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6, T5 bzw. T4[1] / Ⓔx II 2 D IP66 T80 °C/T95 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEx Certificate of Conformity		IECEx PTB 12.0026
Marking accd. to IECEx		Ex d IIC T6, T5 or T4 Gb / Ex de IIC T6, T5 or T4 Gb Ex d IIB T6, T5 or T4 Gb / Ex de IIB T6, T5 or T4 Gb
Permissible ambient temperature		–20 °C up to +40 °C[2]
Rated voltage		up to max. 690 V
Rated current		max. 630 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 630 A U_e 400 V / I_e 630 A U_e 500 V / I_e 630 A U_e 690 V / I_e 630 A
Back-up fuse		up to 400 V AC: 800 A gG up to 500 V AC: 800 A gG up to 690 V AC: 800 A gG
Connecting terminals	main contact auxiliary/signal contact	6 x 240 mm²/2 x 120 mm² 2 x 4 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP54 (IP65 optional)
Cable glands/enclosure drilling		M25 cable gland see ordering details M80 Ø 62 - 68 mm see ordering details
Weight		approx. 245 kg
Enclosure material		steel, powder-coated polyester connection box steel, powder-coated
Colour	Enclosure Cover	grey (RAL 7032) dark grey (RAL 7022)
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1] Also available with Explosion Group IIB

[2] Other ambient temperatures on request



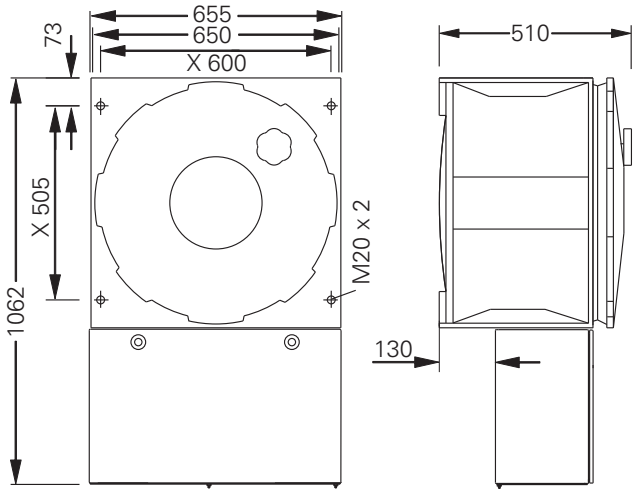
3-pole

Ordering details

Content	Cable gland	Order No.
Safety switch 630 A 3-pole **Version with 2 auxiliary contacts (1 NO; 1 x NC)**		
3-pole	4 x M80 / 1 x M25	**EXKO 731713 V0001**
3-pole EMERGENCY STOP	4 x M80 / 1 x M25	**EXKO 731723 V0001**

Customized version on request, auxiliary contacts in Ex ia available

Dimension drawing



3-pole

X = fixing dimensions

Dimensions in mm



3-pole, 20 A

Technical data

		Ex-safety switches 20 A for controlled three-phase drives
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex ed ia IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 99 ATEX 1161
IECEx Certificate of Conformity		BKI 07.0012
Marking accd. to IECEx		Ex ed ia IIC T6 Ex tD A21 IP66 T55 °C
Permissible ambient temperature		–20 °C up to +40 °C[1)]
Rated voltage		up to max. 690 V
Rated current		max. 20 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 20 A U_e 400 V / I_e 20 A U_e 500 V / I_e 16 A U_e 690 V / I_e 10 A
Back-up fuse		up to 400 V AC: 35 A gG up to 500 V AC: 35 A gG up to 690 V AC: 25 A gG
Connecting terminals	main contact auxiliary/signal contact	2 x 4 mm² 2 x 4 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M32 cable gland see ordering details Option: metal flange with 2 x thread
Weight		approx. 1.48 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Aux. 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
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1)] Other ambient temperatures on request



3-pole, 20 A

Ordering details

Content	Cable gland	Order No.
Safety switch 20 A Version with 2 auxiliary contacts (1 NO; 1 x NC), 1 x Safety interlock for electronics (1 x NO)		
3-pole	2 x M32 / 2 x M25	**GHG 262 0014 R0001**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

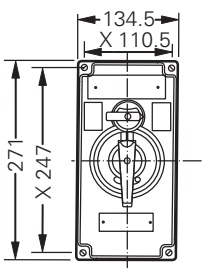
Type	Application	Fixing method	Order No.
Mounting plate for Ex-safety switches 20 A controlled three-phase drives			
Size 3	Wall mounting	screwless mounting	**GHG 610 1953 R0118**
Size 3	Pipe clamp	screwless mounting	**GHG 610 1953 R0110**
Size 3	Trellis-work mounting	screwless mounting	**GHG 610 1953 R0118**

Type	OU	Order No.
Accessories for mounting plates		
Label holder with label (unlabelled) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

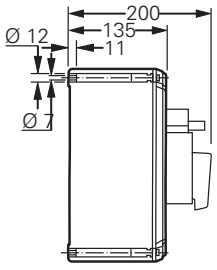
Type	Application	OU	Order No.
Accessories for canopies plates			
Size 3	for pipe mounting plate size 3 vertical	1	**GHG 610 1955 R0104**
Size 3A	for mounting plates wall/trellis fixing size 3 vertical	1	**GHG 610 1955 R0105**
Size 3	for mounting plates pipe fixing size 3 horizontal	1	**GHG 610 1955 R0106**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Dimension drawing



3-pole



X = fixing dimensions

Dimensions in mm



3-pole, 40 A

Technical data

	Ex-safety switches 40 A for controlled three-phase drives
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed ia IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 99 ATEX 1161
IECEx Certificate of Conformity	BKI 07.0012
Marking accd. to IECEx	Ex ed ia IIC T6 Ex tD A21 IP66 T53 °C
Permissible ambient temperature	–20 °C up to +40 °C[1)]
Rated voltage	up to max. 690 V
Rated current	max. 40 A
Frequency	50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3	U_e 230 V / I_e 40 A U_e 400 V / I_e 40 A U_e 500 V / I_e 40 A U_e 690 V / I_e 32 A
Back-up fuse	up to 400 V AC: 80 A gG up to 500 V AC: 80 A gG up to 690 V AC: 63 A gG
Connecting terminals main contact auxiliary/signal contact	2 x 16 mm² 2 x 4 mm²
Protection class	I
Degree of protection accd. to EN 60529	IP66
Cable glands/enclosure drilling	M25 cable gland see ordering details M40 cable gland see ordering details M50 cable gland see ordering details Option: metal flange with 2 x thread
Weight	approx. 4.3 kg
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black
Aux. 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
Padlocking facility	can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1)] Other ambient temperatures on request



3-pole, 40 A

Ordering details

Content	Cable gland	Order No.
Safety switch 40 A 3-pole Version with 2 auxiliary contacts (1 NO; 1 x NC), 1 x Safety interlock for electronics (1 x NO)		
3-pole	2 x M40 / 2 x M25	**GHG 263 0053 R0001**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

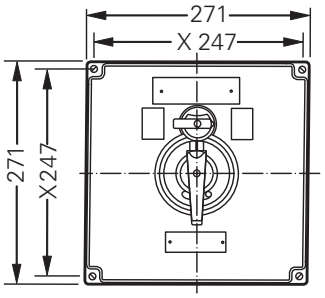
Type	Application	Fixing method	Order No.
Mounting plate for Ex-safety switches 125 A/180 A 3-pole			
Size 3	2 x pipe clamp	screw-on[1)]	**GHG 610 1953 R0110**

[1)] observe mounting distance

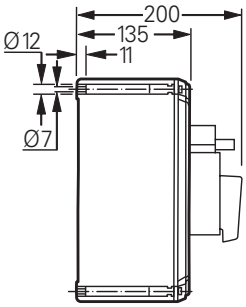
Type	OU	Order No.
Accessories for mounting plates		
Label holder with label (unlabelled) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Dimension drawing



Ex-safety switches 40 A



X = fixing dimensions

Dimensions in mm



3-pole, 80 A

Technical data

5

		Ex-safety switches 80 A for controlled three-phase drives
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 00 ATEX 1091
IECEx Certificate of Conformity		BKI 07.0010
Marking accd. to IECEx		Ex ed ia II T6 Ex tD A21 IP66 T53 °C
Permissible ambient temperature		–20 °C up to +40 °C[1)]
Rated voltage		up to max. 690 V
Rated current		max. 80 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 80 A U_e 400 V / I_e 80 A U_e 500 V / I_e 80 A U_e 690 V / I_e 63 A
Back-up fuse		up to 400 V AC: 160 A gG up to 500 V AC: 160 A gG up to 690 V AC: 160 A gG
Connecting terminals	main contact auxiliary-/Signal contact	2 x 25 mm² 2 x 4 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M40 cable gland see ordering details M50 cable gland see ordering details Option: metal flange with 2 x thread
Weight		approx. 7.25 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Aux. 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
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1)] Other ambient temperatures on request



3-pole, 80 A

Ordering details

Content	Cable gland	Order No.
Safety switch 80 A 3-pole Version with 2 auxiliary contacts (1 NO; 1 x NC), 1 x Safety interlock for electronics (1 x NO)		
3-pole	2 x M50 / 2 x M25	**GHG 264 0024 R0001**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

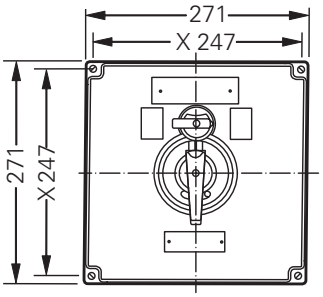
Type	Application	Fixing method	Order No.
Mounting plate for Ex-safety switches 80 A controlled three-phase drives			
Size 3	2 x pipe clamp	screw-on1)	**GHG 610 1953 R0110**

[1] observe mounting distance

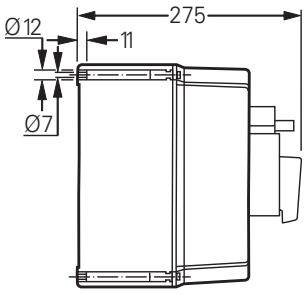
Type	OU	Order No.
Accessories for mounting plates		
Label holder with label (unlabelled) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Dimension drawing



Ex-safety switches 80 A



X = fixing dimensions

Dimensions in mm

GHG 9810048 Ex-Safety Switches for Zone 22

Rated current from 25 A - 700 A

The right size for every application

The switches are available in 3-pole, 4-pole, and 6-pole versions in sizes ranging from 25 A to 400A. The 630 A and 700 A sizes are available in 3-pole or 4-pole versions.

On the 25 A through 80 A sizes, they feature full AC-3 switching capacity for squirrel- cage motors during starting or while running per EN 60947-3 Appendix A. This is the most typical industrial application for motors. Sizes 100 A and above feature full AC-23 switching capacity for motor loads or other highly inductive loads per EN60947-3 Appendix A.

Emergency stop versions according to EN 60204-1

Optional emergency stop versions to EN 60204-1 featuring a red handle with a yellow backplate are also available. The additional leading or lagging auxiliary contact guarantees double safety for extreme switching conditions. All switch versions feature an earth terminal.

Special features of the safety switches include designs for ease of installation and readily accessible connection terminals.

Safety switches rated 160 A and below are available in all 3 material types while those 250 A and above are built into enclosures made of powder- coated sheet steel or electro- polished stainless steel. These enclosures can be fitted with screw-on flanges.

Enclosed Switch-Disconnectors to provide isolation during repair and maintenance.

GHG 26 switches (10-160 A) and GHG 981 switches (25- 80 A) are now confirmed to comply with the new standard IEC 62626-1, requirements Class 1.

The new standard IEC 62626-1 defines the requirements for safety switches (switch-disconnectors) that are used to provide isolation of equipment during repair and maintenance. These requirements go above and beyond those of IEC 60947-3, where no standard previously existed.

The standard divides products into two classifications: Class 0 for general use and Class 1 for harsh and rough/heavy duty conditions.

All products installed in ATEX/ IECEx hazardous areas should be rated for Class 1. Class 1 requirements include minimum ratings for mechanical strength, IP protection, tamper resistance, heat/vibration/corrosion resistance, switching capacity, and locking capability.





Features

- Approved for use in Zone 22 explosive dust atmospheres and for industrial applications
- For max. currents from 25A up to 700A
- AC-3 switching capacity (25A to 80A)
- AC-23 switching capacity (100A and up)
- Environmental protection to IP66
- Reliable corrosion protection
- Wide temperature range from-55°C to +55°C
- Can be locked in “OFF” position by max. 3 padlocks



Safety first

Occupational safety always has top priority in any industrial facility. Whenever maintenance, cleaning, or repair work is necessary, it must be possible to safely and reliably isolate machines and installations from the electrical power supply. Safety switches are the most widely used and cost effective isolation method available.

However, not all isolator switches are created equal. If safety switches that meet the requirements of the Raw Materials and Chemical Industry Employers' Liability Insurance Association (BG RCI) are used, time-consuming measures (e.g. the complete disconnection of motors) can be eliminated. Eaton's Crouse-Hinds series GHG981 safety switches meet these standards.

In addition, the GHG981 safety switches have been approved for use in zone 22 areas containing explosive dust. With the built-in padlocking facilities, they can be used as a load break switch with full confidence they will provide the required safety and personnel protection.

Ready for harsh environments

The enclosures for our GHG 981 safety switches are designed with IP66 environmental protection and are available in powder-coated sheet steel, glass-reinforced polyester (GRP), or electro-polished stainless steel. They are impact resistant and robust, corrosion-resistant, and are suitable for use in harsh industrial environments with extreme ambient temperatures from-55 °C to +55 °C.

Lock-out/tag-out capability

All GHG981 safety switches come with built-in lock-out/tag-out capability and can be locked in the "OFF" position by means of max. 3 padlocks. While switched to the "OFF" position, the enclosure covers of safety switches cannot be opened without destroying the enclosure. This provides an extra level of safety as it prevents access to a switch locked in the "OFF" position, eliminating any risk of tampering with the switch position or electrical connections.

Electrical equipment for use in areas with combustible dust

Combustible dust can be ignited by electrical apparatus in various ways:

by apparatus surface temperatures that are higher than the ignition or glow temperature of the respective dust. The temperature at which the dust ignites is dependent on the properties of the dust, on whether it is present in the form of a cloud or deposits, on the thickness of the layer and on the type of heat source

by sparks at electrical parts such as switches, contacts, commutators, brushes or similar

by the discharge of stored electrostatic energy

by radiated energy (e.g. electromagnetic radiation)

by magnetic impact or friction sparks or a rise in temperature originating from the apparatus.

To avoid ignition hazards, it is necessary that:

- the temperature of any surfaces on which dust deposits can form or that can come into contact with a cloud of dust are kept at a temperature that is lower than the limiting temperatures laid down in EN 50028-1-2
- all parts with electric sparks or with temperatures above the ignition or glow temperature of the dust are built into an enclosure that prevents the ingress of dust in a suitable manner, or
- the energy of the electric circuits is limited to such a degree, that sparks or temperature that could ignite combustible dust are avoided
- all other ignition sources are avoided.


80 A 3-pole plastic


80 A 6-pole sheet steel


100 A 3-pole plastic


100 A 6-pole stainless steel

Technical Data

	GHG 981...
Marking to 2014/34/EU	Ⓔx II 3 D Ex tc IIIC T80°C Dc
Type Examination Certificate	CCH 15 ATEX 1001
Permissible ambient temperature	-55 °C up to +40 °C/45 °C/50 °C/55 °C see instruction manual
IK-class according to EN 50102	IK 9 =^ 10 J
Rated voltage	up to 690 V
Rated current	see ordering information
Frequency	50 - 60 Hz
Switch-disconnector for maintenance accd. to IEC 62262-1	Class 1 (25 A - 80 A)
Protection class	I and II
Degree of protection accd. to EN 60529	IP66
Auxiliary contact	1 x NO making - lagging, breaking - leading 1 x NC making - leading, breaking - lagging
Padlocking	can be logged in OFF position with 3 commercially padlocks
Enclosure colour	Plastic = black / sheet steel = RAL 7032 / stainless steel 316L = electro-polished

	GHG 981 (25 A)		GHG 981 (40 A)		GHG 981 (80 A)	
Back-up fuse	up to 415 V AC 50 A gG	up to 690 V AC 50 A gG	up to 415 V AC 50 A gG	up to 690 V AC 80 A gG	up to 415 V AC 100 A gG	up to 690 V AC 100 A gG
Rated making-/breaking capacity AC-3 accd. to EN 60947-3 Appendix A	25 A / 3 pole 23 A / 4/6 pole	14 A / 3 pole 14 A / 4/6 pole	40 A / 3 pole 40 A / 6 pole	22 A / 3 pole 17 A / 6 pole	71 A / 3 pole 55 A / 6 pole	23 A / 3 pole 17 A / 6 pole
Connecting terminals	4 mm² - 10 mm²		16 mm² - 35 mm²		50 mm² - 70 mm²	

	GHG 981 (100 A)		GHG 981 (160 A)		GHG 981 (250 A)	
Back-up fuse	up to 415 V AC 315 A gG	up to 690 V AC 355 A gG	up to 415 V AC 315 A gG	up to 690 V AC 355 A gG	up to 415 V AC 315 A gG	up to 690 V AC 355 A gG
Rated making-/breaking capacity AC-3 accd. to EN 60947-3 Appendix A	100 A	100 A	160 A	160 A	250 A	250 A
Connecting terminals	50 mm² - 70 mm²		95 mm² - M8 x 25		185 mm² - M10 x 30	

	GHG 981 (400 A)		GHG 981 (630 A)		GHG 981 (700 A)	
Back-up fuse	up to 415 V AC 500 A gG	up to 690 V AC 500 A gG	up to 415 V AC 800 A gG	up to 690 V AC 800 A gG	up to 415 V AC 800 A gG	up to 690 V AC 800 A gG
Rated making-/breaking capacity AC-3 accd. to EN 60947-3 Appendix A	400 A	400 A	630 A	630 A	700 A	700 A
Connecting terminals	1 x 240 mm²		2 x 185 mm² - M12 x 40		2x240 mm² - M12 x 40	


160 A plastic


160 A sheet steel


250 A sheet steel


250 A stainless steel

Ordering details GHG 981 25 A - 100 A

Rated current	Poles	Enclosure material	Cable entry (metal thread)	Cable glands (plastic)	Enclosure sizes: GRP Size 1	Size 2	Size 3	Enclosure sizes: metall Size 1	Size 2	Size 3	Size 4	Order No.[1]
GHG 981 (25 A)												
25 A	3-pole	GRP		2xM32, 1xM25	X							**GHG 981 0048 R1211**
25 A	4-pole	GRP		2xM32, 1xM25	X							**GHG 981 0048 R1212**
25 A	6-pole	GRP		4xM32, 1xM25		X						**GHG 981 0048 R1213**
25 A	3-pole	Sheet steel, powder-coated	2xM32, 1xM25					X				**GHG 981 0048 R1214**
25 A	4-pole	Sheet steel, powder-coated	2xM32, 1xM25					X				**GHG 981 0048 R1215**
25 A	6-pole	Sheet steel, powder-coated	4xM32, 1xM25					X				**GHG 981 0048 R1216**
25 A	3-pole	316L stainless steel, electro-polished	2xM32, 1xM25					X				**GHG 981 0048 R1217**
25 A	4-pole	316L stainless steel, electro-polished	2xM32, 1xM25					X				**GHG 981 0048 R1218**
25 A	6-pole	316L stainless steel, electro-polished	4xM32, 1xM25					X				**GHG 981 0048 R1219**
GHG 981 (40 A)												
40 A	3-pole	GRP		2xM40, 1xM25		X						**GHG 981 0048 R1221**
40 A	4-pole	GRP		2xM40, 1xM25		X						**GHG 981 0048 R1222**
40 A	6-pole	GRP		4xM40, 1xM25		X						**GHG 981 0048 R1223**
40 A	3-pole	Sheet steel, powder-coated	2xM40, 1xM25						X			**GHG 981 0048 R1224**
40 A	4-pole	Sheet steel, powder-coated	2xM40, 1xM25						X			**GHG 981 0048 R1225**
40 A	6-pole	Sheet steel, powder-coated	4xM40, 1xM25						X			**GHG 981 0048 R1226**
40 A	3-pole	316L stainless steel, electro-polished	2xM40, 1xM25						X			**GHG 981 0048 R1227**
40 A	4-pole	316L stainless steel, electro-polished	2xM40, 1xM25						X			**GHG 981 0048 R1228**
40 A	6-pole	316L stainless steel, electro-polished	4xM40, 1xM25						X			**GHG 981 0048 R1229**
GHG 981 (80 A)												
80 A	3-pole	GRP		2xM50, 1xM25		X						**GHG 981 0048 R1231**
80 A	4-pole	GRP		2xM50, 1xM25		X						**GHG 981 0048 R1232**
80 A	6-pole	GRP		4xM50, 1xM25			X					**GHG 981 0048 R1233**
80 A	3-pole	Sheet steel, powder-coated	2xM50, 1xM25						X			**GHG 981 0048 R1234**
80 A	4-pole	Sheet steel, powder-coated	2xM50, 1xM25						X			**GHG 981 0048 R1235**
80 A	6-pole	Sheet steel, powder-coated	4xM50, 1xM25							X		**GHG 981 0048 R1236**
80 A	3-pole	316L stainless steel, electro-polished	2xM50, 1xM25						X			**GHG 981 0048 R1237**
80 A	4-pole	316L stainless steel, electro-polished	2xM50, 1xM25						X			**GHG 981 0048 R1238**
80 A	6-pole	316L stainless steel, electro-polished	4xM50, 1xM25							X		**GHG 981 0048 R1239**
GHG 981 (100 A)												
100 A	3-pole	GRP		2xM50, 1xM25		X						**GHG 981 0048 R0241**
100 A	4-pole	GRP		2xM63, 1xM25			X					**GHG 981 0048 R0242**
100 A	6-pole	GRP		4xM50, 1xM25			X					**GHG 981 0048 R0243**
100 A	3-pole	Sheet steel, powder-coated	2xM50, 1xM25						X			**GHG 981 0048 R0244**
100 A	4-pole	Sheet steel, powder-coated	2xM63, 1xM25							X		**GHG 981 0048 R0245**
100 A	6-pole	Sheet steel, powder-coated	4xM50, 1xM25							X		**GHG 981 0048 R0246**
100 A	3-pole	316L stainless steel, electro-polished	2xM50, 1xM25						X			**GHG 981 0048 R0247**
100 A	4-pole	316L stainless steel, electro-polished	2xM63, 1xM25							X		**GHG 981 0048 R0248**
100 A	6-pole	316L stainless steel, electro-polished	4xM50, 1xM25							X		**GHG 981 0048 R0249**

[1] For an emergency stop switch (red handle/yellow back plate), change the 3rd to last digit from R*2** (standard version) to R*3** (emergency stop)



GHG 981 (630 A)



GHG 981 (800 A)

Ordering details GHG 981 160 A - 700 A

Rated current	Poles	Enclosure material	Cable entry (metal thread)	Cable glands (plastic)	Enclosure sizes: GRP Size 1	Size 2	Size 3	Enclosure sizes: metall Size 1	Size 2	Size 3	Size 4	Order No.[1]
GHG 981 (160 A)												
160 A	3-pole	GRP		2xM63, 1xM25		X						**GHG 981 0048 R0251**
160 A	4-pole	GRP		2xM63, 1xM25			X					**GHG 981 0048 R0252**
160 A	6-pole	GRP		4xM50, 1xM25			X					**GHG 981 0048 R0253**
160 A	3-pole	Sheet steel, powder-coated	2xM63, 1xM25						X			**GHG 981 0048 R0254**
160 A	4-pole	Sheet steel, powder-coated	2xM63, 1xM25							X		**GHG 981 0048 R0255**
160 A	6-pole	Sheet steel, powder-coated	4xM50, 1xM25							X		**GHG 981 0048 R0256**
160 A	3-pole	316L stainless steel, electro-polished	2xM63, 1xM25						X			**GHG 981 0048 R0257**
160 A	4-pole	316L stainless steel, electro-polished	2xM63, 1xM25							X		**GHG 981 0048 R0258**
160 A	6-pole	316L stainless steel, electro-polished	4xM50, 1xM25							X		**GHG 981 0048 R0259**
GHG 981 (250 A)												
250 A	3-pole	Sheet steel, powder-coated	2xM63, 1xM25								X	**GHG 981 0048 R0264**
250 A	4-pole	Sheet steel, powder-coated	2xM63, 1xM25								X	**GHG 981 0048 R0265**
250 A	6-pole	Sheet steel, powder-coated	4xM63, 1xM25								X	**GHG 981 0048 R0266**
250 A	3-pole	316L stainless steel, electro-polished	2xM63, 1xM25								X	**GHG 981 0048 R0267**
250 A	4-pole	316L stainless steel, electro-polished	2xM63, 1xM25								X	**GHG 981 0048 R0268**
250 A	6-pole	316L stainless steel, electro-polished	4xM63, 1xM25								X	**GHG 981 0048 R0269**
GHG 981 (400 A)												
400 A	3-pole	Sheet steel, powder-coated	2xM63, 1xM25								X	**GHG 981 0048 R0274**
400 A	4-pole	Sheet steel, powder-coated	2xM63, 1xM25								X	**GHG 981 0048 R0275**
400 A	6-pole	Sheet steel, powder-coated	4xM63, 1xM25								X	**GHG 981 0048 R0276**
400 A	3-pole	316L stainless steel, electro-polished	2xM63, 1xM25								X	**GHG 981 0048 R0277**
400 A	4-pole	316L stainless steel, electro-polished	2xM63, 1xM25								X	**GHG 981 0048 R0278**
400 A	6-pole	316L stainless steel, electro-polished	4xM63, 1xM25								X	**GHG 981 0048 R0279**
GHG 981 (630 A)												
630 A	3-pole	Sheet steel, powder-coated	4xM80, 1xM25								X	**GHG 981 0048 R0284**
630 A	4-pole	Sheet steel, powder-coated	4xM80, 1xM25								X	**GHG 981 0048 R0285**
630 A	3-pole	316L stainless steel, electro-polished	4xM80, 1xM25								X	**GHG 981 0048 R0287**
630 A	4-pole	316L stainless steel, electro-polished	4xM80, 1xM25								X	**GHG 981 0048 R0288**
GHG 981 (700 A)												
700 A	3-pole	Sheet steel, powder-coated	4xM80, 1xM25								X	**GHG 981 0048 R0294**
700 A	4-pole	Sheet steel, powder-coated	4xM80, 1xM25								X	**GHG 981 0048 R0295**
700 A	3-pole	316L stainless steel, electro-polished	4xM80, 1xM25								X	**GHG 981 0048 R0297**
700 A	4-pole	316L stainless steel, electro-polished	4xM80, 1xM25								X	**GHG 981 0048 R0298**

[1] For an emergency stop switch (red handle/yellow back plate), change the 3rd to last digit from R*2** (standard version) to R*3** (emergency stop)

Accessories

Type	Version	
Cable glands		
Plastic cable glands	M20 up to M63	see: Main catalogue part 2 - page 2.3.4 - 2.3.11
Metal cable glands	ADE 1 F2	see: Main catalogue part 2 - page 2.3.12 - 2.3.19



40 A sheet steel



40 A plastic

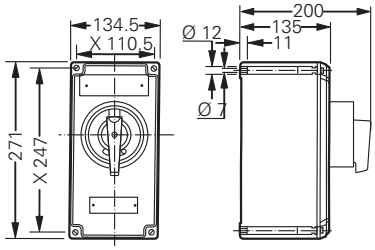


25 A stainless steel

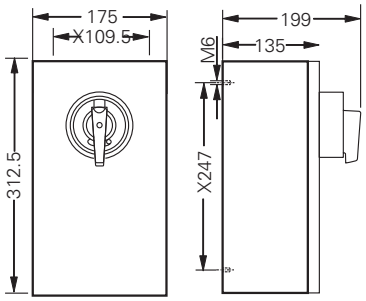


25 plastic

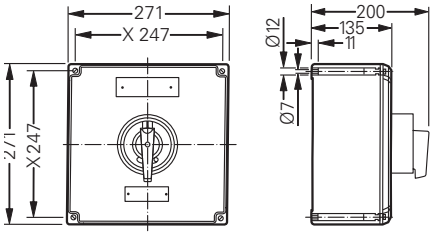
Dimension drawing



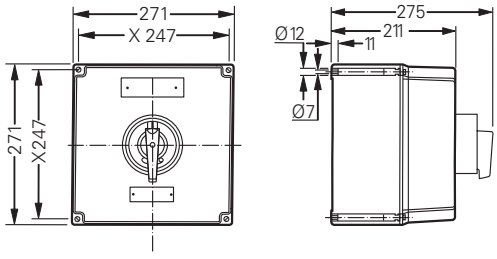
25 A, 3-/4-pole, plastic



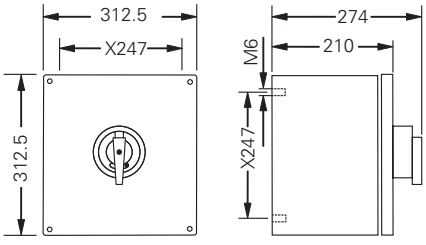
25 A, 3-/4-/6-pole, metal



25 A, 6-pole, plastic



40 A, 3-/4-/6-pole, plastic



40 A, 3-/4-/6-pole, metal

X = fixing dimensions

Dimensions in mm



80 A 3-pole plastic



80 A 6-pole sheet steel

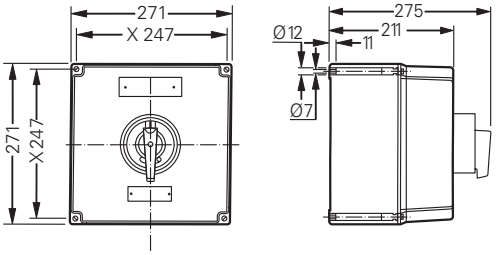


100 A 3-pole plastic

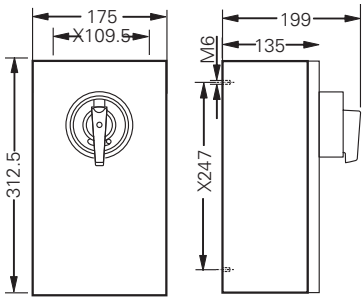


100 A 6-pole stainless steel

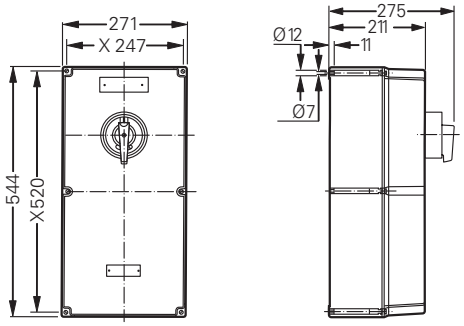
Dimension drawing



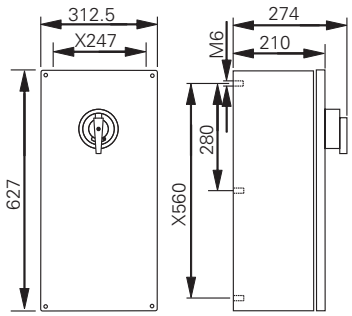
80 A, 3-/4-pole, plastic
100 A, 3-pole, plastic
160 A, 3-pole, plastic



80 A, 3-/4-pole, metal
100 A, 3-pole, metal
160 A, 3-pole, metal



80/100/160 A, 6-pole, plastic
100 A, 4-pole, plastic
160 A, 4-pole, plastic



80/100/160 A, 6-pole, metal
100 A, 4-pole, metal
160 A, 4-pole, metal

X = fixing dimensions

Dimensions in mm

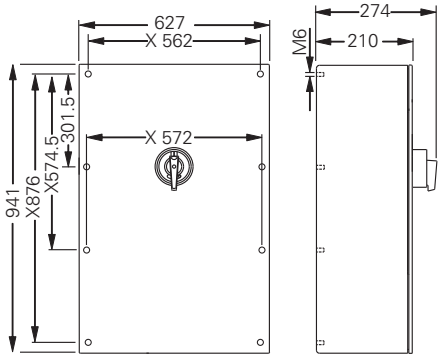


GHG 981 (630 A)



GHG 981 (700 A)

Dimension drawing



250 A, 3-/4-/6-pole, metal
400 A, 3-/4-/6-pole, metal
630 A, 3-/4-pole, metal
700 A, 3-/4-pole, metal

X = fixing dimensions

Dimensions in mm

GHG 981/KO 7317 Industrial Safety Switches

Rated current from 10 A - 630 A

Industrial safety switches protects

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

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.

Industrial applications for harsh environments

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, IP66, is guaranteed.



Features

- **Full AC-3 switching capacity**
- **Double safety: additional auxiliary contact**
- **Cost-saving installation**
- **Up to 40 A: snap mounting**
- **Up to 630 A: IP66 protection**



3-pole EMERGENCY STOP



3-pole

Technical data

		Industrial safety switch 10 A
Permissible ambient temperature		–20 °C up to +40 °C
Rated voltage		up to max. 500 V
Rated current		max. 10 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 10 A U_e 400 V / I_e 10 A U_e 500 V / I_e 10 A
Back-up fuse		up to 400 V AC: 20 A gG up to 500 V AC: 16 A gG
Connecting terminals	main contact auxiliary/signal contact	2 x 1.5 - 2.5 mm^2 2 x 0.5 - 2.5 mm^2
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M20 cable gland see ordering details M25 cable gland see ordering details
Weight		0.55 kg
Enclosure material		impact resistant polyamide
Enclosure colour		black
Auxiliary contact		1 x NO making - lagging; breaking - leading
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)



3-pole



3-pole EMERGENCY STOP

Ordering details

Content	Cable gland	Order No.
Industrial safety switch 10 A		
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**

Customized version on request

Accessories

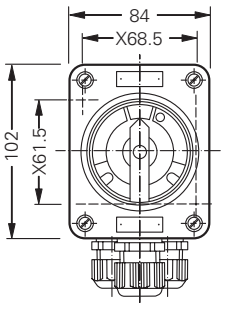
Type	Application	Fixing method	Order No.
Mounting plate for Industrial safety switch 10 A 3-pole			
Size 1	Wall mounting	screwless mounting	**GHG 610 1953 R0101**
Size 1	pipe clamp	screwless mounting	**GHG 610 1953 R0102**
Size 1	Trellis-work mounting	screwless mounting	**GHG 610 1953 R0103**

Type	OU	Order No.
Accessories for mounting plates		
Label holder with label (unlabelled) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

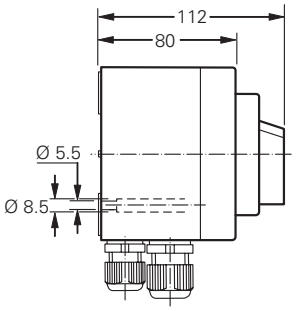
Type	Application	OU	Order No.
Accessories for canopies plates			
Size 1	Mounting plate size 1	1	**GHG 610 1955 R0101**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Dimension drawing



3-pole



X = fixing dimensions

Dimensions in mm



6-pole EMERGENCY STOP



6-pole



3-pole EMERGENCY STOP



3-pole

Technical data

		Industrial safety switch 25 A
Permissible ambient temperature		–20 °C up to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 25 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 20 A U_e 400 V / I_e 20 A U_e 500 V / I_e 16 A U_e 690 V / I_e 10 A
Back-up fuse		up to 400 V AC: 35 A gG up to 500 V AC: 35 A gG up to 690 V AC: 25 A gG
Connecting terminals	main contact auxiliary/signal contact	2 x 4 mm^2 2 x 0.5 - 2.5 mm^2
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M32 cable gland see ordering details Option: metal flange with 2 x thread
Weight	3-pole 6-pole	approx. 1.48 kg approx. 2.43 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC (only 6-pole version) making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)



3-pole



3-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Ordering details

Content	Cable gland	Order No.
Industrial safety switch 25 A 3-pole Version with 1 aux. contacts (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**
Industrial safety switch 25 A 6-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
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**

Customized version on request

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for Industrial safety switch 25 A 3-pole			
Size 2	Wall mounting	snap on	**GHG 610 1953 R0104**
Size 2	pipe clamp	snap on	**GHG 610 1953 R0105**
Size 2	Trellis-work mounting	snap on	**GHG 610 1953 R0106**

Type	Application	Fixing method	Order No.
Mounting plate for Industrial safety switch 25 A 6-pole			
Size 3	Wall mounting	snap on	**GHG 610 1953 R0118**
Size 3	pipe clamp	snap on	**GHG 610 1953 R0110**
Size 3	Trellis-work mounting	snap on	**GHG 610 1953 R0118**

Type	OU	Order No.
Accessories for mounting plates		
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Plug-in fastener for CEAG modules with 5.5 mm and 11 mm mounting feet 1 set = 4 pcs.	10	**GHG 610 1953 R0041**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

Type	Application	OU	Order No.
Accessories for canopies plates			
Size 2	for mounting plate size 2	1	**GHG 610 1955 R0102**
Size 2A	for mounting plate size 2A	1	**GHG 610 1955 R0103**
Size 3	for pipe mounting plate size 3 vertical	1	**GHG 610 1955 R0104**
Size 3A	for mounting plates wall/trellis fixing size 3 vertical	1	**GHG 610 1955 R0105**
Size 3B	for mounting plates pipe fixing size 3 horizontal	1	**GHG 610 1955 R0106**

Please pay attention that only order units (OU) according to the ordering details can be delivered.



6-pole EMERGENCY STOP



6-pole

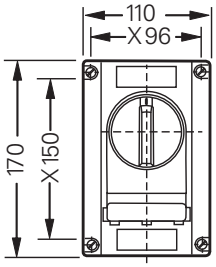


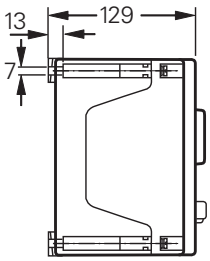
3-pole EMERGENCY STOP



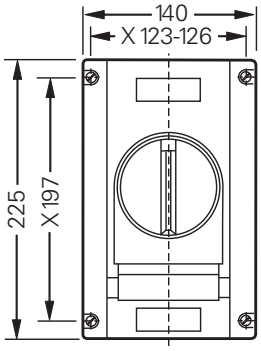
3-pole

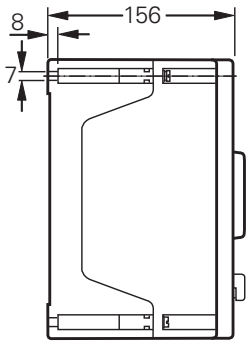
Dimension drawing





3-pole





6-pole

X = fixing dimensions

Dimensions in mm



3-pole



3-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Technical data

		Industrial safety switch 40 A
Permissible ambient temperature		–20 °C up to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 40 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 40 A U_e 400 V / I_e 40 A U_e 500 V / I_e 40 A U_e 690 V / I_e 32 A
Back-up fuse		up to 400 V AC: 80 A gG up to 500 V AC: 80 A gG up to 690 V AC: 63 A gG
Connecting terminals	main contact auxiliary/signal contact	2 x 16 mm^2 2 x 4 mm^2
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M40 cable gland see ordering details Option: metal flange on request
Weight	3-pole 6-pole	approx. 2.30 kg approx. 6.50 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)



6-pole EMERGENCY STOP



6-pole



3-pole EMERGENCY STOP



3-pole

Ordering details

Content	Cable gland	Order No.
Industrial safety switch 40 A 3-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
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**
Industrial safety switch 40 A 6-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
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**

Customized version on request

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for Industrial safety switch 40 A 3-pole			
Size 3	Wall mounting	snap on	**GHG 610 1953 R0118**
Size 3	Pipe clamp	snap on	**GHG 610 1953 R0110**
Size 3	Trellis-work mounting	snap on	**GHG 610 1953 R0118**

Type	Application	Fixing method	Order No.
Mounting plate for Industrial safety switch 40 A 6-pole			
Size 3	2 x pipe clamp	screw-on[1)]	**GHG 610 1953 R0110**

[1)] observe mounting distance

Type	OU	Order No.
Accessories for mounting plates		
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Plug-in fastener for CEAG modules with 5.5 mm and 11 mm mounting feet 1 set = 4 pcs.	10	**GHG 610 1953 R0041**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

Type	Application	OU	Order No.
Accessories for canopies plates			
Size 3	for pipe mounting plate size 3 vertical	1	**GHG 610 1955 R0104**
Size 3A	for mounting plates wall/trellis fixing size 3 vertical	1	**GHG 610 1955 R0105**
Size 3B	for mounting plates pipe fixing size 3 horizontal	1	**GHG 610 1955 R0106**

Please pay attention that only order units (OU) according to the ordering details can be delivered.



3-pole



3-pole EMERGENCY STOP



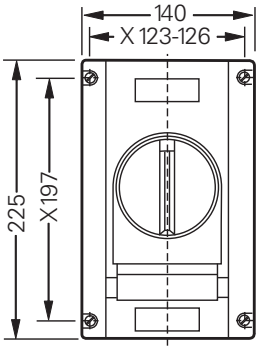
6-pole

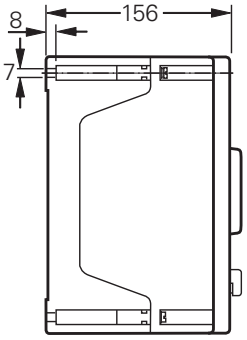


6-pole EMERGENCY STOP

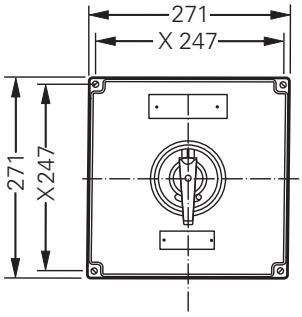
Dimension drawing

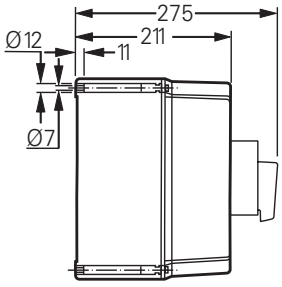
5





3-pole





6-pole

X = fixing dimensions

Dimensions in mm



6-pole EMERGENCY STOP



6-pole



3-pole EMERGENCY STOP



3-pole

Technical data

		Industrial safety switch 80 A
Permissible ambient temperature		–20 °C up to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 80 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 80 A U_e 400 V / I_e 80 A U_e 500 V / I_e 80 A U_e 690 V / I_e 80 A
Back-up fuse		up to 400 V AC: 160 A gG up to 500 V AC: 160 A gG up to 690 V AC: 125 A gG
Connecting terminals	main contact auxiliary/signal contact	2 x 25 mm^2 2 x 4 mm^2
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M50 cable gland see ordering details Option: metal flange with 2 x thread
Weight	3-pole 6-pole	approx. 6.50 kg approx. 9.00 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)



3-pole



3-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Ordering details

5

Content	Cable gland	Order No.
Industrial safety switch 80 A 3-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
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**
Industrial safety switch 80 A 6-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
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**

Customized version on request

Accessories

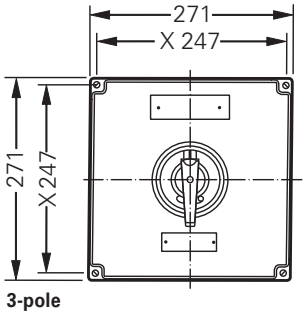
Type	Application	Fixing method	Order No.
Mounting plate for Industrial safety switch			
Size 3	2 x pipe clamp	screw-on[1)]	**GHG 610 1953 R0110**

[1)] observe mounting distance

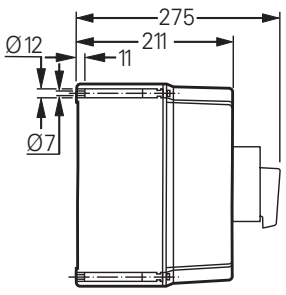
Type	OU	Order No.
Accessories for mounting plates		
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

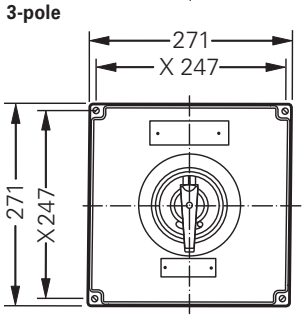
Please pay attention that only order units (OU) according to the ordering details can be delivered.

Dimension drawing

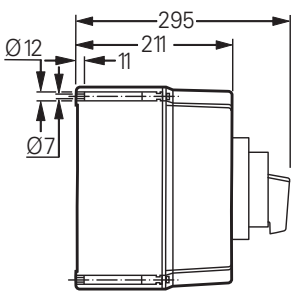


3-pole





6-pole



X = fixing dimensions

Dimensions in mm



6-pole EMERGENCY STOP



6-pole



3-pole EMERGENCY STOP



3-pole

Technical data

		Industrial safety switch 100 A
Permissible ambient temperature		–20 °C up to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 100 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 100 A U_e 400 V / I_e 100 A U_e 500 V / I_e 100 A U_e 690 V / I_e 100 A
Back-up fuse		up to 400 V AC: 200 A gG up to 500 V AC: 200 A gG up to 690 V AC: 160 A gG
Connecting terminals	main contact auxiliary/signal contact	1 x 50/70 mm^2 2 x 4 mm^2
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M50 cable gland see ordering details Option: metal flange with 2 x thread
Weight	3-pole 6-pole	approx. 9.50 kg approx. 16.00 kg
Enclosure material	3-pole 6-pole	glass-fibre reinforced polyester steel, powder-coated polyester
Enclosure colour		black
Auxiliary contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)



3-pole



3-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Ordering details

Content	Cable gland	Order No.
Industrial safety switch 100 A 3-pole Version with 4 auxiliary contacts (2 x NO; 2 x NC)		
3-pole	2 x M50 / 1 x M25	**GHG 981 0029 R0004**
3-pole EMERGENCY STOP	2 x M50 / 1 x M25	**GHG 981 0029 R0005**
Industrial safety switch 100 A 6-pole Version with 4 auxiliary contacts (2 x NO; 2 x NC)		
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**

Customized version on request

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for Industrial safety switch			
Size 3	2 x pipe clamp	screw-on[1)]	**GHG 610 1953 R0110**

[1)] observe mounting distance

Type	OU	Order No.
Accessories for mounting plates		
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

Please pay attention that only order units (OU) according to the ordering details can be delivered.



6-pole EMERGENCY STOP



6-pole

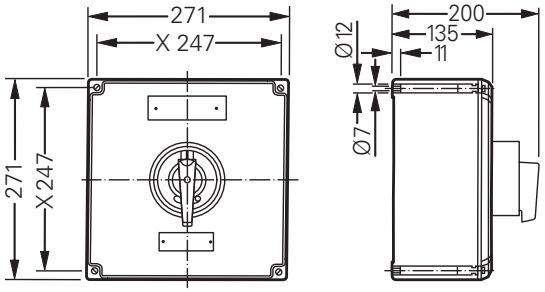


3-pole EMERGENCY STOP

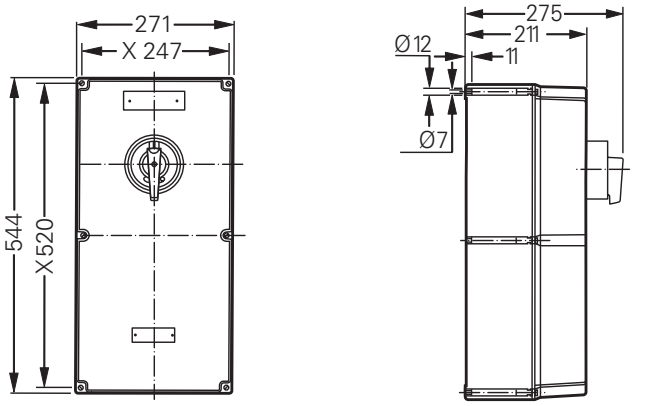


3-pole

Dimension drawing



3-pole



6-pole

X = fixing dimensions

Dimensions in mm



3-pole



3-pole EMERGENCY STOP



6-pole



6-pole EMERGENCY STOP

Technical data

		Industrial safety switch 160 A
Permissible ambient temperature		–20 °C up to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 160 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 160 A U_e 400 V / I_e 160 A U_e 500 V / I_e 160 A U_e 690 V / I_e 160 A
Back-up fuse		up to 400 V AC: 250 A gG up to 500 V AC: 250 A gG up to 690 V AC: 200 A gG
Connecting terminals	main contact auxiliary/signal contact	1 x 95 mm^2 2 x 4 mm^2
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M63 cable gland see ordering details Double cable pothead Ø 46 -72 mm) Option: metal flange with 2 x thread
Weight	3-pole 6-pole	approx. 9.00 kg approx. 16.50 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Aux. contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)



6-pole EMERGENCY STOP



6-pole



3-pole EMERGENCY STOP



3-pole

Ordering details

Content	Cable gland	Order No.
Industrial safety switch 160 A 3-pole Version with 4 auxiliary contacts (2 x NO; 2 x NC)		
3-pole	2 x M63 / 1 x M25	**GHG 981 0031 R0003**
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	**GHG 981 0031 R0004**
Industrial safety switch 160 A 6-pole Version with 4 auxiliary contacts (2 x NO; 2 x NC)		
6-pole	4 x M50 / 1 x M25	**GHG 981 0032 R0003**
6-pole EMERGENCY STOP	4 x M50 / 1 x M25	**GHG 981 0032 R0004**

Customized version on request

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for Industrial safety switch			
Size 3	2 x pipe clamp	screw-on[1)]	**GHG 610 1953 R0110**

[1)] observe mounting distance

Type	OU	Order No.
Accessories for mounting plates		
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

Please pay attention that only order units (OU) according to the ordering details can be delivered.



3-pole



3-pole EMERGENCY STOP



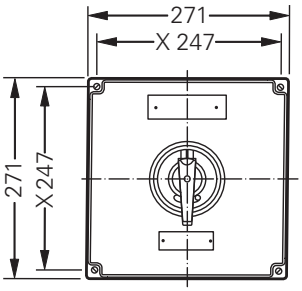
6-pole

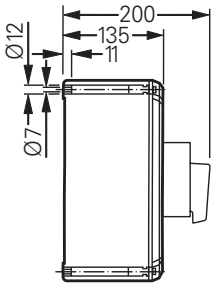


6-pole EMERGENCY STOP

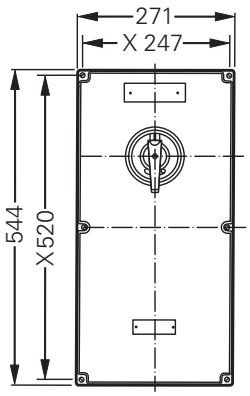
Dimension drawing

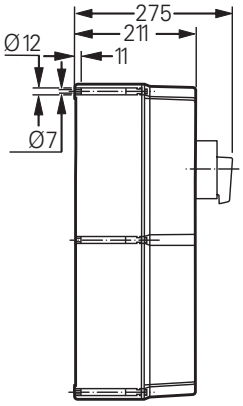
5





3-pole





6-pole

X = fixing dimensions

Dimensions in mm



3-/6-pole EMERGENCY STOP



3-/6-pole

Technical data

		Industrial safety switch 250 A
Permissible ambient temperature		–20 °C up to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 250 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 250 A U_e 400 V / I_e 250 A U_e 500 V / I_e 250 A U_e 690 V / I_e 250 A
Back-up fuse		up to 400 V AC: 250 A gG up to 500 V AC: 200 A gG up to 690 V AC: 200 A gG
Connecting terminals	main contact 3-pole 6-pole auxiliary/signal contact	3 x 150 mm^2/95 mm^2 6 x 150 mm^2/2 x 95 mm^2 2 x 4 mm^2
Protection class		I
Degree of protection accd. to EN 60529		IP65
Cable glands/enclosure drilling		M25 cable gland see ordering details M63 cable gland see ordering details
Weight	3-pole 6-pole	approx. 18 kg approx. 31 kg
Enclosure material		sheet steel polyester powder coated
Enclosure colour		RAL 7032
Aux. contact		1 x NO making - lagging; breaking - leading
		1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks



3-/6-pole



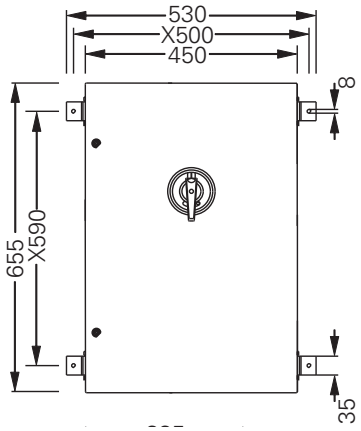
3-/6-pole EMERGENCY STOP

Ordering details

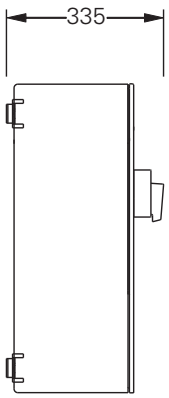
Content	Cable gland	Order No.
Industrial safety switch 250 A 3-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
3-pole	2 x M63 / 1 x M25	**KO 731713 W0001**
3-pole EMERGENCY STOP	2 x M63 / 1 x M25	**KO 731723 W0001**
Industrial safety switch 250 A 6-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
6-pole	4 x M63 / 1 x M25	**KO 731716 W0001**
6-pole EMERGENCY STOP	4 x M63 / 1 x M25	**KO 731726 W0001**

Customized version on request

Dimension drawing



3-/6-pole



X = fixing dimensions

Dimensions in mm



3-pole EMERGENCY STOP



3-pole

Technical data

		Industrial safety switch 400 A
Permissible ambient temperature		–20 °C up to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 400 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 400 A U_e 400 V / I_e 400 A U_e 500 V / I_e 400 A U_e 690 V / I_e 400 A
Back-up fuse		up to 400 V AC: 500 A gG up to 500 V AC: 500 A gG up to 690 V AC: 500 A gG
Connecting terminals	main contact auxiliary/signal contact	3 x 150 mm^2/95 mm^2 2 x 4 mm^2
Protection class		I
Degree of protection accd. to EN 60529		IP65
Cable glands/enclosure drilling		M25 cable gland see ordering details M63 cable gland see ordering details
Weight		approx. 39.50 kg
Enclosure material		steel, powder-coated polyester
Enclosure colour		RAL 7032
Aux. contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks



3-pole



3-pole EMERGENCY STOP

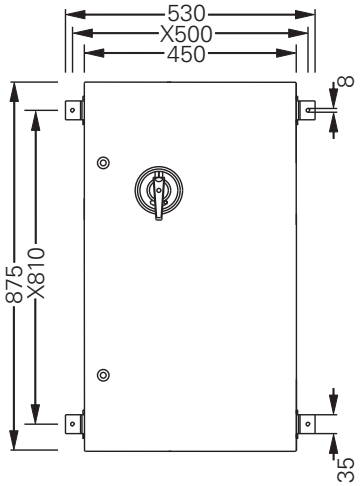
Ordering details

5

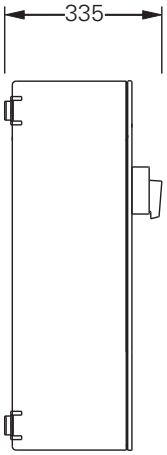
Content	Cable gland	Order No.
Industrial safety switch 400 A 3-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
3-pole	4 x M63 / 1 x M25	**KO 731713 X0001**
3-pole EMERGENCY STOP	4 x M63 / 1 x M25	**KO 731723 X0001**

Customized version on request

Dimension drawing



3-pole



X = fixing dimensions

Dimensions in mm



3-pole EMERGENCY STOP



3-pole

Technical data

		Industrial safety switch 630 A
Permissible ambient temperature		–20 °C up to +40 °C
Rated voltage		up to max. 690 V
Rated current		max. 630 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 630 A U_e 400 V / I_e 630 A U_e 500 V / I_e 630 A U_e 690 V / I_e 630 A
Back-up fuse		up to 400 V AC: 800 A gG up to 500 V AC: 800 A gG up to 690 V AC: 800 A gG
Connecting terminals	main contact auxiliary/signal contact	3 x 240 mm^2/120 mm^2 2 x 4 mm^2
Protection class		I
Degree of protection accd. to EN 60529		IP65
Cable glands/enclosure drilling		M25 cable gland see ordering details M80 Ø 62 - 68 mm see ordering details
Weight		approx. 40.50 kg
Enclosure material		steel, powder-coated polyester
Enclosure colour		RAL 7032
Aux. contact		1 x NO making - lagging; breaking - leading 1 x NC making - leading; breaking - lagging
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)



3-pole



3-pole EMERGENCY STOP

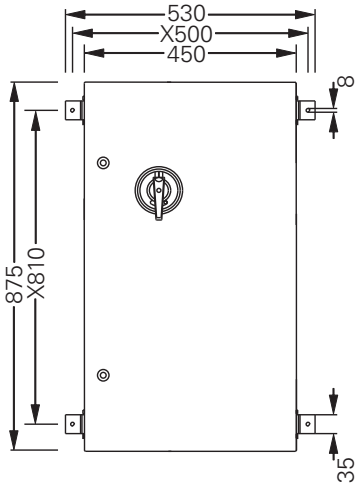
Ordering details

5

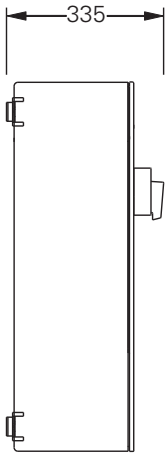
Content	Cable gland	Order No.
Industrial safety switch 630 A 3-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)		
3-pole	4 x M80 / 1 x M25	**KO 731713 Y0001**
3-pole EMERGENCY STOP	4 x M80 / 1 x M25	**KO 731723 Y0001**

Customized version on request

Dimension drawing



3-pole



X = fixing dimensions

Dimensions in mm



GHG 26 Ex-Main Current Switches

Rated current from 10 A - 630 A

Safety for your protection

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.

Full AC-3 motor switching capacities

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 IP66 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.



Features

- **Full AC-3 switching capacity**
- **Cost-saving installation**
- **Variants: star, delta, Dahlander or reversing switches up to 80 A**
- **Up to 40 A: snap mounting**
- **Up to 180 A: IP66 protection**



3-pole, 10 A 0-I

Technical data

		Ex-Main current switches 10 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 00 ATEX 1074
IECEx Certificate of Conformity		BKI 07.0014
Marking accd. to IECEx		Ex ed IIC T6 Ex tD A21 IP66 T53 °C
Permissible ambient temperature		–20 °C up to +40 °C[1)]
Rated voltage		up to max. 500 V
Rated current		max. 10 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 10 A U_e 400 V / I_e 10 A U_e 500 V / I_e 10 A
Back-up fuse		up to 400 V AC: 10 A gG up to 500 V AC: 10 A gG
Connecting terminals	main contact auxiliary/signal contact	2 x 1.5 - 2.5 mm² 2 x 0.5 - 2.5 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details
Weight		approx. 0.60 kg
Enclosure material		impact resistant polyamide
Enclosure colour		black
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1)] Other ambient temperatures on request



3-pole, 10 A 0-I

Ordering details

5

Content	Cable gland		Order No.
Ex-Main current switches 10 A			
3-pole 0-I	2 x M25	ON-OFF switch	**GHG 261 0006 R0001**

Customized version on request

Accessories

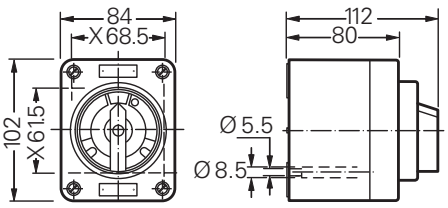
Type	Application	Fixing method	Order No.
Mounting plate for Ex-Main current switches 10 A 3-pole			
Size 1	Wall mounting	screwless mounting	**GHG 610 1953 R0101**
Size 1	Pipe clamp	screwless mounting	**GHG 610 1953 R0102**
Size 1	Trellis-work mounting	screwless mounting	**GHG 610 1953 R0103**

Type		OU	Order No.
Accessories for mounting plates			
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3		10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing		10	**GHG 610 1953 R0020**

Type	Application	OU	Order No.
Protective canopy for mounting plate			
Size 1	for mounting plate size 1	1	**GHG 610 1955 R0101**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Dimension drawing



3-pole, 10 A 0-I **X = fixing dimensions**

Dimensions in mm



3-pole, 20 A change-over



3-pole, 20 A 0-I

Technical data

		Ex-Main current switches 20 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex ed ia IIC T6 / Ⓔx II 2 D IP66 T55 °C
EC-Type Examination Certificate		PTB 99 ATEX 1161
IECEx Certificate of Conformity		BKI 07.0012
Marking accd. to IECEx		Ex ed ia IIC T6 Ex tD A21 IP66 T55 °C
Permissible ambient temperature		–20 °C up to +40 °C[1)]
Rated voltage		up to max. 690 V
Rated current		max. 20 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 20 A U_e 400 V / I_e 20 A U_e 500 V / I_e 16 A U_e 690 V / I_e 10 A
Back-up fuse		up to 400 V AC: 35 A gG up to 500 V AC: 35 A gG up to 690 V AC: 25 A gG
Connecting terminals	main contact auxiliary/signal contact	2 x 4 mm² 2 x 0.5 - 2.5 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M32 cable gland see ordering details Option: metal flange with thread
Weight		approx. 1.40 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1)] Other ambient temperatures on request



3-pole, 20 A 0-I



3-pole, 20 A change-over

Ordering details

Version		Cable gland		Order No.
Ex-Main current switches 20 A 3-pole				
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**
Ex-Main current switches 20 A 3-pole Version with 2 auxiliary contacts (1 NO; 1 x NC)				
3-pole	I - II	3 x M32/1 x M25	Change-over	**GHG 262 0016 R0001**
	I - 0 - II	3 x M32/1 x M25	Change-over	**GHG 262 0016 R0002**
	I - 0 - II	3 x M32/1 x M25	Reversing switch	**GHG 262 0016 R0003**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for Ex-Main current switches 20 A 3-pole			
Size 2	Wall mounting	snap on	**GHG 610 1953 R0104**
Size 2	Pipe clamp	snap on	**GHG 610 1953 R0105**
Size 2	Trellis-work mounting	snap on	**GHG 610 1953 R0106**

Type		OU	Order No.
Accessories for mounting plates			
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3		10	**GHG 610 1953 R0057**
Plug-in fastener for CEAG modules with 5.5 mm and 11 mm mounting feet	1 set = 4 pcs.	10	**GHG 610 1953 R0041**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing		10	**GHG 610 1953 R0020**

Type	Application	OU	Order No.
Protective canopy for mounting plate			
Size 2	for mounting plate size 2	1	**GHG 610 1955 R0102**
Size 2A	for mounting plate size 2A	1	**GHG 610 1955 R0103**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

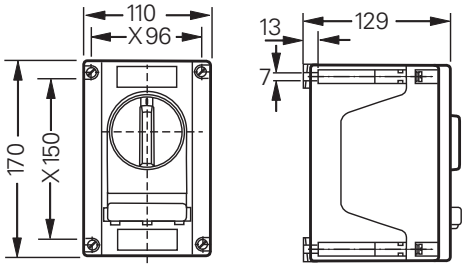


3-pole, 20 A change-over

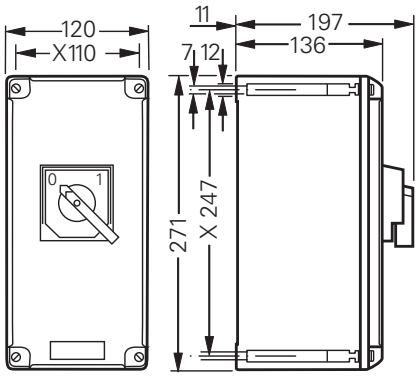


3-pole, 20 A 0-I

Dimension drawing



GHG 262 1301 R0001



GHG 262 0016 R...

X = fixing dimensions

5

Dimensions in mm



GHG 263 1301 R0001



GHG 263 0048 R....

Technical data

		Ex-Main current switches 40 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 99 ATEX 1161
IECEx Certificate of Conformity		BKI 07.0012
Marking accd. to IECEx		Ex ed ia II T6 Ex tD A21 IP66 T55 °C
Permissible ambient temperature		–20 °C up to +40 °C[1)]
Rated voltage		up to max. 690 V
Rated current		max. 40 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 40 A U_e 400 V / I_e 40 A U_e 500 V / I_e 40 A U_e 690 V / I_e 32 A
Back-up fuse		up to 400 V AC: 80 A gG up to 500 V AC: 80 A gG up to 690 V AC: 63 A gG
Connecting terminals	main contact	2 x 16 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M40 cable gland see ordering details Option: metal flange with thread
Weight	3-pole 6-pole	approx. 2.30 kg approx. 6.50 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1)] Other ambient temperatures on request



GHG 263 0048 R....



GHG 263 1301 R0001

Ordering details

Content		Cable gland		Order No.
Ex-Main current switches 40 A 3-pole				
3-pole	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**
Ex-Main current switches 40 A 3-pole Version with 2 auxiliary contacts (1 NO + 1 x NC)				
3-pole	I - II	3 x M40/1 x M25, 1 x M25 screw plug	Change-over	**GHG 263 0048 R0002**
	I - 0 - II	2 x M40/1 x M25, 1 x M25 screw plug	Reversing switch	**GHG 263 0048 R0004**
Version with 2 auxiliary contacts (1 NO + 1 x NO)				
3-pole	I - 0 - II	3 x M40/1 x M25, 1 x M25 screw plug	Change-over	**GHG 263 0048 R0003**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for Ex-Main current switches 40 A 3-pole			
Size 3	Wall mounting	snap on	**GHG 610 1953 R0118**
Size 3	Pipe clamp	snap on	**GHG 610 1953 R0110**
Size 3	Trellis-work mounting	snap on	**GHG 610 1953 R0118**

Type	Application	Fixing method	Order No.
Mounting plate for Ex-Main current switches 40 A 6-pole			
Size 3	2 x pipe clamp	screw-on[1)]	**GHG 610 1953 R0110**

[1)] observe mounting distance

Type	OU	Order No.
Accessories for mounting plates		
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Plug-in fastener for CEAG modules with 5.5 mm and 11 mm mounting feet 1 set = 4 pcs.	10	**GHG 610 1953 R0041**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

Type	Application	OU	Order No.
Protective canopy for mounting plate			
Size 3	for pipe mounting plate size 3 vertical	1	**GHG 610 1955 R0104**
Size 3A	for mounting plates wall/trellis fixing size 3 vertical	1	**GHG 610 1955 R0105**
Size 3B	for mounting plates pipe fixing size 3 horizontal	1	**GHG 610 1955 R0106**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

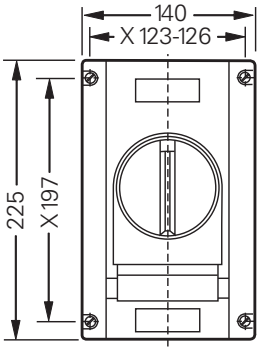


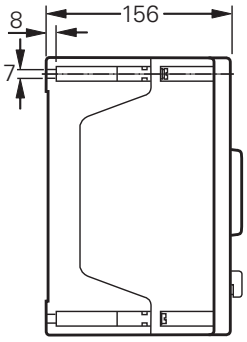
GHG 263 1301 R0001



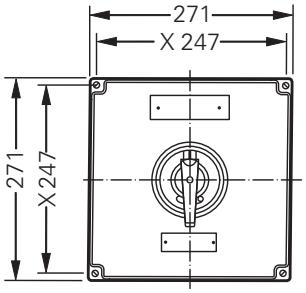
GHG 263 0048 R....

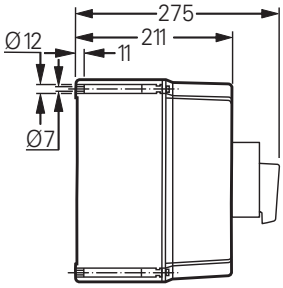
Dimension drawing





GHG 263 1301 R0001





GHG 263 0048 R...

X = fixing dimensions

Dimensions in mm



6-pole, 80 A (change-over)

Technical data

		Ex-Main current switches 80 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 00 ATEX 1091
Permissible ambient temperature		–20 °C up to +40 °C[1)]
Rated voltage		up to max. 690 V
Rated current		max. 80 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 80 A U_e 400 V / I_e 80 A U_e 500 V / I_e 80 A U_e 690 V / I_e 63 A
Back-up fuse		up to 400 V AC: 80 A gG up to 500 V AC: 80 A gG up to 690 V AC: 63 A gG
Connecting terminals	main contact auxiliary/signal contact	2 x 16 mm² 2 x 4 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		M25 cable gland see ordering details M50 cable gland see ordering details Option: metal flange with thread
Weight	3-pole 4-pole	approx. 6.50 kg approx. 9.00 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

1) Other ambient temperatures on request



6-pole, 80 A (change-over)

Ordering details

Content		Cable gland		Order No.
Ex-Main current switches 80 A Version with 2 auxiliary contacts (1 NO; 1 x NC)				
4-pole	0 - I without auxiliary contact	2 x M50, 2 x M25, 1 x screw plug	ON-OFF switch	**GHG 264 0022 R9015**
3-pole	I - 0 - II	3 x M50, 1 x M25 screw plug	Change-over	**GHG 264 0019 R0003**
3-pole	I - 0 - II	2 x M50, 1 x M25 screw plug	Reversing switch	**GHG 264 0019 R0004**

Customized version on request, auxiliary contacts in Ex ia available

Accessories

Type	Application	Fixing method	Order No.
Mounting plate for Ex-Main current switches 80 A 3- and 4-pole			
Size 3	2 x pipe clamp	screw-on[1)]	**GHG 610 1953 R0110**

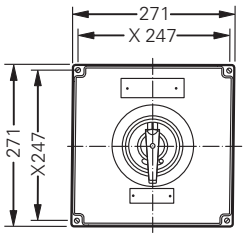
[1)] observe mounting distance

Type	OU	Order No.
Accessories for mounting plates		
Label holder with label (unlabelled) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

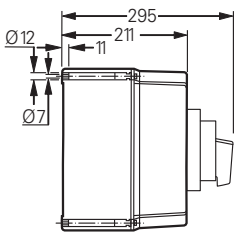
Type	Application	OU	Order No.
Protective canopy for mounting plate			
Size 3	for pipe clamp plate size 3 vertical	1	**GHG 610 1955 R0104**
Size 3A	for mounting plates wall/trellis fixing size 3 vertical	1	**GHG 610 1955 R0105**
Size 3B	for mounting plates pipe fixing size 3 horizontal	1	**GHG 610 1955 R0106**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Dimension drawing



GHG264 0019 R....



X = fixing dimensions

Dimensions in mm



EXKO 7318 Ex-Main Circuit Breakers

Rated current from 63 A - 630 A

Safety for your protection

CEAG main 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

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 IP65. 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.



Features

- **Full AC-3 motor switching capacity**
- **High degree of IP protection**
- **Simple integration into systems**



EXKO 73 1813 A

Technical data

		Ex-main circuit breaker 63 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de ia/ib [ia/ib] IIC T4 – T6[1)] Ⓔx II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEx Certificate of Conformity		IECEx PTB 12.0026
Marking accd. to IECEx		Ex d IIC T6, T5 or T4 Gb / Ex de IIC T6, T5 or T4 Gb Ex d IIB T6, T5 or T4 Gb / Ex de IIB T6, T5 or T4 Gb
Permissible ambient temperature		–20 °C up to +40 °C[2)]
Rated voltage		up to max. 690 V
Rated current		max. 63 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 63 A U_e 400 V / I_e 63 A U_e 500 V / I_e 63 A U_e 690 V / I_e 63 A
Back-up fuse		up to 400 V AC: 80 A gG up to 500 V AC: 80 A gG up to 690 V AC: 80 A gG
Connecting terminals	main contact	2 x 35 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP54 (Option IP65)
Cable glands/enclosure drilling		M50 cable gland see ordering details
Weight	3-pole 4-pole	approx. 17 kg approx. 18 kg
Enclosure material		aluminium, powder-coated polyester connection box steel, powder-coated
Colour	Enclosure Cover	grey (RAL 7032) dark grey (RAL 7022)

[1)] Also available with Explosion Group IIB

[2)] Other ambient temperatures on request



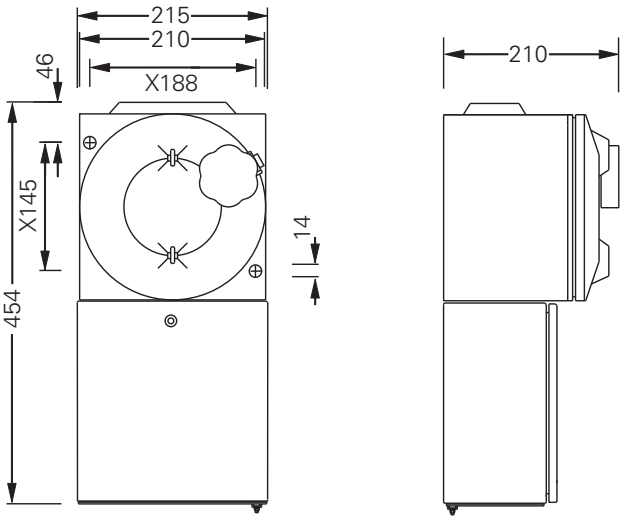
EXKO 73 1813 A

Ordering details

Content	Cable gland	Order No.
Ex-main circuit breaker 63 A		
3-pole	2 x M50	**EXKO 73 1813 A0001**
4-pole	2 x M50	**EXKO 73 1814 A0001**

Customized version on request

Dimension drawing



X = fixing dimensions

Dimensions in mm



EXKO 73 1813 B

Technical data

		Ex-main circuit breaker 125 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de ia/ib [ia/ib] IIC T4 – T6[1)] Ⓔx II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEx Certificate of Conformity		IECEx PTB 12.0026
Marking accd. to IECEx		Ex d IIC T6, T5 or T4 Gb / Ex de IIC T6, T5 or T4 Gb Ex d IIB T6, T5 or T4 Gb / Ex de IIB T6, T5 or T4 Gb
Permissible ambient temperature		–20 °C up to +40 °C[2)]
Rated voltage		up to max. 690 V
Rated current		max. 125 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 125 A U_e 400 V / I_e 125 A U_e 500 V / I_e 125 A U_e 690 V / I_e 125 A
Back-up fuse		up to 400 V AC: 160 A gG up to 500 V AC: 160 A gG up to 690 V AC: 160 A gG
Connecting terminals	main contact	50/35 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP54 (optional IP65)
Cable glands/enclosure drilling		M50 cable gland see ordering details
Weight	3-pole 4-pole	approx. 48 kg approx. 52 kg
Enclosure material		aluminium, powder-coated polyester connection box steel, powder-coated
Colour	Enclosure Cover	grey (RAL 7032) dark grey (RAL 7022)

[1)] Also available with Explosion Group IIB

[2)] Other ambient temperatures on request



EXKO 73 1813 B

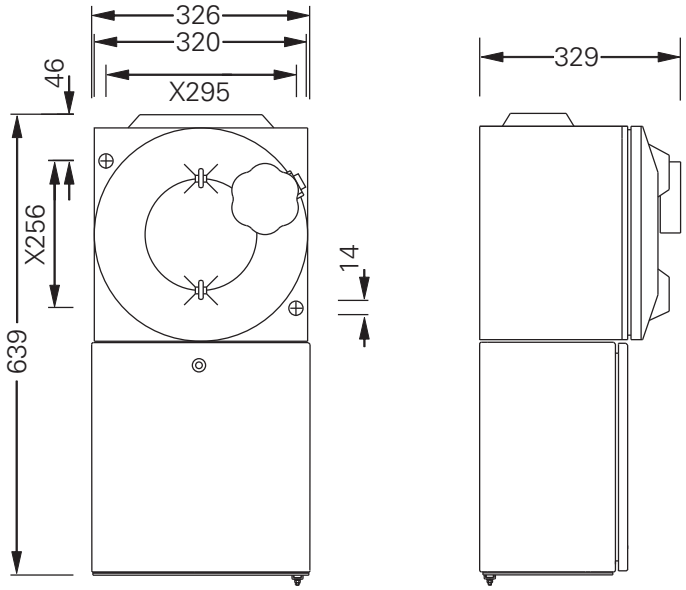
Ordering details

5

Content	Cable gland	Order No.
Ex-main circuit breaker 125 A		
3-pole	2 x M50	**EXKO 73 1813 B0001**
4-pole	2 x M50	**EXKO 73 1814 B0001**

Customized version on request

Dimension drawing



X = fixing dimensions

Dimensions in mm



EXKO 73 1813 C

Technical data

		Ex-main circuit breaker 160 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de ia/ib [ia/ib] IIC T4 ... T6[1)] Ⓔx II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEx Certificate of Conformity		IECEx PTB 12.0026
Marking accd. to IECEx		Ex d IIC T6, T5 or T4 Gb / Ex de IIC T6, T5 or T4 Gb Ex d IIB T6, T5 or T4 Gb / Ex de IIB T6, T5 or T4 Gb
Permissible ambient temperature		–20 °C up to +40 °C[2)]
Rated voltage		up to max. 690 V
Rated current		max. 160 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 160 A U_e 400 V / I_e 160 A U_e 500 V / I_e 160 A U_e 690 V / I_e 160 A
Back-up fuse		up to 400 V AC: 210 A gG up to 500 V AC: 210 A gG up to 690 V AC: 210 A gG
Connecting terminals	main contact	95/50 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP54 (optional IP65)
Cable glands/enclosure drilling		M50 cable gland see ordering details
Weight	3-pole 4-pole	approx. 48 kg approx. 52 kg
Enclosure material		aluminium, powder-coated polyester connection box steel, powder-coated
Colour	Enclosure Cover	grey (RAL 7032) dark grey (RAL 7022)

1) Also available with Explosion Group IIB

2) Other ambient temperatures on request



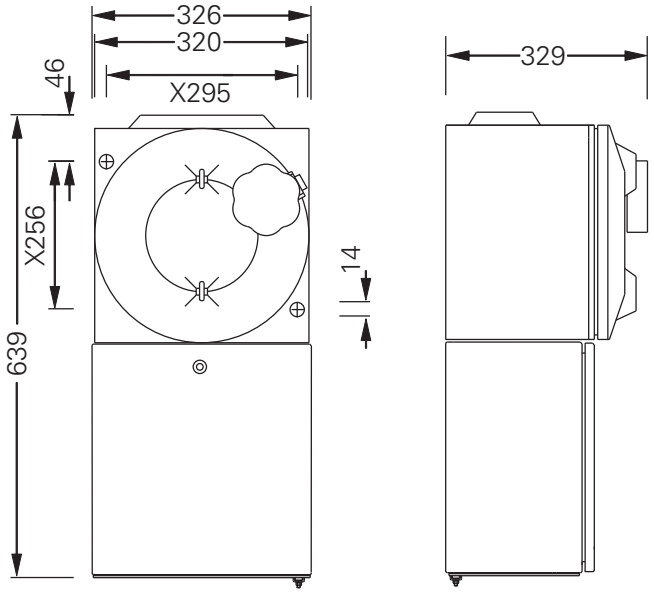
EXKO 73 1813 C

Ordering details

Content	Cable gland	Order No.
Ex-main circuit breaker 160 A		
3-pole	2 x M50	**EXKO 73 1813 C0001**
4-pole	2 x M50	**EXKO 73 1814 C0001**

Customized version on request

Dimension drawing



X = fixing dimensions

Dimensions in mm



EXKO 73 1813 D

Technical data

		Ex-main circuit breaker 250 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de ia/ib [ia/ib] IIC T4 ... T6[1)] Ⓔx II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEx Certificate of Conformity		IECEx PTB 12.0026
Marking accd. to IECEx		Ex d IIC T6, T5 or T4 Gb / Ex de IIC T6, T5 or T4 Gb Ex d IIB T6, T5 or T4 Gb / Ex de IIB T6, T5 or T4 Gb
Permissible ambient temperature		–20 °C up to +40 °C[2)]
Rated voltage		up to max. 690 V
Rated current		max. 250 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 250 A U_e 400 V / I_e 250 A U_e 500 V / I_e 250 A U_e 690 V / I_e 250 A
Back-up fuse		up to 400 V AC: 250 A gG up to 500 V AC: 250 A gG up to 690 V AC: 250 A gG
Connecting terminals	main contact	150/95 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP54 (optional IP65)
Cable glands/enclosure drilling		M63 cable gland see ordering details
Weight	3-pole 4-pole	approx. 50 kg approx. 55 kg
Enclosure material		aluminium, powder-coated polyester connection box steel, powder-coated
Colour	Enclosure Cover	grey (RAL 7032) dark grey (RAL 7022)

[1)] Also available with Explosion Group IIB

[2)] Other ambient temperatures on request



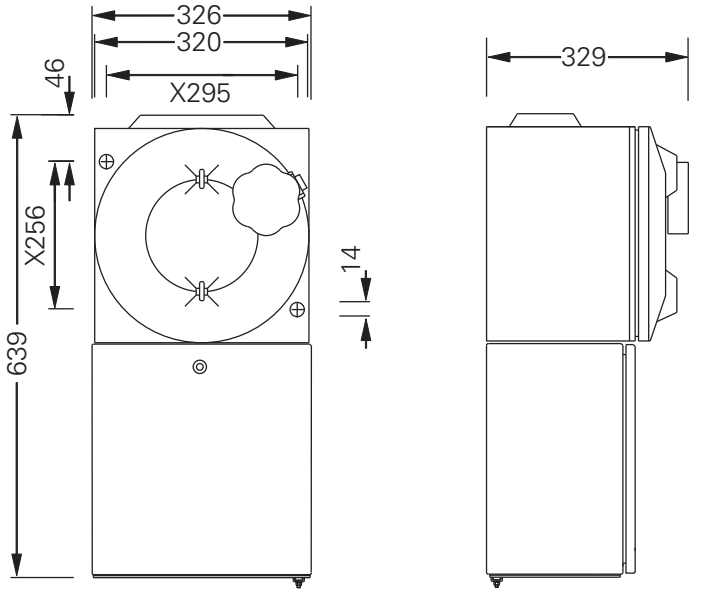
EXKO 73 1813 D

Ordering details

Content	Cable gland	Order No.
Ex-Main current switches 250 A		
3-pole	2 x M63	**EXKO 73 1813 D0001**
4-pole	4 x M63	**EXKO 73 1814 D0001**

Customized version on request

Dimension drawing



X = fixing dimensions

Dimensions in mm



EXKO 73 1813 E

Technical data

		Ex-main circuit breaker 400 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de ia/ib [ia/ib] IIC T4 ... T6[1)] Ⓔx II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEx Certificate of Conformity		IECEx PTB 12.0026
Marking accd. to IECEx		Ex d IIC T6, T5 or T4 Gb / Ex de IIC T6, T5 or T4 Gb Ex d IIB T6, T5 or T4 Gb / Ex de IIB T6, T5 or T4 Gb
Permissible ambient temperature		–20 °C up to +40 °C[2)]
Rated voltage		up to max. 690 V
Rated current		max. 400 A (3-pole / max. 300 A (4-pole)
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 400 A U_e 400 V / I_e 400 A U_e 500 V / I_e 400 A U_e 690 V / I_e 400 A
Back-up fuse		up to 400 V AC: 500 A gG up to 500 V AC: 500 A gG up to 690 V AC: 500 A gG
Connecting terminals	main contact	150/95 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP54 (optional IP65)
Cable glands/enclosure drilling		M63 cable gland see ordering details
Weight	3-pole 4-pole	approx. 85 kg approx. 90 kg
Enclosure material		aluminium, powder-coated polyester connection box steel, powder-coated
Colour	Enclosure Cover	grey (RAL 7032) dark grey (RAL 7022)

[1)] Also available with Explosion Group IIB

[2)] Other ambient temperatures on request



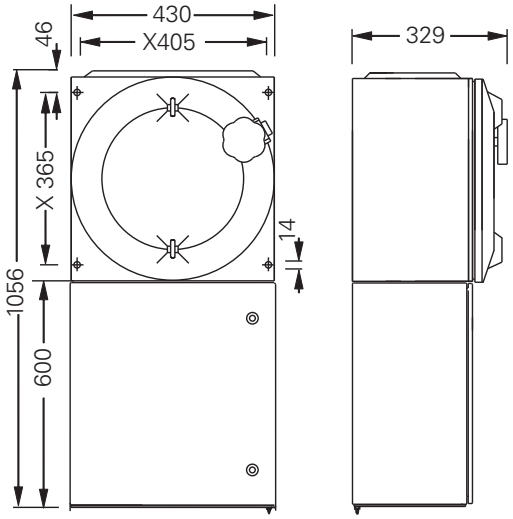
EXKO 73 1813 E

Ordering details

Content	Cable gland	Order No.
Ex-Main current switches 400 A		
3-pole	4 x M63	**EXKO 73 1813 E0001**
4-pole	4 x M63	**EXKO 73 1814 E0001**

Customized version on request

Dimension drawing



X = fixing dimensions

Dimensions in mm



EXKO 73 1813 F

Technical data

		Ex-main circuit breaker 630 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de ia/ib [ia/ib] IIC T4 ... T6[1)] Ⓔx II 2 D IP66 T80 °C / T95 °C / T130 °C
EC-Type Examination Certificate		PTB 99 ATEX 1057
IECEx Certificate of Conformity		IECEx PTB 12.0026
Marking accd. to IECEx		Ex d IIC T6, T5 or T4 Gb / Ex de IIC T6, T5 or T4 Gb Ex d IIB T6, T5 or T4 Gb / Ex de IIB T6, T5 or T4 Gb
Permissible ambient temperature		–20 °C up to +40 °C[2)]
Rated voltage		up to max. 690 V
Rated current		max. 630 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3		U_e 230 V / I_e 630 A U_e 400 V / I_e 630 A U_e 500 V / I_e 630 A U_e 690 V / I_e 630 A
Back-up fuse		up to 400 V AC: 800 A gG up to 500 V AC: 800 A gG up to 690 V AC: 800 A gG
Connecting terminals	main contact	240/120 mm²
Protection class		I
Degree of protection accd. to EN 60529		IP54 (optional IP65)
Cable glands/enclosure drilling		M80 Ø 62 - 68 mm see ordering details
Weight	3-pole 4-pole	approx. 245 kg approx. 250 kg
Enclosure material		aluminium, powder-coated polyester connection box steel, powder-coated
Colour	Enclosure Cover	grey dark grey

[1)] Also available with Explosion Group IIB

[2)] Other ambient temperatures on request



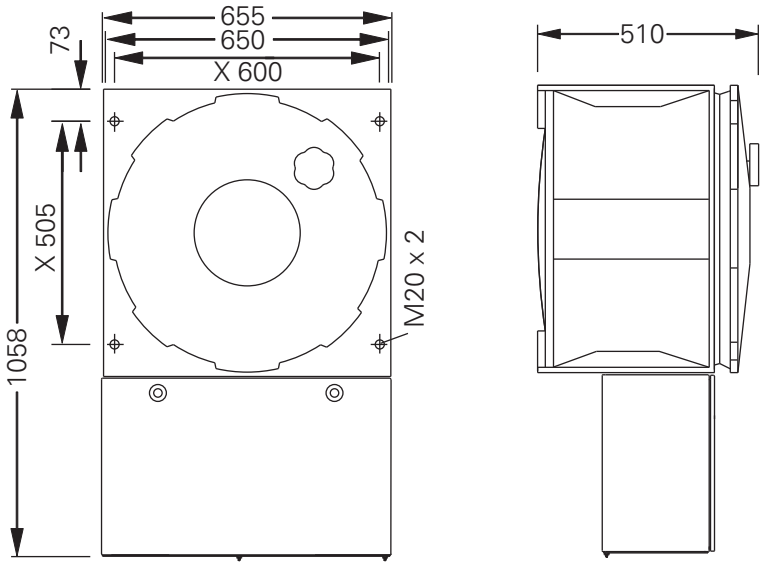
EXKO 73 1813 F

Ordering details

Content	Cable gland	Order No.
Ex-Main current switches 630 A		
3-pole	4 x M80	**EXKO 73 1813 F0001**
4-pole	4 x M80	**EXKO 73 1814 F0001**

Customized version on request

Dimension drawing



X = fixing dimensions

Dimensions in mm



GHG 635 Ex-Manual Motor Starters

Rated current up to 25 A

Motors have to be protected against overloads, phase failures and overheating: CEAG 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.



Features

- **Full AC-3 motor switching capacity**
- **Decisive cost savings with CEAG mounting system**
- **Easily accessible connection terminals**
- **High degree of protection IP66**
- **Isolating properties according to DIN EN 60947-4-1**
- **Clear indication of switch position**
- **Phase-failure protection**
- **Integrated locking facility**



GHG 635 (25 A)

Technical data

		Ex-manual motor starter GHG 635 (25 A)
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex ed IIC T5/T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate		PTB 99 ATEX 1162
IECEx Certificate of Conformity		IECEx BKI 08.0014
Marking accd. to IECEx		Ex d IIC T6/ Ex tD A21 IP66 T80 °C
Permissible ambient temperature		
	at T6 $I_e \leq 16$ A	–20 °C up to +40 °C
	at T5 $I_e > 16$ A; ≤ 25 A	–20 °C up to +55 °C
Rated voltage		up to max. 690 V
Rated current		max. 25 A
Rated current aux. contact		max. 2 A
Frequency		50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-4-1		U_e 690 V / I_e 25 A
Back-up fuse		see table
Undervoltage trip		tripping at 15 % - 75 % Un can be switched on at U > 80 % Uc
Connecting terminals	main contact	10 mm²
	auxiliary-/Signal contact	2 x 0.75 - 4.0 mm²
Thermal tripping characteristic		T II
Protection class		I
Degree of protection accd. to EN 60529		IP66
Cable glands/enclosure drilling		
	0.1 - 6.3 A	2 x M25 cable gland [1]
	6.3 - 25 A	2 x M32 cable gland [1], optional metal flange with thread
Weight		2.5 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Padlocking facility		can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

[1] Version with aux. contact or under voltage trip with additional cable gland M25



GHG 635 (25 A)

Ordering coding for special version

Description	Content	Undervoltage trip	Aux. contact		
GHG 635 1	A	B	C	R...	
Coding					
A	Content	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 aux. contact	
		2	=	with aux. contact 1 NO + 1 NC	
		3	=	with aux. contact 2 NO	

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		Order No.				
	Ics	gG, aM	Ics	gG, aM	Ics	gG, aM	Ics	gG, aM	Temp Class	A	B	C	R...
0.1 A ... 0.16 A									T6	**GHG 635 1**	**1**	**0**	**1**	**R0101**
0.16 A ... 0.25 A									T6	**GHG 635 1**	**1**	**0**	**1**	**R0102**
0.25 A ... 0.40 A									T6	**GHG 635 1**	**1**	**0**	**1**	**R0103**
0.40 A ... 0.63 A									T6	**GHG 635 1**	**1**	**0**	**1**	**R0104**
0.63 A ... 1.0 A									T6	**GHG 635 1**	**1**	**0**	**1**	**R0105**
1.0 A ... 1.6 A	short-circuit								T6	**GHG 635 1**	**1**	**0**	**1**	**R0106**
1.6 A ... 2.5 A	no backup-fuse						40 kA	25 A	T6	**GHG 635 1**	**1**	**0**	**1**	**R0107**
2.5 A ... 4.0 A	required				40 kA	35/40 A	10 kA	40 A	T6	**GHG 635 1**	**1**	**0**	**1**	**R0108**
4.0 A ... 6.3 A					30 kA	50 A	3 kA	40 A	T6	**GHG 635 1**	**1**	**0**	**1**	**R0109**
6.3 A ... 9.0 A					30 kA	80 A	3 kA	50 A	T6	**GHG 635 1**	**1**	**0**	**1**	**R0110**
9.0 A ... 12.5 A			50 kA	80 A	20 kA	80 A	3 kA	50 A	T6	**GHG 635 1**	**1**	**0**	**1**	**R0111**
12.5 A ... 16.0 A			50 kA	100 A	20 kA	100 A	3 kA	50 A	T6	**GHG 635 1**	**1**	**0**	**1**	**R0112**
16.0 A ... 20.0 A			50 kA	100 A	20 kA	100 A	2 kA	50 A	T5	**GHG 635 1**	**1**	**0**	**1**	**R0113**
20.0 A ... 25.0 A	50 kA	125 A	50 kA	125 A	20 kA	125 A	2 kA	50 A	T5	**GHG 635 1**	**1**	**0**	**1**	**R0114**

Customized version on request



GHG 635 (25 A)

Accessories

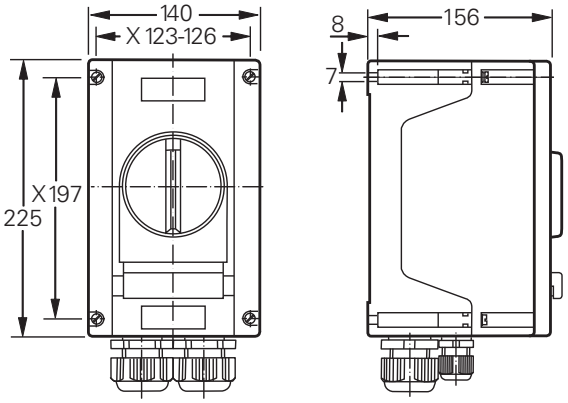
Type	Application	Fixing method	Order No.
Mounting plate for Ex-Main current switches 25 A			
Size 3	Wall mounting	screwless mounting	**GHG 610 1953 R0118**
Size 3	Pipe clamp	screwless mounting	**GHG 610 1953 R0110**
Size 3	Trellis-work mounting	screwless mounting	**GHG 610 1953 R0118**

Type	OU	Order No.
Accessories for mounting plates		
Label holder with type label (blank) for mounting plate size 1, 2, 2A and 3	10	**GHG 610 1953 R0057**
Mounting set for pipes 1" (of 27 - 30 mm) for mounting plates with pipe fixing	10	**GHG 610 1953 R0020**

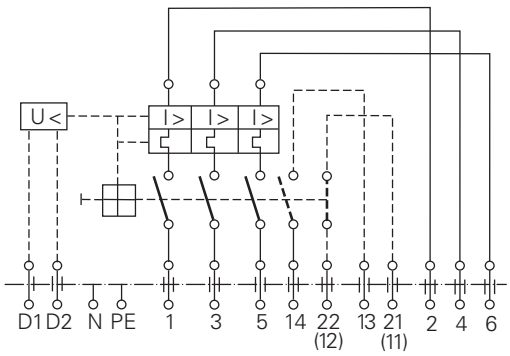
Type	Application	OU	Order No.
Protective canopy for mounting plate			
Size 3	for pipe mounting plate size 3 vertical	1	**GHG 610 1955 R0104**
Size 3A	for mounting plates wall/trellis fixing size 3 vertical	1	**GHG 610 1955 R0105**
Size 3B	for mounting plates pipe fixing size 3 horizontal	1	**GHG 610 1955 R0106**

Please pay attention that only order units (OU) according to the ordering details can be delivered.

Dimension drawing Wiring diagram



GHG 635 **X = fixing dimensions**



Dimensions in mm


GHG 635-12


Panel mounting

Technical data

5

	Ex-manual motor starter GHG 635-12
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex d IIC T6 / ⟨Ex⟩ II 2 D Ex tD A21 IP66 T80 °C
EC-Type Examination Certificate	PTB 05 ATEX 1020
Permissible ambient temperature	–20 °C up to +40 °C
Rated voltage	up to max. 690 V
Rated current	0.1 up to 16 A
Frequency	50/60 Hz
Rated making/breaking capacity AC-3 accd. EN 60947-3-4-1	U_e 650 V / I_e 16 A
Rated voltage undervoltage trip	400 V 50/60 Hz (Standard version) 440 V / 500 V / 24 V / 48 V / 60 V on request tripping at 35 % – 70 % Uc
Undervoltage trip	can be switched on at U > 85 % Uc
Back-up fuse	up to 400 V AC short circuit proof up to 50 kA up to 6.3 A; 30 kA up to 16 A
Thermal tripping characteristic	T II
Protection class	I
Degree of protection accd. to EN 60529	IP66
Connecting cable	H07RN-F (standard 3 m, other length on request)
Weight	1 kg (without cable)
Enclosure material	glass-fibre reinforced polyamide
Enclosure colour	black
Padlocking facility	can be locked in OFF position with 3 commercially available padlocks (Ø max. 6 mm)

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	
	Ics	gG, aM	Ics	gG, aM	Ics	gG, aM	Ics	gG, aM
0.1 A ... 0.16 A	short-circuit no backup-fuse required up to I_{cc} = 50 A							
0.16 A ... 0.25 A								
0.25 A ... 0.40 A								
0.40 A ... 0.63 A								
0.63 A ... 1.0 A								
1.0 A ... 1.6 A								
1.6 A ... 2.5 A							40 kA	25 A
2.5 A ... 4.0 A							10 kA	40 A
4.0 A ... 6.3 A					40 kA	50 A	7 kA	40 A
6.3 A ... 9.0 A					30 kA	80 A	5 kA	50 A
9.0 A ... 12.5 A					27 kA	80 A	4.5 kA	50 A
12.5 A ... 16.0 A					25 kA	100 A	4 kA	50 A

Customized version on request


Panel mounting


with mounting plate


GHG 635-12

Ordering details

Setting range	undervoltage trip	Cord length	Order No.
Ex-manual motor starter GHG 635-12			
0.1 - 0.16 A	no	2 x 3 m	**GHG 635 1200 R0001**
	400 V	2 x 3 m	**GHG 635 1220 R0001**
0.16 - 0.25 A	no	2 x 3 m	**GHG 635 1200 R0002**
	400 V	2 x 3 m	**GHG 635 1220 R0002**
0.25 - 0.40 A	no	2 x 3 m	**GHG 635 1200 R0003**
	400 V	2 x 3 m	**GHG 635 1220 R0003**
0.40 - 0.63 A	no	2 x 3 m	**GHG 635 1200 R0004**
	400 V	2 x 3 m	**GHG 635 1220 R0004**
0.63 - 1.0 A	no	2 x 3 m	**GHG 635 1200 R0005**
	400 V	2 x 3 m	**GHG 635 1220 R0005**
1.0 - 1.6 A	no	2 x 3 m	**GHG 635 1200 R0006**
	400 V	2 x 3 m	**GHG 635 1220 R0006**
1.6 - 2.5 A	no	2 x 3 m	**GHG 635 1200 R0007**
	400 V	2 x 3 m	**GHG 635 1220 R0007**
2.5 - 4.0 A	no	2 x 3 m	**GHG 635 1200 R0008**
	400 V	2 x 3 m	**GHG 635 1220 R0008**
4.0 - 6.3 A	no	2 x 3 m	**GHG 635 1200 R0009**
	400 V	2 x 3 m	**GHG 635 1220 R0009**
6.3 - 9 A	no	2 x 3 m	**GHG 635 1200 R0010**
	400 V	2 x 3 m	**GHG 635 1220 R0010**
9 - 12.5 A	no	2 x 3 m	**GHG 635 1200 R0011**
	400 V	2 x 3 m	**GHG 635 1220 R0011**
12.5 - 16 A	no	2 x 3 m	**GHG 635 1200 R0012**
	400 V	2 x 3 m	**GHG 635 1220 R0012**


GHG 635-12

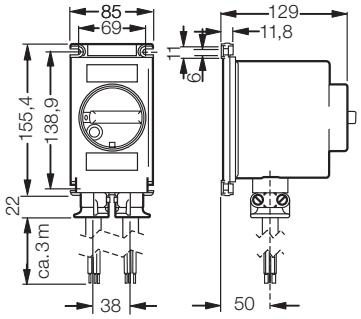

with mounting plate


Panel mounting

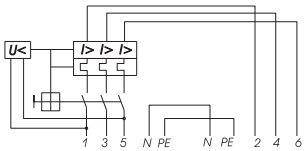
Accessories

Type	Application	Order No.
Mounting plate Ex-manual motor starter GHG 635-12		
Mounting plate	Mounting plate for pipe mounting (1" or 2") and 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**

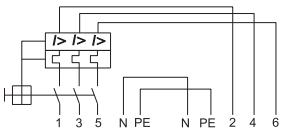
Dimension drawing Wiring diagram



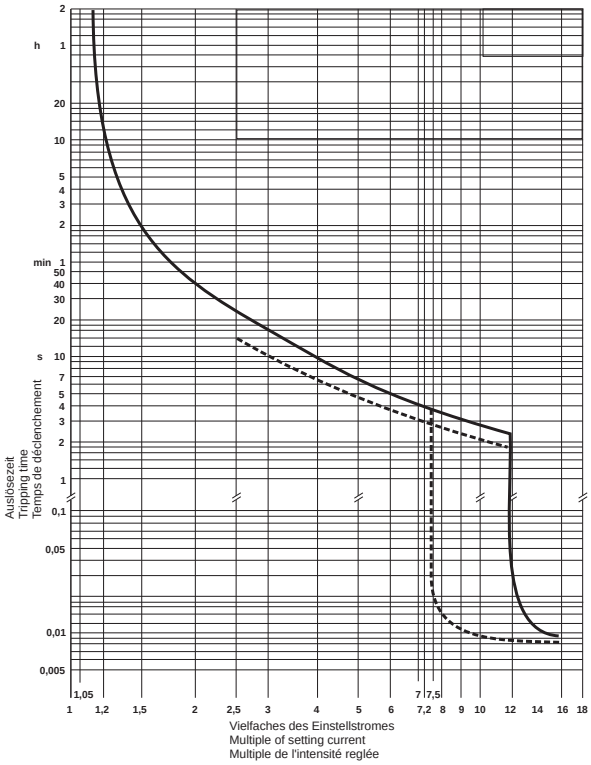
GHG 635-12



with undervoltage trip

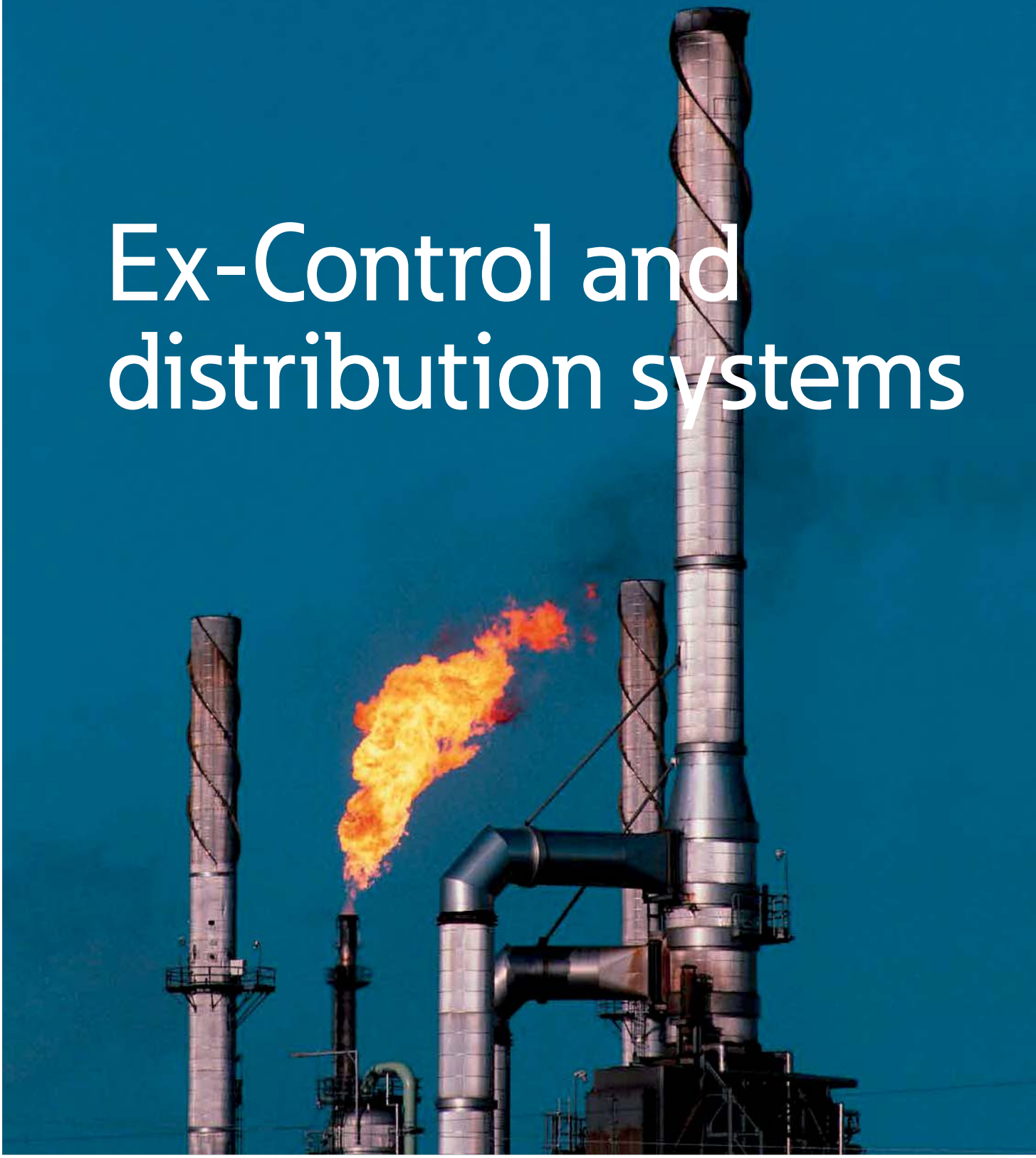


without undervoltage trip



Dimensions in mm

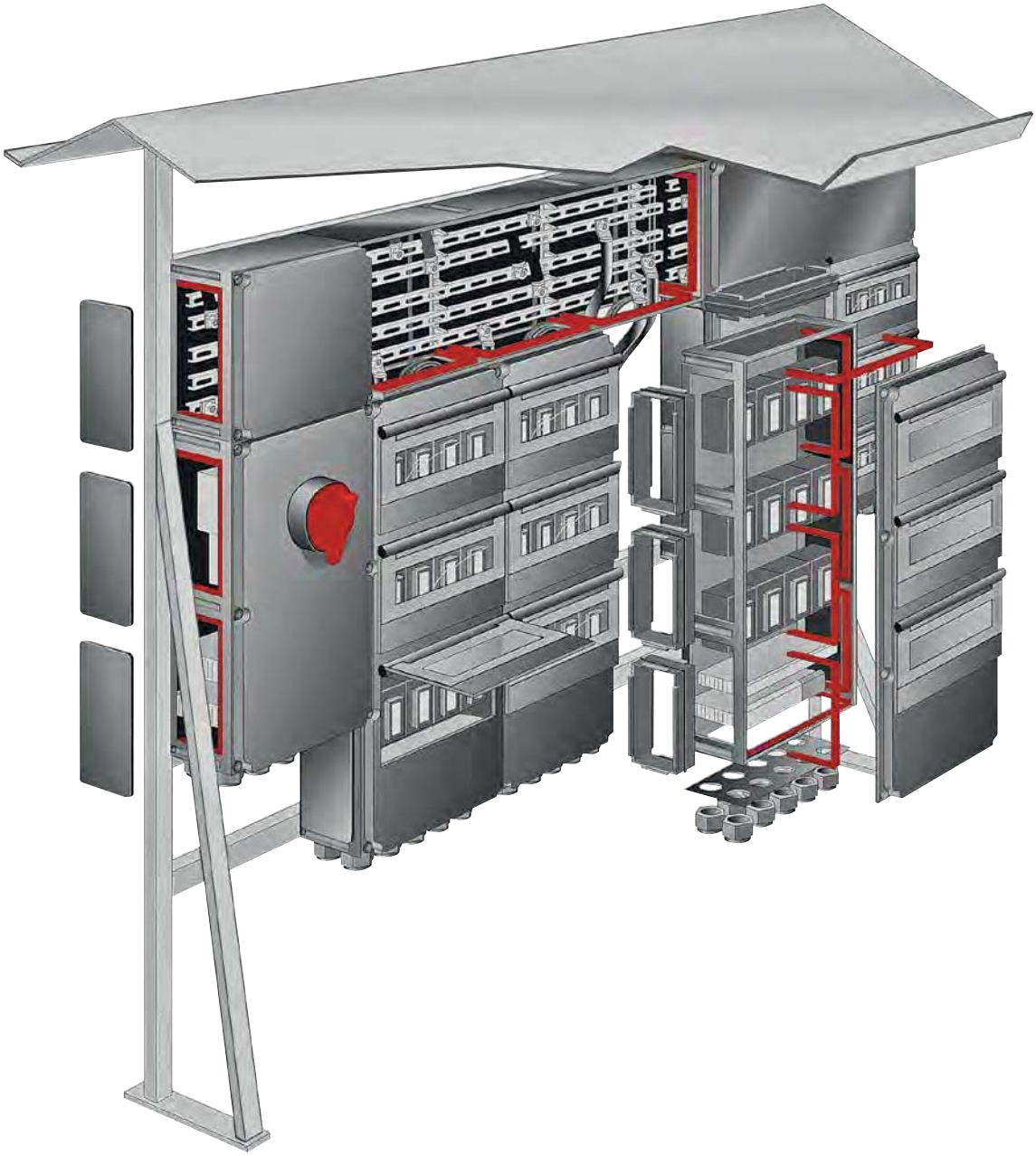
Ex-Control and distribution systems







Ex-control and distribution systems ... 2.6.4
6.1 Ex-Distributions in Moulded Plastic Design ... 2.6.8
MCB distribution for lighting circuits, heating circuits, socket distributions ... 2.6.9
Twilight switch with Ex-e enclosure ... 2.6.12
Complete motor starter distribution ... 2.6.14
6.2 Ex-Distributions in Metal Design ... 2.6.16
MCB distribution for lighting circuits, heating circuits, socket distributions ... 2.6.17
6.3 Ex-d Built-in Components GHG 62 up to 63 A ... 2.6.20
GHG 62 - Ex-d built-in components ... 2.6.21
GHG 622 miniature circuit breaker (MCB) ... 2.6.22
GHG 624 residual current device (RCD) ... 2.6.26
GHG 625 residual circuit breaker with overload (RCBO) ... 2.6.28
GHG 627 contactor 3-pole up to 63 A / 30 kW (optional overcurrent relay) / 4-pole up to 55 A ... 2.6.32
GHG 627 contactor 3-pole up to 30 kW ... 2.6.33
GHG 627 contactor 4-pole up to 55 A ... 2.6.34
6.4 Ex-d Built-in Components GHG 61 up to 40 A ... 2.6.36
GHG 61 - Ex-d-built-in components ... 2.6.37
GHG 612 miniature circuit breaker (MCB) ... 2.6.38
GHG 612 residual circuit breaker with Overload (RCBO) ... 2.6.44
GHG 612 residual current device (RCD) ... 2.6.47
GHG 610 NH 00 main fuse up to 125 A ... 2.6.50
GHG 26 main switch / isolator 20 - 180 A ... 2.6.52
GHG 618 air-break contactor 20 A ... 2.6.54
GHG 618 contactor with thermal release 690 V 4 kW ... 2.6.57
GHG 618 installation contactor 20 A up to 32 A ... 2.6.60
GHG 618 current impulse switch ... 2.6.64
GHG 635 10 manual motor starter ... 2.6.66
GHG 618 thermal overcurrent relay ... 2.6.69
GHG 618 overvoltage arrester ... 2.6.71
GHG 618 multi-function relay ... 2.6.74
GHG 600 GRP Ex-e empty enclosures ... 2.6.78
GHG 600 Metal Ex-e empty enclosures ... 2.6.80
GHG 610 Ex-e actuating flap ... 2.6.82
GHG 758 bus bar ... 2.6.83
GHG 41 / 23 / 28 Ex d/e control elements ... 2.6.85
GHG 41 pushbutton ... 2.6.86
GHG 41 key operated pushbutton ... 2.6.87
GHG 41 mushroom-head pushbutton ... 2.6.89
GHG 41 mini-control switch / potentiometer ... 2.6.90
GHG 41 signal lamp / GHG 23/29 control switch ... 2.6.91
GHG 41 amp-meter ... 2.6.92
Compatible enclosure - series for different applications ... 2.6.93
6.5 Ex-d Enclosures and Distributions ... 2.6.94
Ex-control and distribution systems ... 2.6.95
GHG 66 motor starter ... 2.6.96
GHG 66/67 empty enclosures ... 2.6.98
GHG 758 connection box / bus bar box ... 2.6.100
6.6 Ex-d Enclosures and Distributions ... 2.6.102
GHG 64 industrial components in optimised Ex-d enclosures ... 2.6.103
Empty enclosure GHG 64 ... 2.6.105
6.7 Connection and Bus-Bar Boxes ... 2.6.106
GHG 758 connection Box / bus-bar boxes ... 2.6.107
6.8 GHG 64 Control Elements ... 2.6.108
GHG 64 control elements ... 2.6.109
GHG 64 accessories ... 2.6.110
GHG 64 motor starter ... 2.6.111
GHG 64 applications ... 2.6.112
Controls for your applications ... 2.6.114
Intelligent instrumentation for hazardous areas ... 2.6.115
6.9 Ex-d Distributions EJ-Series ... 2.6.116
EJB/EJW Ex-d empty enclosures ... 2.6.118
EJB-Ex-d motor starter ... 2.6.120
EJB / EJW control elements - Ex-d components for cover mounting ... 2.6.122
EJB / EJW accessories ... 2.6.124
EJB / EJW interconnection bus-bar ... 2.6.126
GUB empty enclosures ... 2.6.128



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 60079 pp. by special constructional measures. CEAG explosion- protected products derives its high degree of safety through the combination of various types of protection. Thus, flameproof encapsulated devices (Ex-d), for instance, are also integrated in enclosures of the „Increased Safety" type (Ex-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" (E-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 cm^3. 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 respective temperature class.

Product range

The extensive CEAG 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.

Material

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.





Snapy 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.

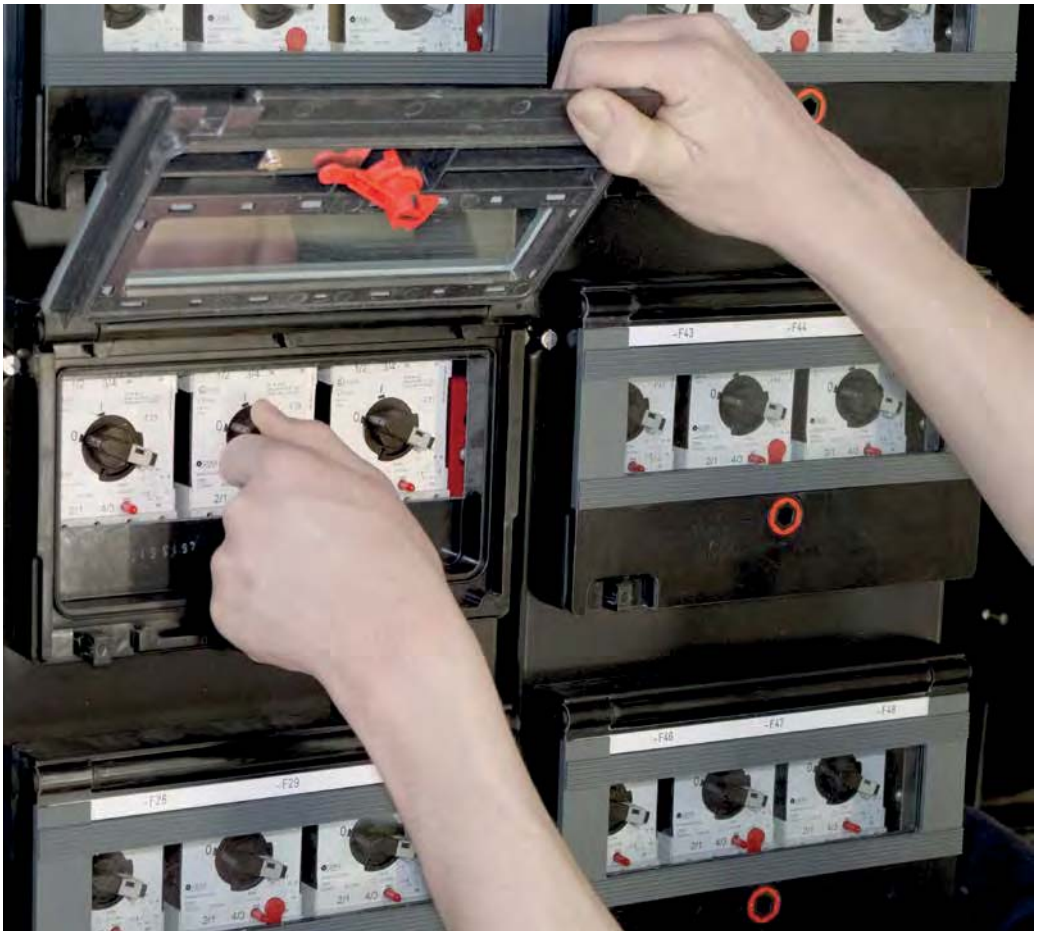
Bus bars

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 ATEX- compatible systems and components. IECEx-Scheme conform products will be taken for granted.





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.

Explosion groups IIB (+H2) and IIC

Eaton's Crouse-Hinds Business offers a complete product line of Ex-d distributions for gas explosion groups IIB and IIC. All common industrial switchgear 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 customized 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.

Ex-Distributions in Moulded Plastic Design

Modular design GHG 619

Safety for your protection

CEAG products provides explosion protection in a snap – and that also applies to distributions.

Electrical distributions for Ex-areas must be protected according to EN 60079 by constructional measures. Thus, the Eaton's Crouse-Hinds Business flameproof moulded-plastic distributions provide type Ex-e protection.

The enclosure and main-switch modules are available in the following materials: fibreglass 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.

Bus-bar modular

A bus-bar system can be used to provide power to the individual components. The flameproof encapsulated modules (Ex-d) can be combined according to customers' specifications. Five enclosure sizes provide enough space for whatever modules are required: MCBs, RCDs, RCBOs, 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.



Features

- **Modular slip-on assembly**
- **High IP66 protection**
- **Snap-on components**
- **Retrofitting**



Technical data

	MCB distribution for lighting circuits I heating circuits I socket distribution
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de ia/ib m [ia/ib] IIC T6/T5/T4 Ⓔx II 2 D Ex tD A21 IP66/IP65 T80 °C, T95 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)
IECEx Certificate of Conformity	IECEx BKI 06.0007
Marking accd. to IECEx	Ex de ia/ib m [ia/ib] T4 ... T6 Ex tD A21 IP66 T80 °C
Rated voltage	up to 690 V (depends on components)
Rated current	up to 315 A (depends on components)
Protection class	I (II as an option)
Terminal cross section	up to 300 mm²
Degree of protection accd. to EN 60529	IP66
Weight	see ordering details
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black

Ordering details distribution for lighting circuits

Content	Type	MCB 2-pole	Connection terminals	Cable glands	Weight approx.	Order No.
40 A	1	8 x 16 A	10 mm²	1 x M40 cable gland 8 x M25 cable gland	20 kg	**EXKO 214 600 G 0000**
80 A	2	12 x 16 A	16 mm²	1 x M50 cable gland 12 x M25 cable gland	32 kg	**EXKO 214 600 G 0001**
80 A	3	24 x 16 A	16 mm²	1 x M50 cable gland 24 x M25 cable gland	56 kg	**EXKO 214 600 G 0002**

Ordering details distribution for heating circuits

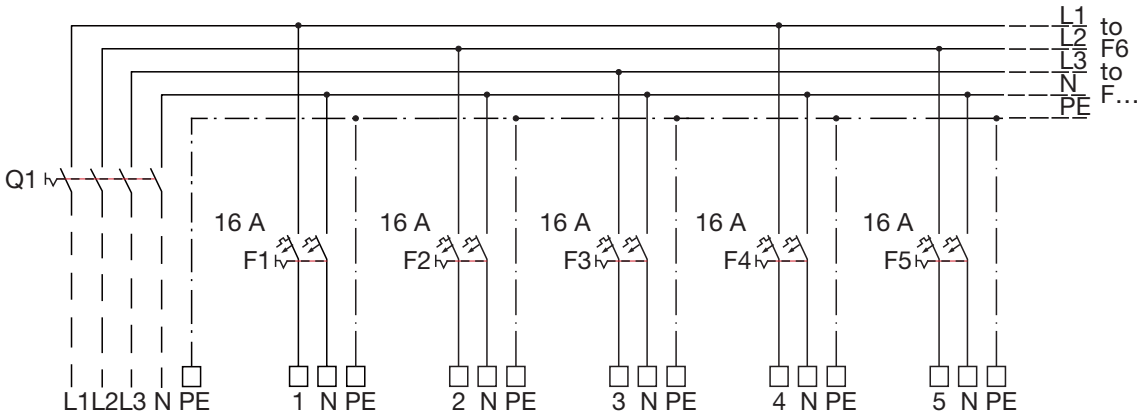
Content	Type	RCBO 2-pole	Connection terminals	Cable glands	Weight approx.	Order No.
40 A	1	8 x 16 A, 30 mA	10 mm²	1 x M40 cable gland 8 x M25 cable gland	20 kg	**EXKO 214 600 G 0003**
80 A	2	12 x 16 A, 30 mA	16 mm²	1 x M50 cable gland 12 x M25 cable gland	32 kg	**EXKO 214 600 G 0004**
80 A	3	24 x 16 A, 30 mA	16 mm²	1 x M50 cable gland 24 x M25 cable gland	56 kg	**EXKO 214 600 G 0005**

Ordering details distribution for sockets

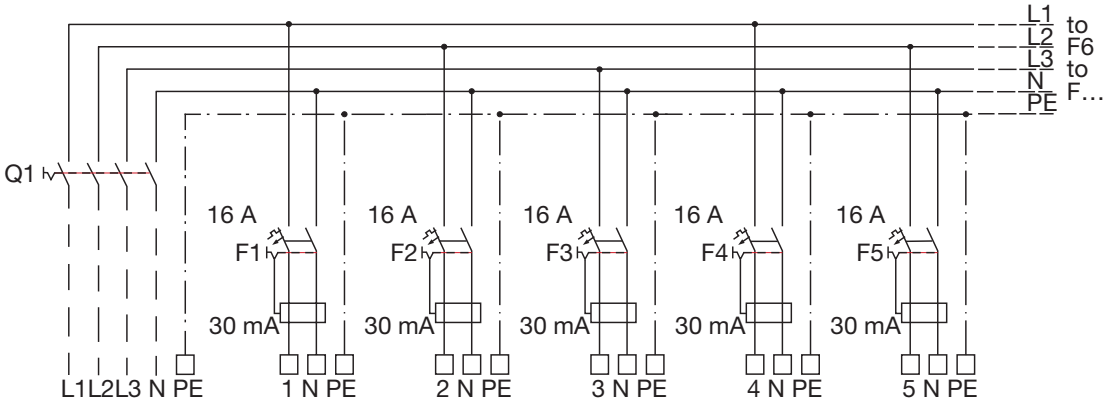
Content MCB	Type	Socket outlets	Cable glands	Weight approx.	Order No.
2 x 16 A	1	2 x 16 A 3-pole	1 x M40 cable gland	10 kg	**EXKO 233 800 C 0001**
2 x 16 A 1 x 32 A	2	1 x 16 A 3-pole 1 x 16 A 5-pole 1 x 32 A 5-pole	1 x M40	20 kg	**EXKO 233 800 C 0002**
4 x 16 A	3	2 x 16 A 3-pole 2 x 16 A 5-pole	1 x M40	25 kg	**EXKO 233 800 C 0003**



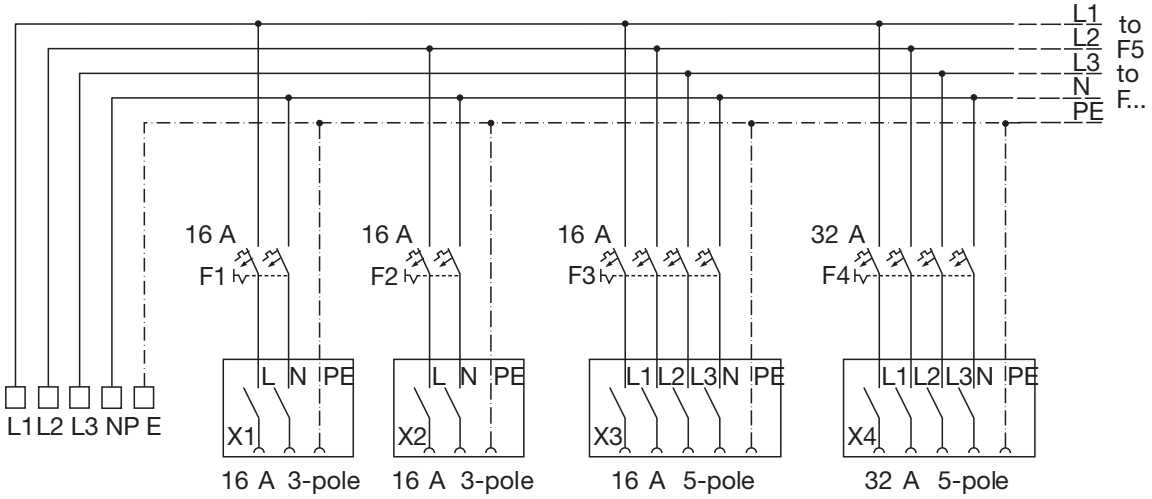
Wiring diagram lighting distribution I heating circuits I socket distribution



Lighting distribution



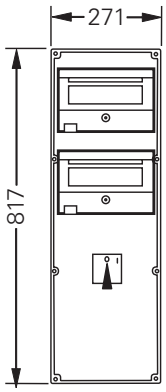
Heating circuits



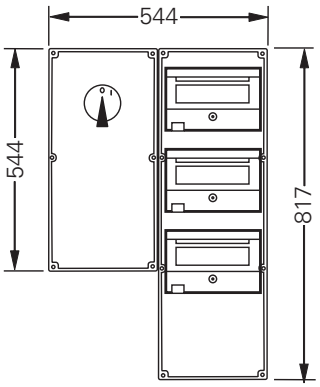
Socket distribution, must be protected by RCD



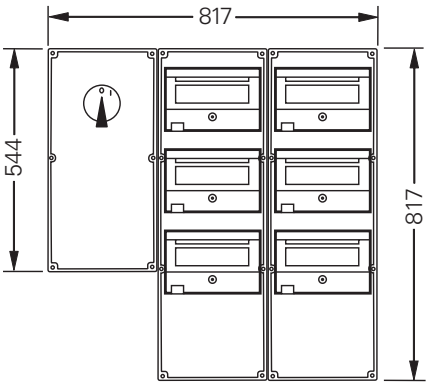
Dimension drawing lighting distribution I heating circuits I socket distribution



Type 1

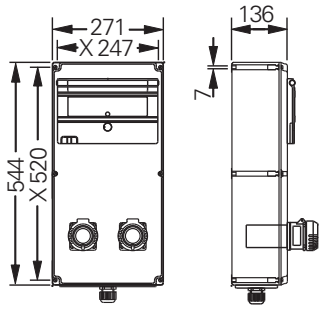


Type 2

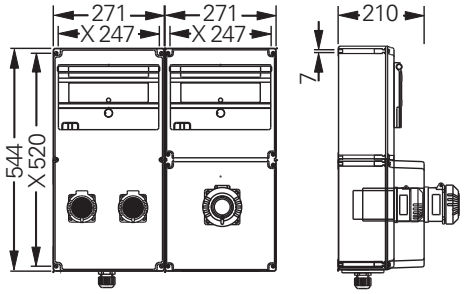


Type 3

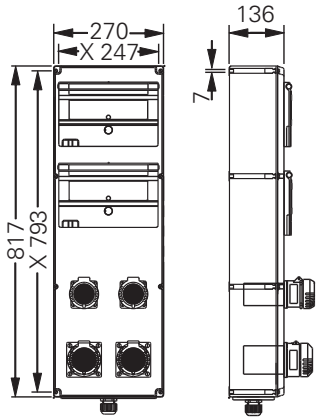
Lighting distribution/heating circuits



Type 1



Type 2



Type 3

Socket distribution

X = fixing dimension

6

Dimensions in mm



EXKO 231 402 L 1122

Technical data

		Twilight switch with Ex-e enclosure
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex Ex d e IIC T5 Gb
EC-Type Examination Certificate terminal box	GHG 721: GHG 74:	BVS 13 ATEX E 013 X BVS 12 ATEX E 118 X
EC-Type Examination Certificate twilight switch		PTB 06 ATEX 1017 X
Permissible ambient temperature		-40°C to +55°C
IECEx Certificate of Conformity terminal box	GHG 721: GHG 74:	IECEx BVS 13.0031X IECEx BVS 12.0071X
Marking accd. to IECEx		Ex d e IIC T5 Gb
Rated voltage		105 - 305 V 50/60 Hz
Rated current		max. 10 A
Protection class		I
Rated switching capacity		1800 VA
Light sensitivity		4 - 11 lux, 7 - 12 lux, 10 - 15 lux, adjustable
Degree of protection accd. to EN 60529		IP66
Enclosure material		glass-fibre reinforced polyester or stainless steel
Enclosure colour		black or polished

Ordering details twilight switch with Ex-e enclosure

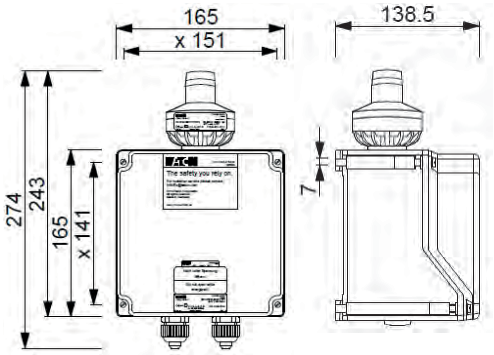
Type of enclosure	Cable entry	Type of gland	Terminals	Order No.
GHG 721 00	direct	2 x M20 threaded plug	6 x UT2.5 + 4 x UT2.5 PE	**EXKO 231 402 L1121**
GHG 721 00	direct	2 x M20 threaded plug	3 x UT4 + 2 x UT4 PE	**EXKO 231 402 L1122**
GHG 721 00	direct	1 x M25 cable gland	3 x UT4 + 2 x UT4 PE	**EXKO 231 402 L1131**
GHG 721 00	internal earth plate	1 x M20 threaded plug	3 x UT4 + 2 x UT4 PE	**EXKO 231 402 L1212**
GHG 721 00	internal earth plate +PE	1 x M20 threaded plug	4 x WDU2,5 + 2 x WPE4 + 1 x WPE10	**EXKO 231 400 L3212**
GHG 744 21	flange	2 x M20 threaded plug + BD	3 x UT4 + 2 x UT4 PE	**EXKO 231 405 L1322**

Other versions available on request

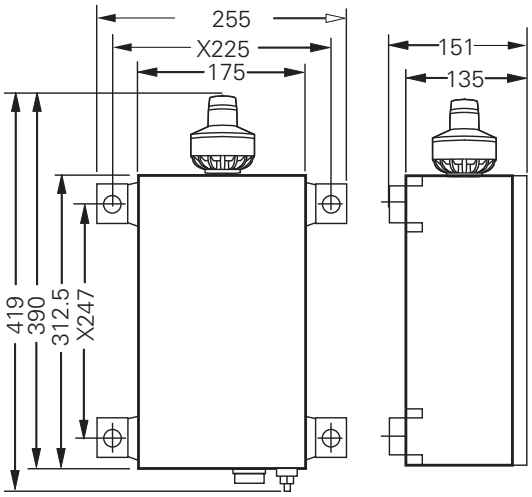


EXKO 231 402 L 1122

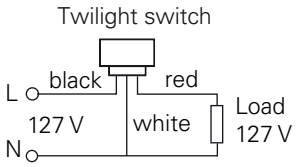
Dimension drawing I wiring diagram



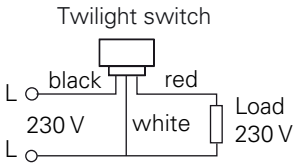
GHG 721 00



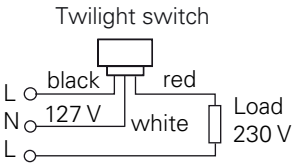
GHG 744 21



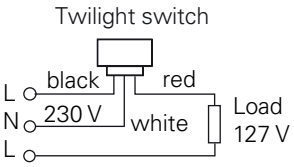
3 phase 127 V / 230 V



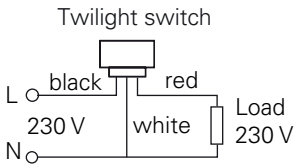
3 phase 127 V / 230 V



3 phase 127 V / 230 V



3 phase 127 V / 230 V



3 phase 230 V / 400 V

Dimensions in mm



EXKO 208900 A 0001



EXKO 208900 C 0004

Technical data

	Complete motor starter distribution
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de ia/ib m [ia/ib]IIC T4 ... T6 Ⓔx II 2 D Ex tD A21 IP66/IP65 T80 °C/T95 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)
IECEx Certificate of Conformity	IECEx BKI 06.0007
Marking accd. to IECEx	Ex de ia/ib m [ia/ib] T4 ... T6 Ex tD A21 IP66 T80 °C
Rated voltage	690 V
Rated power	up to 22 KW
Protection class	I
Terminal cross section	up to 240 mm^2
Degree of protection accd. to EN 60529	IP66
Weight	see ordering details
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black

Ordering details complete motor starter distribution

Content Motor capacity to AC 3	Type	Connection terminals	Cable glands	Weight approx.	Order No.
Direct circuit					
4 KW	1	10 mm^2	3 x M25 cable gland	6 kg	**EXKO 208 900 A 0001**
5.5 KW	2	16 mm^2	3 x M25 cable gland	8 kg	**EXKO 208 900 A 0002**
7.5 KW	2	16 mm^2	3 x M25 cable gland	8 kg	**EXKO 208 900 A 0003**
Reversing circuit					
4 KW	2	10 mm^2	3 x M25 cable gland	10 kg	**EXKO 208 900 B 0001**
5.5 KW	2	16 mm^2	3 x M25 cable gland	10 kg	**EXKO 208 900 B 0002**
7.5 KW	2	16 mm^2	3 x M25 cable gland	10 kg	**EXKO 208 900 B 0003**
Star-delta starter					
4 KW	2	10 mm^2	4 x M25 cable gland	12 kg	**EXKO 208 900 C 0001**
5.5 KW	2	16 mm^2	4 x M25 cable gland	12 kg	**EXKO 208 900 C 0002**
7.5 KW	2	16 mm^2	4 x M25 cable gland	12 kg	**EXKO 208 900 C 0003**
11 KW	3	16 mm^2	1 x M25 cable gland 3 x M25 cable gland	18 kg	**EXKO 208 900 C 0004**
15 KW	3	16 mm^2	2 x M32 cable gland 1 x M40 cable gland	18 kg	**EXKO 208 900 C 0005**

The motor starters are completely wired for connection by customer.

Starters for different motor power available on request. For more than 22 kW please see Ex-d light alloy motor starters on page 2.6.92, 2.6.107 or 2.6.116

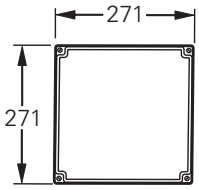


EXKO 208900 C 0004

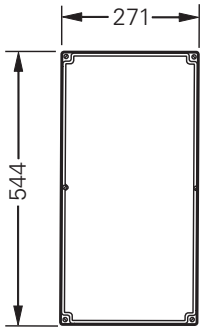


EXKO 208900 A 0001

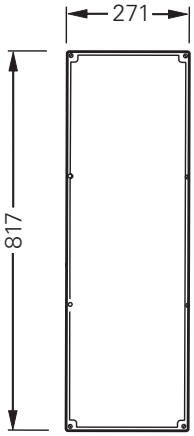
Dimension drawing I wiring diagram



Type 1

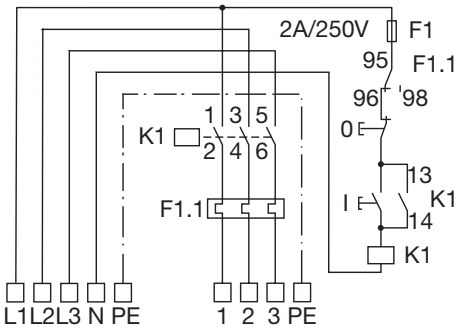


Type 2

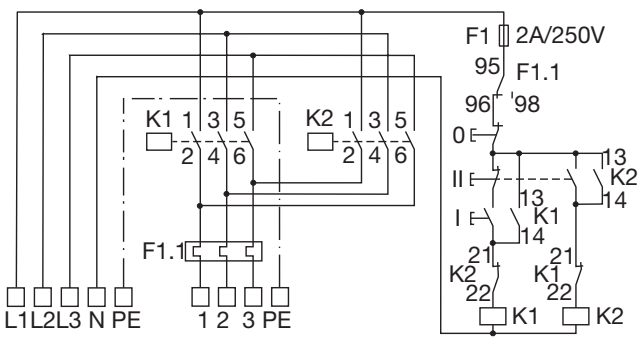


Type 3

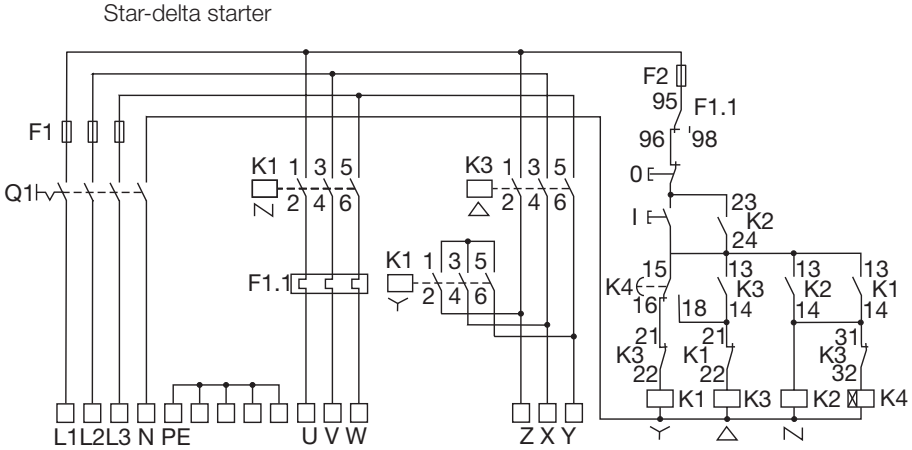
Direct circuit



Reversing circuit



Star-delta starter



Dimensions in mm

Ex-Distributions in Metal Design

Modular design made of stainless steel or powder coated sheet metal GHG 619

Robust enclosure for harsh ambient conditions

Distributions made of stainless steel or powder coated sheet 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, petrochemical and offshore industries.



Features

- **Combinable for larger distributions**
- **Actuating flaps for easy operation**
- **Snap-on components**
- **Protection type IP66**
- **Easy to retrofit**



EXKO 223 100

Technical data

	MCB distribution for lighting circuits I heating circuits I socket distribution
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de ia/ib m [ia/ib] IIC T6/T5/T4 Ⓔx II 2 D Ex tD A21 IP66/IP65 T80 °C, T95 °C
EC-Type Examination Certificate	PTB 99 ATEX 1044
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)
IECEx Certificate of Conformity	IECEx BKI 06.0007
Marking accd. to IECEx	Ex de ia/ib m [ia/ib] T4 ... T6 Ex tD A21 IP66 T80 °C
Rated voltage	up to 690 V (depends on components)
Rated current	up to 315 A (depends on components)
Protection class	I
Terminal cross section	up to 300 mm²
Degree of protection accd. to EN 60529	IP66
Enclosure material	Stainless steel AISI 316 L / powder coated sheet steel
Enclosure colour	electro-polished

Ordering details distribution for lighting circuits (stainless steel)

Content	Type	MCB 2-pole	Connection terminals	Cable glands	Weight approx.	Order No.
40 A	1	8 x 16 A	10 mm²	1 x M40 cable gland 8 x M25 cable gland	22 kg	**EXKO 223 100 Q 0000**
80 A	2	12 x 16 A	16 mm²	1 x M50 cable gland 12 x M25 cable gland	34 kg	**EXKO 223 100 Q 0001**
80 A	3	24 x 16 A	16 mm²	1 x M50 cable gland 24 x M25 cable gland	58 kg	**EXKO 223 100 Q 0002**

Ordering details distribution for heating circuits (stainless steel)

Content	Type	RCBO 2-pole	Connection terminals	Cable glands	Weight approx.	Order No.
40 A	1	8 x 16 A, 30 mA	10 mm²	1 x M40 cable gland 8 x M25 cable gland	22 kg	**EXKO 223 100 Q 0003**
80 A	2	12 x 16 A, 30 mA	16 mm²	1 x M50 cable gland 12 x M25 cable gland	34 kg	**EXKO 223 100 Q 0004**
80 A	3	24 x 16 A, 30 mA	16 mm²	1 x M50 cable gland 24 x M25 cable gland	58 kg	**EXKO 223 100 Q 0005**

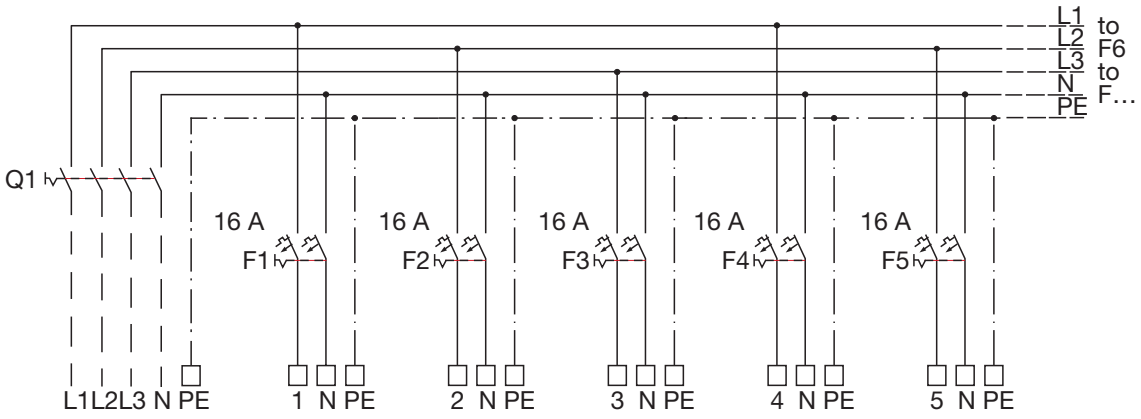
Ordering details distribution for sockets (stainless steel)

Content MCB	Type	Socket outlets	Cable glands	Weight approx.	Order No.
2 x 16 A	1	2 x 16 A 3-pole	1 x M40 cable gland	12 kg	**EXKO 223 800 C 0004**
2 x 16 A 1 x 32 A	2	1 x 16 A 3-pole 1 x 16 A 5-pole 1 x 32 A 5-pole	1 x M40	22 kg	**EXKO 223 800 C 0005**
4 x 16 A	3	2 x 16 A 3-pole 2 x 16 A 5-pole	1 x M40	27 kg	**EXKO 223 800 C 0006**

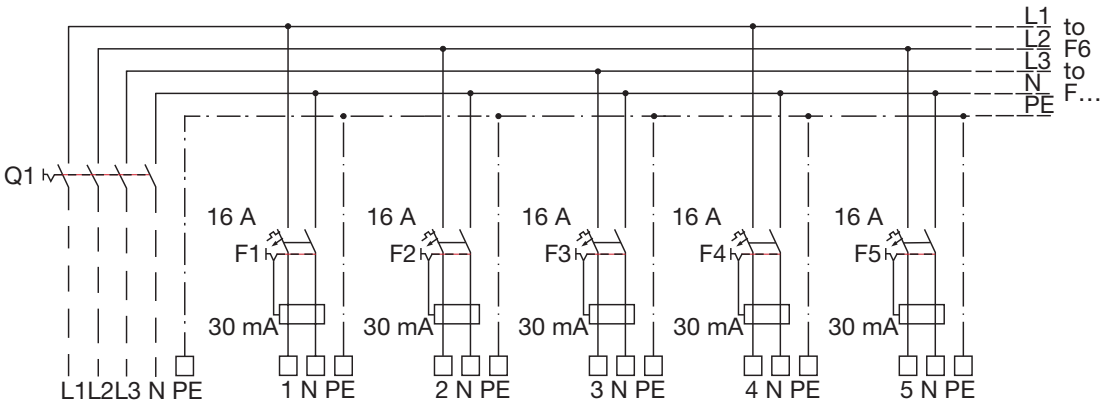


EXKO 223 100

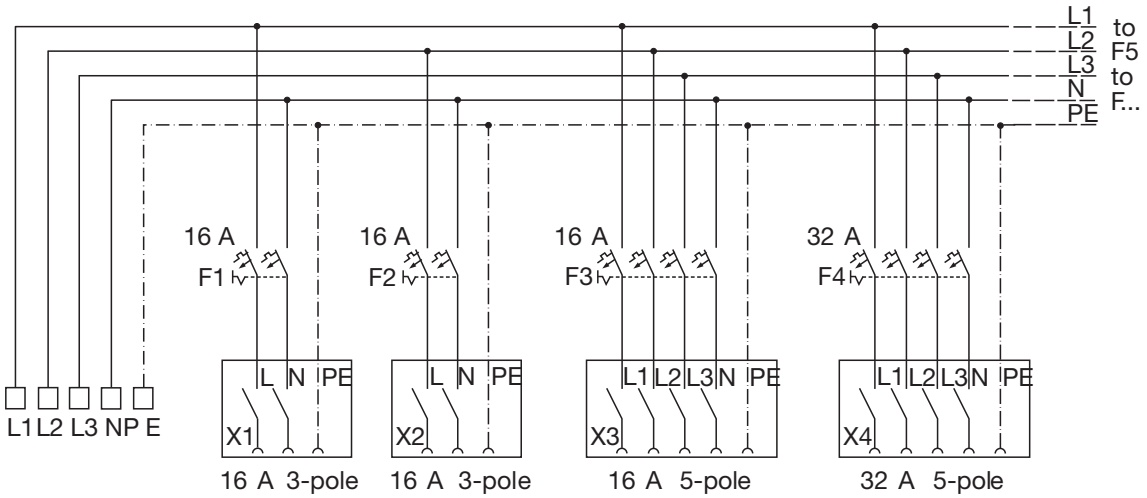
Wiring diagram lighting distribution I heating circuits I socket distribution



Lighting distribution



Heating circuits

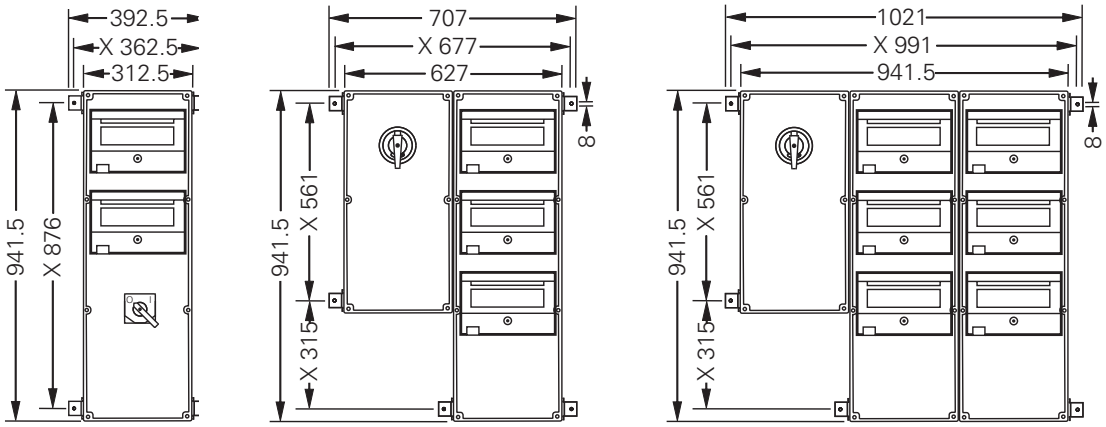


Socket distribution, must be protected by RCD



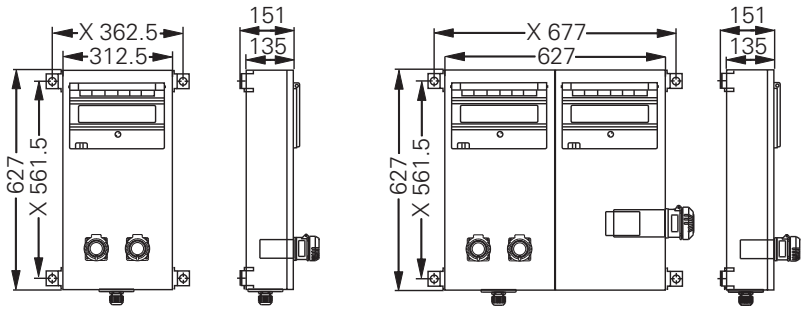
EXKO 223 100

Dimension drawing lighting distribution I heating circuits I socket distribution

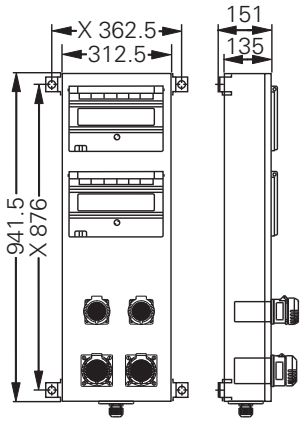


Type 1 **Type 2** **Type 3**

Lighting distribution/heating circuits **X = fixing dimension**



Type 1 **Type 2**



Type 3

Socket distribution **X = fixing dimension**

Dimensions in mm

Ex-d Built-in Components GHG 62

Flameproof encapsulation up to 63 A

Safety easy to install

If arcing or sparking electrical apparatus are used in hazardous areas, i.e. potentially explosive atmospheres, they must be protected according to EN 60079 pp by special constructional measures.

The Eaton's Crouse-Hinds explosion protected apparatus, such as the modules in Ex-e distributions, derives its high degree of safety through the combination of various types of protection. Thus, flameproof encapsulated components (Ex-d), for instance, are also integrated in enclosures of the type "Increased Safety" (Ex-e).

As these components are of modular design, they can be combined according to customers' requirements. Four enclosure sizes provide enough space for whatever modules are required: MCBs, RCDs, RCBOs or motor starters. 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.

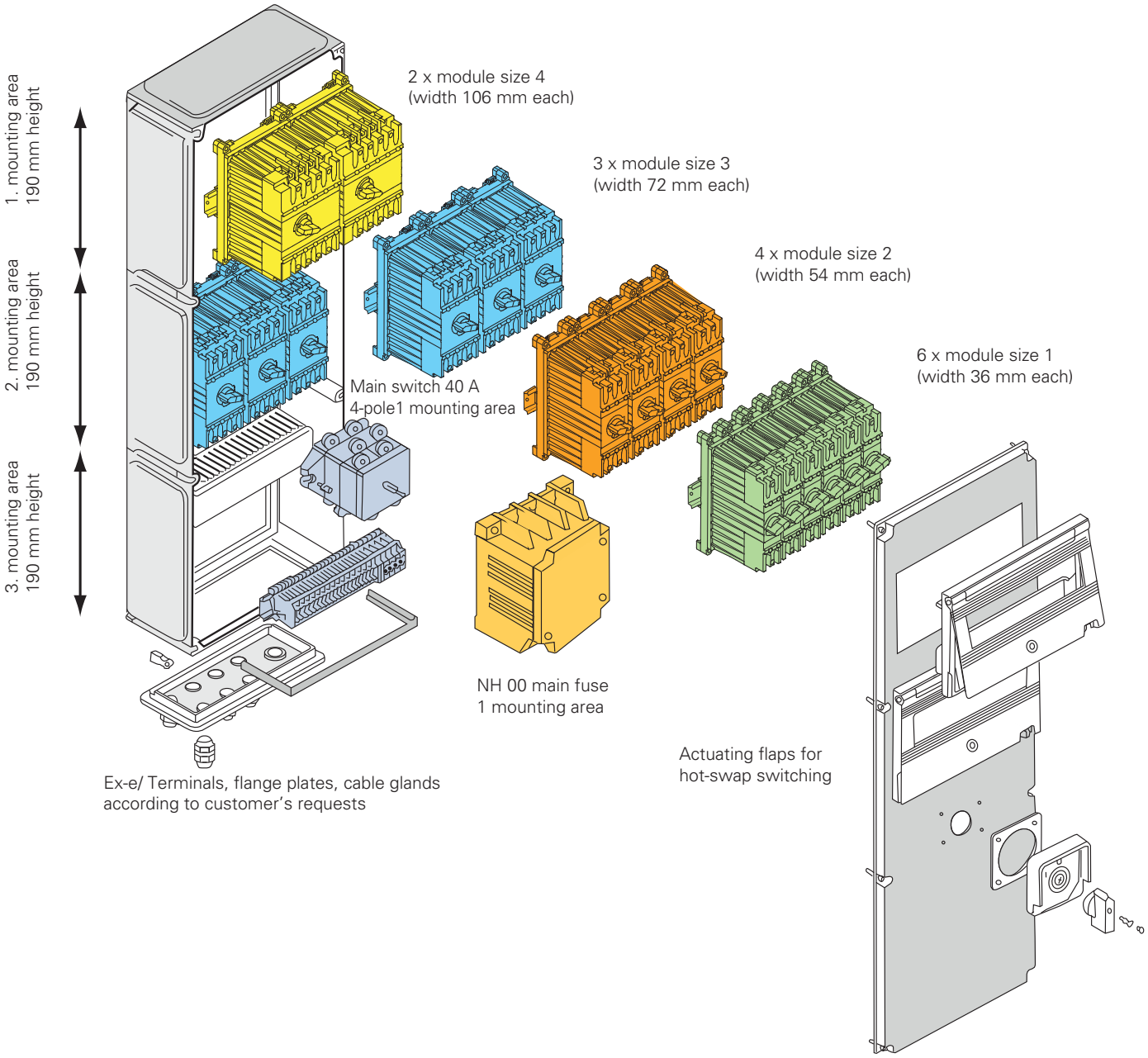
We've also provided for your personal safety: MCBs, RCDs, RCBOs and power circuit breakers can be equipped with a lock in the OFF position. That protects you during your work on the system against inadvertent switching on

– better safe than sorry!



Features

- **Modular design**
- **Easy to maintain**
- **Wde range of built-in components**
- **Rated current up to 63 A**
- **Wide ambient temperature range -45°C up to +55 °C**



6

Individual modular distributions

Eaton's Crouse-Hinds Series explosion protected Ex-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 (Ex-d) according to customers' specifications.

Four enclosure sizes provide enough space for whatever modules are required: MCBs, RCDs, RCBOs or motor starters. 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.

For an easy selection of certified components two temperature information are provided:

1. Operating temperature range
   This defines the max. permitted temperature range of component in the installed state. This has to be considered when configuring
2. Ambient temperature range
   These temperature range defines the expected ambient temperature range for a fully planned equipment and is based on the experiences of configured devices at normal installation conditions. However, it must be observed in any case, the conditions of the type examination certificate. These temperatures are purely based on explosion protection. Mechanical and electrical function based on the installation situation (e.g. self-heating) have to be considered. **For binding function ambient temperatures please refer to the product manual.**



size 4



size 3



size 2



size 1

Technical data

		MCB 0.5 A up to 63 A			
Marking accd. to 2014/34/EU		⟨Ex⟩ II 2 G Ex de IIB/IIC Gb or Ex de [ia] ib IIB/IIC Gb			
EC-Type Examination Certificate		BVS 09 ATEX E 145 U			
Marking accd. to IECEx		Ex de IIB/IIC Gb			
IECEx Certificate of Conformity		IECEx BVS 10.0002 U			
Application temperature[1)]		-20 °C up to +55 °C (IIC) -45 °C up to +55 °C (IIB) (size 1 and 2)			
Operating temperature range		-20 °C up to +110 °C (IIC) -45 °C up to +110 °C (IIB) (size 1 and 2)			
Rated voltage	main contact aux. contact	max. 400 V AC (+ 10 %) max. 250 V AC			
Rated current	main contact aux. contact	0.5 A to 63 A max. 5 A			
Rated switching capacity 2/3 phase 230 V AC (133/230 V AC) kA/cos φ 400 V AC (230/400 V AC) kA/cos φ		10 kA 10/0.5 10/0.5			
Back-up fuse depend on rated current		up to 100 A			
Connecting terminals	main contact size 1 - 4	1 x 1.5 mm² - 1 x 16 mm² fine wire with wire end sleeve/single wire 2 x 1.5 mm² - 2 x 6 mm² fine wire with wire end sleeve/single wire up to 2 x 16 mm² with cable lug GHG9059025R0010 up to 1 x 25 mm² or 2 x 25 mm² with cable lug GHG5101916R0001			
	auxiliary-/signal contact	1.5 mm² up to 2.5 mm² fine wire with wire end sleeve/single wire			
Module size		1	2	3	4
No of main contacts		1	2	3	4
No. of auxillary contacts		2	3	4	5
Weight		0.6 kg	0.9 kg	1.2 kg	1.6 kg
Enclosure material		Polyamide			
Padlocking facility		in OFF position with a commercially available padlock			

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the internal components have to be taken into account.
See also page 2.6.19.


size 1


size 2


size 3


size 4

Order Code miniature circuit breaker (MCB): 0.5 up to 63 A

GHG 622 XXXX R0YYY

1. Contacts

Contact arrangement							No of main contacts		No of main contacts		No of main contacts		No of main contacts	
Additional components	Main contact	Aux. contact	Signal contact	Overload release	Undervoltage release	Circuit	1 pole (XXXX)	module size	2 pole (XXXX)	module size	3 pole (XXXX)	module size	4 pole (XXXX)	module size
none	x	---	---	---	---	---	**1101**	1	**2101**	2	**3101**	3	**4101**	4
one additional component	x	1 NO	---	---	---	1	**1102**	1	**2102**	2	**3102**	3		
	x	1 NC	---	---	---	2	**1103**	1	**2103**	2	**3103**	3		
	x	1 C/O	---	---	---	3	**2104**	2					**4102**	4
	x	2 NO	---	---	---	4					**4118**	4		
	x	1 NO + 1 C/O	---	---	---	5			**3112**	3				
	x	1 NO + 1 C/O	---	---	---						**4114**	4		
	x	---	1 C/O	---	---	8	**2105**	2	**3113**	3	**4109**	4	**4103**	4
	x	---	---	12-60 V	---	9	**2106**	2	**3105**	3	**4107**	4		
	x	---	---	110 - 415 V	---	9	**2107**	2	**3106**	3	**4108**	4		
	x	---	---	---	24 V AC	10			**3107**	3	**4104**	4		
	x	---	---	---	110 V AC	10			**3108**	3	**4105**	4		
	x	---	---	---	230 V AC	10			**3109**	3	**4106**	4		
two additional components	x	1 NO	1 C/O	---	---	1+8							**4113**	4
	x	1 C/O	1 C/O	---	---	3+8			**3104**	3	**4110**	4		
	x	1 NO	---	12-60 V	---	1+9			**3110**	3				
	x	1 C/O	---	12-60 V	---	2+9			**3111**	3				
	x	---	1 C/O	12-60 V	---	8+9			**4111**	4				
	x	---	1 C/O	110 - 415 V	---	8+9			**4112**	4				
	x	---	1 C/O	---	24 V AC	8+10			**4115**	4				
	x	---	1 C/O	---	110 V AC	8+10			**4116**	4				
	x	---	1 C/O	---	230 V AC	8+10			**4117**	4				
three additional components	x	1 NC	1 C/O	12-60 V	---	1+8+9			**4119**	4				
	x	1 NC	1 C/O	110 - 415 V	---	1+8+9			**4120**	4				
	x	1 NO + 1 NC	1 C/O	---	24 V AC	1+8+10			**4121**	4				
	x	1 NO + 1 NC	1 C/O	---	110 V AC	1+8+10			**4122**	4				
	x	1 NO + 1 NC	1 C/O	---	230 V AC	1+8+10			**4123**	4				
	x	1 NO + 1 NC	1 C/O	---	24 V AC	1+8+10			**4124**	4				
	x	1 NO + 1 NC	---	---	230 V AC	1+8+10					**4125**	4		

Example: 2-pole MCB with two additional contacts (1 x aux. contact 1NO + 1 overload release 12 - 60 V)
XXXX=3110 (module size 3) --> GHG 622 3110 R0YYY

GHG 622 XXXX R0YYY

2. Tripping current

Built-in components MCBs: order code MCB 0.5 up to 63 A - Icn = 6 kA

Tripping Current	Characteristic K			Characteristic Z			Characteristic B			Characteristic C		
	Max. Back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY
0.5 A	not necessary	1.6 W	513	not necessary	2.5 W	581				not necessary	1.4 W	621
1 A		1.6 W	515		2.3 W	582					1.4 W	622
1.6 A		1.8 W	516		2.8 W	583					1.6 W	623
2 A		1.9 W	517		2.5 W	584					1.8 W	624
3 A	20 A	1.5 W	518	20 A	1.8 W	585				20 A	1.3 W	625
4 A	25 A	2.0 W	519	20 A	2.4 W	586				20 A	1.8 W	626
6 A	63 A	1.9 W	520	35 A	3.7 W	587	63 A	2.0 W	601	40 A	2.0 W	627
8 A	63 A	2.5 W	521	40 A	3.45 W	588				63 A	1.0 W	628
10 A	63 A	1.26 W	522	63 A	1.7 W	589	100 A	1.3 W	602	100 A	1.3 W	629
13 A	63 A	1.26 W	523				100 A	2.3 W	603	100 A	2.3 W	630
16 A	80 A	2.0 W	524	63 A	2.8 W	590	100 A	1.8 W	604	100 A	1.8 W	631
20 A	80 A	2.7 W	525	80 A	2.4 W	591	100 A	2.5 W	605	100 A	2.5 W	632
25 A	100 A	2.9 W	526	80 A	2.6 W	592	100 A	3.2 W	606	100 A	3.2 W	633
32 A	100 A	3.6 W	527	100 A	2.9 W	593	100 A	3.7 W	607	100 A	3.7 W	634
40 A	125 A	4.5 W	528	100 A	4.1 W	594	125 A	4.8 W	608	125 A	4.8 W	635
50 A	160 A	2.9 W	529	125 A	4.4 W	595	160 A	3.25 W	609	160 A	3.25 W	636
63 A	160 A	5.2 W	530	125 A	5.2 W	596	160 A	4.8 W	610	160 A	4.8W	637

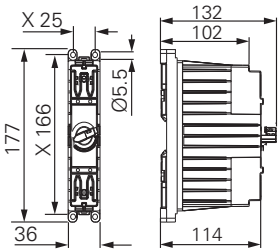
Built-in components MCBs: order code MCB 0.5 up to 63 - Icn = 10 kA

Tripping current	Characteristic K			Characteristic Z			Characteristic B			Characteristic C		
	Max. back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY
0.5 A	not necessary	1.6 W	013							not necessary	1.4 W	121
1 A		1.6 W	015								1.4 W	122
1.6 A		1.8 W	016								1.6 W	123
2 A		1.9 W	017								1.8 W	124
3 A	20 A	1.5 W	018							20 A	1.3 W	125
4 A	25 A	2.0 W	019							20 A	1.8 W	126
6 A	63 A	1.9 W	020				63 A	2.0 W	101	40 A	2.0 W	127
8 A	63 A	2.5 W	021							63 A	1.0 W	128
10 A	63 A	1.3 W	022				100 A	1.3 W	102	100 A	1.3 W	129
13 A	63 A	1.3 W	023				100 A	2.3 W	103	100 A	2.3 W	130
16 A	80 A	2.0 W	024				100 A	1.8 W	104	100 A	1.8 W	131
20 A	80 A	2.7 W	025				100 A	2.5 W	105	100 A	2.5 W	132
25 A	100 A	2.9 W	026				100 A	3.2 W	106	100 A	3.2 W	133
32 A	100 A	3.6 W	027				100 A	3.7 W	107	100 A	3.7 W	134
40 A	125 A	4.5 W	028				125 A	4.8 W	108	125 A	4.8 W	135
50 A	160 A	2.9 W	029				160 A	3.3 W	109	160 A	3.3 W	136
63 A	160 A	5.2 W	030				160 A	4.8 W	110	160 A	4.8 W	137

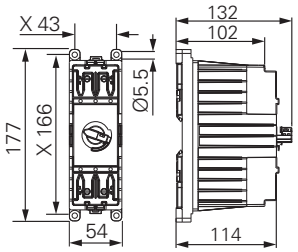
Built-in components MCBs: order code MCB 0.5 up to 63 A - Icn = 15/25 kA

Tripping current	Characteristic K			Characteristic Z			Characteristic B			Characteristic C		
	Max. Back-up fuse gG	Powerloss per pole	YYY	Max. Back-up fuse gG	Powerloss per pole	YYY	Max. Back-up fuse gG	Powerloss per pole	YYY	Max. Back-up fuse gG	Powerloss per pole	YYY
0.5 A	not necessary	1.4 W	263	not necessary	2.5 W	331				not necessary	1.4 W	371
1 A		1.4 W	265		2.3 W	332					1.4 W	372
1.6 A		1.6 W	266		2.8 W	333					1.6 W	373
2 A		1.8 W	267		2.5 W	334					1.8 W	374
3 A	25 A	1.9 W	268	25 A	1.9 W	335				25 A	1.9W	375
4 A	30 A	2.4 W	269	35 A	2.6 W	336				25 A	2.4 W	376
6 A	63 A	2.2 W	270	63 A	3.7 W	337	63 A	2.2 W	351	63 A	2.2 W	377
8 A	80 A	2.9 W	271	80 A	3.5 W	338				63 A	2.9 W	378
10 A	100 A	1.4 W	272	100 A	2.1 W	339	80 A	1.4 W	352	80 A	1.4 W	379
13 A	100 A	2.3 W	273				80 A	2.3 W	353	80 A	2.3 W	380
16 A	100 A	2.5 W	274	100 A	2.8 W	340	100 A	2.5 W	354	100 A	2.5 W	381
20 A	100 A	2.9 W	275	100 A	2.9 W	341	100 A	2.9 W	355	100 A	2.9 W	382
25 A	125 A	3.5 W	276	125 A	3.5 W	342	100 A	3.5 W	356	100 A	3.5 W	383
32 A	160 A	4.2 W	277	160 A	4.2 W	343	125 A	4.2 W	357	125 A	4.2 W	384
40 A	160 A	6.4 W	278	160 A	6.4 W	344	125 A	6.4 W	358	125 A	6.4 W	385
50 A	160A	3.0 W	279	160 A	4.4 W	345	160 A	3.0 W	359	160 A	3.0 W	386
63 A	160 A	5.6 W	280	160 A	5.2 W	346	160 A	5.6 W	360	160 A	5.6 W	387

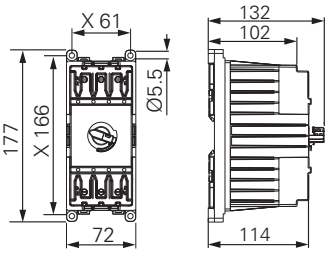
Dimension drawing / termination diagram



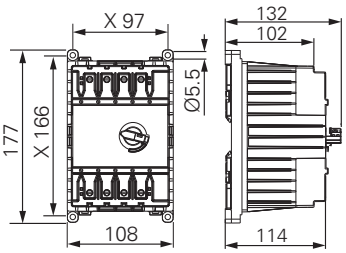
Module size 1



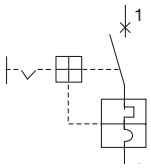
Module size 2



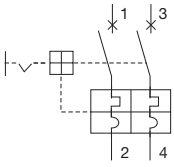
Module size 3



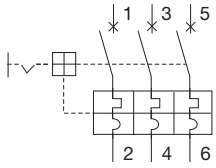
Module size 4



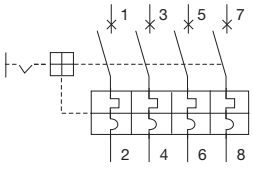
1. 1-pole MCB



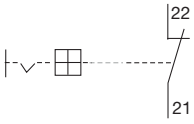
2. 2-pole MCB



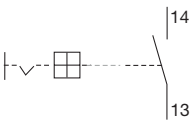
3. 3-pole MCB



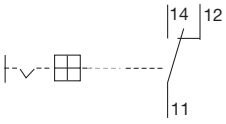
4. 4-pole MCB



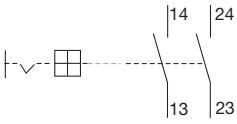
5. HK 1 NC



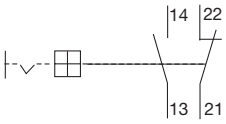
6. HK 1 NO



7. HK 1 C/O

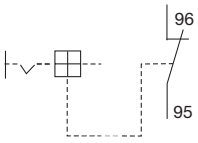


8. HK 2 NO

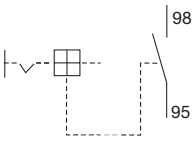


9. HK 1 NO + 1 NC

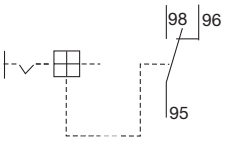
HK: aux. contact, NC: normally closed, NO: normally open, C/O: Changeover



10. SK 1

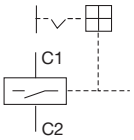


11. SK 1 NO



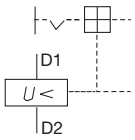
12. SK 1 C/O

SK: Signal contact



13. AA

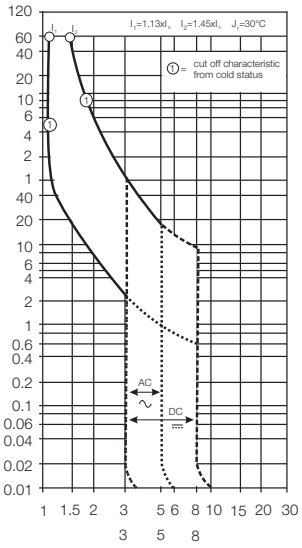
AA: shunt opening release



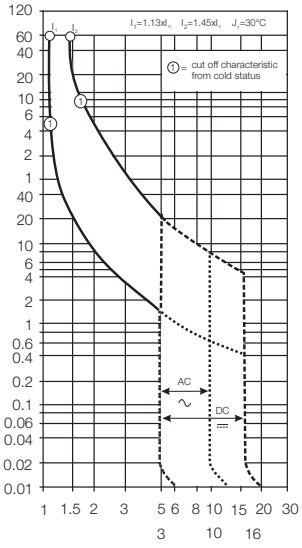
14. UA

UA: undervoltage trip

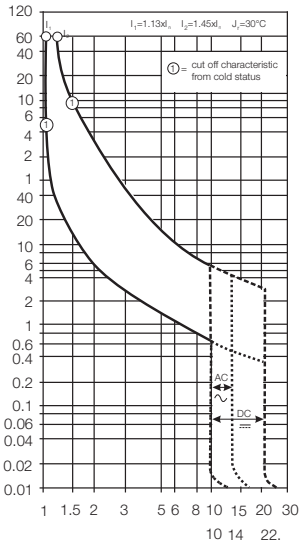
Tripping characteristic



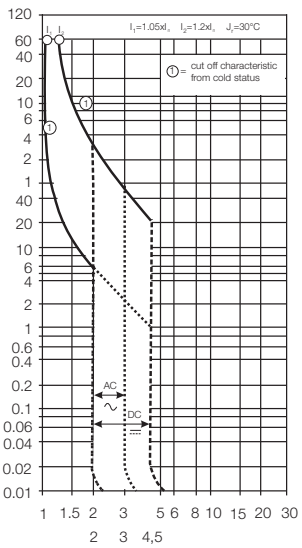
MCB characteristic B



MCB characteristic C



MCB characteristic K



MCB characteristic Z



Size 2



Size 3



Size 4

Technical data

		Residual current circuit breakers RCD from 30 mA up to 0.5 A (25/40/63 A)	
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex db eb IIC / Ex db eb IIB	
EC-Type Examination Certificate		BVS 09 ATEX E 145 U	
Marking accd. to IECEx		Ex de IIB/IIC Gb	
IECEx Certificate of Conformity		IECEx BVS 10.0002 U	
Operating temperature range		-20 °C up to +110 °C (IIC) -45 °C up to +110 °C (IIB) (size 1 and 2)	
Application temperature [1]		-20 °C up to +55 °C (IIC) -45 °C up to +55 °C (IIB) (size 1 and 2)	
Rated voltage	main contact aux. contact	max. 400 V AC (+ 10 %) max. 250 V AC	
Rated current	main contact aux. contact	0.5 A up to max. 63 A max. 5 A	
Rated residual operating current IDn		0.03 up to 0.5 A	
Back-up fuse depend on rated current		up to 100 A	
Connecting terminals	main contact size 1 -4	1 x 1.5 mm² - 1 x 16 mm² fine wire with wire end sleeve/single wire 2 x 1.5 mm² - 2 x 6 mm² fine wire with wire end sleeve/single wire up to 2 x 16 mm² with cable lug GHG9059025R0010 up to 1 x 25 mm² or 2 x 25 mm² with cable lug GHG5101916R0001	
	auxiliary-/signal contact	1.5 mm² up to 2.5 mm² fine wire with wire end sleeve/single wire	
Module size		2	4
No of main contacts		2	4
No. of auxiliary contacts		1	1
Weight		0.9 kg	1.6 kg
Enclosure material		Polyamide	
Padlocking facility		in OFF position with a commercially available padlock	

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also page 2.6.19.


Size 2


Size 3


Size 4

Order Code RCDs 25/40/63 A

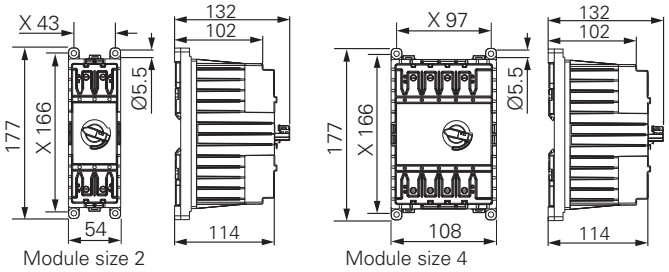
GHG 624 XXXX R0YYY

1. Contacts 2. Tripping current/Rated current

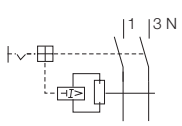
1. Contact arrangement				Termination diagram	No of main contacts		No of main contacts	
Additional components	Main contact	Aux. contact	Signal contact		2 pole (XXXX)	Module size	4 pole (XXXX)	Module size
None	x	---	---	15/18	**2101**	2	**4101**	4
One	x	1 C/O	---	16/19	**3101**	3	**4102**	4
	x	---	1 C/O	17/20	**3102**	3	**4103**	4

2. Rated residual operating current IDn	Rated current 25 A			Rated current 40 A			Rated current 63 A		
	Power dissipation in W			Power dissipation in W			Power dissipation in W		
	2 pole	4 pole	YYY	2 pole	4 pole	YYY	2 pole	4 pole	YYY
0.03 A	2.0	4.8	**012**	4.8	8.4	**013**	7.2	13.2	**014**
0.1 A	2.0	4.8	**022**	4.8	8.4	**023**	7.2	13.2	**024**
0.3 A	2.0	4.8	**032**	4.8	8.4	**033**	7.2	13.2	**034**
0.5 A	2.0	4.8	**042**	4.8	8.4	**043**	7.2	13.2	**044**

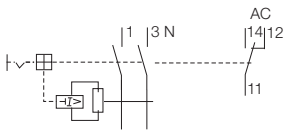
Dimension drawing / termination diagram / tripping characteristic



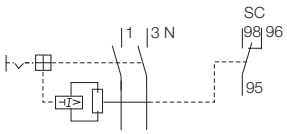
Module size 2 Module size 4



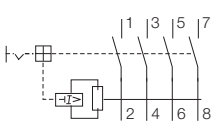
15. 2-pole MCB



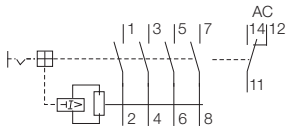
16. 2-pole MCB with aux. contact



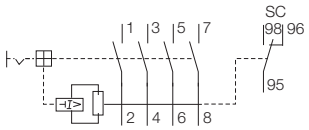
17. 2-pole MCB with signal contact



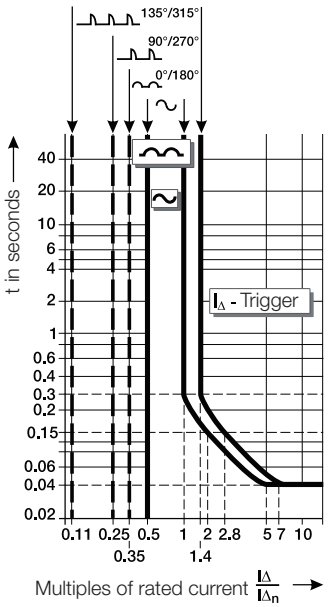
18. 4-pole MCB



19. 4-pole MCB with aux. contact



20. 4-pole MCB with signal contact



Tripping current for RCD



Size 2



Size 3



Size 4

Technical data

		RCBOs from 10 mA up to 0.3 A (trip current 0.5 A - 63 A)		
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex db eb IIC / Ex db eb IIB		
EC-Type Examination Certificate		BVS 09 ATEX E 145 U		
Marking accd. to IECEx		Ex de IIB/IIC Gb		
IECEx Certificate of Conformity		IECEx BVS 10.0002 U		
Operating temperature range		-20 °C up to +110 °C (IIC) -45 °C up to +110 °C (IIB) (option - size 1 and 2)		
Application temperature [1]		-20 °C up to +55 °C (IIC) -45 °C up to +55 °C (IIB) (option - size 1 and 2)		
Rated voltage	main contact aux. contact	max. 400 V AC (+ 10 %) max. 250 V AC		
Rated current	main contact aux. contact	max. 63 A max. 5 A		
Rated switching capacity 2/3 phase 230 V AC (133/230 V AC) kA/cos φ 400 V AC (230/400 V AC) kA/cos φ		6 kA/10 kA (depends on MCB) 10/0.5 10/0.5		
Rated residual operating current ID_n		0.01 up to 0.3 A		
Back-up fuse depend on rated current		up to 100 A		
Connecting terminals	main contact size 1 - 4	1 x 1.5 mm² - 1 x 16 mm² fine wire with wire end sleeve/single wire 2 x 1.5 mm² - 2 x 6 mm² fine wire with wire end sleeve/single wire up to 2 x 16 mm² with cable lug GHG9059025R0010 up to 1 x 25 mm² or 2 x 25 mm² with cable lug GHG5101916R0001		
	auxiliary-/signal contact	1.5 mm² up to 2.5 mm² fine wire with wire end sleeve/single wire		
Module size		2	3	4
No of main contacts		1	1	2
No. of auxiliary contacts		0	1	1
Weight		0.9 kg	1.2 kg	1.6 kg
Enclosure material		Polyamide		
Padlocking facility		in OFF position with a commercially available padlock		

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.



Size 2



Size 3



Size 4

Order Code RCBOs

GHG 625 XXXX R0YYY

1. Contacts

1. Contacts - Icn = 6 kA

Contact arrangement							Term. diag.	No of main contacts		No of main contacts	
Additional components	Main Contact	Aux. contact	Signal contact	N	RCBO			1 pol. (xxxx)	Module size	2 pol. (xxxx)	Module size
					DS201	DDA202+S202					
None	x	-	-	-	-	B/C/K	24			**4101**	4
	x	-	-	x	-	-	21	**2101**	2		
	x	-	-	x	B/C/K	-	21	**2102**	2		
One	x	-	1 C/O	x	-	-	23	**3101**	3		
	x	1 C/O	-	x	-	-	22	**3102**	3		
	x	-	1 C/O	x	B/C/K	-	23	**3103**	3		
	x	1 C/O	-	x	B/C/K	-	22	**3104**	3		
	x	1 C/O	-	-	-	B/C/K	25			**4102**	4
	x	-	1 C/O	-	-	B/C/K	26			**4103**	4
Two	x	2 C/O	-	x	B/C/K	-	25	**3105**	3		
	x	1 C/O	1 C/O	-	B/C/K	-	27	**3106**	3		

1. Contacts - Icn = 10 kA

Contact arrangement								Term. diag	No of main contacts		No of main contacts	
Additional components	Main Contact	Aux. contact	Signal contact	N	RCBO				1 pol. (xxxx)	Module size	2 pol. (xxxx)	Module size
					DS201M	DS202CM	DDA202+ S202 (M/P)					
None	x	-	-	-	-	B/C	-	24			**2121**	2
	x	-	-	-	-	-	B/C/K	24			**4101**	4
	x	-	-	x	-	-	-	21	**2101**	2		
	x	-	-	x	B/C	-	-	21	**2102**	2		
One	x	-	1 C/O	x	-	-	-	23	**3101**	3		
	x	1 C/O	-	x	-	-	-	22	**3102**	3		
	x	-	1 C/O	x	B/C	-	-	23	**3103**	3		
	x	1 C/O	-	x	B/C	-	-	22	**3104**	3		
	x	2 W	-	x	B/C	-	-	22	**3105**	3		
	x	-	1 C/O		-	B/C	-	26			**3121**	3
	x	1 C/O	-	-	-	B/C	-	25			**3122**	3
	x	1 C/O	-	-	-	-	B/C/K	25			**4102**	4
	x	-	1 C/O	-	-	-	B/C/K	26			**4103**	4
Two	x	2 C/O	-	x	B/C		-	22	**3105**	3		



Size 2



Size 3



Size 4

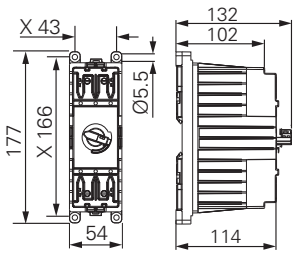
GHG 625 XXXX R Z YYY

2. Rated residual operating current ID_n 3. Tripping current

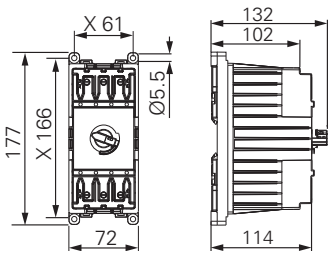
Tripping current	B-Characteristic 6 kA				C-Characteristic 6 kA				K-Characteristic 6 kA			
Type	DS201			DDA202	DS201			DDA202	DS201			DDA202
2. Rated residual operating current IDn												
	ID_n (mA)				ID_n (mA)				ID_n (mA)			
	10	30	300	+ABB S202	10	30	300	+ABB S202	10	30	300	+ABB S202
Z	0	1	3	-	0	1	3	-	0	1	3	-
3. Tripping Current												
0.5 A	-	-	-	-		-	-	**621**	-	-	-	**513**
1 A	-	-	-	-	-	-	-	**622**	-	**046**	**046**	**515**
1.6 A	-	-	-	-	-	-	-	**623**	-	-	-	**516**
2 A	-	-	-	-	-	**024**	**024**	**624**	-	**047**	**047**	**517**
3 A	-	-	-	-	-	-	-	**625**	-	-	-	**518**
4 A	-	-	-	-	-	**025**	**025**	**626**	-	**048**	**048**	**519**
6 A	-	**004**	**004**	**601**	-	**026**	**026**	**627**	-	**049**	**049**	**520**
8A	-	-	-	-	-	**027**	**027**	**628**	-	**050**	**050**	**521**
10 A	**005**	**005**	**005**	**602**	**028**	**028**	**028**	**629**	-	**051**	**051**	**522**
13 A	**006**	**006**	**006**	**603**	**029**	**029**	**029**	**630**	**051**	**052**	**052**	**523**
16 A	**007**	**007**	**007**	**604**	**030**	**030**	**030**	**631**	**052**	**053**	**053**	**524**
20 A	-	**008**	**008**	**605**	-	**031**	**031**	**632**	**053**	**054**	**054**	**525**
25 A	-	**009**	**009**	**606**	-	**032**	**032**	**633**	-	**055**	**055**	**526**
32 A	-	**010**	**010**	**607**	-	**033**	**033**	**634**	-	**056**	**056**	**527**
40 A	-	**011**	**011**	**608**	-	**034**	**034**	**635**	-	**057**	**057**	**528**
50 A	-	-	-	**609**	-	-	-	**636**	-	-	-	**529**
63 A	-	-	-	**610**	-	-	-	**637**	-	-	-	**530**

Tripping current	B-Characteristic 10 kA								C-Characteristic 10 kA								K-Characteristic 10 kA	
Type	DS201M			DS202CM			DDA202	DDA202	DS201M			DS202CM			DDA202	DDA202	DDA202	DDA202
2. Rated residual operating current ID_n																		
	ID_n (mA)								ID_n (mA)									
	10	30	300	10	30	300	+ABBS202M	+ABBS202P	10	30	300	10	30	300	+ABBS202M	+ABBS202P	+ABBS202M	+ABBS202P
z	0	1	3	0	1	3	-	-	0	1	3	0	1	3	-	-	-	-
3. Tripping Current																		
0.5 A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	121	**371**	013	**263**
1 A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	122	**372**	015	**265**
1.6 A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	123	**373**	016	**266**
2 A		-	-	-	-	-	-	-	-	-	-	-	-	-	124	**374**	017	**267**
4 A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125	**375**	018	**268**
3 A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	126	**376**	019	**269**
6 A	-	**254**	**254**	-	**004**	**004**	**101**	**351**	-	**276**	**276**	-	**026**	**026**	127	**377**	020	**270**
8 A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	128	**378**	021	**271**
10 A	**255**	**255**	**255**	**005**	**005**	**005**	**102**	**352**	**278**	**278**	**278**	-	**028**	**028**	129	**379**	022	**272**
13 A	-	**256**	**256**	**006**	**006**	**006**	**103**	**353**	-	**279**	**279**	**029**	**029**	**029**	130	**380**	023	**273**
16 A	**257**	**257**	**257**	**007**	**007**	**007**	**104**	**354**	**280**	**280**	**280**	**030**	**030**	**030**	131	**381**	024	**274**
20 A	-	**258**	**258**	-	**008**	**008**	**105**	**355**	-	**281**	**281**	-	**031**	**031**	132	**382**	025	**275**
25 A	-	**259**	**259**	-	**009**	**009**	**106**	**356**	-	**282**	**282**	-	**032**	**032**	133	**383**	026	**276**
32 A	-	**260**	**260**	-	**010**	**010**	**107**	**357**	-	**283**	**283**	-	**033**	**033**	134	**384**	027	**277**
40 A	-	**261**	**261**	-	-	-	**108**	**358**	-	**284**	**284**	-	-	-	135	**385**	028	**278**
50 A	-	-	-	-	-	-	**109**	**359**	-	-	-	-	-	-	136	**386**	029	**279**
63 A	-	-	-	-	-	-	**110**	**360**	-	-	-	-	-	-	137	**387**	030	**280**

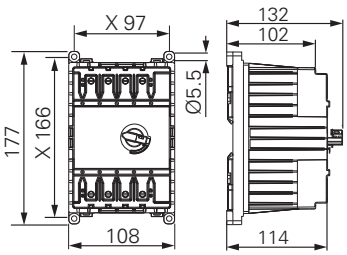
Dimension drawing / Termination diagram



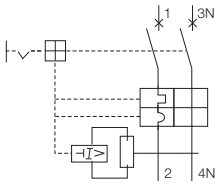
Module size 2



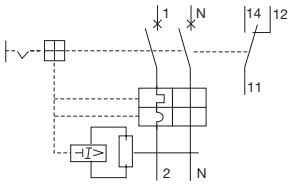
Module size 3



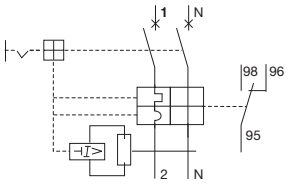
Module size 4



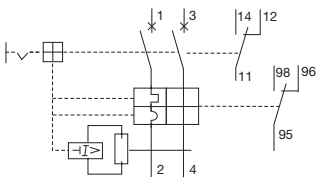
21. RCBO 1-pole + N



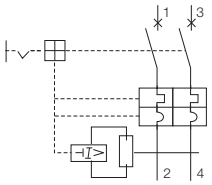
22. RCBO 1-pol. + N with HK



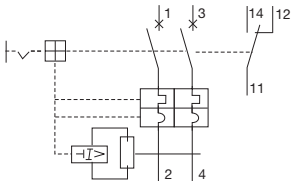
23. RCBO 1-pol. + N with SK



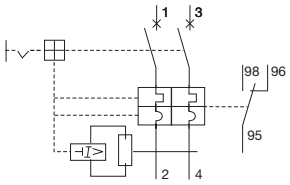
27. RCBO 1-pol. with HK and NO



24. RCBO 2-pole

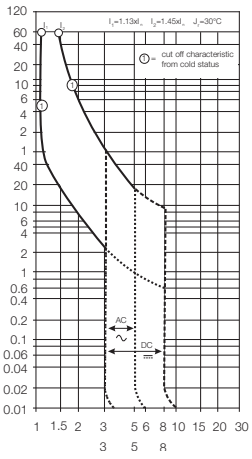


25. RCBO 2-pol. with HK

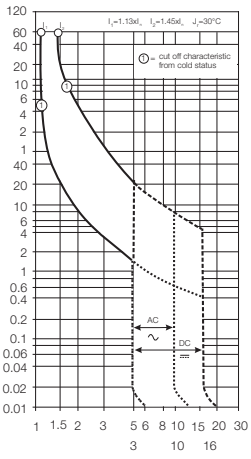


26. RCBO 2-pol. with SK

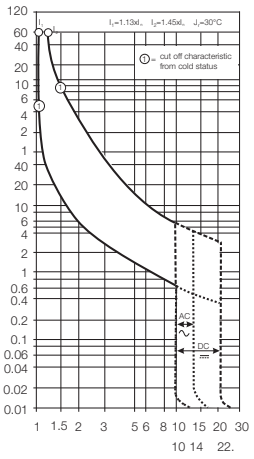
Tripping characteristic



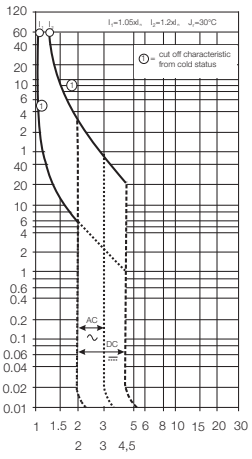
MCB Characteristic B



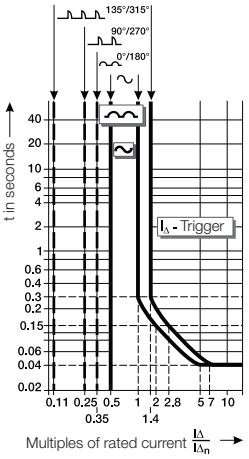
MCB Characteristic C



MCB Characteristic K



MCB Characteristic Z



RCD Characteristic

GHG 627 power contactor 3-pole up to 63 A / 30 kW (optional overcurrent relay) / 4-pole up to 55 A



3-pole 45 A



3-pole 45 A with thermal release

Technical data

		Contactor 3 / 4 pole up to 30 kW					
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex db eb IIC / Ex db eb IIB					
EC-Type Examination Certificate		BVS 09 ATEX E 145 U					
Marking accd. to IECEx		Ex de IIB/IIC Gb					
IECEx Certificate of Conformity		IECEx BVS 10.0002 U					
Operating temperature range		-20 °C up to +110 °C (IIC)					
Application temperature [1]		-20 °C up to +55 °C (IIC)					
Rated voltage	main contact (3-pole) main contact (4-pole) aux. contact	max. 690 V AC / max. 220 V DC max. 690 V AC / max. 440 V DC max. 690 V AC / max. 600 V DC depending on current					
Rated current	main contact aux. contact	max. 63 A (3-pole) / max. 55 A (4-pole) max. 5 A					
Size (3-pole) AC-1 current / AC-3 load		28 A / 5.5 kW	30 A / 7.5 kW	45 A / 11 kW	50 A / 15 kW	50 A / 18.5 kW	63 A / 30 kW
Rated making/breaking capacity accd. to EN 60947-4-1 AC-3 (3-pole)		U_e 400 V/ Pe 4 kW	U_e 400 V/ Pe 7.5 kW	U_e 400 V/ Pe 11 kW	U_e 400 V/ Pe 18.5 kW	U_e 400 V/ Pe 18.5 kW	U_e 400 V/ Pe 30 kW
Size (4-pole) AC-1 current		25 A	30 A	45 A	55 A		
Rated making/breaking capacity accd. to EN 60947-4-1 AC-1 (4-pole)		U_e 400 V/ Ie 25 A	U_e 400 V/ Ie 30 A	U_e 400 V/ Ie 45 A	U_e 400 V/ Ie 55 A		
Connecting terminals	main contact size	1 x 1.5 mm² - 1 x 16 mm² fine wire with wire end sleeve/single wire 2 x 1.5 mm² - 2 x 6 mm² fine wire with wire end sleeve/single wire up to 2 x 16 mm² with cable lug GHG9059025R0010 up to 1 x 25 mm² or 2 x 25 mm² with cable lug GHG5101916R0001					
	auxiliary-/signal contact	1.5 mm² up to 2.5 mm² fine wire with wire end sleeve/single wire					
Module size		5					
No of main contacts		3 / 4					
No. of auxiliary contacts		2 / 4					
Weight		2.5 kg					
Enclosure material		Polyamide					

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.



3-pole 45 A with thermal release



3-pole 45 A

Order code power contactor 3-pole

GHG 627 51XX RYYZZ

1. Contactor configuration 3-pole XX

Main components	Main contact	Aux. contact	Module size	Termination diagram	3 pol. (XX)
3 pole contactor	x	2 (1NO + 1NC)	5	1	**11**
3 pole contactor	x	4 (2NO + 2 NC)	5	2	**12**
3 pole contactor + relay	x	2 (1NO + 1NC)	5	3	**17**

2. Relay current setting YY

Relay current setting				Ir (A)					
		no relay (2 ac[1])	no relay (4 ac[1])	4.2 - 5.7	7.6 - 10	13 - 16	20 - 24	24 - 29	35 - 40
YY		**00**	**00**	**14**	**16**	**18**	**20**	**21**	**23**

3. Nominal current & control voltage ZZ

AC-1 Current	AC-3 Power	Control Voltage	ZZ	ZZ	ZZ	ZZ	ZZ	ZZ	ZZ	ZZ
28 A	5.5 kW	24 V / 20 V to 60 V AC/DC	**01**	**01**						
30 A	7.5 kW	24 V / 20 V to 60 V AC/DC	**02**	**02**	**02**	**02**	**02**			
45 A	11 kW	24 V / 20 V to 60 V AC/DC	**03**	**03**	**03**	**03**	**03**	**03**		
50 A	15 kW	24 V / 20 V to 60 V AC/DC	**04**	**04**			**04**	**04**	**04**	
50 A	18.5 kW	24 V / 20 V to 60 V AC/DC	**05**	**05**				**05**	**05**	**05**
63 A	30 kW	24 V / 20 V to 60 V AC/DC	**08**							
28 A	5.5 kW	100 V to 250 V AC/DC	**11**	**11**						
30 A	7.5 kW	100 V to 250 V AC/DC	**12**	**12**	**12**	**12**	**12**			
45 A	11 kW	100 V to 250 V AC/DC	**13**	**13**	**13**	**13**	**13**	**13**		
50 A	15 kW	100 V to 250 V AC/DC	**14**	**14**			**14**	**14**	**14**	
50 A	18.5 kW	100 V to 250 V AC/DC	**15**	**15**				**15**	**15**	**15**
63 A	30 kW	100 V to 250 V AC/DC	**18**							
28 A	5.5 kW	250 V to 500 V AC/DC	**21**	**21**						
30 A	7.5 kW	250 V to 500 V AC/DC	**22**	**22**						
45 A	11 kW	250 V to 500 V AC/DC	**23**	**23**						
50 A	15 kW	250 V to 500 V AC/DC	**24**	**24**						
50 A	18.5 kW	250 V to 500 V AC/DC	**25**	**25**						
63 A	30 kW	250 V to 500 V AC/DC	**28**							

[1] ac = auxiliary contact

Example: 3-Pole power contactor with relay Ir=13 - 16 A, no auxiliary contacts, 45 A / 11 kW, control voltage 250 - 500 V
3-Pole contactor with relay Ir=13 - 16 A: **XX = 17**
Ir=13 - 16 A, no auxiliary contacts: **YY = 18**
45 A / 11 kW, control voltage 250 - 500 V: **ZZ = 13**

Order No. **GHG 627 5117 R1813**



4-pole 45 A

order code power contactor 4-pole

GHG 627 51XX R00YY

1. Contactor configuration 4-pole XX

Main components	Main contact	Aux. contact	Module size	Termination diagram	4-pol. (XX)
4 pole contactor	x	2 (1NO + 1NC)	5	4	**14**
4 pole contactor	x	4 (2NO + 2NC)	5	5	**15**

2. AC-1 current / Control voltage YY

AC-1 Current	Control voltage		
	24 - 60 V AC/DC	100 - 250 V AC/DC	250 - 500 V AC/DC
	YY	YY	YY
25 A	**01**	**11**	**21**
30 A	**02**	**12**	**22**
45 A	**03**	**13**	**23**
55 A	**04**	**14**	**24**

Example: 4-Pole power contactor, 4 auxiliary contacts, 55 A / 18.5 kW, control voltage 100 - 250 V
4-Pole contactor with 4 auxiliary contacts: **XX = 15**
55 A / 18.5 kW, control voltage 100 - 250 V: **YY = 14**

Order No. **GHG 627 5115 R0014**

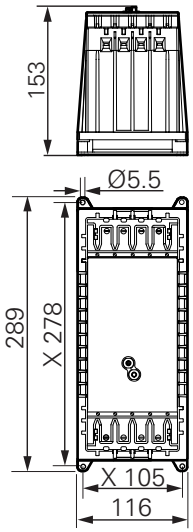


3-pole 45 A with thermal release

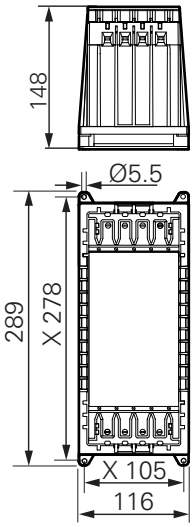


3-pole 45 A

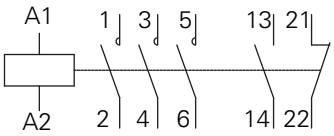
Dimension drawing /Termination diagram



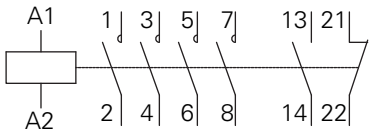
Module size 5 with relay



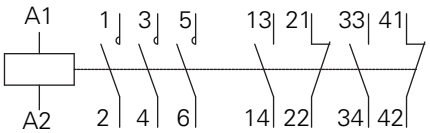
Module size 5 without relay



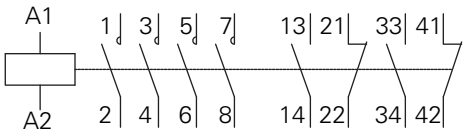
1. Power contactor 3-pole + 2 ac



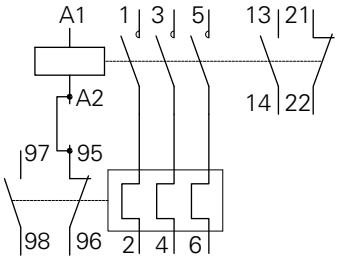
4. Power contactor 4-pole + 2 ac



2. Power contactor 3-pole + 4 ac



5. Power contactor 4-pole + 4 ac



3. Power contactor 3-pole + relay

ac = aux. contact

Ex-d Built-in Components GHG 61

Flameproof encapsulation up to 40 A

Safety easy to install

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 60079 pp by special constructional measures. Eaton's Crouse-Hinds Business explosion-protected apparatus, such as the modules in Ex-e distributions, derives its high degree of safety through the combination of various types of protection.

Thus, flameproof encapsulated components (Ex-d), for instance, are also integrated in enclosures of the type "Increased Safety" (Ex-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, RCBOs 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.

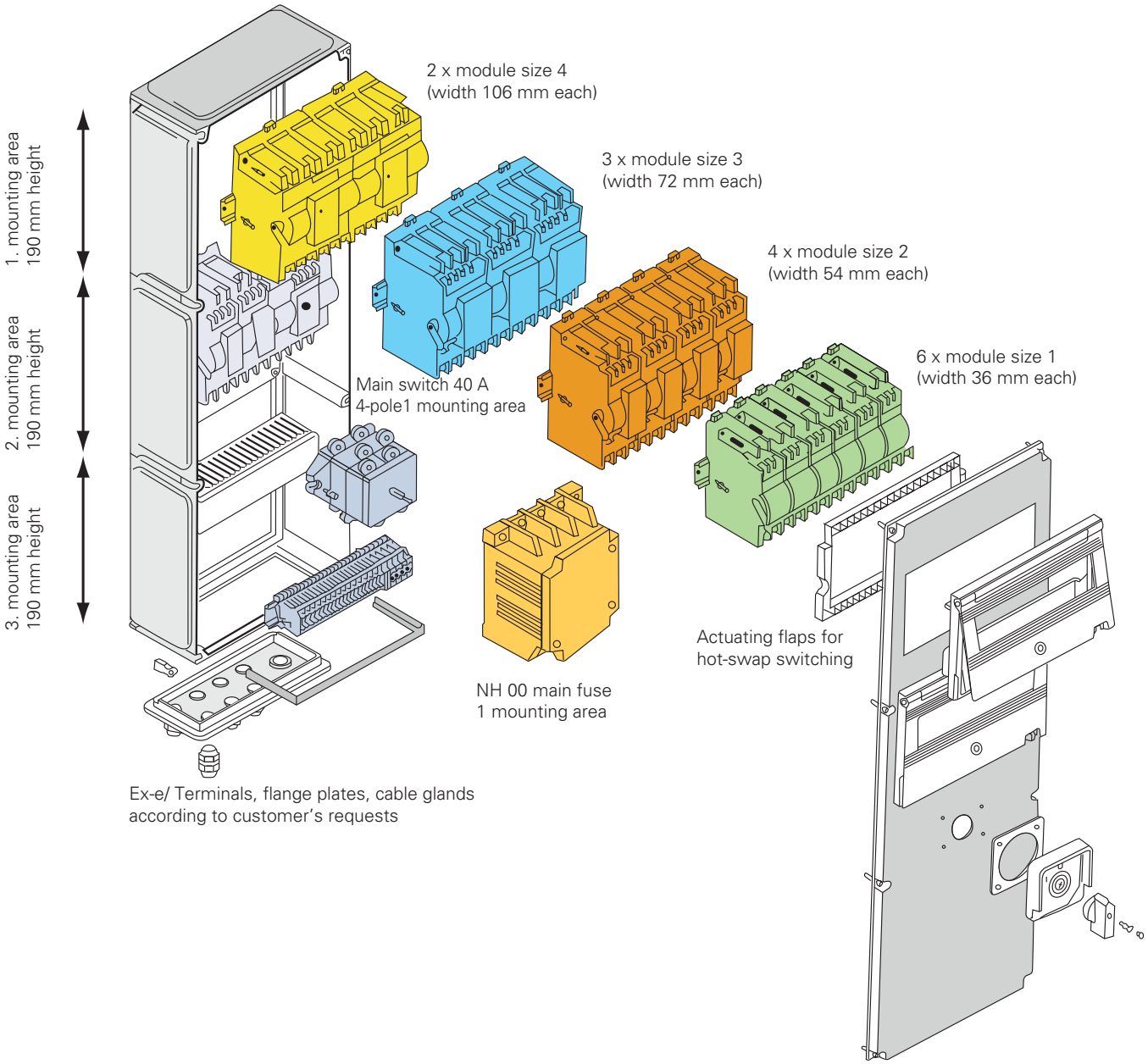
The modules are inserted in the distribution by simple snap-on rail mounting. Thus, modules can be replaced or added quickly and reliably. That makes servicing and extension work simpler and faster – and thus more cost efficient.

We've also provided for your personal safety: MCBs, RCDs, RCBOs 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!



Features

- **Snap-on**
- **Individually combinable**
- **Operation via actuating flap**
- **Optimum space utilisation with 4 enclosure sizes**



Individual modular distributions

Eaton's Crouse-Hinds Business explosion protected Ex-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 (Ex-d) according to customers' specifications.

Four enclosure sizes provide enough space for whatever modules are required: MCBs, RCDs, RCBOs, contactors, over-current trips star-delta-time relays or motor starters. 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.

For an easy selection of certified components two temperature information are provided:

- Operating temperature range
  This defines the max. permitted temperature range of component in the installed state. This has to be considered when configuring
- Ambient temperature range
  These temperature range defines the expected ambient temperature range for a fully planned equipment and is based on the experiences of configured devices at normal installation conditions. However, it must be observed in any case, the conditions of the type examination certificate. These temperatures are purely based on explosion protection. Mechanical and electrical function based on the installation situation (e.g. self-heating) have to be considered. **For binding function ambient temperatures please refer to the product manual.**



Size 1 MCB-1-pole



Size 2 MCB-2-pole



Size 3 MCB-3-pole



Size 4 MCB-4-pole

Technical data

		MCB 0.5 A up to 40 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I Mb
EC-Type Examination Certificate		PTB 98 ATEX 1087 U
IECEx Certificate of Conformity		IECEx BKI 07.0038 U
Marking accd. to IECEx		Ex de IIC
Operating temperature range		–55 °C up to +110 °C (size 0, 1, 2 - IIC) –20 °C up to +110 °C (size 3, 4 - IIC) –55 °C up to +110 °C (size 3, 4 - IIB)
Application temperature[1)]		–20 °C up to +55 °C (size 3, 4 - IIC) –55 °C up to +55 °C (size 0, 1, 2 - IIC; size 3, 4 - IIB)
Rated voltage	main contact aux. contact	max. 400 V AC (+ 10 %) max. 250 V AC
Rated current	main contact aux. contact	0.5 A up to 40 A max. 5 A
Rated switching capacity 2/3 phase		10 kA
230 V AC (133/230 V AC) kA/cos φ		10/0.5
400 V AC (230/400 V AC) kA/cos φ		10/0.5
Back-up fuse		depend on rated current up to 100 A
Connecting terminals	main contact aux. contact	2 x 10 mm^2 fine wire with wire end sleeve/single wire 2 x 2.5 mm^2 fine wire with wire end sleeve/single wire
Weight	1-pole 2-pole 3-pole 4-pole	0.55 kg size 1 0.95 kg size 2 1.25 kg size 3 1.57 kg size 4
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Options		Auxiliary-signal contact
Padlocking facility		in OFF position with a commercially available padlock

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.


Size 4 MCB-4-pole


Size 3 MCB-3-pole


Size 2 MCB-2-pole


Size 1 MCB-1-pole

Order code MCB 0.5 A up to 40 A

GHG 612 XXXX R0YYY

1. Contacts

1. Ordering Code for Contacts

Contacts	Termination diagram[1]	1-pole (xxxx)	Module size[2]	2-pole (xxxx)	Module size[2]	3-pole (xxxx)	Module size[2]	4-pole (xxxx)	Module size[2]
only main contact	A1 up to A5	**1141**	1	**2141**	2	**3141**	3	**4141**	4
+ aux. contact (1 C/O)	B3	**1142**	1	**2142**	2	**3142**	3	**4142**	4
+ aux. contact (1NO+1NC)	B1, B2			**3150**	3				
+ aux. contact (2NO)	B4					**4168**	4		
+ N + aux. contact (1NO+1NC)	A4, B1, B2					**4166**	4		
+1 C/O	C3	**2148**	2	**3157**	3	**4147**	4	**4143**	4
+ signal contact (1NC) + aux. contact (1NO)	C2 + B1					**4148**	4		
+ signal contact (1NO) + aux. contact (1NO)	C1 + B1					**4161**	4	**4160**	4
+ signal contact (1NC) + aux. contact (1NC)	C2 + B2					**4163**	4		
+ Overload release (12 - 60 V)	D	**2150**	2	**3147**	3				
+ Overload release (110 - 415 V)	D	**2151**	2	**3146**	3	**4146**	4		
+ undervoltage trip [3]	E			**3148**	3	**4144**	4		
+ signal contact (1 C/O)	C3								
+ aux. contact (1 C/O)	B3			**3143**	3	**4164**	4		
+ Overload release (110 - 415 V)	D								
+ signal contact (1 C/O)	C3			**4159**	4				
+ Overload release (12 - 60 V)	D								
+ aux. contact (1 C/O)	B3			**3149**	3				
+ Overload release (110 - 415 V)	D								
+ signal contact (1 C/O)	C3								
+ auxiliary contact (1 C/O)	B3			**4165**	4				
+ Overload release (12 - 60 V)	D								
+ signal contact (1 C/O)	C3								
+ aux. contact (1 C/O)	B3			**4169**	4				
+ undervoltage trip [3]	E								
+ signal contact (1 C/O)	C3					**4167**	4		
+ undervoltage trip [3]	E								
+ signal contact (1 C/O)	C3								
+ aux. contact (1 C/O)	B3					**4174**	4		

[1] Termination diagram see page 11.21

[2] Module size see dimension drawing page 11.22

[3] undervoltage trip 12 V DC, 24 V AC/DC, 48 V AC/DC, 110 V AC/DC, 230 V AC/DC, 400 V AC on request


Size 1 MCB-1-pole


Size 2 MCB-2-pole


Size 3 MCB-3-pole


Size 4 MCB-4-pole

Order code MCB 0.5 A up to 40 A

GHG 612 XXXX R0YYY

2. Tripping current

2. Order code for tripping current, characteristic, max. back-up fuse, power dissipation per pole

Tripping current	Characteristic K Max. Back-up fuse gG	YYY	Characteristic Z Max. Back-up fuse gG	YYY	Characteristic B Max. Back-up fuse gG	YYY	Characteristic C Max. Back-up fuse gG	YYY
0.5 A	not necessary	**013**	not necessary	**081**			not necessary	**121**
0.75 A		**014**						
1.0 A		**015**		**082**				**122**
1.6 A		**016**		**083**				**123**
2 A		**017**		**084**				**124**
3 A	20 A	**018**	20 A	**085**			20 A	**125**
4 A	25 A	**019**	20 A	**086**			20 A	**126**
6 A	63 A	**020**	35 A	**087**	63 A	**101**	40 A	**127**
8 A	63 A	**021**	40 A	**088**			63 A	**128**
10 A	63 A	**022**	63 A	**089**	100 A	**102**	100 A	**129**
13 A					100 A	**103**	100 A	**130**
16 A	80 A	**023**	63 A	**090**	100 A	**104**	100 A	**131**
20 A	81 A	**024**	80 A	**091**	100 A	**105**	100 A	**132**
25 A	100 A	**025**	80 A	**092**	100 A	**106**	100 A	**133**
32 A	100 A	**026**	100 A	**093**	100 A	**107**	100 A	**134**
40 A	125 A	**027**	100 A	**094**	125 A	**108**	125 A	**135**

Back-up fuse is only required if at the installation point the max. prospective, unaffected short-circuit current will exceed the rated switching capacity.

Example

GHG 612 XXXX R 0YYY

GHG 612 **3143** R 0**023**

3-pole
+ signal contact (1 C/O)
+ aux. contact (1 C/O)

16 A
K-Characteristic

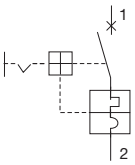

Size 4 MCB-4-pole


Size 3 MCB-3-pole

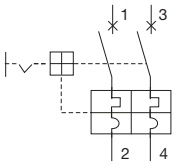

Size 2 MCB-2-pole


Size 1 MCB-1-pole

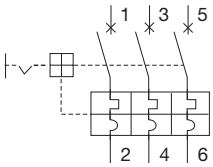
Termination diagram

① 

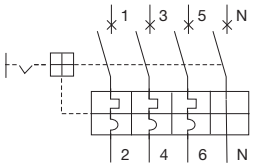
1. 1-pole MCB

② 

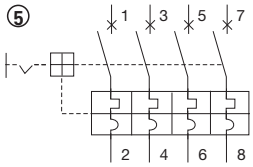
2. 2-pole MCB

③ 

3. 3-pole MCB

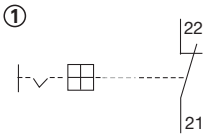
④ 

3. 3-pole + N MCB

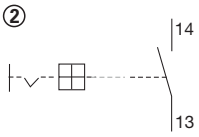
⑤ 

4. 4-pole MCB

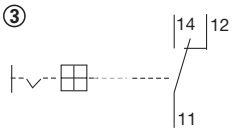
A. main contact

① 

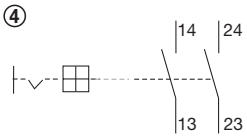
HK 1 NC

② 

HK 1 NO

③ 

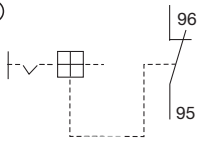
HK 1 C/O

④ 

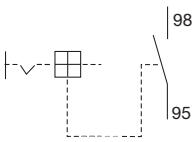
HK 2 NO

HK: aux. contact, NC: normally closed, NO: normally open, C/O: Changeover

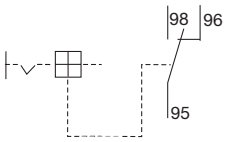
B. Auxiliary contacts

① 

SK 1

② 

SK 1 NO

③ 

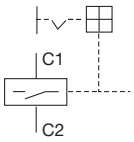
1SK 1 C/O

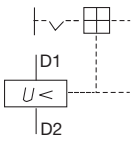
13. AA

14. UA

SK: Signal contact

C. Signal contacts





D. AA: shunt opening release

E. undervoltage trip

HK = main contact
ac = aux. contact
SK = signal contact
AA = shunt opening release
UA = undervoltage trip



Size 1 MCB-1-pole



Size 2 MCB-2-pole

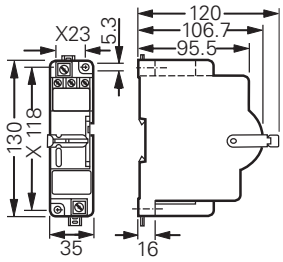


Size 3 MCB-3-pole

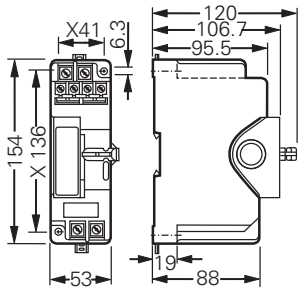


Size 4 MCB-4-pole

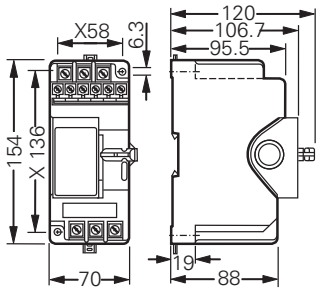
Dimension drawing I Termination diagram



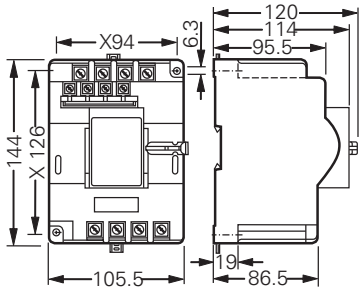
Module size 1



Module size 2



Module size 3



Module size 4

X = fixing dimension

Dimensions in mm



Size 4 MCB-4-pole



Size 3 MCB-3-pole

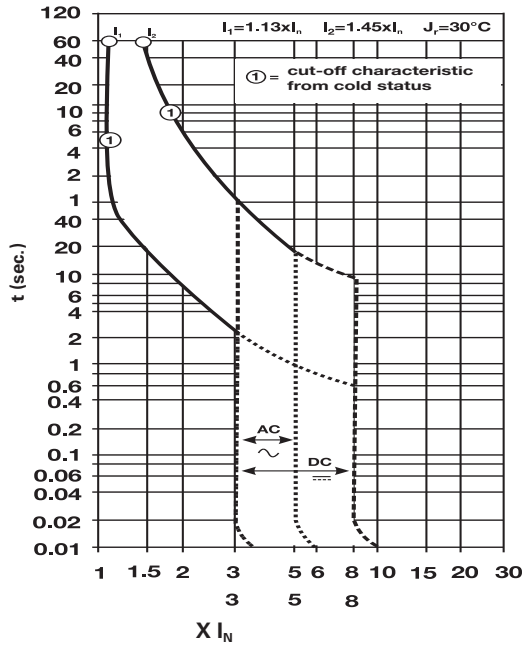


Size 2 MCB-2-pole

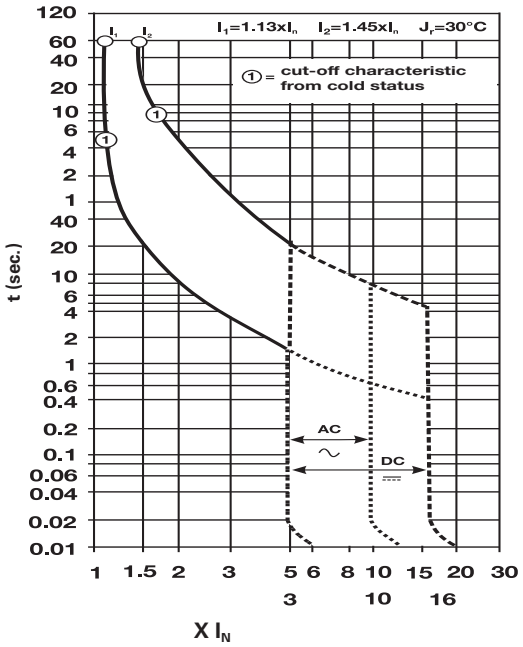


Size 1 MCB-1-pole

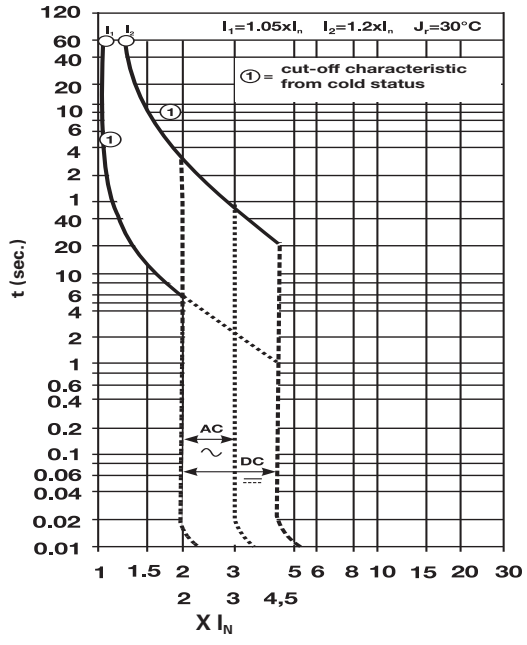
Tripping characteristic



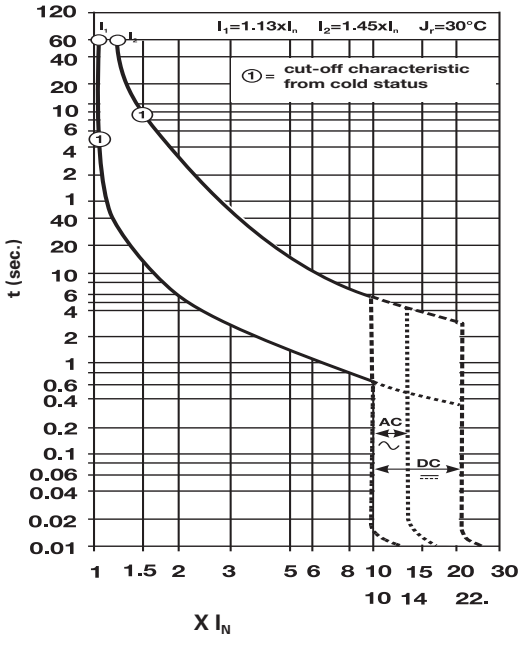
B-Characteristic



C-Characteristic



Z-Characteristic



K-Characteristic



RCBO 2-pole

Technical data

		RCBO 0.5 A up to 40 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I
EC-Type Examination Certificate		PTB 98 ATEX 1087 U
IECEx Certificate of Conformity		IECEx BKI 07.0038 U
Marking accd. to IECEx		Ex de IIC
Operating temperature range		–20 °C up to +110 °C (size 4 - IIC) –55 °C up to +110 °C (size 4 - IIB)
Application temperature[1)]		–20 °C up to +55 °C (size 4 - IIC) –55 °C up to +55 °C (size 4 - IIB)
Rated voltage	main contact aux. contact	max. 400 V AC (+ 10 %) max. 250 V AC
Rated current	RCD main contact aux. contact	25 A; 40 A 1.0 A up to 40 A max. 5 A
Rated switching capacity 2 phase		10 kA (2-pole)
Back-up fuse	RCD MCB	63 A gG depend on rated current up to 100 A
Connecting terminals	main contact aux. contact	2 x 10 mm^2 fine wire with wire end sleeve/single wire 2 x 2.5 mm^2 fine wire with wire end sleeve/single wire
Weight	1-pole + N 2-pole	0.95 kg size 2 1.57 kg size 4
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Options		auxiliary-/Signal contact
Padlocking facility		in OFF position with a commercially available padlock

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.



RCBO 2-pole

Order code RCBO 0.5 A up to 32 A

GHG 612 XXXX RXYYY

1. Contacts **2. Tripping current**

1. Order code for RCBO 6 kA

Pole	Characteristic	Contacts	Termination diagram	Module size	XXXX RX
2-pole	K		4	4 105.5 mm	**4156 R 0**
2-pole	K	aux. contact (1 C/O)	5		**4157 R 0**
2-pole	K	Signal contact (1 C/O)	6		**4158 R 0**
2-pole	B, C				**4156 R 2**
2-pole	B, C	aux. contact (1 C/O)	5		**4157 R 2**
2-pole	B, C	Signal contact (1 C/O)	6		**4158 R 2**

1. Order code for RCBO 10 kA

Pole	Characteristic	Contacts	Termination diagram	Module size	XXXX RX
2-pole	K		4	4 105.5 mm	**4156 R 5**
2-pole	K	aux. contact (1 C/O)	5		**4157 R 5**
2-pole	K	signal contact (1 C/O)	6		**4158 R 5**

2. Order code for tripping current and characteristic

Tripping current	Characteristic C (YYY)		Characteristic B (YYY)		Characteristic K (YYY)		Characteristic C (YY)
	30 mA	300 mA	30 mA	300 mA	30 mA	300 mA	100 mA
2 A	**004**	**024**			**084**	**104**	**204**
4 A	**005**	**025**			**085**	**105**	**205**
6 A	**006**	**026**	**046**	**066**	**086**	**106**	**206**
8 A	**007**	**027**	**047**	**067**	**087**	**107**	**207**
10 A	**008**	**028**	**048**	**068**	**088**	**108**	**208**
16 A	**009**	**029**	**049**	**069**	**089**	**109**	**209**
20 A	**010**	**030**	**050**	**070**	**090**	**110**	**210**
25 A	**011**	**031**	**051**	**071**	**091**	**111**	**211**
32 A	**012**	**032**	**052**	**072**	**092**	**112**	**212**
40 A			**053**	**073**	**093**	**113**	**213**

Example

GHG 612 XXXX R XYYY

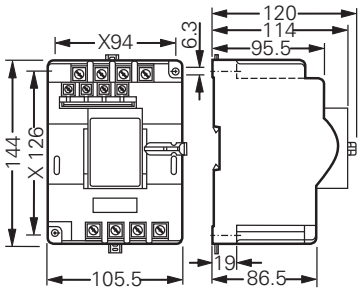
GHG 612 **4157** R 0**090**

K-Characteristic 6 kA; with aux. contact — 20 A; 30 mA; K



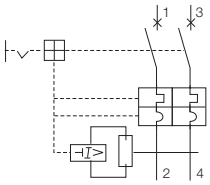
RCBO 2-pole

Dimension drawing I Termination diagram



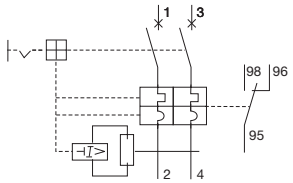
Module size 4

①



RCBO 2-pole

②



RCBO 2-pol. with SK 1 C/O

Tripping characteristic see page 11.23

HK = main contact
ac = aux. contact
SK = Signal contact

Dimensions in mm



RCD-4-pole



RCD-2-pole

Technical data

		RCD from 30 mA to 500 mA
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC / Ⓔx I M2 Ex de I
EC-Type Examination Certificate		PTB 98 ATEX 1087 U
IECEx Certificate of Conformity		IECEx BKI 07.0038 U
Marking accd. to IECEx		Ex de IIC
Operating temperature range		–55 °C up to +110 °C (size 1, 2 - IIC) –20 °C up to +110 °C (size 3, 4 - IIC) –55 °C up to +110 °C (size 3, 4 - IIB)
Application temperature[1)]		–20 °C up to +55 °C (size 3, 4 - IIC) –55 °C up to +55 °C (size 0, 1, 2 - IIC; size 3, 4 - IIB)
Rated voltage	main contact aux. contact	max. 400 V AC (+ 10 %) max. 250 V AC
Rated current	RCD aux. contact	25 A; 40 A; 63 A max. 5 A
Rated switching capacity		10 kA
Back-up fuse	RCD tipping current	63 A gG 30 mA up to 500 mA
Connecting terminals	main contact aux. contact	2 x 10 mm^2 fine wire with wire end sleeve/single wire 2 x 2.5 mm^2 fine wire with wire end sleeve/single wire
Weight	2-pole 4-pole	0.95 kg size 2 1.57 kg size 4
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Options		aux. contact
Padlocking facility		in OFF position with a commercially available padlock

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.



RCD 2-pole



RCD 4-pole

Order code RCD from 30 - 500 mA

GHG 612 XXXX RYYYY

1. Contacts

2. Tripping current

1. Order code for contacts

Contacts	Characteristic	Enclosure width	XXXX
2-pole	only main contact	Enclosure size 2, 53.0 mm	**2144**
2-pole	aux. contact (1 C/O) (F200)		**2147**
4-pole	only main contact	Enclosure size 4, 105.4 mm	**4149**
4-pole	aux. contact (1 C/O) (F200)		**4150**

2. Order code for rated current and tripping current

Rated current	Tripping current	Power dissipation in W		YYYY
		2-pole	4-pole	
25 A	0.03 A	2.0	4.8	**0002**
40 A	0.03 A	4.8	8.4	**0003**
63 A	0.03 A	7.2	13.2	**0004**
25 A	0.1 A	2.0	4.8	**0005**
40 A	0.1 A	4.8	8.4	**0006**
63 A	0.1 A	7.2	13.2	**0007**
25 A	0.3 A	2.0	4.8	**0008**
40 A	0.3 A	4.8	8.4	**0009**
63 A	0.3 A	7.2	13.2	**0010**
25 A	0.5 A	2.0	4.8	**0011**
40 A	0.5 A	4.8	8.4	**0012**
63 A	0.5 A	7.2	13.2	**0013**

Example

GHG 612 XXXX RYYYY

GHG 612 **21 44** R **0002**

Enclosure size 2, 53 mm — 2 pole — Rated current 25 A

Tripping current 0.03 A

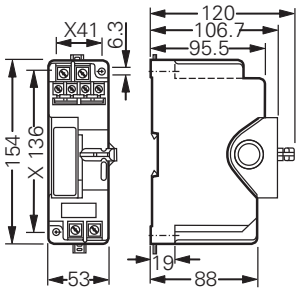


RCD 2-pole

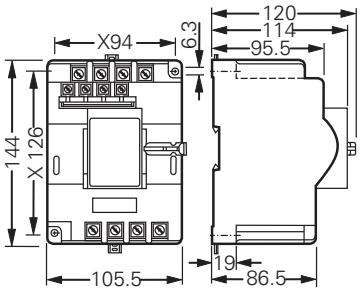


RCD 4-pole

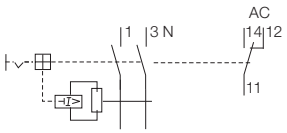
Dimension drawing I Termination diagram



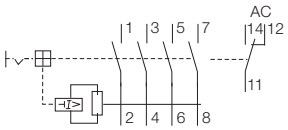
Module size 2



Module size 4 X = fixing dimension



2-pole + ac 1 C/O



4-pole + ac 1 C/O

HK = main contact
ac = aux. contact

Dimensions in mm



NH-00

Technical data

	NH 00 main fuse up to 125 A
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC / Ⓔx I M2 Ex de I
EC-Type Examination Certificate	PTB 99 ATEX 1066 U
IECEx Certificate of Conformity	IECEx BKI 07.0035 U
Marking accd. to IECEx	Ex de IIC
Operating temperature range	–20 °C up to +90 °C
Application temperature[1)]	–20 °C up to +55 °C
Rated voltage aux. contact	690 V max. 250 V AC
Rated current aux. contact	2 A up to 125 A max. 5 A
Rated switching capacity	max. 100 kA, depending on fuse rating
Connecting terminals	up to 95 mm2
Connecting terminals signal contact	2 x 2.5 mm2 fine wire
Min. 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)
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	white
Options	aux. contact

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account.
See also pages 2.6.37.



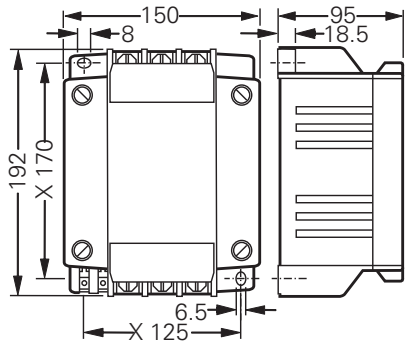
NH-00

Ordering details NH 00 main fuse up to 125 A

Content	Rated current	Mounting width	Order Unit	Order No.
Without signal contact				
Empty enclosure 3-pole	2 A - 100 A	150 mm	2	**GHG 610 1940 R0001**
Empty enclosure 3-pole	2 A - 125 A	150 mm	2	**GHG 610 1940 R0002**
With signal contact (1 NC)				
Empty enclosure 3-pole	2 A - 125 A	150 mm	2	**GHG 610 1940 R0006**

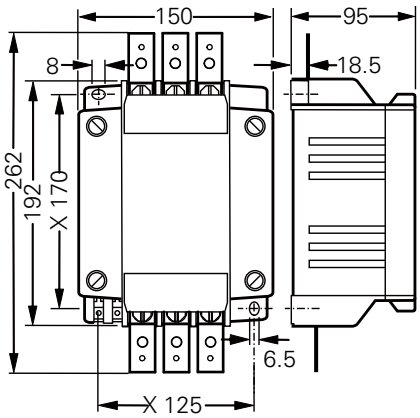
Delivery with fuses on request

Dimension drawing I Termination diagram

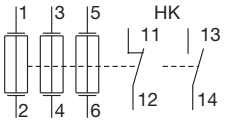


up to 100 A

X = fixing dimension



125 A



NH 00

HK = aux. contact

Dimensions in mm



80 A 4-pole

Technical data

		Main switch up to 180 A				
Marking accd. to 2014/34/EU		⟨Ex⟩ II 2 G Ex de IIC Gb / ⟨Ex⟩ Ex de IIB Gb				
EC-Type Examination Certificate						
switch 20 A		BVS 14 ATEX E 076 U				
switch 40 A		BVS 14 ATEX E 085 U				
switch 80 A		BVS 12 ATEX E 127 U				
switch 125 A up to 180 A		PTB 99 ATEX 1062 U				
IECEx Certificate of Conformity						
switch 20 A		BVS 14.0047 U				
switch 40 A		BVS 14.0055 U				
switch 80 A		IECEx BVS 12.0083 U				
switch 125 A up to 180 A		IECEx BKI 07.0003 U				
Marking accd. to IECEx		Ex de (ia/ib) IIC				
		20 A	40 A	80 A	125 A	180 A
Operating temperature range	(IIB)	–55 °C up to +80 °C	–55 °C up to +90 °C	–55 °C up to +80 °C	–	–
	(IIC)	–40 °C up to +80 °C	–40 °C up to +90 °C	–20 °C up to +80 °C	–20 °C up to +80 °C	–20 °C up to +80 °C
Application temperature[1)]	(IIB)	–55 °C up to +80 °C	–55 °C up to +55 °C	–55 °C up to +55 °C	–	–
	(IIC)	–40 °C up to +55 °C	–40 °C up to +55 °C	–20 °C up to +55 °C	–20 °C up to +55 °C	–20 °C up to +55 °C
Rated voltage		690 V				
Type of switch		20 A	40 A	80 A	125 A	180 A
Rated current		20 A	40 A	80 A	125 A	180 A
Rated making/breaking capacity accd. EN 60947-5-1 AC-3	U_e 400 V	I_e 20 A	Ie 40 A	Ie 80 A	Ie 125 A	Ie 180 A
	U_e 500 V	I_e 16 A	Ie 40 A	Ie 80 A	Ie 125 A	Ie 150 A
	U_e 690 V	I_e 10 A	Ie 32 A	Ie 63 A	Ie 110 A	Ie 125 A
Back-up fuse up to 500 V		35 A gG	80 A gG	160 A gG	200 A gG	250 A gG
Connecting terminals switch 20 A		2 x 1.5 up to 4 mm^2				
switch 40 A		2 x 4 up to 16 mm^2				
switch 80 A		2 x 4 up to 25 mm^2, with cable lug 1 x 35 mm^2				
switch 125 A		2 x 4 up to 70 mm^2, with cable lug 1 x 120 mm^2				
switch 180 A		2 x 4 up to 70 mm^2, with cable lug 1 x 120 mm^2				
Weight		1.0 kg	1.2 kg	3.68 kg	6.3 kg	6.5 kg
Enclosure material		glass-fibre reinforced polyester				
Enclosure colour		white				

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.

20 A / 40 A fits in flat and high encolsure GHG 619, 80 A /125 A / 180 A fits in high enclosure GHG 619

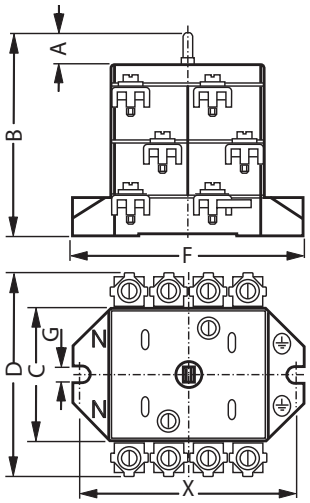


80 A 4-pole

Ordering details main switch up to 180 A

Content	Rated current	Order No.
Type 3-pole		
3-pole	20 A	**GHG 260 1004 R0005**
3-pole	40 A	**GHG 260 1005 R0005**
3-pole	80 A	**GHG 260 1006 R0003**
3-pole	125 A	**GHG 260 1007 R0003**
3-pole	180 A	**GHG 260 1008 R0003**
Type 4-pole		
4-pole	20 A	**GHG 260 1004 R0006**
4-pole	40 A	**GHG 260 1005 R0006**
4-pole	80 A	**GHG 260 1006 R0004**
4-pole	125 A	**GHG 260 1007 R0004**
4-pole	180 A	**GHG 260 1008 R0004**

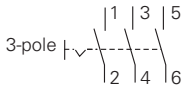
Dimension drawing I Termination diagram

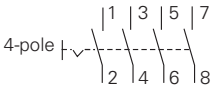


Main switch

Switch

Dimensions	20 A	40 A	80 A	125 A/180 A
A	45	23	32	9
B	110	110	169	173
C	50	73	130	145
D	70.4	118	167	194
X	72	114	140	170
F	80	126	160	192
G	5.5	6.2	9	9





Dimensions in mm



20 A 3-pole

Technical data

		Air-break contactor 20 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC/IIB Gb /Ⓔx I M 2 Ex de I
EC-Type Examination Certificate		PTB 98 ATEX 1087 U
IECEx Certificate of Conformity		IECEx BKI 07.0038 U
Marking accd. to IECEx		Ex de IIC
Operating temperature range		–20 °C up to +110 °C IIC –55 °C up to +110 °C IIB
Application temperature[1)]		–20 °C up to +55 °C IIC –55 °C up to +55 °C IIB
Rated voltage	main contact aux. contact control A1-A2	max. 690 V AC max. 250 V AC 12 V up to 400 V AC, 50-60 Hz / 12 V up to 250 V/DC
Rated current	main contact aux. contact	max. 20 A max. 6 A
Rated making/breaking capacity accd. to EN 60947-4-1 AC-3		U_e 230 V / P_e 2.2 KW U_e 400 V / P_e 4 KW U_e 690 V / P_e 4 KW
Rated making/breaking capacity aux. contact accd. to EN 60947-4-1 AC-11		U_e 230 V / I_e 4 A
Connecting terminals		
	main contact aux. contact control A1-A2	2 x 10 mm² fine wire with wire end sleeve/single wire 2 x 2.5 mm² fine wire with wire end sleeve/single wire 2 x 2.5 mm² fine wire with wire end sleeve/single wire
Weight		1.26 kg size 3
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Options		aux. contact

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.



20 A 3-pole

Order code Air-break contactor 20 A

GHG 618 3104 RXXXX ← Auxiliary contacts

One auxiliary contact for mounting width 70 mm

	Auxiliary contacts (XXXX)	
Control voltage A1-A2	**1 NO**	**1 NC**
24 V AC	**0101**	**0201**
42 V AC	**0102**	**0202**
48 V AC	**0103**	**0203**
110 V AC	**0104**	**0204**
230 V AC	**0105**	**0205**
230 / 240 V AC	**0106**	**0206**
380 / 400 V AC	**0107**	**0207**
400 V AC	**0110**	**0210**
12 V DC	**0131**	**0231**
24 V DC	**0132**	**0232**
42 V DC	**0133**	**0233**
48 V DC	**0134**	**0234**
60 V DC	**0135**	**0235**
110 V DC	**0136**	**0236**
220 V DC	**0137**	**0237**

GHG 618 3105 RXXXX ← Auxiliary contacts

Two auxiliary contacts for mounting width 70 mm

	Auxiliary contacts (XXXX)		
Control voltage A1-A2	**1 NO / 1 NC**	**2 NC**	**2 NO**
24 V AC	**0101**	**0201**	**0301**
42 V AC	**0102**	**0202**	**0302**
48 V AC	**0103**	**0203**	**0303**
110 V AC	**0104**	**0204**	**0304**
230 V AC	**0105**	**0205**	**0305**
230 / 240 V AC	**0106**	**0206**	**0306**
380 / 400 V AC	**0107**	**0207**	**0307**
440 V AC	**0108**	**0208**	**0308**
24 V DC	**0111**	**0211**	**0311**
12 V DC	**0112**	**0212**	**0312**
48 V DC	**0114**	**0214**	**0314**
60 V DC	**0115**	**0215**	**0315**
110 V DC	**0116**	**0216**	**0316**
220 V DC	**0117**	**0217**	**0317**

Example

GHG 618 3105 RXXXX

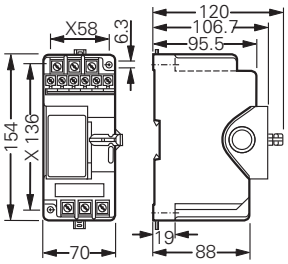
GHG 618 3105 R **0206**

Air-break contactor coil voltage 230/240 V 2 NC



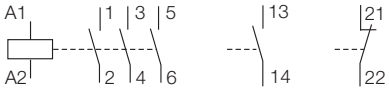
20 A 3-pole

Dimension drawing I Termination diagram

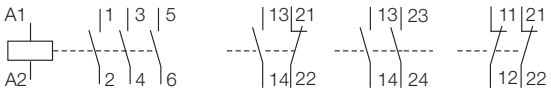


Module size 3 **X = fixing dimension**

3pol + 1 HSK



3pol + 2 HSK 2 Ö



ac = aux. contact

Dimensions in mm



3-pole

Technical data

		Motor starter for direct on-line starting with thermal release 4 kW
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I
EC-Type Examination Certificate		PTB 98 ATEX 1087 U
IECEx Certificate of Conformity		IECEx BKI 07.0038 U
Marking accd. to IECEx		Ex de IIC
Operating temperature range		–20 °C up to +110 °C IIC –55 °C up to +110 °C IIB
Application temperature[1)]		–20 °C up to +55 °C IIC –55 °C up to +55 °C IIB
Rated voltage	main contact	max. 690 V AC / 50-60 Hz
Control voltage		12 V up to 400 V AC / 12 V up to 230 V DC
Rated current	main contact aux. contact	max. 20 A max. 6 A
Rated making/breaking capacity accd. to EN 60947-4-1 AC-3		U_e 230 V / P_e 2.2 KW U_e 400 V / P_e 4 KW U_e 690 V / P_e 4 KW
Rated making/breaking capacity aux. contact accd. to EN 60947-4-1 AC-15		U_e 230 V / I_e 4 A
Back-up fuse		20 A gG
Connecting terminals	main contact aux. contact/ control A1-A2 signal contact	2 x 10 mm² fine wire with wire end sleeve/single wire 2 x 2.5 mm² fine wire with wire end sleeve/single wire 2 x 2.5 mm² fine wire with wire end sleeve/single wire
Weight		1.72 kg size 3
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Options		aux. contact

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.



3-pole

Order code motor starter for direct on-line starting with thermal release 4 kW

GHG 618 3102 RXXYY

1. Rated current | 2. Coil voltage

Ordering details Type: 3-pole

1. Rated current	XX	2. Control voltage A1-A2	YY
Module size 3 (70 mm)			
0.11 A - 0.16 A	**01**	110 V AC	**04**
0.16 A - 0.23 A	**02**	230 V AC	**05**
0.23 A - 0.36 A	**03**	240 V AC	**06**
0.36 A - 0.54 A	**04**	120 V AC	**07**
0.54 A - 0.80 A	**05**	400 V AC	**08**
0.8 A - 1.20 A	**06**	440 V AC	**09**
1.2 A - 1.8 A	**07**	380 / 400 V AC	**10**
1.8 A - 2.6 A	**08**	24 V DC	**32**
2.6 A - 3.7 A	**09**	48 V DC	**34**
3.7 A - 5.5 A	**10**	110 V DC	**36**
5.5 A - 8.0 A	**11**		
8.0 A - 11.5 A	**12**		

Example

GHG 618 3102 RXXYY

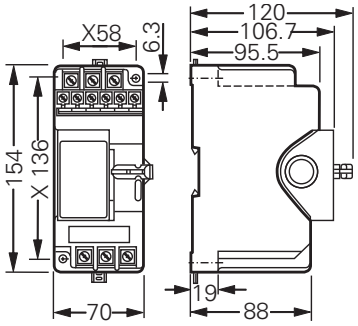
GHG 618 31 02 R **08** **05**

Rated current 230 V | Coil voltage 230 V

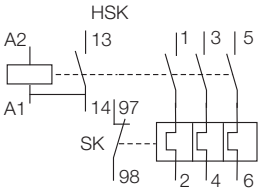


3-pole

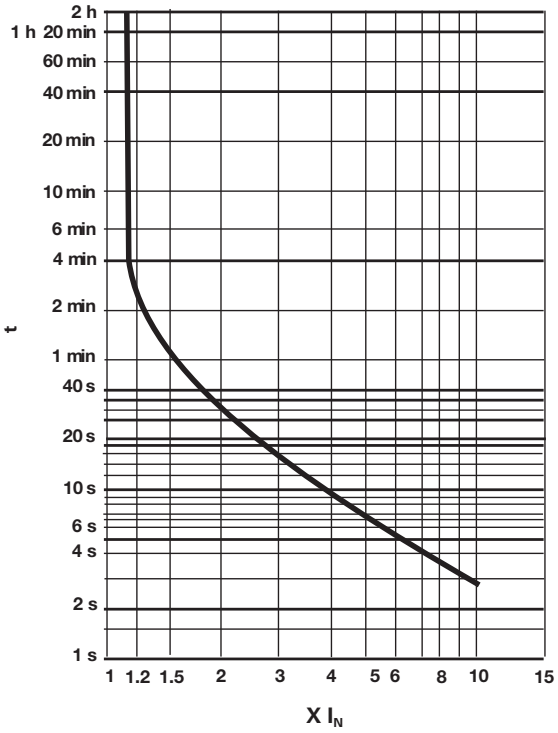
Dimension drawing I Termination diagram



Module size 3



Main contacts



ac = aux. contact
SK = signal contact

Dimensions in mm



20 A 2-pole



24 A 4-pole



32 A 4-pole

Technical data

		Installation contactor 20 A up to 32 A		
Marking accd. to 94/9/EC		⟨Ex⟩ II 2 G Ex de IIC/IIB Gb /⟨Ex⟩ I M2 Ex de I		
EC-Type Examination Certificate		PTB 98 ATEX 1087 U		
IECEx Certificate of Conformity		IECEx BKI 07.0038 U		
Marking accd. to IECEx		Ex de IIC		
Operating temperature range		–55 °C up to +110 °C (size 1, 2 - IIC) –20 °C up to +110 °C (size 3, 4 - IIC) –55 °C up to +110 °C (size 3, 4 - IIB)		
Application temperature[1)]		–20 °C up to +55 °C (size 3, 4 - IIC) –55 °C up to +55 °C (size 0, 1, 2 - IIC; size 3, 4 - IIB)		
Contactor		20 A	24 A	32 A
Rated voltage	main contact	max. 250 V	440 V	440 V
	aux. contact		440 V	440 V
	Control voltage A1-A2	24 V up to 400 V AC 50-60 Hz		
Rated current	main contact NC	20 A	24 A	32 A
	main contact NO	20 A	24 A	32 A
	aux. contact		6 A	6 A
Rated making/breaking capacity accd. to EN 60947-4-1				
	main contact AC-1 - U_e 230 V	P_e 4.0 kW	P_e 9.0 kW	P_e 15.2 kW
	main contact AC-1 - U_e 400 V	–	P_e 16 kW	P_e 26 kW
	main contact AC-3 - U_e 230 V	P_e 1.3 kW	P_e 2.2 kW	P_e 5.5 kW
	main contact AC-3 - U_e 400 V	–	P_e 4.0 kW	P_e 11 kW
	DC-3 1 current path U_e 60 V/230 V	–	I_e 4 A/0.2 A	I_e 5 A/0.3 A
	DC-3 2 current paths U_e 60 V/230 V	–	I_e 14 A/1.0 A	I_e 16 A/1.1 A
	DC-3 3 current paths U_e 60 V/230 V	–	I_e 24 A/4.0 A	I_e 34 A/4.5 A
	aux. contact up to U_e 230 V	–		I_e 4 A
	aux. contact up to U_e 400 V	–	I_e 3 A	I_e 3 A
Back-up fuse		20 A gL	35 A gL	63 A gL
Connecting terminals				
	main contact	2 x 10 mm² fine wire with wire end sleeve/single wire		
	aux. contact/Control A1-A2	2 x 2.5 mm² fine wire with wire end sleeve/single wire		
Weight		0.55 kg size 0	1.2 kg size 3	1.65 kg size 4
Enclosure material		glass-fibre reinforced polyester		
Enclosure colour		black		
Options		aux. contact		

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.



20 A 2-pole

Installation contactor 20 A (Module size 0 - 35 mm)

Control voltage A1 - A2		Contacts	Order No.
50 Hz	60 Hz		
24 V	27 ... 28 V	2 NO	**GHG 618 0001 R0010**
24 V	27 ... 28 V	2 NC	**GHG 618 0001 R0011**
24 V	27 ... 28 V	1 NO / 1 NC	**GHG 618 0001 R0012**
42 V	48 V	2 NO	**GHG 618 0001 R0007**
42 V	48 V	2 NC	**GHG 618 0001 R0008**
42 V	48 V	1 NO / 1 NC	**GHG 618 0001 R0009**
110 V	125 ... 127 V	2 NO	**GHG 618 0001 R0004**
110 V	125 ... 127 V	2 NC	**GHG 618 0001 R0005**
110 V	125 ... 127 V	1 NO / 1 NC	**GHG 618 0001 R0006**
230 V	255 V	2 NO	**GHG 618 0001 R0001**
230 V	255 V	2 NC	**GHG 618 0001 R0002**
230 V	255 V	1 NO / 1 NC	**GHG 618 0001 R0003**
231 ... 244 V	240 V	2 NO	**GHG 618 0001 R0016**
231 ... 244 V	240 V	2 NC	**GHG 618 0001 R0017**
231 ... 244 V	240 V	1 NO / 1 NC	**GHG 618 0001 R0018**
400 V		2 NO	**GHG 618 0001 R0013**
400 V		2 NC	**GHG 618 0001 R0014**



24 A 4-pole



32 A 4-pole

GHG 618 3118 RXXXX

Coil voltage / Contacts

Ordering details Type: 24 A (Module size 3) - 70 mm)

Control voltage	Contacts HK (XXXX)			
AC 40 – 400 Hz/DC	**1 NO / 3 NC**	**2 NO / 2 NC**	**3 NO / 1 NC**	**4 NO**
24 V	**1301**	**2201**	**3101**	**4001**
42 V	**1302**	**2202**	**3102**	**4002**
48 V	**1303**	**2203**	**3103**	**4003**
110 ... 120 V	**1304**	**2204**	**3104**	**4004**
230 ... 240 V	**1306**	**2206**	**3106**	**4006**
400 ... 415 V	**1307**	**2207**	**3107**	**4007**

Control voltage	Contacts HK (XXXX)		
AC 40 – 400 Hz/DC	**1 NO / 2 NC + 1 ac**	**2 NO / 1 NC + 1 ac**	**3 NO + 1 ac**
12 V	**1309**	**2209**	**3109**
24 V	**1311**	**2211**	**3111**
110 ... 120 V	**1314**	**2214**	**3114**
230 ... 240 V	**1316**	**2216**	**3116**
400 ... 415 V	**1317**	**2217**	**3117**

Example

GHG 618 3118 RXXXX

GHG 618 31 **18** R **2206**

Installation contactor 24 A — Coil voltage 230 - 240 V 2NO / 2NC

GHG 618 4109 RYYYY

Coil voltage / Contacts

Ordering details Type: 32 A (Module size 4 - 105 mm)

Control voltage	Contacts HK (XXXX)		
AC 40 – 400 Hz/DC	**4 x NO**	**4 x NO + 1NC (ac)**	**4 x NO + 1NO (ac)**
24 V	**4001**	**4011**	**4101**
48 V	**4003**	**4013**	**4103**
110 V	**4004**	**4014**	**4104**
240 V	**4005**	**4015**	**4105**
230 V	**4006**	**4016**	**4106**
400 V	**4007**	**4017**	**4107**
415 V	**4008**	**4018**	**4108**

Example

GHG 618 41 09 RYYYY

GHG 618 41 **09** R **4015**

Installation contactor 32 A — Coil voltage 240 V 4NO + ac 1NC

HK = main contact

ac = aux. contact



32 A 4-pole

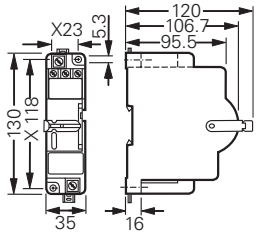


24 A 4-pole

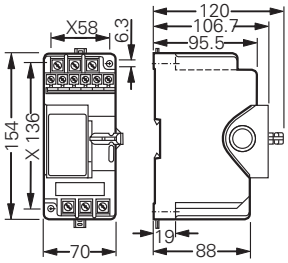


20 A 2-pole

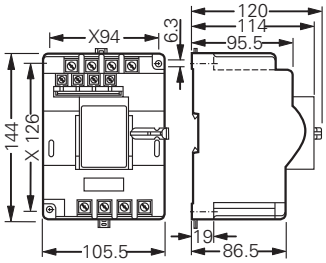
Dimension drawing I Termination diagram



Module size 0

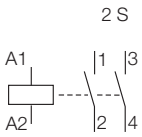


Module size 3

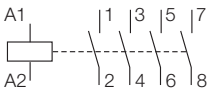


Module size 4

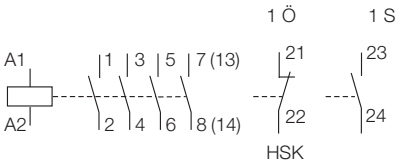
X = fixing dimension



Installation contactor 20 A



Installation contactor 24 A



Installation contactor 32 A

Ac = aux. contact

Dimensions in mm



Current impulse switch

Technical data

		Current impulse switch up to 16 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I
EC-Type Examination Certificate		PTB 98 ATEX 1087 U
IECEx Certificate of Conformity		IECEx BKI 07.0038 U
Marking accd. to IECEx		Ex de IIC
Operating temperature range		–55 °C up to +55 °C
Application temperature[1)]		–55 °C up to +110 °C
Rated voltage	main contact control A1-A2	400 V AC (+ 10 %) 230 V AC
Rated current	main contact	16 A
Rated making/breaking capacity accd. to EN 60947-4-1 AC-3		U_e 250 V / I_e 16 A U_e 400 V / I_e 10 A
Back-up fuse		16 A gG
Connecting terminals	main contact control contact	2 x 10 mm² fine wire with wire end sleeve/single wire 2 x 2.5 mm² fine wire with wire end sleeve/single wire
Weight		0.95 kg size 2
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.

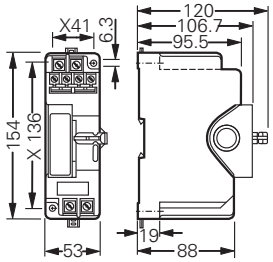


Current impulse switch

Ordering details

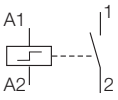
Rated current	Contact	Coil voltage	Mounting width	Order No.
16 A	1 NO	230 V AC	53 mm	**GHG 618 0002 R0004**
16 A	2 NO	230 V AC	53 mm	**GHG 618 0002 R0008**
16 A	1 NO + 1 NC	230 V AC	53 mm	**GHG 618 0002 R0012**

Dimension drawing I Termination diagram

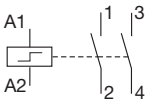


Module size 2

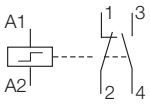
X = fixing dimension



1 NO



2 NO



1 NO + 1 NC

Termination diagram current impulse switch

Dimensions in mm



Manual motor starter

Technical data

		Manual motor starter 0.1 A up to 25 A
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC / Ⓔx I M2 Ex de I
EC-Type Examination Certificate		PTB 99 ATEX 1007 U
IECEx Certificate of Conformity		IECEx BKI 07.0038 U
Marking accd. to IECEx		Ex de IIC
Operating temperature range		–20 °C up to +95 °C
Application temperature[1)]		–20 °C up to +55 °C (IIC)
Rated voltage	main contact aux. contact	690 V AC, 50/60 Hz, 440 V DC 110 V; 230 V; 400 V; 500 V 50/60 Hz
Rated current	main contact	25 A
Rated current	aux. contact	230 V/2 A 400 V/0.5 A
Rated making/breaking capacity accd. to EN 60947-4-1 AC-3		U_e 690 V / I_e 25 A
Thermal tripping characteristic		T II
Tripping time at 6x Ie		≥ 5 sec.
Back-up fuse	main contact aux. contact	see table not required
Connecting terminals	main contact aux. contact	2 x max. 10 mm² 2 x 0.75 - 4 mm²
Dimensions (L x W x H)		Mounting width 106 mm
Weight		1.3 kg
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Mounting		35 mm top hat rail (DIN-rail)
Options		aux. contact

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account.
See also pages 2.6.37.

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	
	Ics	gG, aM	Ics	gG, aM	Ics	gG, aM	Ics	gG, aM
0.1 ... 0.16 A	short circuit proof - no bach-up fuse required up to I_{CC} = 100 kA							
1.0 ... 1.6 A								
1.6 ... 2.5 A							40 kA	25 A
2.5 ... 4.0 A					60 kA	35/40 A	10 kA	40 A
4.0 ... 6.3 A					40 kA	50 A	7 kA	40 A
6.3 ... 9.0 A					30 kA	80 A	5 kA	50 A
9.0 ... 12.5 A			75 kA	80 A	27 kA	80 A	4.5 kA	50 A
12.5 ... 16.0 A			60 kA	100 A	25 kA	100 A	4.0 kA	50 A
16.0 ... 20.0 A			55 kA	100 A	22 kA	100 A	3.5 kA	50 A
20.0 ... 25.0 A	50 kA	125 A	50 kA	125 A	20 kA	125 A	3.0 kA	50 A



Manual motor starter

Order code manual motor starter 0.1 A up to 25 A

GHG 635 XXXX RYYYY

1. Auxiliary contacts
2. Setting range

Ordering details

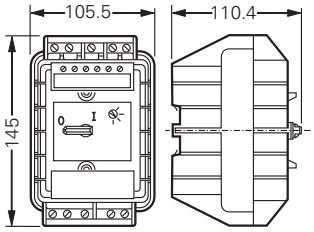
Setting range	Undervoltage trip (UT)	Auxiliary contacts XXXX without ac	1NO / 1NC ac	2NO ac	Setting range YYYY
0.10 – 0.16 A	–	**1031**	**1032**	**1033**	**0001**
0.16 – 0.25 A	–	**1031**	**1032**	**1033**	**0002**
0.25 – 0.40 A	–	**1031**	**1032**	**1033**	**0003**
0.40 – 0.63 A	–	**1031**	**1032**	**1033**	**0004**
0.63 – 1.00 A	–	**1031**	**1032**	**1033**	**0005**
1.00 – 1.60 A	–	**1031**	**1032**	**1033**	**0006**
1.60 – 2.50 A	–	**1031**	**1032**	**1033**	**0007**
2.50 – 4.00 A	–	**1031**	**1032**	**1033**	**0008**
4.00 – 6.30 A	–	**1031**	**1032**	**1033**	**0009**
6.30 – 9.00 A	–	**1031**	**1032**	**1033**	**0010**
9.00 – 12.50 A	–	**1031**	**1032**	**1033**	**0011**
12.50 – 16.00 A	–	**1031**	**1032**	**1033**	**0012**
16.00 – 20.00 A	–	**1031**	**1032**	**1033**	**0013**
20.00 – 25.00 A	–	**1031**	**1032**	**1033**	**0014**
0.10 – 0.16 A	230 V	**1031**	**1032**	**1033**	**0101**
0.16 – 0.25 A	230 V	**1031**	**1032**	**1033**	**0102**
0.25 – 0.40 A	230 V	**1031**	**1032**	**1033**	**0103**
0.40 – 0.63 A	230 V	**1031**	**1032**	**1033**	**0104**
0.63 – 1.00 A	230 V	**1031**	**1032**	**1033**	**0105**
1.00 – 1.60 A	230 V	**1031**	**1032**	**1033**	**0106**
1.60 – 2.50 A	230 V	**1031**	**1032**	**1033**	**0107**
2.50 – 4.00 A	230 V	**1031**	**1032**	**1033**	**0108**
4.00 – 6.30 A	230 V	**1031**	**1032**	**1033**	**0109**
6.30 – 9.00 A	230 V	**1031**	**1032**	**1033**	**0110**
9.00 – 12.50 A	230 V	**1031**	**1032**	**1033**	**0111**
16.00 – 20.00 A	230 V	**1031**	**1032**	**1033**	**0112**
20.00 – 25.00 A	230 V	**1031**	**1032**	**1033**	**0113**
0.10 – 0.16 A	400 V	**1031**	**1032**	**1033**	**0201**
0.16 – 0.25 A	400 V	**1031**	**1032**	**1033**	**0202**
0.25 – 0.40 A	400 V	**1031**	**1032**	**1033**	**0203**
2.50 – 4.00 A	400 V	**1031**	**1032**	**1033**	**0208**
4.00 – 6.30 A	400 V	**1031**	**1032**	**1033**	**0209**
6.30 – 9.00 A	400 V	**1031**	**1032**	**1033**	**0210**
9.00 – 12.50 A	400 V	**1031**	**1032**	**1033**	**0211**
16.00 – 20.00 A	400 V	**1031**	**1032**	**1033**	**0212**
20.00 – 25.00 A	400 V	**1031**	**1032**	**1033**	**0213**

ac = aux. contact

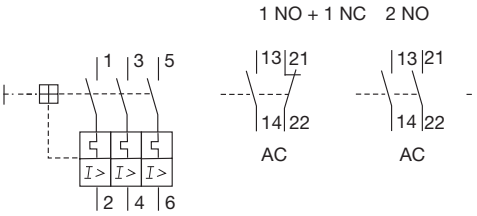


Manual motor starter

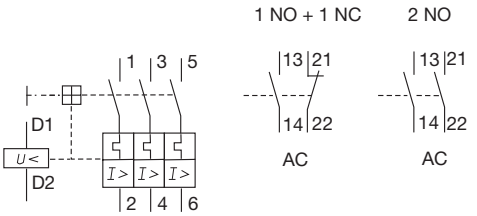
Dimension drawing I Termination diagram



Manual motor starter 25 A



without undervoltage trip



with undervoltage trip

ac = aux. contact

Dimensions in mm



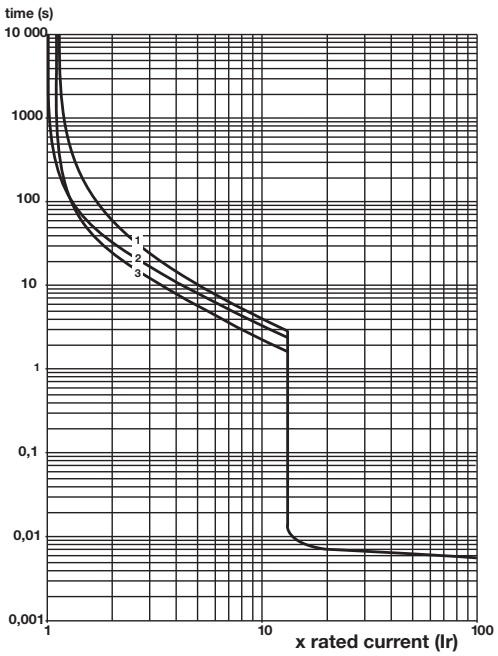
Thermal overcurrent relay

Technical data

		Thermal overcurrent relay
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I
EC-Type Examination Certificate		PTB 98 ATEX 1087 U
IECEx Certificate of Conformity		IECEx BKI 07.0038 U
Marking accd. to IECEx		Ex de IIC
Operating temperature range		–20 °C up to +110 °C IIC
		–55 °C up to +110 °C IIB
Application temperature[1)]		–20 °C up to +55 °C IIC
		–55 °C up to +55 °C IIB
Rated voltage	main contact	690 V AC, 50/60 Hz
Tripping current	main contact	Thermal tripping with phase failure function, 0.1 - 16 A, manual reset
Rated voltage	aux. contact	275 V AC
Rated current	aux. contact	6 A
Connecting terminals	main contact	2 x 10 mm² fine wire with wire end sleeve/single wire
	aux. contact	2 x 2.5 mm² fine wire with wire end sleeve/single wire
Dimensions (L x W x H)		Mounting width 70 mm
Weight		1.1 kg size 3
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.

Tripping characteristic



Mean tripping time at 20 °C in relationship to the multible rated current

1 3-pole load at cold condition
2 2-pole load at cold condition
3 3-pole load at warm condition

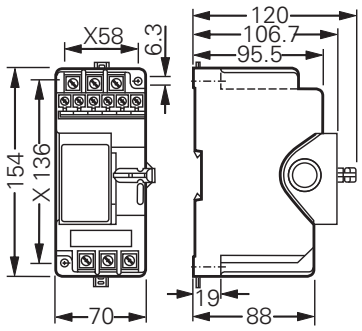


Thermal overcurrent relay

Ordering details thermal overcurrent relay

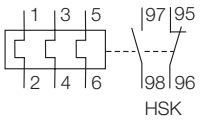
Tripping current	Order No.
0.1 A - 0.16 A	**GHG 618 3103 R0012**
0.16 A - 0.23 A	**GHG 618 3103 R0001**
0.23 A - 0.36 A	**GHG 618 3103 R0002**
0.36 A - 0.54 A	**GHG 618 3103 R0003**
0.54 A - 0.8 A	**GHG 618 3103 R0004**
0.8 A - 1.2 A	**GHG 618 3103 R0005**
1.2 A - 1.8 A	**GHG 618 3103 R0006**
1.8 A - 2.6 A	**GHG 618 3103 R0007**
2.6 A - 3.7 A	**GHG 618 3103 R0008**
3.7 A - 5.5 A	**GHG 618 3103 R0009**
5.5 A - 8.0 A	**GHG 618 3103 R0010**
8.0 A - 11.5 A	**GHG 618 3103 R0011**

Dimension drawing I Termination diagram



Module size 3

X = fixing dimension



ac = aux. contact

Dimensions in mm



Overvoltage arrester

Technical data

	Overvoltage arrester
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I
EC-Type Examination Certificate	PTB 98 ATEX 1087 U
IECEx Certificate of Conformity	IECEx BKI 07.0038 U
Marking accd. to IECEx	Ex de IIC
Operating temperature range	–55 °C up to +55 °C
Application temperature[1)]	–55 °C up to +110 °C
Rated voltage U_n	275 V
Rated discharge surge current I_n	20 kA
Rated forward surge current I_{max}	< 40 kA
Response time t_A	≤ 25 ns
Voltage protection level residual voltage U_p	1.25 KV
Short-circuit protection at max. back-up fuse	25 kA eff
Back-up fuse	125 A (gG / gL or 63 A MCB with B/C-Characteristic)
Connecting terminals	2 x 10 mm² fine wire with wire end sleeve/single wire
Dimensions (L x W x H)	mounting width 35 mm
Weight	0.52 kg size 1
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black
Options	tripping indication in inspection window

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.

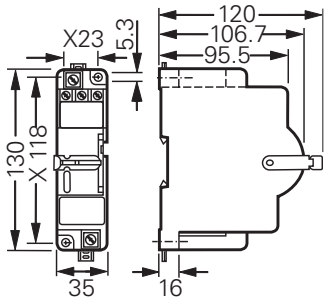


Overvoltage arrester

Ordering details overvoltage arrester

Content	Mounting width	Order No.
Type: 1-pole version, optional with tripping indication		
1-pole overvoltage arrester	35 mm	**GHG 612 1003 R0001**

Dimension drawing I Termination diagram



Module size 1 **X = fixing dimension**



Dimensions in mm



Star-delta timer relay

Technical data

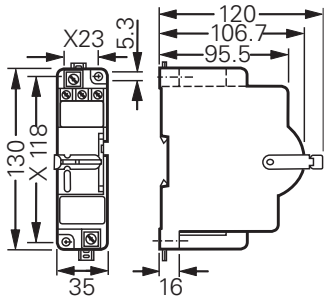
		Star-delta timer relay
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I
EC-Type Examination Certificate		PTB 98 ATEX 1087 U
IECEx Certificate of Conformity		IECEx BKI 07.0038 U
Marking accd. to IECEx		Ex de IIC
Operating temperature range		–55 °C up to +55 °C
Application temperature[1)]		–55 °C up to +110 °C
Rated voltage	main contact control A1-A2	max. 250 V 220 V - 240 V AC
Rated continuous Ith		3 A
Power dissipation per pole		2 W
Rated switching capacity AC-15		230 V/3 A
Tripping time		1.5 s up to 30 s continuously externally adjustable
Connecting terminals	main contact aux. contact/ control A1-A2	2 x 10 mm² fine wire with wire end sleeve/single wire 2 x 2.5 mm² fine wire with wire end sleeve/single wire
Dimensions (L x W x H)		Mounting width 35 mm
Weight		0.53 kg size 0
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Options		aux. contact

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.

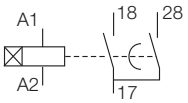
Ordering details

Content	Rated current	Response time	Mounting width	Order No.
Type: 1-pole Equipped with 1 C/O				
1-pole	3 A	1.5 s - 30 s	35 mm	**GHG 618 1102 R 0001**

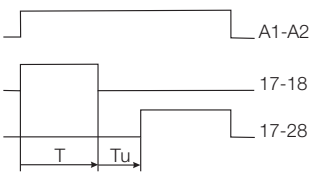
Dimension drawing I Termination diagram



Module size 1



Termination diagram Star-delta timer relay



Characteristic

Dimensions in mm



Multi-function relay

Technical data

		Multi-function relay
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex de IIC/IIB Gb / Ⓔx I M2 Ex de I
EC-Type Examination Certificate		PTB 98 ATEX 1087 U
IECEx Certificate of Conformity		IECEx BKI 07.0038 U
Marking accd. to IECEx		Ex de IIC
Operating temperature range		–20 °C up to +110 °C (IIC) –55 °C up to +110 °C (IIB)
Application temperature[1)]		–20 °C up to +60 °C (IIC) –55 °C up to +60 °C (IIB)
Rated voltage		max. 400 V AC (+10 %)
Control voltage		24 V AC up to 400 V AC or 24 V DC up to 240 V DC
Rated current		6 A
Power dissipation per pole		2 W
Rated switching capacity AC-11		440 V/3 A
Rated switching capacity DC-22		24 V / 1 A; 60 V / 0.35 A; 220 V / 0.20 A
Connecting terminals	main contact aux. contact/ control A1-A2	2 x 10 mm² 2 x 2.5 mm²
Dimensions (L x W x H)		Mounting width 70 mm
Weight		1.26 kg, size 3
Enclosure material		glass-fibre reinforced polyester
Enclosure colour		black
Options		Control

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.

Order code multi-function relay

GHG 618 2910 RXXYY

1. Control function | **2. Response time/time range**

1. Control function

Control function	XX
delayed response	**11**
delayed OFF response	**12**
delayed ON and OFF response	**16**
impulse ON	**21**
impulse OFF	**22**
flashing	**42**
pulsing	**81**
pulse shaper	**82**

2. Response time/time range

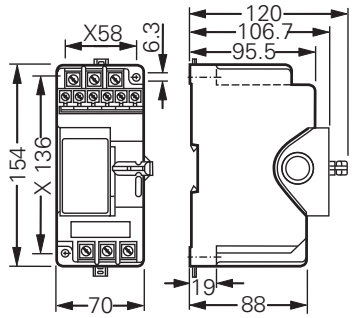
Response time/time range	YY
0.15 min - 3 min	**01**
3 s - 60 s	**02**
0.5 s - 10 s	**03**
0.15 s - 3 s	**04**
0.05 s - 1 s	**05**
0.5 min - 10 min	**06**
3 min - 60 min	**07**
0.15 h - 3 h	**08**
0.5 h - 10 h	**09**
3 h - 60 h	10

Note: The time setting within the time ranges is performed via potentiometer 10 kΩ (GHG 410 1901 R 0194) to be connected externally. To be ordered separately



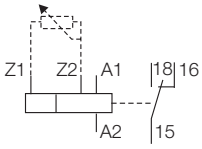
Multi-function relay

Dimension drawing I Termination diagram I Function diagram

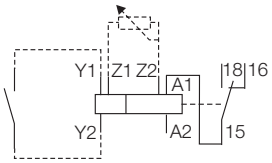


Module size 2 **X = fixing dimension**

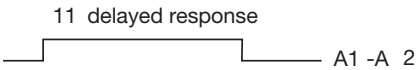
Termination diagram Multi-function relay

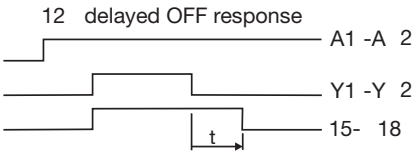


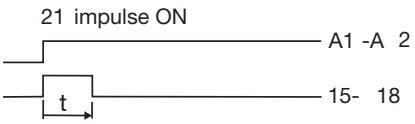
Contacts for function 11, 21, 42 and 81

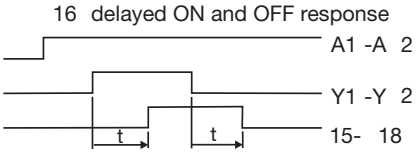


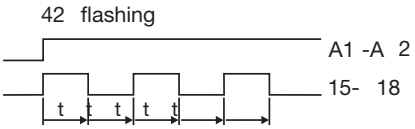
Contacts for function 12, 16, 22 and 82

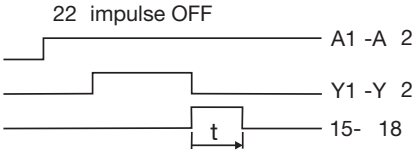


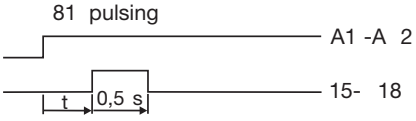


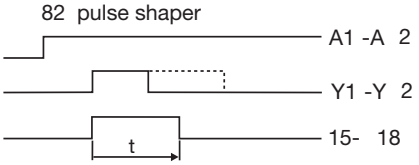












Dimensions in mm



Ex-e transformer

Technical data

		Ex-e isolating transformer
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex e IIC Gb
EC-Type Examination Certificate		BVS 11 ATEX E 195 U
Application temperature		–55 °C up to +40 °C[1]
IECEx Certificate of Conformity		IECEx BVS 11.0087U
Marking accd. to IECEx		Ex e IIC Gb
Operating temperature range		–55 °C up to +130 °C
Application temperature[1]		–55 °C up to +55 °C
Rated voltage	primary secondary	110 V up to 690 V - see ordering details 12 V up to 400 V - see ordering details
Frequency		50 – 60 Hz
Power consumption		100 VA up to 1200 VA
Short-circuit voltage		4.2 %
Duty type		S1
Thermal class		E
Back-up fuse		max. 1.5 x of secondary rated current
Connecting terminals		2.5 – 16 mm², option direct wire connections
Protection class		I
Degree of protection accd. to EN 60529		[2]

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.37.

[2] The transformer may only be mounted in a certified enclosure with minimum degree of protection IP54.

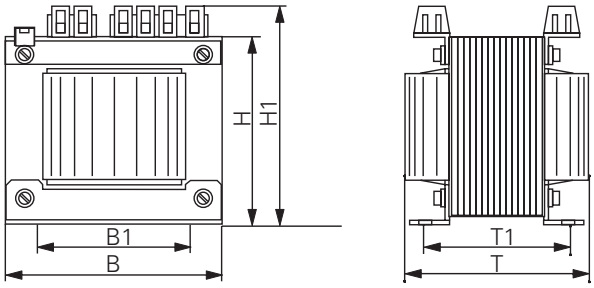
Ordering details

Type	Prim. / sec.	Max. input power	Order No.
Ex-e isolating transformer			
Ex-e transformer	110 V / 24 V	100 VA	**GHG 410 1992 R0001**
Ex-e transformer	220 V / 24 V	100 VA	**GHG 410 1992 R0002**
Ex-e transformer	230 V / 24 V	100 VA	**GHG 410 1992 R0003**
Ex-e transformer	230 V / 48 V	100 VA	**GHG 410 1992 R0004**
Ex-e transformer	400 V / 24 V	100 VA	**GHG 410 1992 R0005**
Ex-e transformer	500 V / 24 V	100 VA	**GHG 410 1992 R0006**
Ex-e transformer	230 V / 230 V	100 VA	**GHG 410 1992 R0007**
Ex-e transformer	400 V / 230 V	100 VA	**GHG 410 1992 R0008**
Ex-e transformer	500 V / 120 V	100 VA	**GHG 410 1992 R0009**
Ex-e transformer	230 V / 24 V	200 VA	**GHG 410 1992 R0010**
Ex-e transformer	400 V / 24 V	200 VA	**GHG 410 1992 R0011**
Ex-e transformer	400 V / 230 V	200 VA	**GHG 410 1992 R0012**
Ex-e transformer	230 V / 24 V	400 VA	**GHG 410 1992 R0013**
Ex-e transformer	400 V / 24 V	400 VA	**GHG 410 1992 R0014**
Ex-e transformer	400 V / 230 V	400 VA	**GHG 410 1992 R0015**
Ex-e transformer	230 V / 24 V	550 VA	**GHG 410 1992 R0016**
Ex-e transformer	400 V / 24 V	550 VA	**GHG 410 1992 R0017**
Ex-e transformer	400 V / 230 V	550 VA	**GHG 410 1992 R0018**
Ex-e transformer	230 V / 24 V	1200 VA	**GHG 410 1992 R0019**
Ex-e transformer	400 V / 24 V	1200 VA	**GHG 410 1992 R0020**
Ex-e transformer	400 V / 230 V	1200 VA	**GHG 410 1992 R0021**



Ex-e transformer

Dimension drawing



Ex-e transformer

Power (VA)	100	200	400	550	1200
Dimensions (mm)					
H	110	122	132	145	161
H1	126	136	148	161	181
H2	146	156	168	181	201
B	105	120	135	150	174
B1	85	90	105	12	140
T	80	102	128	150	170
T1	65	81	108	125	145

Dimensions in mm



Size 1



Size 2



Size 3



Size 4

Technical data

	GRP Empty enclosures
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC Gb Ex de IIC T6, T5, T4 / Ⓔx II 2 D Ex tb IIIC Db Ex tD A21 IP66 T80 °C, T95 °C[1]
EC-Type Examination Certificate	PTB 99 ATEX 3118U
IECEx Certificate of Conformity	IECEx-PTB11.0030U
Marking accd. to IECEx	Ex e IIC Gb / Ex tb IIIC Db
Operating temperature range	–20 °C up to +95 °C –55 °C up to +95 °C
Permissible ambient temperature [1]	–20 °C up to +40 °C –55 °C up to +55 °C (option)
Rated voltage	690 V
Rated current	315 A
Protection class	I / II depending on the flange type and glands
Terminal cross section	up to 300 mm²
Cable gland	acc. to customer specification, max. M63
Degree of protection accd. to EN 60529	IP66
Weight	see ordering details
Enclosure material	glass-fibre reinforced polyester
Enclosure colour	black

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.

Ordering details empty enclosures plastic version

Content	Mounting width	Weight approx.	Order No. / Order code [2]
Size 1: 1 mounting area 106 mm			
Cover closed	106 mm	1.5 kg	**GHG 600 0101 R0001**
Cover cut-out with small actuating flap for GHG 61	106 mm	1.9 kg	**GEH 001 01 61** [2]
Cover cut-out with small actuating flap for GHG 62	106 mm	1.9 kg	**GEH 001 01 62** [2]
Size 2: 1 mounting area 213 mm			
Cover closed	213 mm	2.5 kg	**GHG 600 0201 R0001**
Cover cut-out with 1 actuating flap for GHG 61	213 mm	3.2 kg	**GEH 002 01 61** [2]
Cover cut-out with 1 actuating flap for GHG 62	213 mm	3.2 kg	**GEH 002 01 62** [2]
Cover raised for insertion of main switch = 80 A		3.3 kg	**GHG 600 0301 R0001**
Size 3: 2 mounting areas 213 mm			
Cover closed	2 x 213 mm	4.5 kg	**GHG 600 0401 R0001**
Cover cut-out with 1 actuating flap for GHG 61	2 x 213 mm	5.2 kg	**GEH 003 01 61** [2]
Cover cut-out with 1 actuating flap for GHG 62	2 x 213 mm	5.2 kg	**GEH 003 01 62** [2]
Cover cut-out with 2 actuating flaps for GHG 61	2 x 213 mm	5.9 kg	**GEH 003 02 61** [2]
Cover cut-out with 2 actuating flaps for GHG 62	2 x 213 mm	5.9 kg	**GEH 003 02 62** [2]
Cover with 1 actuating flap and main switch ≤ 40 A	1 x 213 mm	6.2 kg	**GEH 003 03** [2]
Cover raised for insertion of main switch ≥ 80 A up to 180 A		5.5 kg	**GHG 600 0501 R0001**
Size 4: 3 mounting areas 213 mm			
Cover closed	3 x 213 mm	5.5 kg	**GHG 600 0601 R0001**
Cover cut-out with 1 actuating flap for GHG 61	3 x 213 mm	6.2 kg	**GEH 004 01 61** [2]
Cover cut-out with 1 actuating flap for GHG 62	3 x 213 mm	6.2 kg	**GEH 004 01 62** [2]
Cover cut-out with 2 actuating flaps for GHG 61	3 x 213 mm	6.9 kg	**GEH 004 02 61** [2]
Cover cut-out with 2 actuating flaps for GHG 62	3 x 213 mm	6.9 kg	**GEH 004 02 62** [2]
Cover cut-out with 3 actuating flaps for GHG 61	3 x 213 mm	7.6 kg	**GEH 004 03 61** [2]
Cover cut-out with 3 actuating flaps for GHG 62	3 x 213 mm	7.6 kg	**GEH 004 03 62** [2]
Cover with 2 actuating flaps and main switch ≤ 40 A	1 x 213 mm	8.1 kg	**GEH 004 04** [2]

[2] "GEH" is an order code only



Size 4



Size 3

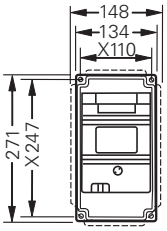


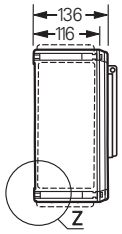
Size 2

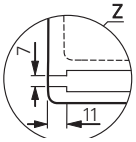


Size 1

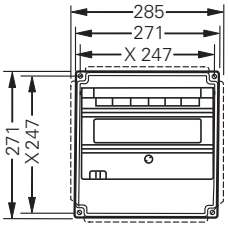
Dimension drawing

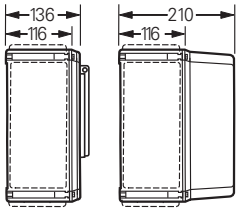




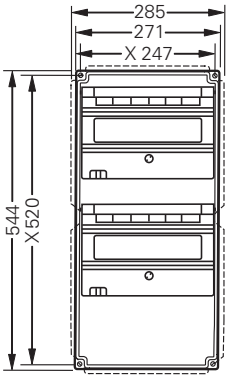


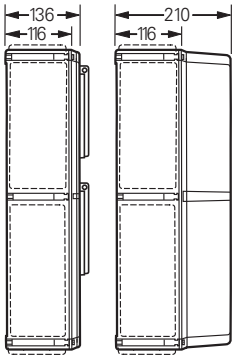
Size 1



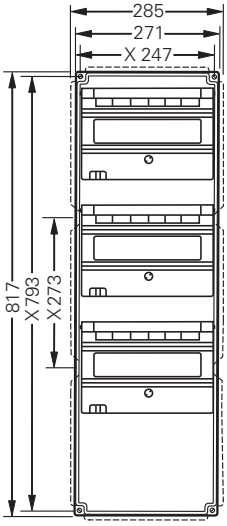


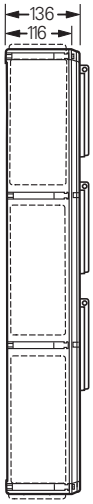
Size 2





Size 3





Size 4

X = fixing dimension



Size 1



Size 2



Size 3



Size 4

Technical data

	Metal empty enclosure
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC Gb Ex de IIC T6, T5, T4 / Ⓔx II 2 D Ex tb IIIC Db Ex tD A21 IP66 T80 °C, T95 °C[1)]
EC-Type Examination Certificate	PTB 99 ATEX 3118U
IECEx Certificate of Conformity	IECEx-PTB11.0030U
Marking accd. to IECEx	Ex e IIC Gb Ex tb IIIC Db
Operating temperature range	–20 °C up to +95 °C –55 °C up to +95 °C
Permissible ambient temperature [1)]	–20 °C up to +40 °C –55 °C up to +55 °C (option)
Rated voltage	690 V
Rated current	315 A
Protection class	I
Terminal cross section	up to 300 mm²
Cable gland	acc. to customer specification
Degree of protection accd. to EN 60529	IP66
Enclosure material	Stainless steel AISI 316 L / sheet steel powder coated
Enclosure colour	electro-polished / grey

[1)] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.

Ordering details empty enclosure stainless steel

Content	Mounting width	Weight approx.	Order code
Size 1: 1 mounting area 106 mm			
Cover closed	106 mm	3.5 kg	**GEH 100 00**
Cover cut-out with small actuating flap for GHG 61	106 mm	3.8 kg	**GEH 100 01 61**
Cover cut-out with small actuating flap for GHG 62	106 mm	3.8 kg	**GEH 100 01 62**
Size 2: 1 mounting area 213 mm			
Cover closed	213 mm	7.5 kg	**GEH 200 00**
Cover cut-out with 1 actuating flap for GHG 61	213 mm	8.1 kg	**GEH 200 01 61**
Cover cut-out with 1 actuating flap for GHG 62	213 mm	8.1 kg	**GEH 200 01 62**
Size 3: 2 mounting areas 213 mm			
Cover closed	2 x 213 mm	11.5 kg	**GEH 300 00**
Cover cut-out with 1 actuating flap for GHG 61	2 x 213 mm	12.1 kg	**GEH 300 01 61**
Cover cut-out with 1 actuating flap for GHG 62	2 x 213 mm	12.1 kg	**GEH 300 01 62**
Cover cut-out with 2 actuating flaps for GHG 61	2 x 213 mm	12.7 kg	**GEH 300 02 61**
Cover cut-out with 2 actuating flaps for GHG 62	2 x 213 mm	12.7 kg	**GEH 300 02 62**
Cover with 1 actuating flap and main switch ≤ 40 A	1 x 213 mm	12.9 kg	**GEH 300 03**
Size 4: 3 mounting areas 213 mm			
Cover closed	3 x 213 mm	16.5 kg	**GEH 400 00**
Cover cut-out with 1 actuating flap for GHG 61	3 x 213 mm	17.1 kg	**GEH 400 01 61**
Cover cut-out with 1 actuating flap for GHG 62	3 x 213 mm	17.1 kg	**GEH 400 01 62**
Cover cut-out with 2 actuating flaps for GHG 61	3 x 213 mm	17.7 kg	**GEH 400 02 61**
Cover cut-out with 2 actuating flaps for GHG 62	3 x 213 mm	17.7 kg	**GEH 400 02 62**
Cover cut-out with 3 actuating flaps for GHG 61	3 x 213 mm	18.4 kg	**GEH 400 03 61**
Cover cut-out with 3 actuating flaps for GHG 62	3 x 213 mm	18.4 kg	**GEH 400 03 62**
Cover with 2 actuating flaps and main switch ≤ 40 A	2 x 213 mm	18.6 kg	**GEH 400 04**



Size 4



Size 3

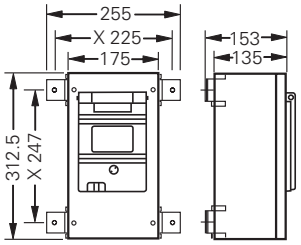


Size 2

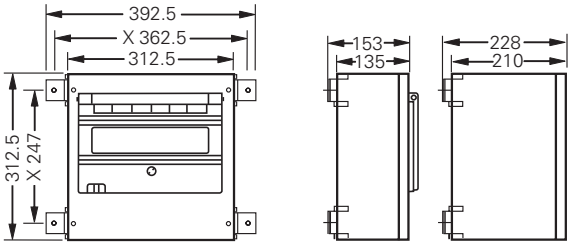


Size 1

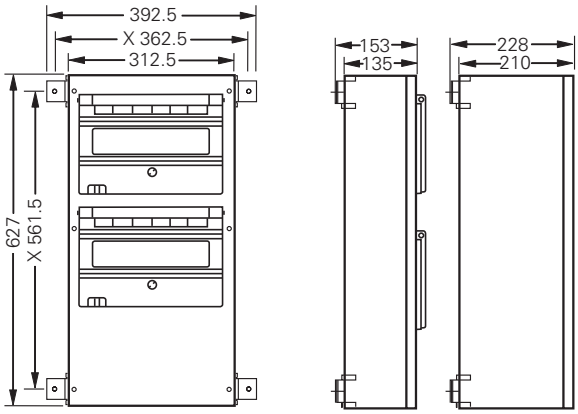
Dimension drawing



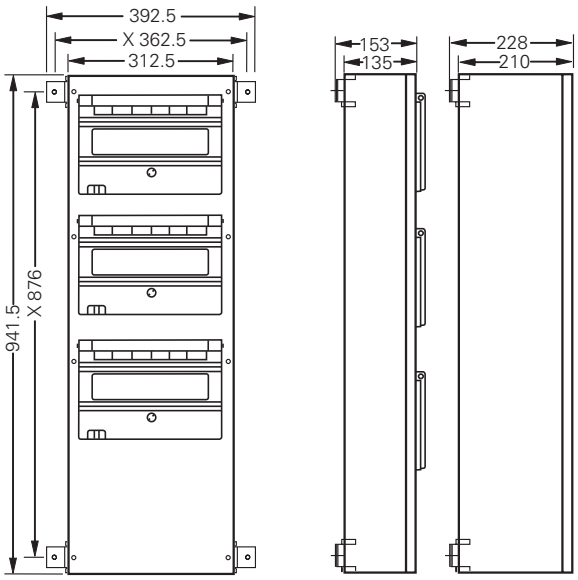
Size 1



Size 2



Size 3



Size 4

X = fixing dimension

Dimensions in mm



Size 1



Size 2

Technical data

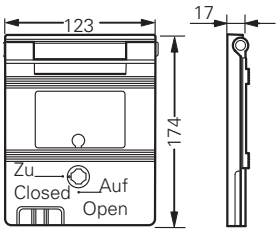
	Actuating flap
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC Gb / Ⓔx Ex tb IIIC Db IP65
EC-Type Examination Certificate	PTB 99 ATEX 3107U
Operating temperature range	–55 °C up to +60 °C
Application temperature [1]	–55 °C up to +60 °C
IECEx Certificate of Conformity	IECEx-PTB11.0020U
Marking accd. to IECEx	Ex e IIC Gb Ex tb IIIC Db IP65
Degree of protection accd. to EN 60529	IP66
Weight	flap size 1 0.48 kg flap size 1 0.78 kg

Ordering details

Content	Mounting width	Weight approx.	Order No.
Size 1: 1 mounting area 106 mm for GHG 61, lockable	123 mm	0.48 kg	**GHG 610 1954 R0003**
Size 1: 1 mounting area 106 mm for GHG 61 + 62, lockable	123 mm	0.48 kg	**GHG 610 1954 R0013**
Size 2: 1 mounting area 213 mm for GHG 61, lockable	245 mm	0.78 kg	**GHG 610 1954 R0001**
Size 2: 1 mounting area 213 mm for GHG 61 + 62, lockable	245 mm	0.78 kg	**GHG 610 1954 R0011**

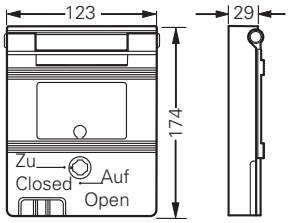
Dimension drawing

for GHG 61



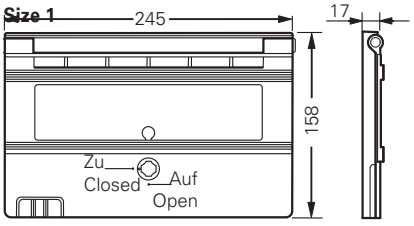
Size 1

for GHG 61 + 62

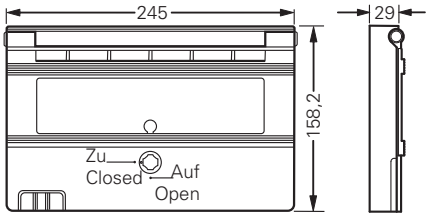


Size 1

Size 1

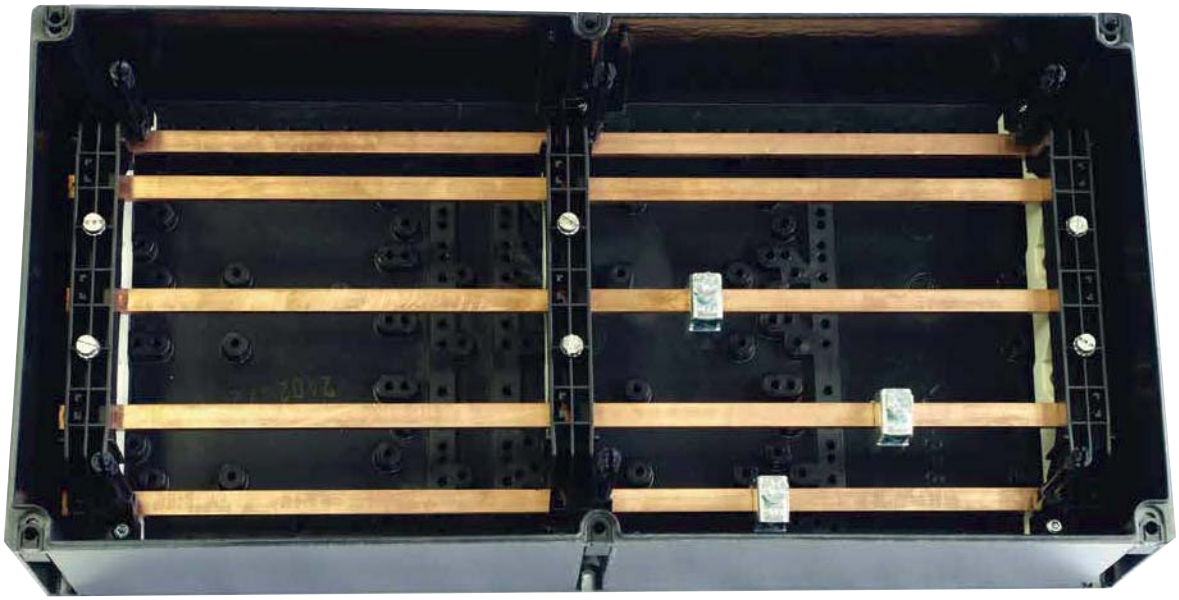


Size 2



Size 2

Dimensions in mm



Bus-bar system GHG 758:
The bus-bar system GHG 758 for 250 A and 315 A in Ex-e technology is a fast and economic assembly system for efficient distribution of electrical energy for zone 1.

Robust design
Thanks to the high ambient temperature range of -55 to + 55 ° C, this mounting system is ideal for applications under extreme conditions. Due to the use of high quality materials, this device has a high short-circuit rating and long durability.

Easy and economically to install
Fast and economic assembly using undrilled clamp technology for the connection cables

- **For use in areas with extreme ambient conditions**
- **High short-circuit rating and long durability**
- **Greater length of usable bus-bar rail (up to 6300 mm)**
- **Optional with removable plastic cover**
- **Fast and economic assembly**

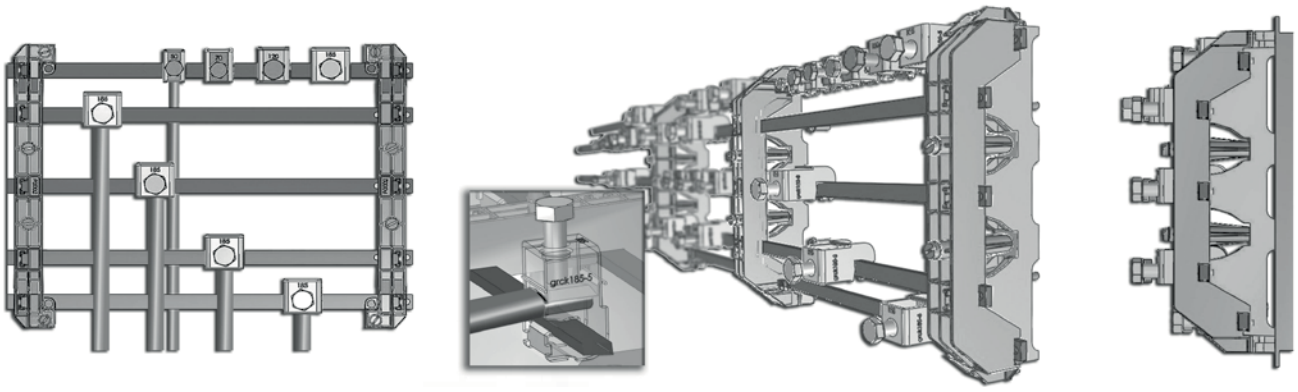


Bus bar in plastic encl.

Technical data

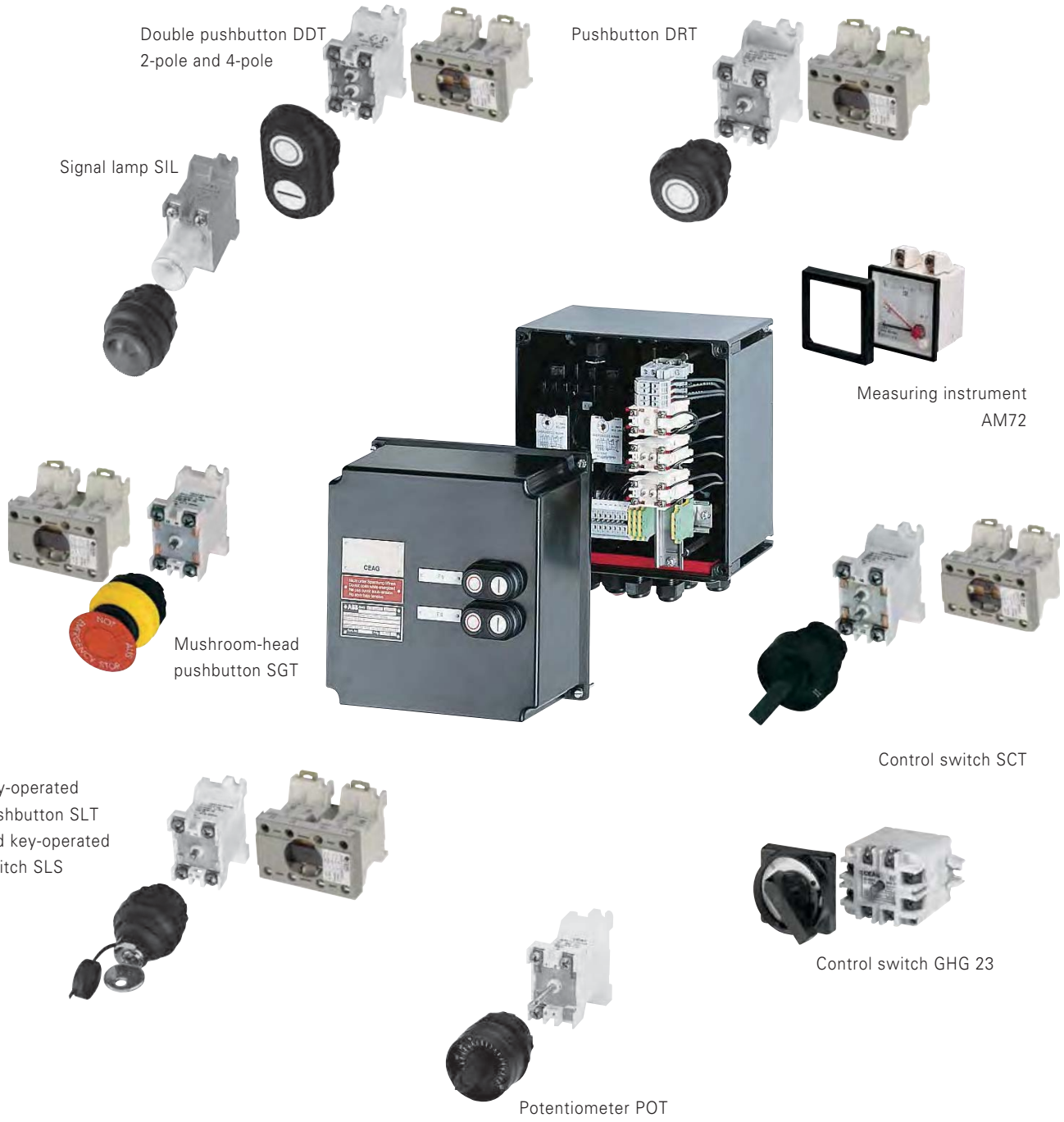
	Bus-bar system
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC Gb Ⓔx II 2 G Ex eb IIC
EC-Type Examination Certificate	BVS 11 ATEX E 068 U
IECEx Certificate of Conformity	IECEx BVS11.0048U
Marking accd. to IECEx	Ex e IIC Gb
Permissible ambient temperature	-55 °C up to +55 °C
Rated voltage	690 V
Terminal cross section	1.5 mm² up to 185 mm²
Maximum length	6300 mm
	250 A for plastic enclosures
Rated current	250 A
Rated short-time current	4 kA, other values on request
Rated short-circuit current	35 kA
	315 A for metallic enclosures
Rated current	315 A
Rated short-time current	9 kA, other values on request
Rated short-circuit current	47 kA

Drawings



Customised enclosure, covered by Type Examination Certificates, can be individually combined from CEAG's numerous built-in components. For the selection of control units and components, please see page 2.4.54 to 2.4.80.

Furthermore control units for panel mounting are available for use in certified enclosures or switchboards.
Detailed information you will find on pages 2.4.82 - 2.4.112.





DRT 1 x 2-pole



DRT 4 x 1-pole



DDT 2 x 1-pole



DDT 2 x 2-pole

Technical data

	Ex-pushbutton DRT and double pushbutton DDT
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de e IIC/IIB Gb / Ⓔx I M2 Ex d e I Mb
EC-Type Examination Certificate	IBEx U14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx-IBE14.0005U
Marking accd. to IECEx	Ex d e IIC/IIB Gb Ex d e I Mb
Operating temperature range	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Application temperature [1]	–45 °C up to +55 °C (option: IIC) –60 °C up to +55 °C (option: IIB)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making/breaking capacity accd. EN 60947-5-1	AC-1: U_e 400 V / I_e 16 A AC-15: U_e 250 V / I_e 6 A
Degree of protection accd. to EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure material	grey
Gasket material	Neoprene (standard), Silikon or Viton on request

	2-pole version
Connecting terminals	2 x 2.5 mm²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

	4-pole version [2]
Connecting terminals	4 x 2.5 mm²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.5 kg

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.

[2] The 4-pole pushbutton needs two mounting areas of a 2-pole pushbutton. The actuator will be in the middle of the two mounting areas. For detailed information see page 2.4.54 - 2.4.80.



SLT 1 x 4-pole



SLT 1 x 2-pole

Technical data

	Ex-key-operated pushbutton SLT
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de e IIC/IIB Gb / Ⓔx I M2 Ex d e I Mb
EC-Type Examination Certificate	IBEx U14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx-IBE14.0005U
Marking accd. to IECEx	Ex d e IIC/IIB Gb Ex d e I Mb
Operating temperature range	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Application temperature [1]	–45 °C up to +55 °C (Option: IIC) –60 °C up to +55 °C (Option: IIB)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making/breaking capacity accd. EN 60947-5-1	AC-1: U_e 400 V / I_e 16 A AC-15: U_e 250 V / I_e 6 A
Degree of protection accd. to EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey
Gasket material	Neoprene (standard), Silikon or Viton on request
Latch point	CEAG 1 (others on request)

	2-pole version
Connecting terminals	2 x 2.5 mm²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

	4-pole version [2]
Connecting terminals	4 x 2.5 mm²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.

[2] The 4-pole pushbutton needs two mounting areas of a 2-pole pushbutton. The actuator will be in the middle of the two mounting areas. For detailed information see page 2.4.54 - 2.4.80.



SLT 1 x 2-pole



SLT 1 x 4-pole

Technical data

	Ex-Built-in components for individual control stations, key-operated switch SLS
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de e IIC/IIB Gb / Ⓔx I M2 Ex d e I Mb
EC-Type Examination Certificate	IBEx U14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx-IBE14.0005U
Marking accd. to IECEx	Ex d e IIC/IIB Gb Ex d e I Mb
Operating temperature range [1]	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Application temperature [1]	–45 °C up to +55 °C (option: IIC) –60 °C up to +55 °C (option: IIB)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making/breaking capacity accd. EN 60947-5-1	AC-1: U_e 400 V / I_e 16 A AC-15: U_e 250 V / I_e 6 A
Switching system	engaging – engaging – engaging
Degree of protection accd. to EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey
Latch point	CEAG 1 (others on request)

	2-pole version
Connecting terminals	2 x 2.5 mm²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

	4-pole version [2]
Connecting terminals	4 x 2.5 mm²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.

[2] The 4-pole pushbutton needs two mounting areas of a 2-pole pushbutton. The actuator will be in the middle of the two mounting areas. For detailed information see page 2.4.54 - 2.4.80..


SGT 1 x 4-pole


SGT 1 x 2-pole


SGTE 1 x 4-pole


SGTE 1 x 2-pole

Technical data

	Ex-mushroom-head pushbutton (Emergency Stop „SGTE“ and normal version „SGT“)
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de e IIC/IIB Gb / Ⓔx I M2 Ex d e I Mb
EC-Type Examination Certificate	IBEx U14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx-IBE14.0005U
Marking accd. to IECEx	Ex d e IIC/IIB Gb Ex d e I Mb
Operating temperature range	–45 °C up to +80 °C (IIC) –60 °C up to +80 °C (IIB)
Application temperature [1]	–45 °C up to +55 °C (option: IIC) –60 °C up to +55 °C (option: IIB)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making/breaking capacity accd. EN 60947-5-1	AC-1: U_e 400 V / I_e 16 A AC-15: U_e 250 V / I_e 6 A
Degree of protection accd. to EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey
Gasket material	Neoprene (standard), Silikon or Viton on request

	2-pole version
Connecting terminals	2 x 2.5 mm²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

	4-pole version [2]
Connecting terminals	4 x 2.5 mm²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.

[2] The 4-pole pushbutton needs two mounting areas of a 2-pole pushbutton. The actuator will be in the middle of the two mounting areas. For detailed information see page 2.4.54 - 2.4.80.



SCT 1 x 2-pole



SCT 1 x 4-pole



Potentiometer

Technical data

	Ex-Mini-control switch SCT
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de e IIC/IIB Gb / Ⓔx I M2 Ex d e I Mb
EC-Type Examination Certificate	IBEx U14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx-IBE14.0005U
Marking accd. to IECEx	Ex d e IIC/IIB Gb / Ex d e I Mb
Operating temperature range	–45 °C up to +80 °C (IIC) / –60 °C up to +80 °C (IIB)
Application temperature [1]	–45 °C up to +55 °C (option: IIC) / –60 °C up to +55 °C (option: IIB)
Rated voltage	500 V AC
Rated current	16 A
Rated current gold contacts	0.4 A
Rated making/breaking capacity accd. EN 60947-5-1	AC-1: U_e 400 V / I_e 16 A AC-15: U_e 250 V / I_e 6 A
Degree of protection accd. to EN 60529	IP66
Type of mounting	DIN rail mounting
Enclosure colour	grey

	2-pole version
Connecting terminals	2 x 2.5 mm²
Dimensions (L x W x H)	59 x 31 x 45 mm
Weight	0.15 kg

	4-pole version [2]
Connecting terminals	4 x 2.5 mm²
Dimensions (L x W x H)	59 x 73 x 45 mm
Weight	0.35 kg

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.

[2] The 4-pole pushbutton needs two mounting areas of a 2-pole pushbutton. The actuator will be in the middle of the two mounting areas.
For detailed information see page 2.4.54 - 2.4.80..

Technical data

	Ex-Potentiometer POT
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de e IIC/IIB Gb / Ⓔx I M2 Ex d e I Mb
EC-Type Examination Certificate	IBEx U14 ATEX 1030 U
IECEx Certificate of Conformity	IECEx-IBE14.0005U
Marking accd. to IECEx	Ex d e IIC/IIB Gb / Ex d e I Mb
Operating temperature range [1]	–45 °C up to +80 °C (IIC) / –60 °C up to +80 °C (IIB)
Application temperature [1]	–45 °C up to +55 °C (option: IIC) / –60 °C up to +55 °C (option: IIB)
Rated voltage	up to 250 V
Power consumption (VA)	max. 1 W
Resistance range	100 – 10.000 Ω
Tolerance	± 20 %
Connecting terminals	2 x 2.5 mm²
Degree of protection accd. to EN 60529	IP66
Dimensions (L x W x H)	approx. 59 x 31 x 45 mm
Weight	0.15 kg
Type of mounting	DIN rail mounting
Enclosure colour	grey
Angle of rotation	270°
Scale	0 - 100 %

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.

For detailed information see page 9.52 – 9.74.



Ex 29



Ex 23



Signal lamp

Technical data

		Ex-signal lamp SIL
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex d e IIC/IIB Gb / Ⓔx II 2 G Ex d ia IIC/IIB Gb
EC-Type Examination Certificate		IBExU 12 ATEX 1047 U
Application temperature		–20 °C up to +40 °C
IECEx Certificate of Conformity		IECEx-IBE13.0031U
Marking accd. to IECEx		Ex d e IIC/IIB Gb Ex d ia IIC/IIB Gb
Operating temperature range		–45 °C up to +68 °C (IIC) –60 °C up to +68 °C (IIB)
Application temperature [1]		–45 °C up to +60 °C (IIC) –60 °C up to +60 °C (IIB)
Rated voltage (Ex ed IIC) (Ex d ia IIC/IIB) (Ex d e IIC/IIB)		20 V up to 254 V AC/DC 10 V up to 30 V DC 12 V up to 24 V AC/DC
Rated current	20 V to 254 V 10 V up to 30 V Ex d ia IIC 12 V up to 24 V	approx. 4 - 15 mA max. 25 mA max. 24 mA
Maximum for Ex ia		Ui = 30 V DC, Ii = 100 mA, Pi = 750 mW
Connecting terminals		2 x 2.5 mm²
Degree of protection accd. to EN 60529		IP66
Dimensions (L x W x H)		approx. 59 x 31 x 45 mm
Weight		0.15 kg
Type of mounting		DIN rail mounting
Enclosure colour		grey / yellow

[1] The limits of the operating temperature range and the max. permissible temperature rise of the components have to be taken into account. See also pages 2.6.21.

For detailed information see page 2.4.54 - 2.4.80.

Technical data

		Ex-Built-in components for individual control stations control switch Ex 23 and Ex 29	
		Ex 23	Ex 29
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex d e IIC / Ⓔx I M 2 Ex d e I	
EC-Type Examination Certificate		BVS 13 ATEX E 107 U	PTB 98 ATEX 1118 U
Application temperature [1]		–45 °C up to +55 °C (IIC) –60 °C up to +55 °C (IIB)	–20 °C up to +40 °C –55 °C up to +55 °C (option)
IECEx Certificate of Conformity		IECEx-IBNS13.0108U	
Rated voltage		up to 500 V	up to 500 V
Rated current		10 A	16 A[1]
Rated current gold contacts			0.4 A
Rated making/breaking capacity accd. EN 60947-5-1		AC-15: U_e 230 V / I_e 6 A DC-13: U_e 24 V / I_e 2 A	U_e 400 V / I_e 4 A U_e 230 V / I_e 0.5 A
Connecting terminals		2 x 0.5 - 2.5 mm²	2 x 0.5 - 2.5 mm² or 1 x 1.0 - 6.0 mm²
Weight	1 tier: 2 tier: 3 tier:	approx. 0.2 kg approx. 0.35 kg	approx. 0.25 kg approx. 0.40 kg approx. 0.55 kg
Type of mounting		DIN rail mounting	
Enclosure colour		grey	black

[1] Terminal cross section for 12 A: 2.5 mm²

For detailed information see page 2.4.54 - 2.4.80.



AM 45

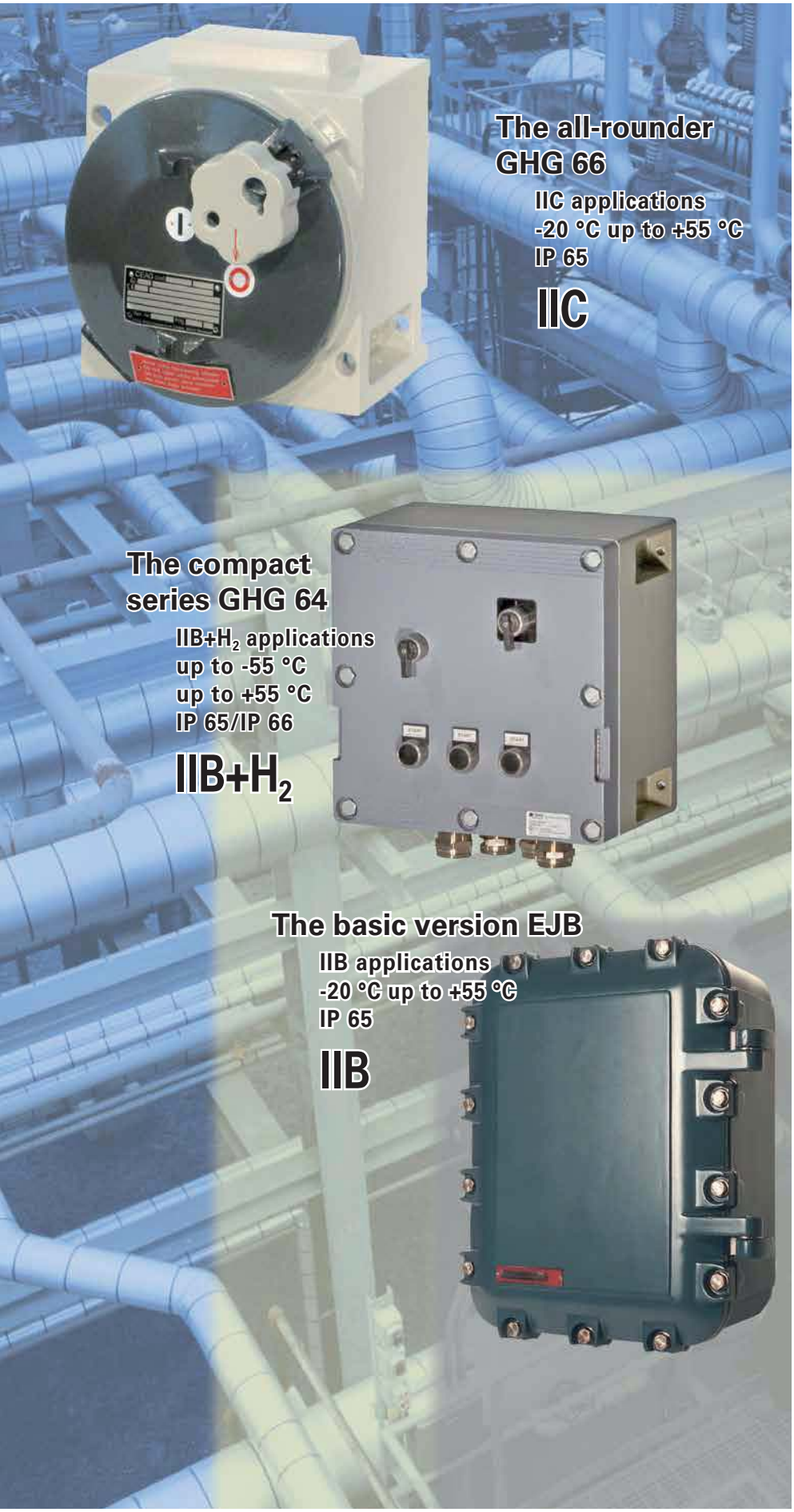


AM 72

Technical data

	Ex-measuring instrument AM 45/AM 72	
	Moving iron	Moving coil
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e IIC / Ⓔx I M 2 Ex e I	Ⓔx II 2 G Ex ib IIC / Ⓔx I M 2 Ex ib I
EC-Type Examination Certificate	PTB 99 ATEX 2032 U	
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)	
Rated voltage	up to 420 V (AM 45) up to 750 V (AM 72)	
Power consumption		max. 0.31 A
Overload range	10-fold - 25 sec. 25-fold - 4 sec. 50-fold - 1 sec. indicated 1 : 1.5	10-fold - 5 sec.
Measuring range	max. 0 - 25 A direct / n / 1A	0/4 - 20 mA
Inductance Li		≤ 0.1 mH
Capacitance Ci		≤ 0.1 nF
Winding specification of moving coil		26.5 windings
Internal resistance		2.5 Ω ±30 %
Open circuit voltage max. Ui		30 V
Connecting terminals max. Ii		150 mA
Accuracy	Class 2.5	Class 1.5
Circuit	Moving iron	Moving coil
Connecting terminals	2 x 0.5 - 2.5 mm^2 fine-/multi-wire	1 x 4 mm^2 solid-wire
Degree of protection accd. to EN 60529	IP65	
Display size	50 x 45 mm (AM 45) 72 x 72 mm (AM 72)	
Weight	0.35 kg	
Type of mounting	DIN rail mounting	
Enclosure material	grey	

For detailed information see page 2.4.54 - 2.4.80.



Safety can also be flexible

In our comprehensive product range you can find enclosure solutions in metal for a wide variety of applications. CEAG distributions with approvals for use in Zones 1, 21, 2 and 22 can be used for the implementation of applications in individual enclosures as well as in comprehensive complete distributions.

According to customer requirements, the flameproof enclosures can be designed for either direct cable entry or conduit connection or with a built-on Ex-e connection box with the so-called "indirect" cable entry option. When engineering complex distributions, the supply of individual flameproof enclosures via a bus bar system is possible. Depending on the respective product family or application, versions are available for the explosion groups IIB, IIB +H2 and IIC. A complete range of CEAG Ex-d distributions is available for the gas explosion groups IIB, IIB +H2 and IIC. The products can, of course, also be used for gas group IIA.

Provided that the power dissipation and the space requirements are taken into account, all standard industrial switchgear that gives off arcs or sparks during operation can be built into these flameproof enclosures.

In case of distributions for explosion group IIC (enclosure series GHG 66), wiring between flameproof enclosures is carried out in the factory, whereby it is standard to use enclosures in the type of protection "Increased Safety" (Ex-e enclosures). The use of Ex-e enclosures is also standard for connection by the customer.

In case of distributions for explosion groups IIB and IIB+ H2 (enclosure series GHG 64), enclosures are wired in the factory directly using flameproof cable entries between the Ex-d enclosures or indirectly using Ex-e enclosures. Connection by the customer is either carried out directly using Ex-d cable entries or indirectly using Ex-e enclosures.

Our EJB enclosure series for explosion group IIB are connected to each other using direct cable entries. The use of Ex-d cable entries or Ex-d conduits is standard for connection by the customer.

Thanks to the optimal geometry of the enclosures and the well-thought-out modular system, with the GHG 64 enclosure series you can fulfil both simple and complex tasks in an optimal way and create space-saving and safe solutions to suit your individual applications.

Ex-d Enclosures and Distributions

Series GHG 66 made of metal for gases of explosion group IIC

Safety for all environments

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, Eaton's Crouse-Hinds Business 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, petrochemical and offshore industries..



Features

- **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 unit construction system 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 glands.

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 flame-proof 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 en-closures are made of hot-dip galvanised steel.





Type 1



Type 2



Type 4



Type 5

Technical data

	Ex d Light alloy enclosure for motor starter
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex de ia/ib [ia/ib] IIC/IIB T6/T5/T4 Gb ⟨Ex⟩ II 2 d Ex tb IIIC T80 °C T95 °C Db [1]
EC-Type Examination Certificate	PTB 99 ATEX 1057
IECEx-Certificate of Conformity	IECEx PTB 12.0026
Marking accd. to IECEx	Ex de IIC T6, T5, T4 Gb Ex de IIB T6, T5, T4 Gb
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)
Rated voltage	690 V
Rated current	630 A
Protection class	I
Connecting terminals	up to 300 mm²
Degree of protection acc. to EN 60529[1]	IP54 (IP66 on request)
Weight	see ordering details
Enclosure material	aluminium die-cast housing
Enclosure colour	pebbles grey, cover dark grey

[1] Dust certification only in combination with IP66

Ordering details

Content Motor capacity to AC 3	Type	Main switch	Cable glands	Weight approx.	Degree of protection nach EN 60529	Order No.
Direct circuit						
11 kW	1	25 A	3 x M25	14.5 kg	IP54	**EXKO 71 5000 F 0000**
15 kW	2	25 A	2 x M32 / 1 x M25	24.5 kg	IP54	**EXKO 71 5000 H 0000**
22 kW	4	40 A	2 x M40 / 1 x M25	37.5 kg	IP54	**EXKO 71 5000 K 0000**
Reversing circuit						
11 kW	1	25 A	3 x M25	14.5 kg	IP54	**EXKO 71 5100 F 0000**
15 kW	2	25 A	2 x M32 / 1 x M25	24.5 kg	IP54	**EXKO 71 5100 H 0000**
22 kW	4	40 A	2 x M40 / 1 x M25	39.5 kg	IP54	**EXKO 71 5100 K 0000**
Star-delta starter						
7.5 kW	2	40 A	4 x M25	25 kg	IP54	**EXKO 71 5200 B 0000**
12.5 kW	2	40 A	4 x M25	25 kg	IP54	**EXKO 71 5200 D 0000**
18.5 kW	4	40 A	3 x M32 / 1 x M25	37 kg	IP54	**EXKO 71 5200 F 0000**
30.0 kW	4	63 A	3 x M32 / 1 x M25	39 kg	IP54	**EXKO 71 5200 H 0000**
37.0 kW	5	100 A	1 x M40 / 2 x M32 1 x M25	64 kg	IP54	**EXKO 71 5200 K 0000**
55.0 kW	5	100 A	1 x M40 / 2 x M32 1 x M25	64 kg	IP54	**EXKO 71 5200 M 0000**

The motor starters are completely wired for connection by customer.

Further switching capacities up to 630 A on request.

Please state motor operating voltage and rated current in your order.



Type 5



Type 4

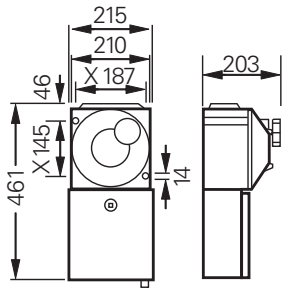


Type 2

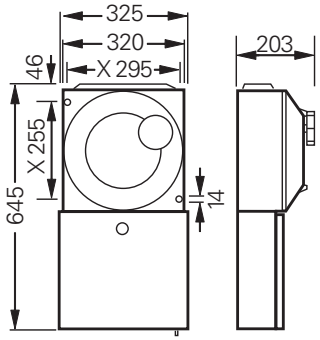


Type 1

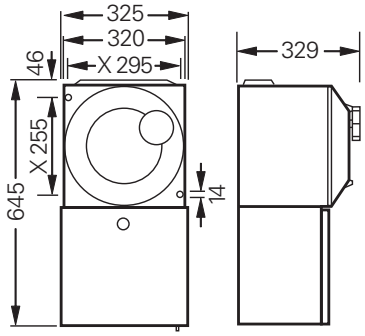
Dimension drawing I Wiring diagram



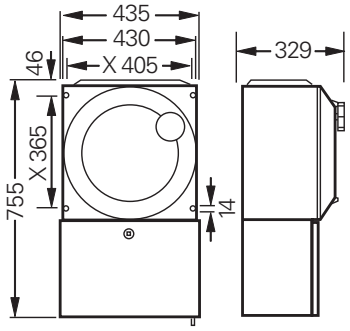
Type 1



Type 2



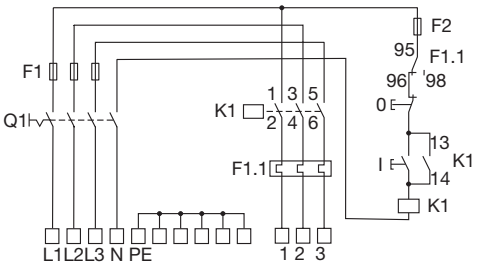
Type 4



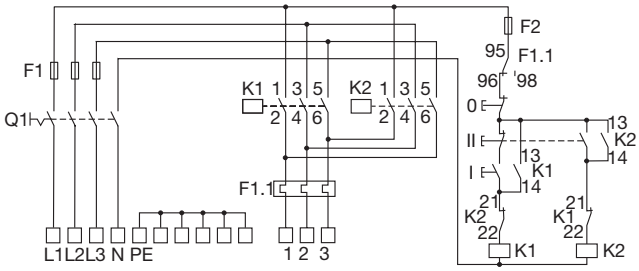
Type 5

X = fixing dimension

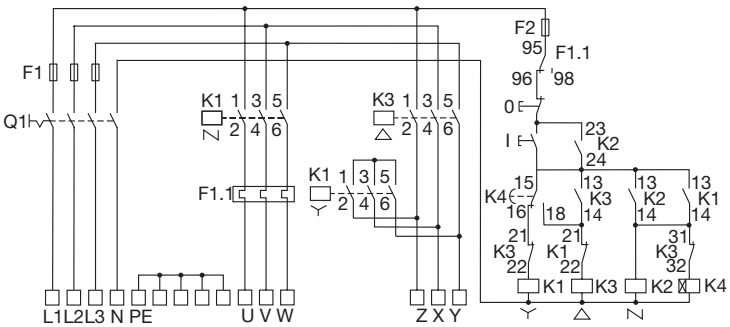
Direct online starter



Reversing starter



Star-delta starter





Size 1



Size 2



Size 7



Size 6

Technical data

	Ex d light alloy empty enclosures GHG 66/GHG 67 motor starter
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de ia/ib [ia/ib] II Ⓔx II 2 D Ex tD A21 IP66
EC-Type Examination Certificate	PTB 98 ATEX 1054U
IECEx-Certificate of Conformity	IECEx PTB 12.0026
Marking accd. to IECEx	Ex de IIC / IIB Gb / Ex tb IIIC Db Ex de IIB T6, T5, T4 Gb
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +60 °C (option)
Rated voltage	690 V
Rated current	630 A
Connecting terminals	up to 300 mm^2
Degree of protection accd. to EN 60529	IP54 (IP66 on request)
Weight	see ordering details
Enclosure material	aluminium die-cast housing
Enclosure colour	coating suited for tropical and marine climates finish polyester coating in RAL 7032/7022

Ordering details

Content	Power dissipation [1] T6	T5	Rated current	Weight	Order No.
Ex d light alloy empty enclosures, GHG 66					
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**
Ex d empty enclosure, cover light alloy, body sheet steel, GHG 67					
Size 6	700 W	975 W	630 A	195 kg	**on request**

[1] Power loss to keep the temperature class only. Operating temperature of internal components has to be considered.



Size 6



Size 7

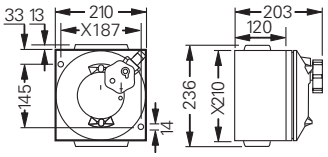


Size 2

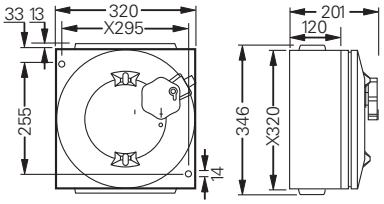


Size 1

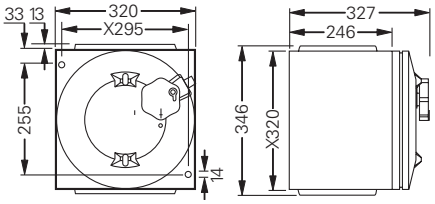
Dimension drawing



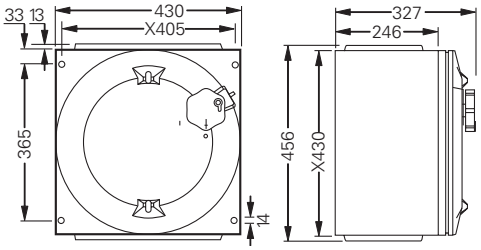
Size 1



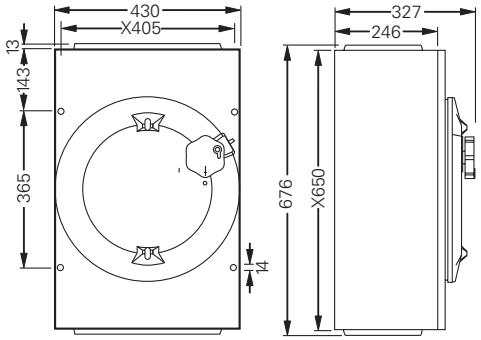
Size 2



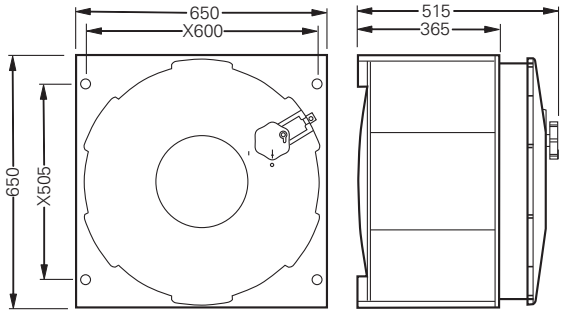
Size 4



Size 5



Size 7



Size 6

X = fixing dimension

Dimensions in mm



Connection box



Bus-bar box

Technical data

	Stainless steel / sheet steel connection box		
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de ia/ib [ia/ib] IIC T4 - T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C, T95 °C, T100 °C		
EC-Type Examination Certificate	PTB 00 ATEX 1073		
Permissible ambient temperature	–55 °C up to +55 °C		
Rated voltage	690 V		
Rated current	630 A		
Connecting terminals	up to 300 mm²		
Degree of protection accd. to EN 60529	IP54 (IP65 on request)		
Weight	see ordering details		
Enclosure material	stainless steel / sheet steel		
Enclosure colour	natural stainless steel / finish polyester powder coating in RAL 7032		

	Stainless steel / sheet steel-bus-bar box		
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de ia/ib [ia/ib] IIC T4 - T6 Ⓔx II 2 D Ex tD A21 IP66 T80 °C, T95 °C, T100 °C		
EC-Type Examination Certificate	PTB 00 ATEX 1073		
Permissible ambient temperature	–55 °C up to +55 °C		
Rated voltage	690 V		
Rated current	250 A	400 A	630 A
Rated short-circuit current	35 kA	53 kA	59.2 kA
Rated thermal short-time current	9.4 kA (1s) [1]	10.7 kA (1s) [1]	13.2 kA (1s) [1]
Terminal cross section	up to 300 mm²		
Degree of protection accd. to EN 60529	IP54 (IP66 on request)		
Weight	see ordering details		
Enclosure material	stainless steel / sheet steel		
Enclosure colour	natural stainless steel / finish polyester powder coating in RAL 7032		

[1] Other values on request

Ordering details

Content	Max. no. of built-in control units	Module size	Length of terminal rail	Weight	Order No.
Stainless steel / sheet steel connection box					
AK 1-2	4	1	1 x 190 mm	4.3 kg	**on request**
AK 2-2	15	2	2 x 300 mm	7.0 kg	**on request**
AK 4-1	15	4	3 x 300 mm	9.5 kg	**on request**
AK 5-1	21	5	3 x 410 mm	11.5 kg	**on request**
AK 6-1	52	6	3 x 630 mm	23.5 kg	**on request**
Stainless steel / sheet steel bus-bar box					
SSK 1	20	1	1 x 295 mm	11.0 kg	**on request**
SSK 2	28	2	2 x 405 mm	15.0 kg	**on request**
SSK 3	52	3	2 x 625 mm	23.0 kg	**on request**
SSK 4	72	4	2 x 845 mm	31.0 kg	**on request**

Also suitable for Ex-d enclosure series GHG 64



Bus-bar box



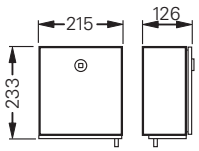
Connection box

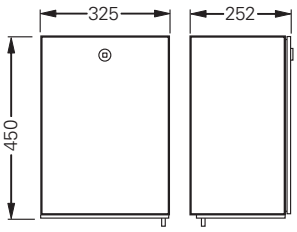
Dimension drawing

Stainless steel/ sheet steel-connection box

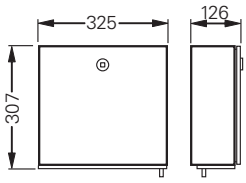
Stainless steel / sheet steel-bus-bar box

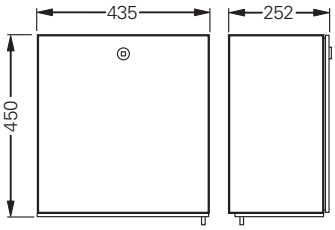
Size 1



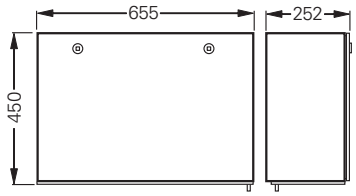


Size 2

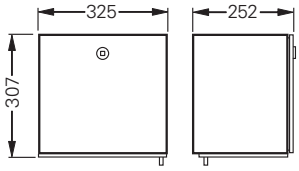


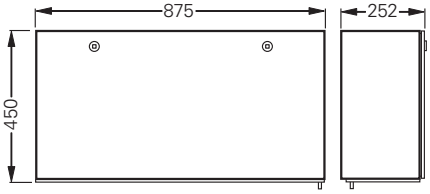


Size 3

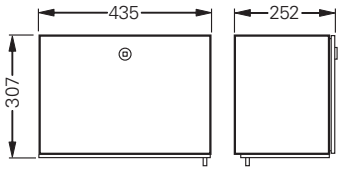


Size 4

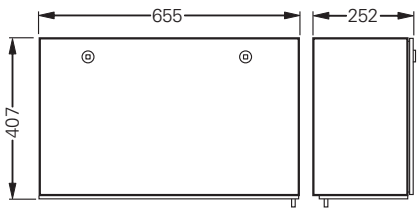




Size 5



Size 6



6

Dimensions in mm

Ex-d Enclosures and Distributions

Series GHG 64: Modular design for almost any application IIB / IIB + H_2

The optimized solution

Regardless of whether for offshore applications or for use in harsh environments found in chemical plants and refineries: thanks to the optimised selection of materials, combined with a high quality powder coating (> 100 µm) and the use of stainless fixing materials, the new flameproof light alloy enclosures of the series.

GHG 64 with flat flamepaths can be used in all areas. The modular design, the wider temperature range (-55 °C to +55 °C) and the compact design are further highlights of this product range.

The computer-optimised enclosure design with a significant weight reduction ensures a pressure resistance up to -55 °C.

The 11 different enclosure sizes are compatible and can, therefore, be combined to suit requirements. They are interconnected using flameproof bushings and, as a result, individual, large and complex customised solutions up to 1150 A can be assembled using enclosures in different sizes, e.g. a wide variety of control systems, as well as control devices, motors starters and trace heating distributions up to 1150 A.

A fast and economical distribution of high currents is also possible using a bus-bar system.

The special cost advantage: as they are built into Ex-d enclosures, not only low-priced, standard industrial built-in components, but also complex units (e.g. converters) can also be used in hazardous areas. The high dissipation loss of the enclosures ensures a high degree of flexibility when selecting components.

The result: solutions that suit your applications exactly!



Features

- **Extract from our modular construction system:**
- **Enclosure in 11 different sizes**
- **Wide variety of Ex-d actuators for pushbuttons, circuit breakers, main switches, etc.**
- **Stainless steel or powder-coated sheet metal**
- **Ex-e enclosures**
- **Two busbar systems (Ex-d up to 1150 A and,**
- **standard version, Ex-e up to 630 A)**
- **Free choice of suitable cable entries (Ex-d and**
- **Ex-e), e.g from CEAG and Capri**
- **Hinged cover with up to 110° opening angle**
- **Frameworks for wall and floor mounting**
- **Windows**

Explosion protection made to measure!

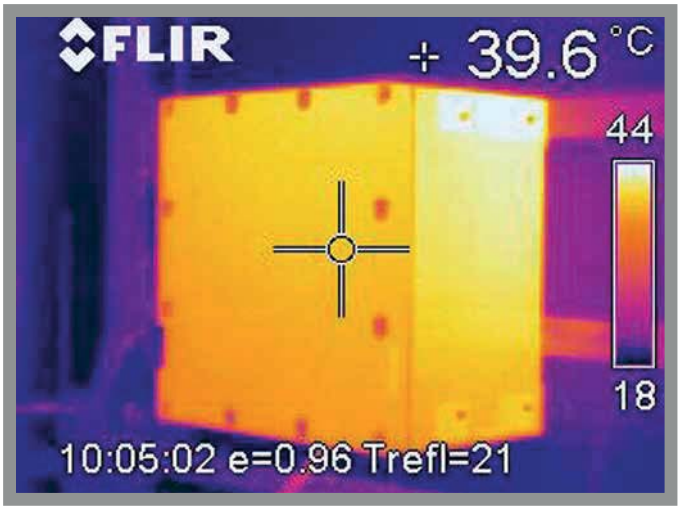
Optimised enclosure sizes enable us to meet the needs of the customer exactly are possible. A wide variety of industrial components, e.g. contactors, MCBs, RCDs, PLCs, WLAN, time elements, electronic components or terminals, can be operated in hazardous areas in a space-saving and safe manner using the 11 enclosure sizes that are now available.

The better the size of the enclosure suits the built-in components, the more convenient the mounting on site.

Optimum utilization of heat dissipation!

Optimum utilization is made possible by a complex assessment of the permissible heat dissipation in worst case situations, in combination with a simultaneous observance of the maximum surface temperature that must not exceed the permissible limiting temperature at any time. As a result, the permissible values are considerably higher than those normally given in the standard documentation.

Thus, a higher dissipation is possible in an enclosure of the same size, while the surface temperature stays within the permissible limits! This saves space and allows more flexibility during planning.







The following sizes are available:

Size 11: 650 x 650 x 442 mm
Size 10: 430 x 650 x 440 mm
Size 9: 430 x 650 x 284 mm
Size 8: 430 x 430 x 284 mm
Size 7: 320 x 430 x 284 mm
Size 6: 320 x 430 x 191 mm
Size 5: 320 x 320 x 284 mm
Size 4: 320 x 320 x 191 mm
Size 3: 210 x 320 x 284 mm
Size 2: 210 x 320 x 191 mm
Size 1: 210 x 210 x 191 mm

In addition to the innovative overall concept, it is the many innovative details of the GHG 64 enclosure series are that convince our customers.

Intelligent hinge technique

Optionally, the stainless steel hinges with their new technique make it possible to open enclosures even if they are mounted directly adjacent to each other. Once the captive screws have been undone, the cover can be swung open easily thanks to the spring-mounted pull/turn hinges.

This saves space, simplifies maintenance work and speeds up repairs and the replacement of built-in components – a cost factor that should not be underestimated!
The new integrated easy cover opening mechanism prevents mechanical damage of the flame path.

Cost-saving windows

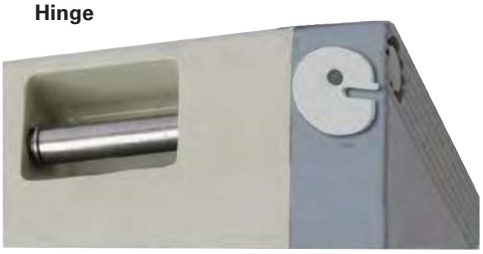
The optional window embedded in the enclosure cover is a further useful detail. It makes it possible to monitor the display and switch states of the built-in components without additional, explosion-protected indicators that automatically increase costs.

Sealing system for low-maintenance flat flame paths.

With their optimised, low-maintenance, flat flamepaths, the standard GHG 64 enclosures feature the high degree of protection IP 65. This can be increased to IP 66 with the optional lip seal made of highly heat and weather-resistant silicone.

And that is not all! Thanks to this sealing system, the Ex-d flamepath has optimal, long-term protection against corrosion caused by the ingress of aggressive materials into the flamepath. This reduces maintenance costs and enhances safety! Enclosures protected in this way can also be used where extreme conditions may occur due to moisture, salt water, chemicals and dust, e.g. in harsh industrial environments, and offshore. Thanks to the optimised sealing, the enclosures are also ideally suited for use in areas where large amounts of dust occur, e.g. in flour and saw mills.

Hinge



closed



Excenter disk for easy opening

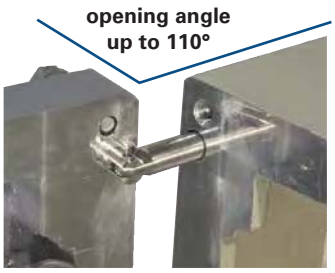


screw undone





open

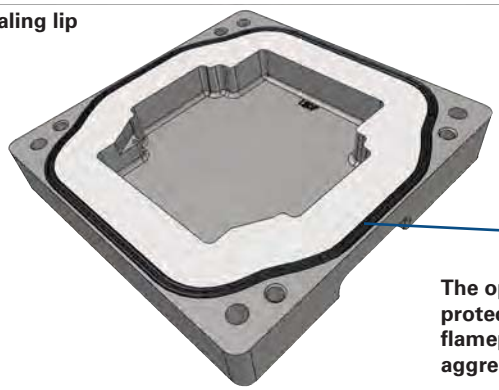


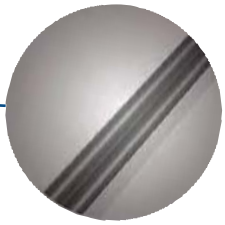
windows





sealing lip





The optional seal protects the flat flamepath from aggressive media



Technical data empty enclosure GHG 64

	Ex-d Light alloy empty enclosure GHG 64
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIB / IIB + H2 Gb / Ⓔx Ex t b IIIC Db
EC-Type Examination Certificate empty enclosure	PTB 08 ATEX 1042U
Application temperature[1]	–20 °C up to +40 °C / –55 °C up to +60 °C (option)
Degree of protection accd. to EN 60529	IP65 (IP66 optional)
Weight	see ordering details
Enclosure material	die-cast aluminium alloy
Enclosure colour (optionally with salt-water resistant paint finish)	RAL 7032/7046

[1] depends on the test pressure of the static overpressure test of the gas group

Ordering details[1]/dimension drawing empty enclosure II B and IIB + H_2

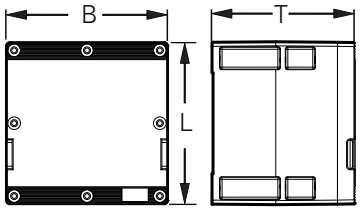
Type	Dissipation [3] ($T_{amb.}$ = 40 °C) T6	T5	Weight kg	Dimensions L x B X T	Order No.[1] IIB and IIB+H_2	Order-number key[1]
Ex d light alloy empty enclosures, powder coated						
Size 1	94 W	134 W	10,5 kg	210 x 210 x 191 mm	**GHG 640 1901 R02XX**	**XX** 01 > IIB 02 > IIB+H2 [2] 13 > IIB + hinge 14 > IIB+H2 + hinge [2] 25 > IIB IP66 26 > IIB+H2 IP66 [2] 37 > IIB IP66 + hinge 38 > IIB+H2 IP66 + hinge [2]
Size 2	112 W	158 W	14,0 kg	320 x 210 x 191 mm	**GHG 640 1902 R02XX**	
Size 3	140 W	195 W	17,0 kg	320 x 210 x 284 mm	**GHG 640 1903 R02XX**	
Size 4	152 W	214 W	18,0 kg	320 x 320 x 191 mm	**GHG 640 1904 R02XX**	
Size 5	197 W	280 W	21,0 kg	320 x 320 x 284 mm	**GHG 640 1905 R02XX**	
Size 6	240 W	335 W	22,0 kg	430 x 320 x 191 mm	**GHG 640 1906 R02XX**	
Size 7	270 W	390 W	27,0 kg	430 x 320 x 284 mm	**GHG 640 1907 R02XX**	
Size 8	270 W	390 W	35,0 kg	430 x 430 x 284 mm	**GHG 640 1908 R02XX**	
Size 9	390 W	430 W	53,0 kg	650 x 430 x 284 mm	**GHG 640 1909 R02XX**	
Size 10	470 W	640 W	73,0 kg	650 x 430 x 440 mm	**GHG 640 1910 R02XX**	
Size 11	470 W	640 W	105,0 kg	650 x 650 x 442 mm	**GHG 640 1911 R02XX**	

[1] The mentioned order numbers are only for guidance and will change in case of an order, due to the fact that they describe the equipment as delivered.
[2] H_2 option is not available for sizes 10 and 11
[3] Power loss to keep the temperature class. Operation temperature of the internal components has to be observed

Accessories

Type	Order No.
Mounting plates for components	**on request**

Dimension drawing



Connection and Bus-Bar Boxes

Ex-e connection and bus-bar boxes for GHG 64

A time-saving installation method

The time-proven Ex-e connection and bus-bar boxes are a meaningful addition to the GHG 64 range of enclosures. With these, the easy and safe realization of complex connections and current strengths of up to 630 A is standard.

Depending on customer requirements, these connection / busbar boxes, that have been adapted in an optimal way to the modular system of the flameproof enclosures, are available in stainless steel and powder-coated sheet steel and in 11 different sizes and can, therefore, be used in variable ways for a wide variety of enclosure combinations.

The various circuits of the distribution can be connected quickly and economically using a bus-bar system. Currents up to 1150 A are possible.

According to your requirements, individually encapsulated devices, such as control and indicator units, e.g. as pushbutton, control switches or Ex-e measuring instruments and Ex-i digital indicating instruments can also be built into the Ex-e connection and bus-bar boxes.



Features

- **Ex-e enclosures that have been adapted to the modular system**
- **Busbar boxes in both Ex-e and Ex-d design**
- **Through coupling of several enclosures using busbar rails**
- **Rugged Ex-e enclosure made of powder-coated sheet steel or stainless steel**
- **Ex-d enclosure made of die-cast aluminium alloy**
- **Easily accessible connection terminals or busbar rails**
- **Easy mounting of control and indicator units in cover**



Terminal boxes



Busbar boxes

Technical data

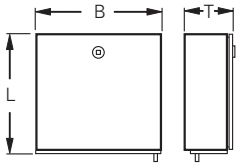
	Stainless steel / sheet steel connection box for GHG 64		
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de ia/ib [ia/ib] IIC T4 - T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C, T95 °C, T100 °C		
EC-Type Examination Certificate	PTB 00 ATEX 1073		
Permissible ambient temperature	–55 °C up to +55 °C		
Rated voltage	690 V		
Rated current	630 A		
Connecting terminals	up to 300 mm²		
Degree of protection accd. to EN 60529	IP54 (IP65 on request)		
Enclosure material	stainless steel / sheet steel		
Enclosure colour	natural stainless steel / finish polyester powder coating in RAL 7032		
	Stainless steel / sheet steel-bus-bar box for GHG 64		
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de ia/ib [ia/ib] IIC T4 - T6 / Ⓔx II 2 D Ex tD A21 IP66 T80 °C, T95 °C, T100 °C		
EC-Type Examination Certificate	PTB 00 ATEX 1073		
Permissible ambient temperature	–55 °C up to +55 °C		
Rated voltage	690 V		
Rated current	250 A	400 A	630 A
Rated short-circuit current	35 kA	53 kA	59.2 kA
Rated thermal short-time current	9.4 kA (1s) [1]	10.7 kA (1s) [1]	13.2 kA (1s) [1]
Terminal cross section	up to 300 mm²		
Degree of protection accd. to EN 60529	IP54 (IP66 on request)		
Enclosure material	stainless steel / sheet steel		
Enclosure colour	natural stainless steel / finish polyester powder coating in RAL 7032		

[1] Other values on request

Dimensions Ex-e connection and bus-bar boxes

Content	Module size	Length of – terminal rail	Weight	Dimensions in mm L x B x T	
Sheet steel-connection box					
AK 1-1	1	1 x 190 mm	3.0 kg	126 x215 x 128	
AK 1-2	1	1 x 190 mm	4.3 kg	233 x 215 x 126	
AK 2-1	2	1 x 300 mm	4.5 kg	150 x 325 x 128	
AK 2-2	2	2 x 200 mm	7.0 kg	307 x 325 x 126	
AK 4-1	4	3 x 300 mm	9.5 kg	307 x 325 x 252	
AK 5-1	5	3 x 410 mm	11.5 kg	307 x 435 x 252	**(Order No. on request)**
AK 6-1	6	3 x 630 mm	23.5 kg	407 x 655 x 252	
AK 7-1	7	[1] 300 mm	15.8 kg	600 x 325 x 254	
AK 8-1	8	[1] 410 mm	18.7 kg	600 x 435 x 254	
AK 9-1	9	[1] 630 mm	31.8 kg	600 x 655 x 254	
AK 10-1	10	[1] 190 mm	5.1 kg	452 x 215 x 128	
Sheet steel-bus-bar box					
SSK 1	1	1 x 295 mm	11.0 kg	450 x 325 x 252	
SSK 2	2	2 x 405 mm	15.0 kg	450 x 435 x 252	**(Order No. on request)**
SSK 3	3	2 x 625 mm	23.0 kg	450 x 655 x 252	
SSK 4	4	2 x 845 mm	31.0 kg	450 x 875 x 252	

[1] Number of rails dependent on terminal type



GHG 64 Control Elements

Variable mounting of windows, control devices and signal lamps

Control your panel

In addition to the use of familiar bus bar and connection boxes for built-in components, e.g. windows, switches, indicating devices, actuators and switch blocks, a direct use of flameproof enclosures for Ex-d cover-mounting devices is also possible. The result is a multitude of possible combinations for the configuration of complex controls.

In accordance with your specifications, threaded Ex-d holes for accommodating the desired screw-in components are drilled into enclosure covers in our works.

Thanks to the modular design of the pushbutton, switch contact blocks can be exchanged at a later point in time. By simply undoing a bayonet connection inside the enclosure, individual contacts such as NC or NO can easily be replaced by multiple contact blocks without affecting the explosion protection. Here the extension of individual contacts to multiple contacts with up to four NC or NO contacts is possible.

Long-life LED lamps ensure safe operation on a lasting basis. Windows allow the monitoring of the built-in components. Ex-d actuating elements for various circuit breakers, such as mushroom-head pushbutton, key-operated switches or photocell inserts, complete the product range.



Features

- **Variable mounting of windows, actuators and signal lamps**
- **Rotary switches for main switch**
- **Pushbuttons with up to four contacts**
- **Pushbuttons with Emergency Stop function**
- **Key-operated switches/pushbuttons**
- **Signal lamp in various colours**
- **Padlocking facilities**
- **Nameplates**
- **Actuating elements for circuit breakers (MCBs)**



Mushroom-head pushb.w.lock



Mushroom-head pushbutton



Pushbutton



Key-operated pushbutton



Signal lamp

Technical data components for cover mounting

	Built-in Ex d control units / indicator elements / actuators for GHG 64
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d II
EC-Type Examination Certificate	PTB 06 ATEX 1009U
Operating temperature range	–20 °C up to +70 °C –20 °C up to +100 °C (option)
Application temperature[1)]	–20 °C up to +40 °C –20 °C up to +55 °C (option)
Rated voltage switch base	up to 500 V
Rated voltage indication lamps	230 V
Rated current switch basel	up to 63 A
Degree of protection accd. to EN 60529	IP65 (IP66, listed switch base up to 10 A, optional)
Fixing thread Ex-d	M22 x 1.5

Ordering details

Type	Content	Order No.
Switch base		
	1 NO	**GHG 640 9617 P0001**
	1 NC	**GHG 640 9617 P0002**
	1NO + 1 NC	**GHG 640 9617 P0003**
	2 NO	**GHG 640 9617 P0004**
	2 NC	**GHG 640 9617 P0005**
	2 NO + 1 NC	**GHG 640 9617 P0006**
	1 NO + 2 NC	**GHG 640 9617 P0007**
	2 NO + 2 NC	**GHG 640 9617 P0008**
	3 NO + 1 NC	**GHG 640 9617 P0009**
	1 NO + 3 NC	**GHG 640 9617 P0010**
	4 NO	**GHG 640 9617 P0011**
	4 NC	**GHG 640 9617 P0012**

Type	Content	Order No.	Thread length	
Signal lamp			**25 mm**	**40 mm**
	green	**GHG 640 9614...**	**P0011**	**P0021**
	red	**GHG 640 9614...**	**P0012**	**P0022**
	yellow	**GHG 640 9614...**	**P0013**	**P0023**
	blue	**GHG 640 9614...**	**P0014**	**P0024**
	farblos	**GHG 640 9614...**	**P0015**	**P0025**

Ordering details

Type	Content	Order No.	Thread length	
			25 mm	**40 mm**
Signal lamp	yellow	**GHG 640 9607...**	**P0011**	
	blue	**GHG 640 9607...**	**P0012**	**P0022**
	red	**GHG 640 9607...**	**P0013**	**P0023**
	green	**GHG 640 9607...**	**P0014**	**P0024**
	white	**GHG 640 9607...**	**P0015**	**P0025**
	black	**GHG 640 9607...**	**P0016**	**P0026**
Key-operated pushbutton				
	with 2 keys	**GHG 640 9608...**	**P0011**	**P0012**
Mushroom-head / EMERG.STOP pushbutton				
	D 36 mm with lock	**GHG 640 9603...**	**P0011**	**P0013**
	D 50 mm with lock	**GHG 640 9603...**	**P0012**	**P0014**
	with twist-release	**GHG 640 9604...**	**P0011**	**P0012**
	EMERG.STOP pushb.	**GHG 640 9606...**	**P0011**	**P0012**

Ex-d(e) control units, control switches, terminal boxes and distributions can be built in accordance with EC-Type Examination Certificate PTB 08 ATEX 1043X



Rotary switch base mounted



Rotary switch cover mounted



Photocell



Wndow, round



Window, square/rectangular

Ordering details

Type	Content	Order No.
Main switch up to 1000 A	**Rotary switch for cover**	
	Switch 32 - 63 A	**GHG 640 9612 P0001**
	Switch 63 - 100 A	**NOR 000 001 170 030**
	Switch 100- 250 A	**NOR 000 001 170 031**
	Switch 250-1000 A	**NOR 000 001 170 032**

Type	Content	Order No.
	Photocell 250 VAC / 10 A	**GHG 640 9601 P0003**

Ordering details

Type	Content	Order No.
	Window square, 60 x 60 mm	**on request**
	Window rectangular, 140 x 60 mm	**on request**
	Window rectangular, 140 x 180 mm	**on request**
	Window round, Ø 80 mm	**on request**
	Padlocking-facility Pushbutton engaged	**GHG 640 9614 P0001**
	Padlocking-facility Pushbutton released	**GHG 640 9614 P0002**

Ex-d(e) control units, control switches, terminal boxes and distributions can be built in accordance with EC-Type Examination Certificate PTB 08 ATEX 1043X.



Size 5



Size 4



Size 3



Size 2



Size 1

Technical data

	Ex-d Motor starter
EC-Type Examination Certificate	PTB 08 ATEX 1043X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIB / IIB + H2 T5, T6 Gb Ⓔx II 2 D Ex tb IIIC T80 °C, T95 °C Db IP66
IECEx Certificate of Conformity	IECEx PTB 11.0077 X
Marking accd. to IECEx	Ex d IIB + H2 T6, T5, T4 Gb
Permissible ambient temperature	–20 °C up to +40 °C –55 °C up to +55 °C (option)
Rated voltage	up to 690 V
Rated current	up to 100 A
Connecting terminals	up to 400 mm^2
Degree of protection accd. to EN 60529	IP65 (IP66 optional)
Weight	see ordering details
Enclosure material	die-cast aluminium
Enclosure colour	RAL 7032/7022

Ordering details

Content Motor capacity to AC 3	Main switch	Cable entry	Weight approx.	Order No.
11 kW	25 A	3 x M25	13.0 kg	**on request**
15 kW	25 A	2 x M32 / 1 x M25	23.0 kg	**on request**
22 kW	40 A	2 x M40 / 1 x M25	35.5 kg	**on request**
Reversing circuit				
11 kW	25 A	3 x M25	13.5 kg	**on request**
15 kW	25 A	2 x M32 / 1 x M25	23.5 kg	**on request**
22 kW	40 A	2 x M40 / 1 x M25	36.0 kg	**on request**
Star-delta starter				
7.5 KW	40 A	4 x M25	23.5 kg	**on request**
12.5 KW	40 A	4 x M25	24.0 kg	**on request**
18.5 KW	40 A	3 x M32 / 1 x M25	37.0 kg	**on request**
30.0 KW	63 A	3 x M32 / 1 x M25	38.0 kg	**on request**
37.0 KW	100 A	1 x M40 / 2 x M32 / 1 x M25	63.0 kg	**on request**
55.0 KW	100 A	1 x M40 / 2 x M32 / 1 x M25	63.0 kg	**on request**

You have your specific requirements for which we provide the appropriate solution:

- Ex low-voltage distributions
- Ex motor controls
- Ex lighting circuit distribution systems
- Ex heating circuit distribution systems
- Ex instrumentation applications
- Ex wireless LAN

Depending on the task in hand and taking the specified size and technology or specific ambient conditions into consideration, e.g. aggressive media, harsh industrial conditions or offshore applications, we engineer the optimum GHG 64 Ex-d distribution system for you as a solution for the most cost-effective, local control/power distribution in a hazardous area.

With this modular system, all enclosure sizes are fully compatible, thus making it possible to flange several smaller enclosures onto the large enclosures, whereby they are flush with all the adjacent areas. Thus, any distribution required can be realized using flameproof connections or connection and bus-bar boxes.

We can, of course, also integrate customer-specific functional units, such as frequency converters or electronic sub-assemblies, into our Ex-d solution as built-in apparatus.

According to your inquiry, we submit an optimum solution proposal for your required application.





- Compact design
- IIB + H2 applications
- Cost optimization thanks to low maintenance flat flamepaths and the compact design
- Can be used in extreme ambient temperatures from-55°C to +55°C
- Wide range of actuators
- Copper-free aluminium with high quality powder coating
- Up to IP 66 to EN 60529



With us you have the choice

With us you always have the possibility of choosing between fully configurated standard and customised equipment with direct cable entries, flameproof connection compartments or Ex-e connection compartments according to your requirements.

Customised solutions

We can supply you with an individual solution customised according to your wishes. We deliver individual units, combinations on wall or floor-mounting frameworks or free-standing for operation from both sides that are ready for connection to any place in the world.

Based on your specific requirements, we put together all the necessary components, assemble them with your specific built-in components, test all the functions and deliver them within the agreed time to the specified location.

It goes without saying that our CE Declaration of Conformity also observes and takes the built-in industrial components into consideration and, what is more, our customised solutions are also covered by other available national approvals, thus allowing you to concentrate fully on your core business. .

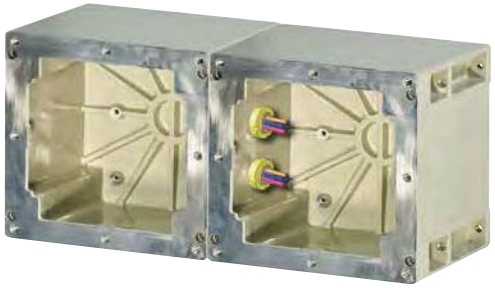






Our standard solution

As with the GHG 66 enclosure series, we also supply the GHG 64 enclosure series with fully assembled products, e.g. manual motor starters for direct, reversing and star-delta switching, as well as safety switches for up to 800 A, four-pole, and standard distributions with circuit breakers. These units have their own order numbers, have been fully tested and can be supplied at short notice.



Complex requirements for local explosion- protected controls

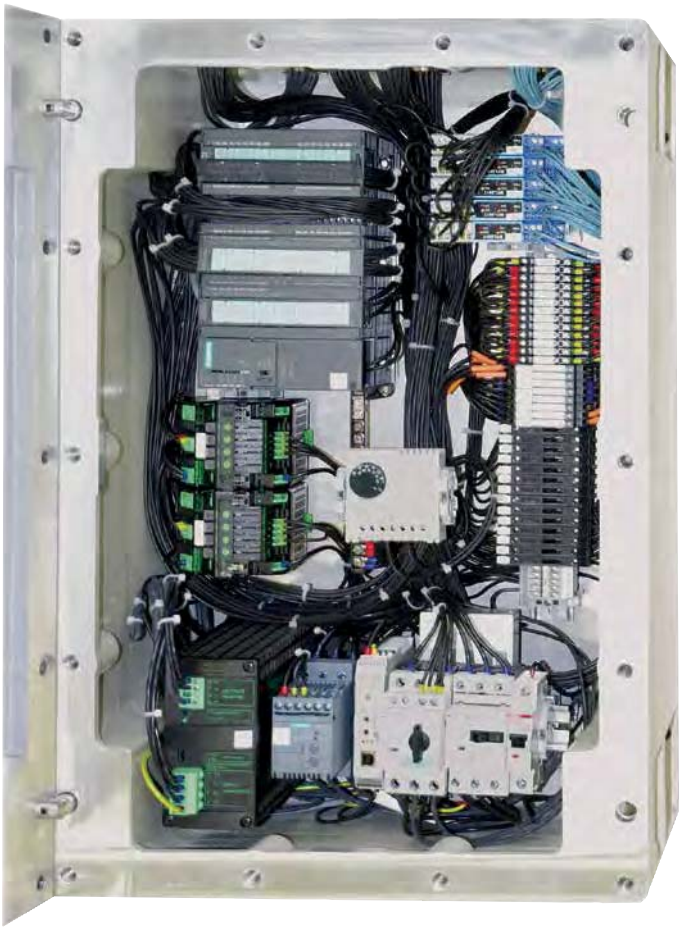
In addition to the stringent enclosure requirements, in the case of controls special emphasis is placed on the clear arrangement of the control and indicating elements.

For example, in the case of marine applications. The illustrated control unit is used for the operation of two electric motors of the hydraulic pump of the ship loading arm in a hazardous area that is classified as Group IIB.

This is a challenging task, as the components in the required compact design always have to be easily accessible. Here we were able to offer the customer an optimised solution that completely fulfils the given specifications using the GHG 64 concept.

Further applications of this kind, where a high degree of protection and compact design are required, are not only found in the oil and gas industries in installations for loading operations onshore and on offshore platforms or on oil or gas tankers, but also in pharmaceutical plants, at suppliers and in areas with Ex dust applications, e.g. in areas where sacks are emptied, mills and mixers, filling installations, etc.





Wireless solutions for the processing industry

New radio systems make reliable wireless communication for measuring and control applications possible. The demand for solutions in the processing industry is growing all the time. The range of possible applications even covers the equipment/field level. Here we are working together closely with MTL, the leading manufacturer of industrial radio systems, and can supply you with complete solutions on the basis of our GHG 64 enclosure system. This means that you can use various systems with open interfaces. The requirement profiles for the hardware are complex.





Intelligent instrumentation

Thanks to the GHG 64 enclosure concept, it is possible to combine the reliable safety of a modular, explosion-protected enclosure concept with the advantages of a continuous communications infrastructure between the main, control and process levels. Here, for example, Ethernet-based communication systems can also be used in hazardous areas. This allows the use of a modern information architecture and, at the same time, the efficient adherence to all the explosion protection criteria.

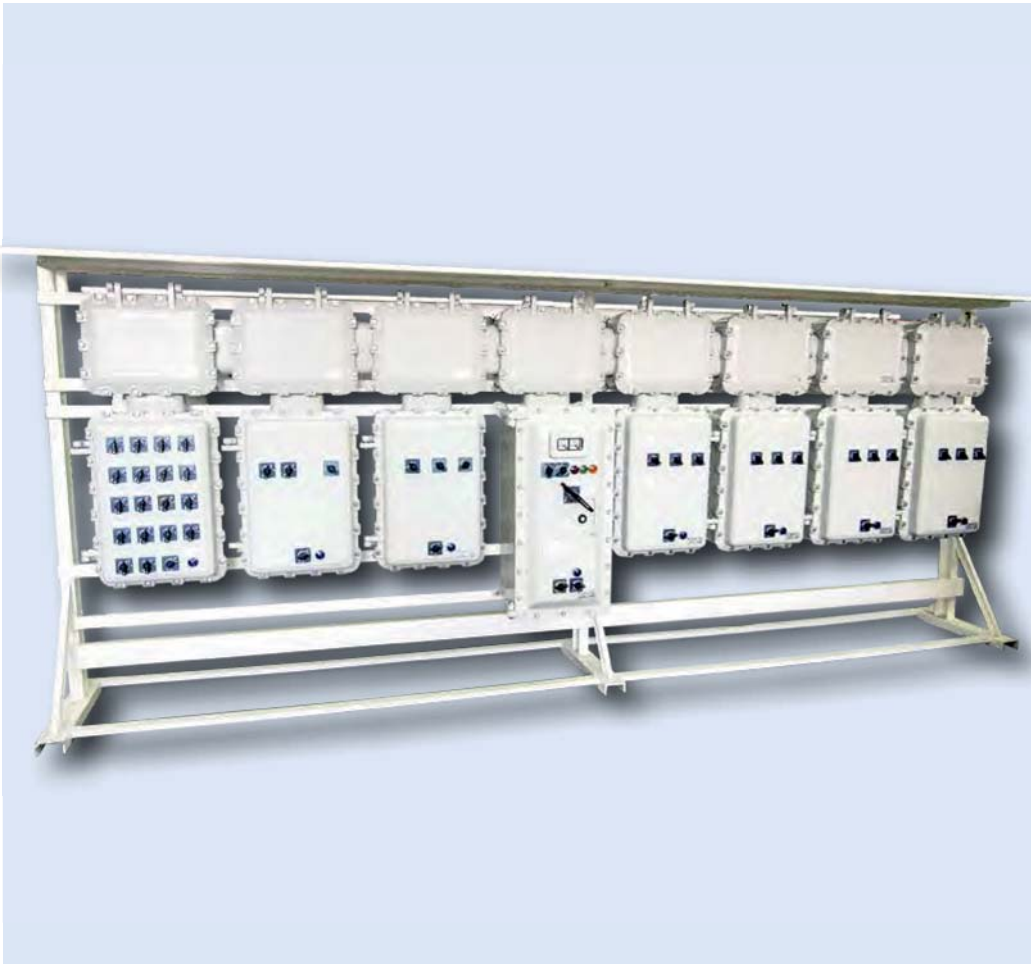
Ex-d Distributions EJ-Series

Metal enclosures for gases in explosion group IIB with variable mounting of windows, control devices and signal lamps

Flexible safety

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 for use in explosion group IIB for the hazardous areas of Zones 1 and 2 fulfils the requirements of ATEX directive 2014/34/EU. 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.



Features

- **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**

Customer specific

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.

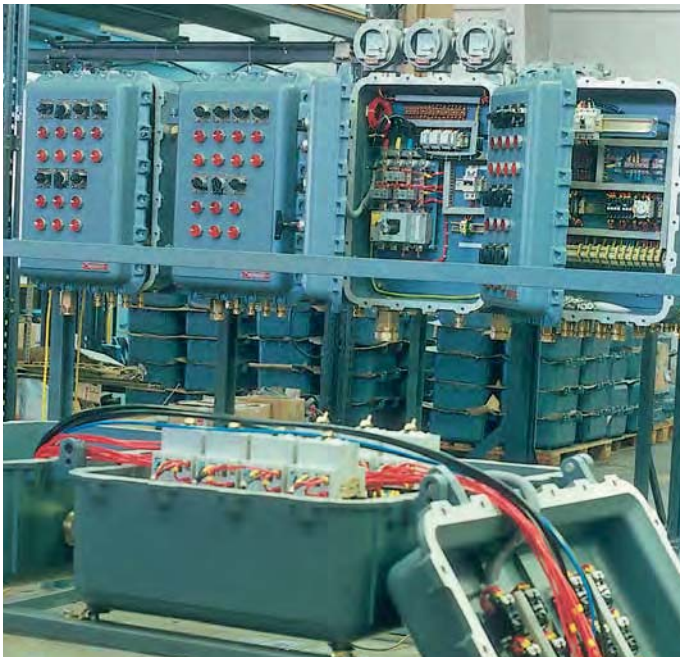
The enclosures are interconnected with cable bushings and/or bus bars and are especially designed to facilitate bus-bar allocation when putting distributions together.

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 12A



EJB 14R



EJB 23R



EJB 110

Technical data

	Ex EJB/EJW enclosures light alloy/sheet steel
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature[1)]	–20 °C up to +40 °C
Rated voltage	690 V
Rated current	1200 A
Protection class	I
Degree of protection accd. to EN 60529	IP65
Weight	see ordering details
Enclosure material	EJB in aluminium EJB 241 M1 and M2 cast iron EJW welded steel Front panels cast iron
Enclosure colour	epoxy-resin finish, grey

[1)] Depend on installation



EJB 120



EJB 130

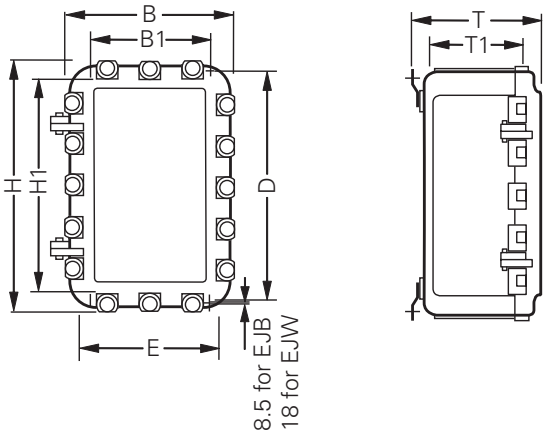


EJB 241 M1

Ordering details

Content	Power dissipation in Watt			Rated current in A	Weight kg	Rail fixing dimension mm		Enclosure size mm			Intern. space mm			Order No.
	T6	T5	T4			D	E	H	B	T	H1	B1	T1	
EJB 12 R	30	60	100	40	3.0	242	166	215	131	102	178	89	57	**NOR 000 001 170 438**
EJB 12 A	30	60	100	40	3.6	242	166	215	131	162	178	89	110	**NOR 000 001 170 446**
EJB 14 R	80	140	240	65	8.3	436	178	412	150	143	358	103	85	**NOR 000 001 170 462**
EJB 23 R	60	140	240	100	11.0	354	240	336	217	212	276	163	152	**NOR 000 001 170 488**
EJB 110	125	170	295	160	22.0	310	310	373	373	230	305	305	162	**NOR 000 001 170 496**
EJB 120	150	270	480	300	28.5	414	310	474	373	230	405	305	162	**NOR 000 001 170 503**
EJB 120 M3	150	270	480	300	28.5	414	310	474	373	230	405	305	162	**NOR 000 111 170 601**
EJB 120 M4	150	270	480	300	28.5	414	310	474	373	230	405	305	162	**NOR 000 111 170 606**
EJB 121	150	280	500	350	32.0	414	310	474	373	295	405	305	235	**NOR 000 001 170 511**
EJB 130	200	340	590	450	35.3	520	310	577	373	230	518	305	162	**NOR 000 001 170 529**
EJB 131	200	350	610	500	39.0	520	310	577	373	295	518	305	235	**NOR 000 001 170 537**
EJB 240	250	400	700	800	52.3	624	414	680	474	230	619	405	162	**NOR 000 001 170 545**
EJB 241	250	400	700	850	56.8	624	414	680	474	295	619	405	235	**NOR 000 001 170 553**
EJB 241 M1	250	400	700	850	54.0	624	414	680	474	295	619	405	235	**NOR 000 111 170 469**
EJW 250	250	340	560	1200	145.0	852	387	890	425	280	810	345	199	**NOR 000 001 190 139**
EJW 251	380	520	850	1200	167.0	852	387	890	425	440	810	345	320	**NOR 000 001 190 197**
EJW 350	380	520	850	1200	168.0	852	502	890	540	322	810	460	250	**NOR 000 001 190 171**
EJW 351	450	600	1000	1200	175.0	852	502	890	540	446	810	460	375	**NOR 000 001 190 062**
EJW 561	600	730	1000	1200	380.0	1242	687	1280	765	386	1200	685	325	**NOR 000 001 190 064**

Dimension drawing



Ex-Enclosure IIB metal enclosure

Dimensions in mm



Motor starter

Technical data

	Ex EJB light-alloy motor starter
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIB T6
EC-Type Examination Certificate	LOM 03 ATEX 2004 X
Permissible ambient temperature	–20 °C up to +40 °C
Rated voltage	690 V
Rated current	63 A
Protection class	I
Connecting terminals	up to max. 240 mm^2
Degree of protection accd. to EN 60529	IP65
Dimensions (L x H x W)	see dimension drawing
Weight	see ordering details
Enclosure material	EJB in aluminium Front panels cast iron
Enclosure colour	epoxy-resin finish, grey

Ordering details

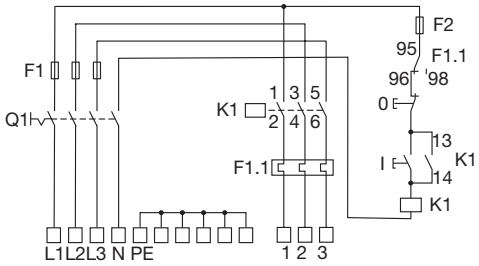
Motor capacity	Main switch	Cable gland	Weight	Module size	Order No.
Type: Direct circuit					
4.0 kW	25 A	2 x M 25 Ex-d	4.0 kg	1	**EXKO 732 101 M**
4.0 kW	25 A	2 x M 25 Ex-d	12.0 kg	2	**EXKO 732 102 M**
5.5 kW	40 A	2 x M 25 Ex-d	12.0 kg	2	**EXKO 732 103 M**
8.0 kW	40 A	2 x M 25 Ex-d	16.8 kg	3	**EXKO 732 104 M**
12.5 kW	63 A	2 x M 32 Ex-d	17.2 kg	3	**EXKO 732 105 M**
15.0 kW	63 A	2 x M 32 Ex-d	18.8 kg	3	**EXKO 732 106 M**
Type: Star-delta starter					
12.5 kW	40 A	2 x M 25 Ex-d	17.2 kg	2	**EXKO 732 113 M**
18.5 kW	40 A	2 x M 32 Ex-d	19.7 kg	2	**EXKO 732 114 M**
25.0 kW	40 A	2 x M 32 Ex-d	25.3 kg	3	**EXKO 732 115 M**
Type: Reversing circuit					
4.0 kW	25 A	2 x M 25 Ex-d	4.0 kg	1	**EXKO 732 107 M**
4.0 kW	25 A	2 x M 25 Ex-d	12.0 kg	2	**EXKO 732 108 M**
5.5 kW	40 A	2 x M 25 Ex-d	12.0 kg	2	**EXKO 732 109 M**
8.0 kW	40 A	2 x M 25 Ex-d	16.8 kg	3	**EXKO 732 110 M**
12.5 kW	63 A	2 x M 32 Ex-d	17.2 kg	3	**EXKO 732 111 M**
15.0 kW	63 A	2 x M 32 Ex-d	18.8 kg	3	**EXKO 732 112 M**

Other switching capacities, soft starter and variable speed drives on request

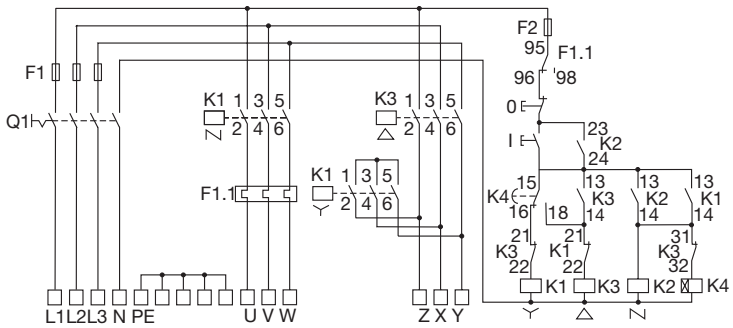


Motor starter

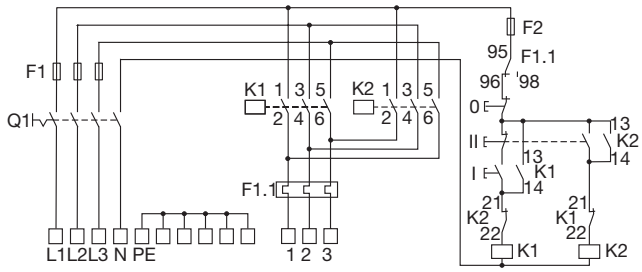
Wiring diagram I Dimension drawing



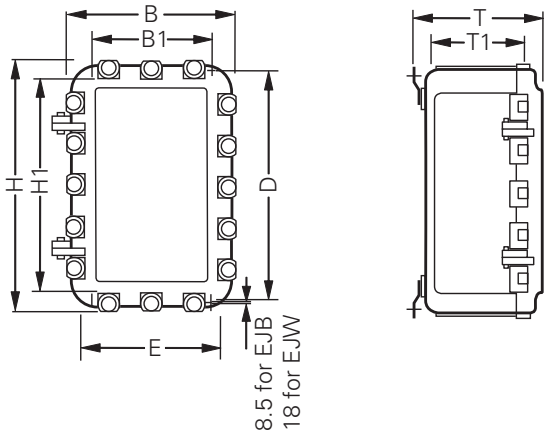
Direct on-line starter



Star-delta starter



Reversing circuit



Version	Rail fixing dimensions mm		Enclosure size mm			Internal space mm		
	D	E	H	B	T	H1	B1	T1
1	242	166	215	131	102	178	89	57
2	436	178	412	150	143	358	103	85
3	354	240	336	217	212	276	163	152

Dimensions in mm



Signal lamp



Key-operated switch



Mushroom-head pushbutton



Pushbutton

Technical data

	Signal lamp
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature[1)]	–20 °C up to +40 °C
Rated voltage	500 V
Rated power consumption	3 W
Connecting terminals	2 x 2.5 mm²
Degree of protection accd. to EN 60529	IP65
Weight	see ordering details
Enclosure material	body material aluminium window material white, yellow, red or green polycarbonate
Lamp cap	Ba 9 s

	Pushbutton | Mushroom-head pushbutton | Key-operated switch
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature[1)]	–20 °C up to +40 °C
Rated voltage	500 V
Rated current	10 A
Connecting terminals	2 x 2.5 mm²
Degree of protection accd. to EN 60529	IP65
Weight	see ordering details
Enclosure material	Aluminium

[1)] Depend on installation



Pushbutton



Mushroom-head pushbutton



Key-operated switch



Signal lamp

Ordering details

Description	Colour	Order No.
Signal lamp		
Incandescent lamp 240 V, 3 W	white, yellow, red, yellow-green	**NOR 000 001 170 016**
Incandescent lamp 130 V, 2.6 W	white, yellow, red, yellow-green	**NOR 000 001 170 017**
Incandescent lamp 24 V, 1.2 W	white, yellow, red, yellow-green	**NOR 000 001 170 018**
Transformer incandescent lamp 380-400/6V, 1.2 W	white, yellow, red, yellow-green	**NOR 000 001 170 019**
LED 230 V	white, yellow, red, yellow-green	**NOR 000 001 170 116**
LED 130 V	white, yellow, red, yellow-green	**NOR 000 001 170 117**
LED 24 V	white, yellow, red, yellow-green	**NOR 000 001 170 118**

Description	Colour	Inscription	Order No.
Pushbutton and mushroom-head pushbutton with contact block 1NC + 1NO			
Pushbutton	white	I 0 STOP START	**NOR 000 001 170 004**
Pushbutton lockable in pushed position with padlock	white	0 STOP OFF	**NOR 000 001 170 005**
Pushbutton lockable in un-pushed position with padlock	white	I 0 STOP START	**NOR 000 001 170 006**
Mushroom-head pushbutton	red, yellow	0 STOP OFF	**NOR 000 001 170 007**
Mushroom-head pushbutton lockable in un-pushed position with padlock	red, yellow	0 STOP OFF	**NOR 000 001 170 008**
Mushroom-head pushbutton lockable in un-pushed position with padlock	red, yellow	0 STOP OFF	**NOR 000 001 170 009**
Key-operated switch			**NOR 000 001 170 010**
Mushroom-head pushbutton with key unlocking			**NOR 000 001 170 011**
Pushbutton		RESET	**NOR 000 001 170 012**

Description	Colour	Inscription	Order No.
Contact blok (wihtout pushbutton)			
1 NC			**NOR 000 001 170 013**
1 NO			**NOR 000 001 170 014**
Pushbutton label	green, red, yellow, black	II arrow ON RESET TEST	**NOR 000 001 170 015**
Key-operated switch			
0-1, 2 P 12 A			**NOR 000 001 170 020**
0-1, 2 P 25 A			**NOR 000 001 170 021**
0-1, 3 P 25 A			**NOR 000 001 170 022**
1-2, 1 P 12 A			**NOR 000 001 170 023**
1-2, 2 P 12 A			**NOR 000 001 170 024**
1-0-2, 1 P 12 A			**NOR 000 001 170 025**



Cable bushing



Rotary actuator <250 A



Rotary actuator <63 A



Window

Technical data

		Window
Marking accd. to 2014/34/EU		Ⓔx II 2 G Ex d IIB
EC-Type Examination Certificate		LOM 02 ATEX 3060 U
Application temperature[1)]		–20 °C up to +40 °C
Degree of protection accd. to EN 60529		IP65
Dimensions (L x H x W)		60 x 60 mm 75 x 75 mm 110 x 50 mm 110 x 75 mm
Enclosure material	frame material window material	aluminium borosilicate glass
Enclosure colour		epoxy resin finish, grey

	Rotary actuator
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature[1)]	–20 °C up to +40 °C
Rated voltage	500 V
Rated current	25 A 63 A 250 A 500 A
Degree of protection accd. to EN 60529	IP65
Enclosure material	Aluminium
Enclosure colour	stainless steel finish
Options	Locking facility for units up to 40 A. on front panel, for units > 40 A on enclosure panel.

	Cable bushing
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature[1)]	–20 °C up to +40 °C
Rated voltage	690 V
Rated current	50 A 75 A 150 A
Size	4 x 10 mm^2 + 1 x 6 mm^2 up to zu 9 x 1.5 mm^2 + depends on use (50 A) 4 x 16 mm^2 + 1 x 10 mm^2 up to zu 9 x 1.5 mm^2 + depends on use (75 A) 4 x 50 mm^2 + 1 x 10 mm^2 up to zu 47 x 1.5 mm^2 + depends on use (150 A)
Degree of protection accd. to EN 60529	IP65
Material	bichromatised hexagonal steel
Cable sealing	high-thermal and chemical-resistant compound

[1)] Depend on installation



Window



Rotary actuator <63 A



Rotary actuator <250 A

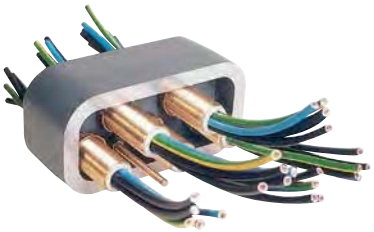


Cable bushing

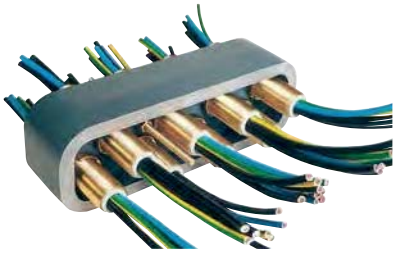
Ordering details

Description	Order No.
Rotary switch	
Rotary switch, 1-0-2, 2 P, 12 A	**NOR 000 001 170 026**
Rotary switch, 0-1, 2 P, 12 A	**NOR 000 001 170 027**
Rotary switch, 0-1-M, 2 P, 12 A	**NOR 000 001 170 028**
Rotary actuator for main switch:	
Main switch, 25 A up to < 63 A	**NOR 000 001 170 029**
Main switch, 63 A up to < 100 A	**NOR 000 001 170 030**
Main switch, 100 A up to < 250 A	**NOR 000 001 170 031**
Main switch, 250 A up to < 1000 A	**NOR 000 001 170 032**
Plain labels for switch	
Plain labels for switch, 60 x 60	**NOR 000 001 170 033**
Plain labels for switch, 70 x 70	**NOR 000 001 170 034**
Plain labels for switch, 85 x 85	**NOR 000 001 170 035**
Rotary actuator for MCBs	
Rotary actuator for MCBs 1-pole ABB	**NOR 000 001 170 933**
Rotary actuator for MCBs Multipole ABB	**NOR 000 001 170 925**
Rotary actuator for MCBs 1-pole M&G	**NOR 000 001 170 600**
Rotary actuator for MCBs Multipole M&G	**NOR 000 001 170 569**
Rotary actuator for MCBs POWER	**NOR 000 001 170 565**

	Thread	Content	Order No.
Cable bushing			
50 A 4 x 10 mm2 + 1 x 6 mm2	3/4" NPT	3P+N+PE	**NOR 000 001 170 892**
75 A 4 x 16 mm2 + 1 x 10 mm2	1" NPT	3P+N+PE	**NOR 000 001 170 909**
150 A 4 x 50 mm2 + 1 x 10 mm2	1 1/2" NPT	3P+N+PE	**NOR 000 001 170 917**
Window			
60 x 60 mm, Type M 6060			**NOR 000 001 170 000**
75 x 75 mm, Type M 7575			**NOR 000 001 170 001**
110 x 50 mm, Type M 11050			**NOR 000 001 170 002**
110 x 75 mm, Type M 11075			**NOR 000 001 170 003**
Blanking plug			
Blanking plug			**NOR 000 001 170 154**



Size 1 > 150 A ≤ 350 A

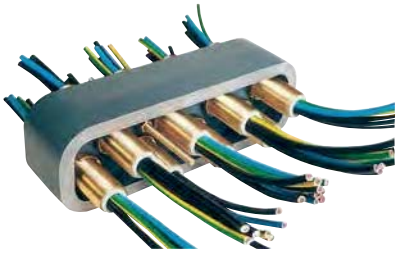


Size 2 > 630 A ≤ 800 A

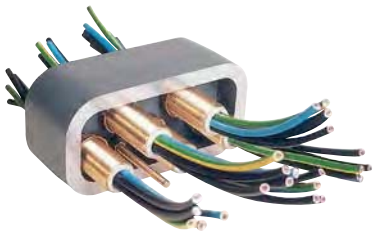
Technical data

	Bus bar for interconnection of enclosoures
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature[1)]	–20 °C up to +40 °C
Rated voltage	690 V AC
Rated current	150 A 350 A 500 A 800 A
Wire cross section Size 1 up to 150 A 3P+N+PE Size 1 up to 350 A 3P+N+PE Size 1 up to 500 A Size 1 up to 800 A	 4 x 10 mm^2 + 1 x 6 mm^2, up to 9 x 1.5 mm^2 + depends on use Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N) 350 A, 1 auxiliary bushing max. 19 x 1.5 mm^2, 1 PE-rail Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N) 500 A, 1 auxiliary bushing max. 19 x 1.5 mm^2, 1 PE-rail Aluminium coupler 310 x 102 mm, comprising 7 bars, (3P+N) 800 A, 1 auxiliary bushing max. 19 x 1.5 mm^2, 1 PE-rail
Degree of protection accd. to EN 60529	IP65
Dimensions (L x H x W)	60 x 60 mm 75 x 75 mm 110 x 50 mm 110 x 75 mm
Enclosure material	Duroplastic
Cable sealing	high-thermal and chemical-resistant compound

[1)] Depend on installation



Size 2 > 630 A ≤ 800 A



Size 1 > 150 A ≤ 350 A

Ordering details

Description	Enclosure size	Order No.
Bus bars for interconnection of enclosures		
Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N+PE) ≤350 A, 1 auxiliary bushing max. 19 x 1.5 mm², 1 PE-rail	1	**NOR 000 001 170 036**
Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N+PE) >350 A ≤ 500 A, 1 auxiliary bushing max. 19 x 1.5 mm², 1 PE-rail	1	**NOR 000 001 170 037**
Aluminium coupler 310 x 102 mm, comprising 4 bars, (3P+N+PE) >500 A ≤ 630 A, 1 auxiliary bushing max. 19 x 1.5 mm², 1 PE-rail	2	**NOR 000 001 170 038**
Aluminium coupler 310 x 102 mm, comprising 3 x 2 + 1 bars, (3P+N+PE) >630 A ≤ 800 A, 1 auxiliary bushing max. 19 x 1.5 mm², 1 PE-rail	2	**NOR 000 001 170 039**



GUB 00



GUB 20



GUB 30

Technical data

	Ex d light alloy enclosure GUB
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIC Gb Ⓔx II 2 D Ex t IIIC Gb
EC-Type Examination Certificate	LOM 03 ATEX 3107U
Permissible ambient temperature	–20 °C up to +40 °C –60 °C up to +55 °C (option)
Rated voltage	690 V
Rated current	max. 250 A
Protection class	I
Degree of protection accd. to EN 60529	IP67
Cable glands/enclosure drilling	1)
Dimensions (L x W x H)	1)
Weight	1)
Enclosure material	copper-free aluminium
Enclosure colour	Polyester finish grey

1) see table

Ordering details

Type	Power dissipation 1)			Rated current	Weight		Order No.
	T6	T5	T4	max.	approx.		
Ex d light alloy empty enclosures GUB							
GUB 00	60	85	150	60 A	3.20 kg		**NOR 000 001 160 116**
GUB 20	100	145	255	150 A	6.20 kg		**NOR 000 001 160 124**
GUB 30	140	200	360	250 A	10.20 kg		**NOR 000 001 160 132**
Type	**1/2"**	**3/4"**	**1"**	**1 1/4"**	**1 1/2"**	**2"**	**2 1/2"**
Max. entries per side							
GUB 00	4	3	2	2	2	–	–
GUB 20	6	5	3	2	2	1	1
GUB 30	10	8	5	3	3	2	2

1) Power dissipation to keep the temperature class only. Operating temperature of internal components has to be considered.

These enclosures can provide according to LOM 04 ATEX 2018 certification with the following electrical apparatus:

bus-bars, terminals, low voltage transformers, air circuit breakers, automatic circuit breakers, control and operations circuits, servomotors without ventilation, starters and ballasts for discharge lamps, electronic apparatus, associated SI apparatus, etc. according customer needs.



GUB 30

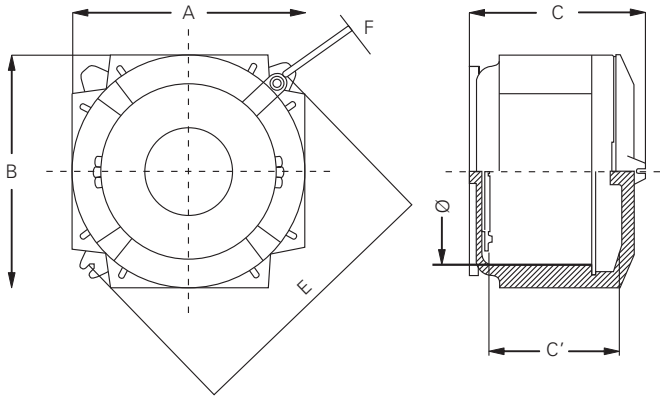


GUB 20



GUB 00

Dimension drawing



Ex d light alloy enclosure GUB

Type	External			Internal		Mounting	
	A	B	C	Ø	C′	E	F
GUB 00	170	170	135	125	74	210	9
GUB 20	215	215	195	175	139	250	11
GUB 30	333	333	180	295	120	370	11

Dimensions in mm

CAP 190 124 ..... 2.3.26
CAP 190 164 ..... 2.3.26
CAP 190 194 ..... 2.3.26
CAP 190 204 ..... 2.3.26
CAP 190 254 ..... 2.3.26
CAP 190 294 ..... 2.3.26
CAP 190 324 ..... 2.3.26
CAP 190 394 ..... 2.3.26
CAP 190 404 ..... 2.3.26
CAP 190 494 ..... 2.3.26
CAP 190 504 ..... 2.3.26
CAP 190 594 ..... 2.3.26
CAP 190 634 ..... 2.3.26
CAP 190 694 ..... 2.3.26
CAP 190 794 ..... 2.3.26
CAP 190 894 ..... 2.3.26
CAP 190 994 ..... 2.3.26
CAP 191 094 ..... 2.3.26
CAP 191 194 ..... 2.3.26
CAP 191 294 ..... 2.3.26
CAP 221 245 ..... 2.3.22
CAP 221 249 ..... 2.3.11
CAP 221 249 ..... 2.3.22
CAP 221 294 ..... 2.3.21
CAP 221 645 ..... 2.3.22
CAP 221 649 ..... 2.3.11
CAP 221 649 ..... 2.3.22
CAP 221 694 ..... 2.3.21
CAP 222 045 ..... 2.3.22
CAP 222 049 ..... 2.3.11
CAP 222 049 ..... 2.3.22
CAP 222 094 ..... 2.3.21
CAP 222 545 ..... 2.3.22
CAP 222 549 ..... 2.3.11
CAP 222 549 ..... 2.3.22
CAP 222 594 ..... 2.3.21
CAP 223 245 ..... 2.3.22
CAP 223 249 ..... 2.3.11
CAP 223 249 ..... 2.3.22
CAP 223 294 ..... 2.3.21
CAP 224 045 ..... 2.3.22
CAP 224 049 ..... 2.3.11
CAP 224 049 ..... 2.3.22
CAP 224 094 ..... 2.3.21
CAP 225 045 ..... 2.3.22
CAP 225 049 ..... 2.3.11
CAP 225 049 ..... 2.3.22
CAP 225 094 ..... 2.3.21
CAP 226 345 ..... 2.3.22
CAP 226 349 ..... 2.3.11
CAP 226 349 ..... 2.3.22
CAP 226 394 ..... 2.3.21
CAP 229 010 ..... 2.3.22
CAP 229 012 ..... 2.3.22
CAP 229 014 ..... 2.3.22
CAP 229 020 ..... 2.3.22
CAP 229 034 ..... 2.3.22
CAP 229 038 ..... 2.3.22
CAP 229 112 ..... 2.3.22
CAP 229 114 ..... 2.3.22
CAP 229 212 ..... 2.3.22
CAP 229 300 ..... 2.3.22
CAP 229 312 ..... 2.3.22
CAP 238 049 ..... 2.3.22
CAP 239 010 ..... 2.3.22
CAP 239 012 ..... 2.3.22
CAP 239 014 ..... 2.3.22
CAP 239 020 ..... 2.3.22
CAP 239 034 ..... 2.3.22
CAP 239 038 ..... 2.3.22
CAP 239 112 ..... 2.3.22
CAP 239 114 ..... 2.3.22
CAP 239 212 ..... 2.3.22
CAP 239 312 ..... 2.3.22
CAP 280 104 ..... 2.3.21
CAP 280 114 ..... 2.3.21
CAP 280 124 ..... 2.3.21
CAP 280 134 ..... 2.3.21
CAP 280 144 ..... 2.3.21
CAP 280 154 ..... 2.3.21
CAP 280 164 ..... 2.3.21
CAP 280 174 ..... 2.3.21
CAP 280 184 ..... 2.3.21
CAP 280 194 ..... 2.3.21
CAP 280 204 ..... 2.3.21
CAP 280 214 ..... 2.3.21
CAP 506 040 ..... 2.3.20
CAP 506 050 ..... 2.3.20
CAP 506 060 ..... 2.3.20
CAP 506 070 ..... 2.3.20
CAP 506 080 ..... 2.3.20
CAP 506 090 ..... 2.3.20
CAP 506 100 ..... 2.3.20
CAP 506 110 ..... 2.3.20
CAP 506 120 ..... 2.3.20
CAP 506 130 ..... 2.3.20
CAP 506 140 ..... 2.3.20
CAP 506 150 ..... 2.3.20
CAP 506 160 ..... 2.3.20
CAP 560 530 ..... 2.3.20
CAP 560 630 ..... 2.3.20
CAP 560 730 ..... 2.3.20
CAP 560 830 ..... 2.3.20
CAP 560 930 ..... 2.3.20
CAP 561 030 ..... 2.3.20
CAP 561 130 ..... 2.3.20
CAP 561 230 ..... 2.3.20
CAP 561 330 ..... 2.3.20
CAP 561 430 ..... 2.3.20
CAP 561 530 ..... 2.3.20
CAP 561 630 ..... 2.3.20
CAP 567 024 ..... 2.3.21
CAP 567 034 ..... 2.3.21
CAP 567 044 ..... 2.3.21
CAP 567 054 ..... 2.3.21
CAP 567 064 ..... 2.3.21
CAP 567 074 ..... 2.3.21
CAP 567 084 ..... 2.3.21
CAP 567 094 ..... 2.3.21
CAP 567 104 ..... 2.3.21
CAP 567 124 ..... 2.3.21
CAP 567 134 ..... 2.3.21
CAP 567 154 ..... 2.3.21
CAP 567 154 ..... 2.3.21
CAP 567 174 ..... 2.3.21
CAP 567 184 ..... 2.3.21
CAP 567 194 ..... 2.3.21
CAP 740 024 ..... 2.3.25
CAP 740 034 ..... 2.3.25
CAP 740 294 ..... 2.3.25
CAP 740 304 ..... 2.3.25
CAP 740 454 ..... 2.3.27
CAP 740 564 ..... 2.3.25
CAP 740 574 ..... 2.3.25
CAP 740 714 ..... 2.3.27
CAP 740 724 ..... 2.3.27
CAP 740 834 ..... 2.3.25
CAP 740 844 ..... 2.3.25
CAP 740 864 ..... 2.3.25
CAP 740 984 ..... 2.3.27
CAP 740 994 ..... 2.3.27
CAP 741 104 ..... 2.3.25
CAP 741 114 ..... 2.3.25
CAP 741 124 ..... 2.3.25
CAP 741 254 ..... 2.3.27
CAP 741 264 ..... 2.3.27
CAP 741 374 ..... 2.3.25
CAP 741 384 ..... 2.3.25
CAP 741 524 ..... 2.3.27
CAP 741 534 ..... 2.3.27
CAP 741 644 ..... 2.3.25
CAP 741 794 ..... 2.3.27
CAP 741 804 ..... 2.3.27
CAP 744 704 ..... 2.3.27
CAP 744 884 ..... 2.3.25
CAP 744 894 ..... 2.3.25
CAP 744 964 ..... 2.3.27
CAP 744 974 ..... 2.3.27
CAP 745 154 ..... 2.3.25
CAP 745 164 ..... 2.3.25
CAP 745 234 ..... 2.3.27
CAP 745 244 ..... 2.3.27
CAP 745 424 ..... 2.3.25
CAP 745 434 ..... 2.3.25
CAP 745 444 ..... 2.3.25
CAP 745 504 ..... 2.3.27
CAP 745 514 ..... 2.3.27
CAP 745 574 ..... 2.3.25
CAP 745 584 ..... 2.3.25
CAP 745 594 ..... 2.3.25
CAP 745 604 ..... 2.3.25
CAP 745 654 ..... 2.3.25
CAP 745 664 ..... 2.3.25
CAP 745 694 ..... 2.3.25
CAP 745 704 ..... 2.3.25
CAP 745 734 ..... 2.3.25
CAP 745 774 ..... 2.3.27
CAP 745 834 ..... 2.3.25
CAP 745 844 ..... 2.3.25
CAP 745 854 ..... 2.3.25
CAP 745 864 ..... 2.3.25
CAP 745 874 ..... 2.3.25
CAP 745 914 ..... 2.3.25
CAP 745 924 ..... 2.3.25
CAP 745 934 ..... 2.3.25
CAP 745 964 ..... 2.3.25
CAP 745 974 ..... 2.3.25
CAP 746 044 ..... 2.3.27
CAP 746 054 ..... 2.3.27
CAP 746 234 ..... 2.3.25
CAP 746 244 ..... 2.3.25
CAP 746 314 ..... 2.3.27
CAP 746 504 ..... 2.3.25
CAP 746 834 ..... 2.3.25
CAP 806 404 V1 ..... 2.3.14
CAP 806 405 V1 ..... 2.3.14
CAP 806 409 V1 ..... 2.3.14
CAP 806 504 V1 ..... 2.3.14
CAP 806 505 V1 ..... 2.3.14
CAP 806 509 V1 ..... 2.3.14
CAP 806 594 V1 ..... 2.3.14
CAP 806 595 V1 ..... 2.3.14
CAP 806 599 V1 ..... 2.3.14
CAP 806 604 V1 ..... 2.3.14
CAP 806 605 V1 ..... 2.3.14
CAP 806 609 V1 ..... 2.3.14
CAP 806 664 V1 ..... 2.3.14
CAP 806 665 V1 ..... 2.3.14
CAP 806 669 V1 ..... 2.3.14
CAP 806 674 V1 ..... 2.3.14
CAP 806 675 V1 ..... 2.3.14
CAP 806 679 V1 ..... 2.3.14
CAP 806 694 V1 ..... 2.3.14
CAP 806 695 V1 ..... 2.3.14
CAP 806 699 V1 ..... 2.3.14
CAP 806 704 V1 ..... 2.3.14
CAP 806 705 V1 ..... 2.3.14
CAP 806 709 V1 ..... 2.3.14
CAP 806 774 V1 ..... 2.3.14
CAP 806 775 V1 ..... 2.3.14
CAP 806 779 V1 ..... 2.3.14
CAP 806 794 V1 ..... 2.3.14
CAP 806 795 V1 ..... 2.3.14
CAP 806 799 V1 ..... 2.3.14
CAP 806 804 V1 ..... 2.3.14
CAP 806 805 V1 ..... 2.3.14
CAP 806 809 V1 ..... 2.3.14
CAP 806 904 V1 ..... 2.3.14
CAP 806 905 V1 ..... 2.3.14
CAP 806 909 V1 ..... 2.3.14
CAP 807 004 V1 ..... 2.3.14
CAP 807 005 V1 ..... 2.3.14
CAP 807 009 V1 ..... 2.3.14
CAP 807 084 V1 ..... 2.3.14
CAP 807 085 V1 ..... 2.3.14
CAP 807 089 V1 ..... 2.3.14
CAP 807 204 V1 ..... 2.3.14
CAP 807 205 V1 ..... 2.3.14
CAP 807 209 V1 ..... 2.3.14
CAP 807 304 V1 ..... 2.3.14
CAP 807 305 V1 ..... 2.3.14
CAP 807 309 V1 ..... 2.3.14
CAP 807 504 V1 ..... 2.3.14
CAP 807 505 V1 ..... 2.3.14
CAP 807 509 V1 ..... 2.3.14
CAP 807 594 V1 ..... 2.3.14
CAP 807 595 V1 ..... 2.3.14
CAP 807 599 V1 ..... 2.3.14
CAP 807 604 V1 ..... 2.3.14
CAP 807 605 V1 ..... 2.3.14
CAP 807 609 V1 ..... 2.3.14
CAP 807 704 V1 ..... 2.3.14
CAP 807 705 V1 ..... 2.3.14
CAP 807 709 V1 ..... 2.3.14
CAP 808 604 V1 ..... 2.3.15
CAP 808 605 V1 ..... 2.3.15
CAP 808 609 V1 ..... 2.3.15
CAP 808 664 V1 ..... 2.3.15
CAP 808 665 V1 ..... 2.3.15
CAP 808 669 V1 ..... 2.3.15
CAP 808 674 V1 ..... 2.3.15
CAP 808 675 V1 ..... 2.3.15
CAP 808 679 V1 ..... 2.3.15
CAP 808 694 V1 ..... 2.3.15
CAP 808 695 V1 ..... 2.3.15
CAP 808 699 V1 ..... 2.3.15
CAP 808 704 V1 ..... 2.3.15
CAP 808 705 V1 ..... 2.3.15
CAP 808 709 V1 ..... 2.3.15
CAP 808 774 V1 ..... 2.3.15
CAP 808 775 V1 ..... 2.3.15
CAP 808 779 V1 ..... 2.3.15
CAP 808 794 V1 ..... 2.3.15
CAP 808 795 V1 ..... 2.3.15
CAP 808 799 V1 ..... 2.3.15
CAP 808 804 V1 ..... 2.3.15
CAP 808 805 V1 ..... 2.3.15
CAP 808 809 V1 ..... 2.3.15
CAP 808 904 V1 ..... 2.3.15
CAP 808 905 V1 ..... 2.3.15
CAP 808 909 V1 ..... 2.3.15
CAP 809 004 V1 ..... 2.3.15
CAP 809 005 V1 ..... 2.3.15
CAP 809 009 V1 ..... 2.3.15
CAP 809 204 V1 ..... 2.3.15
CAP 809 205 V1 ..... 2.3.15
CAP 809 209 V1 ..... 2.3.15
CAP 809 294 V1 ..... 2.3.15
CAP 809 295 V1 ..... 2.3.15
CAP 809 299 V1 ..... 2.3.15
CAP 809 404 V1 ..... 2.3.15
CAP 809 405 V1 ..... 2.3.15

Index of Order Code

CAP 809 409 V1....2.3.15
CAP 809 504 V1....2.3.15
CAP 809 505 V1....2.3.15
CAP 809 509 V1....2.3.15
CAP 809 594 V1....2.3.15
CAP 809 595 V1....2.3.15
CAP 809 599 V1....2.3.15
CAP 809 604 V1....2.3.15
CAP 809 605 V1....2.3.15
CAP 809 609 V1....2.3.15
CAP 809 704 V1....2.3.15
CAP 809 705 V1....2.3.15
CAP 809 709 V1....2.3.15
CAP 810 434....2.3.20
CAP 810 534....2.3.20
CAP 810 634....2.3.20
CAP 810 734....2.3.20
CAP 810 834....2.3.20
CAP 810 934....2.3.20
CAP 811 034....2.3.20
CAP 811 134....2.3.20
CAP 811 234....2.3.20
CAP 811 334....2.3.20
CAP 811 434....2.3.20
CAP 811 534....2.3.20
CAP 811 634....2.3.20
CAP 846 404 V1....2.3.16
CAP 846 405 V1....2.3.16
CAP 846 409 V1....2.3.16
CAP 846 504 V1....2.3.16
CAP 846 505 V1....2.3.16
CAP 846 509 V1....2.3.16
CAP 846 594 V1....2.3.16
CAP 846 595 V1....2.3.16
CAP 846 599 V1....2.3.16
CAP 846 604 V1....2.3.16
CAP 846 605 V1....2.3.16
CAP 846 609 V1....2.3.16
CAP 846 674 V1....2.3.16
CAP 846 675 V1....2.3.16
CAP 846 679 V1....2.3.16
CAP 846 694 V1....2.3.16
CAP 846 695 V1....2.3.16
CAP 846 699 V1....2.3.16
CAP 846 704 V1....2.3.16
CAP 846 705 V1....2.3.16
CAP 846 709 V1....2.3.16
CAP 846 774 V1....2.3.16
CAP 846 775 V1....2.3.16
CAP 846 779 V1....2.3.16
CAP 846 794 V1....2.3.16
CAP 846 795 V1....2.3.16
CAP 846 799 V1....2.3.16
CAP 846 804 V1....2.3.16
CAP 846 805 V1....2.3.16
CAP 846 809 V1....2.3.16
CAP 846 894 V1....2.3.16
CAP 846 895 V1....2.3.16
CAP 846 899 V1....2.3.16
CAP 846 904 V1....2.3.16
CAP 846 905 V1....2.3.16
CAP 846 909 V1....2.3.16
CAP 846 994 V1....2.3.16
CAP 846 995 V1....2.3.16
CAP 846 999 V1....2.3.16
CAP 847 004 V1....2.3.16
CAP 847 005 V1....2.3.16
CAP 847 009 V1....2.3.16
CAP 847 094 V1....2.3.16
CAP 847 095 V1....2.3.16
CAP 847 099 V1....2.3.16
CAP 847 204 V1....2.3.16
CAP 847 205 V1....2.3.16
CAP 847 209 V1....2.3.16
CAP 847 294 V1....2.3.16
CAP 847 295 V1....2.3.16
CAP 847 299 V1....2.3.16
CAP 847 304 V1....2.3.16
CAP 847 305 V1....2.3.16
CAP 847 309 V1....2.3.16
CAP 847 394 V1....2.3.16
CAP 847 395 V1....2.3.16
CAP 847 399 V1....2.3.16
CAP 847 404 V1....2.3.16
CAP 847 405 V1....2.3.16
CAP 847 409 V1....2.3.16
CAP 847 494 V1....2.3.16
CAP 847 495 V1....2.3.16
CAP 847 499 V1....2.3.16
CAP 847 504 V1....2.3.16
CAP 847 505 V1....2.3.16
CAP 847 509 V1....2.3.16
CAP 847 574 V1....2.3.16
CAP 847 575 V1....2.3.16
CAP 847 579 V1....2.3.16
CAP 847 594 V1....2.3.16
CAP 847 595 V1....2.3.16
CAP 847 599 V1....2.3.16
CAP 848 404 V1....2.3.17
CAP 848 405 V1....2.3.17
CAP 848 409 V1....2.3.17
CAP 848 504 V1....2.3.17
CAP 848 505 V1....2.3.17
CAP 848 509 V1....2.3.17
CAP 848 594 V1....2.3.17
CAP 848 595 V1....2.3.17
CAP 848 599 V1....2.3.17
CAP 848 604 V1....2.3.17
CAP 848 605 V1....2.3.17
CAP 848 609 V1....2.3.17
CAP 848 674 V1....2.3.17
CAP 848 675 V1....2.3.17
CAP 848 679 V1....2.3.17
CAP 848 694 V1....2.3.17
CAP 848 695 V1....2.3.17
CAP 848 699 V1....2.3.17
CAP 848 704 V1....2.3.17
CAP 848 705 V1....2.3.17
CAP 848 709 V1....2.3.17
CAP 848 774 V1....2.3.17
CAP 848 775 V1....2.3.17
CAP 848 779 V1....2.3.17
CAP 848 794 V1....2.3.17
CAP 848 795 V1....2.3.17
CAP 848 799 V1....2.3.17
CAP 848 804 V1....2.3.17
CAP 848 805 V1....2.3.17
CAP 848 809 V1....2.3.17
CAP 848 894 V1....2.3.17
CAP 848 895 V1....2.3.17
CAP 848 899 V1....2.3.17
CAP 848 904 V1....2.3.17
CAP 848 905 V1....2.3.17
CAP 848 909 V1....2.3.17
CAP 848 994 V1....2.3.17
CAP 848 995 V1....2.3.17
CAP 848 999 V1....2.3.17
CAP 849 004 V1....2.3.17
CAP 849 005 V1....2.3.17
CAP 849 009 V1....2.3.17
CAP 849 094 V1....2.3.17
CAP 849 095 V1....2.3.17
CAP 849 099 V1....2.3.17
CAP 849 204 V1....2.3.17
CAP 849 205 V1....2.3.17
CAP 849 209 V1....2.3.17
CAP 849 294 V1....2.3.17
CAP 849 295 V1....2.3.17
CAP 849 299 V1....2.3.17
CAP 849 404 V1....2.3.17
CAP 849 405 V1....2.3.17
CAP 849 409 V1....2.3.17
CAP 849 494 V1....2.3.17
CAP 849 495 V1....2.3.17
CAP 849 499 V1....2.3.17
CAP 849 504 V1....2.3.17
CAP 849 505 V1....2.3.17
CAP 849 509 V1....2.3.17
CAP 849 594 V1....2.3.17
CAP 849 595 V1....2.3.17
CAP 849 599 V1....2.3.17
CAP 965 594 V1....2.3.18
CAP 965 599 V1....2.3.18
CAP 965 604 V1....2.3.18
CAP 965 609 V1....2.3.18
CAP 965 674 V1....2.3.18
CAP 965 679 V1....2.3.18
CAP 965 694 V1....2.3.18
CAP 965 699 V1....2.3.18
CAP 965 704 V1....2.3.18
CAP 965 709 V1....2.3.18
CAP 965 794 V1....2.3.18
CAP 965 799 V1....2.3.18
CAP 965 804 V1....2.3.18
CAP 965 809 V1....2.3.18
CAP 965 894 V1....2.3.18
CAP 965 899 V1....2.3.18
CAP 965 904 V1....2.3.18
CAP 965 909 V1....2.3.18
CAP 965 994 V1....2.3.18
CAP 965 999 V1....2.3.18
CAP 966 004 V1....2.3.18
CAP 966 009 V1....2.3.18
CAP 966 094 V1....2.3.18
CAP 966 099 V1....2.3.18
CAP 967 594 V1....2.3.19
CAP 967 599 V1....2.3.19
CAP 967 604 V1....2.3.19
CAP 967 609 V1....2.3.19
CAP 967 674 V1....2.3.19
CAP 967 679 V1....2.3.19
CAP 967 694 V1....2.3.19
CAP 967 699 V1....2.3.19
CAP 967 704 V1....2.3.19
CAP 967 709 V1....2.3.19
CAP 967 794 V1....2.3.19
CAP 967 799 V1....2.3.19
CAP 967 804 V1....2.3.19
CAP 967 809 V1....2.3.19
CAP 967 894 V1....2.3.19
CAP 967 899 V1....2.3.19
CAP 967 904 V1....2.3.19
CAP 967 909 V1....2.3.19
CAP 967 994 V1....2.3.19
CAP 967 999 V1....2.3.19
CAP 968 094 V1....2.3.19
CAP 968 099 V1....2.3.19
CAP 968 294 V1....2.3.19
CAP 968 299 V1....2.3.19
EXKO 208 900 A 0001....2.6.12
EXKO 208 900 A 0002....2.6.12
EXKO 208 900 A 0003....2.6.12
EXKO 208 900 B 0001....2.6.12
EXKO 208 900 B 0002....2.6.12
EXKO 208 900 B 0003....2.6.12
EXKO 208 900 C 0001....2.6.12
EXKO 208 900 C 0002....2.6.12
EXKO 208 900 C 0003....2.6.12
EXKO 208 900 C 0004....2.6.12
EXKO 214 600 G 0000....2.6.9
EXKO 214 600 G 0001....2.6.9
EXKO 214 600 G 0002....2.6.9
EXKO 214 600 G 0003....2.6.9
EXKO 214 600 G 0004....2.6.9
EXKO 214 600 G 0005....2.6.9
EXKO 223 100 Q 0000....2.6.15
EXKO 223 100 Q 0001....2.6.15
EXKO 223 100 Q 0002....2.6.15
EXKO 223 100 Q 0003....2.6.15
EXKO 223 100 Q 0004....2.6.15
EXKO 223 100 Q 0005....2.6.15
EXKO 223 800 C 0004....2.6.15
EXKO 223 800 C 0005....2.6.15
EXKO 223 800 C 0006....2.6.15
EXKO 224716 K 0000....2.5.18
EXKO 224716 L 0000....2.5.21
EXKO 224726 K 0000....2.5.18
EXKO 224726 L 0000....2.5.21
EXKO 233 800 C 0001....2.6.9
EXKO 233 800 C 0002....2.6.9
EXKO 233 800 C 0003....2.6.9
EXKO 233201 A0006....2.1.109
EXKO 233201 A0007....2.1.110
EXKO 233201 A0014....2.1.111
EXKO 233201 A0015....2.1.107
EXKO 233201 A0016....2.1.108
EXKO 233201 A0019....2.1.112
EXKO 233201 A0021....2.1.113
EXKO 233201 A0025....2.1.114
EXKO 71 5000 F 0000....2.6.92
EXKO 71 5000 H 0000....2.6.92
EXKO 71 5000 K 0000....2.6.92
EXKO 71 5100 F 0000....2.6.92
EXKO 71 5100 H 0000....2.6.92
EXKO 71 5100 K 0000....2.6.92
EXKO 71 5200 B 0000....2.6.92
EXKO 71 5200 D 0000....2.6.92
EXKO 71 5200 F 0000....2.6.92
EXKO 71 5200 H 0000....2.6.92
EXKO 71 5200 K 0000....2.6.92
EXKO 71 5200 M 0000....2.6.92
EXKO 73 1813 A0001....2.5.82
EXKO 73 1813 B0001....2.5.84
EXKO 73 1813 C0001....2.5.86
EXKO 73 1813 D0001....2.5.88
EXKO 73 1813 E0001....2.5.90
EXKO 73 1813 F0001....2.5.92
EXKO 73 1814 A0001....2.5.82
EXKO 73 1814 B0001....2.5.84
EXKO 73 1814 C0001....2.5.86
EXKO 73 1814 D0001....2.5.88
EXKO 73 1814 E0001....2.5.90
EXKO 73 1814 F0001....2.5.92
EXKO 731713 S0001....2.5.23
EXKO 731713 T0001....2.5.25
EXKO 731713 U0001....2.5.27
EXKO 731713 V0001....2.5.29
EXKO 731716 S0001....2.5.23
EXKO 731716 T0001....2.5.25
EXKO 731723 S0001....2.5.23
EXKO 731723 T0001....2.5.25
EXKO 731723 U0001....2.5.27
EXKO 731723 V0001....2.5.29
EXKO 731726 S0001....2.5.23
EXKO 731726 T0001....2.5.25
EXKO 732 101 M....2.6.116
EXKO 732 102 M....2.6.116
EXKO 732 103 M....2.6.116
EXKO 732 104 M....2.6.116
EXKO 732 105 M....2.6.116
EXKO 732 106 M....2.6.116
EXKO 732 107 M....2.6.116

EXKO 732 108 M....2.6.116
EXKO 732 109 M....2.6.116
EXKO 732 110 M....2.6.116
EXKO 732 111 M....2.6.116
EXKO 732 112 M....2.6.116
EXKO 732 113 M....2.6.116
EXKO 732 114 M....2.6.116
EXKO 732 115 M....2.6.116
EXKO238001E0001....2.1.104
EXKO238001E0002....2.1.104
EXKO238001E0003....2.1.104
EXKO238001E0004....2.1.104
EXKO238001E0005....2.1.104
EXKO238001E0006....2.1.104
EXKO238001E0007....2.1.104
EXKO238001E0008....2.1.104
EXKO238001E0009....2.1.104
EXKO238001E0010....2.1.104
EXKO238001E0011....2.1.104
EXKO238001E0012....2.1.104
EXKO238001E0013....2.1.104
EXKO238001E0014....2.1.104
EXKO238001E0015....2.1.104
EXKO238001E0016....2.1.104
EXKO238001E0017....2.1.104
EXKO238001E0018....2.1.104
EXKO238001E0019....2.1.104
EXKO238001E0020....2.1.104
EXKO238001E0021....2.1.104
EXKO238001E0022....2.1.104
EXKO238001E0023....2.1.104
EXKO238001E0024....2.1.104
EXKO238001E0025....2.1.104
EXKO238001E0026....2.1.104
EXKO238001E0027....2.1.104
EXKO238001E0028....2.1.104
EXKO238001E0029....2.1.104
EXKO238001E0030....2.1.104
EXKO238001E0031....2.1.104
EXKO238001E0032....2.1.104
EXKO238001E0033....2.1.104
EXKO238001E0034....2.1.104
EXKO238001E0035....2.1.104
EXKO238001E0036....2.1.104
EXKO238001F0001....2.1.105
EXKO238001F0002....2.1.105
EXKO238001F0003....2.1.105
EXKO238001F0004....2.1.105
EXKO238001F0005....2.1.105
EXKO238001F0006....2.1.105
EXKO238001F0007....2.1.105
EXKO238001F0008....2.1.105
EXKO238001F0009....2.1.105
EXKO238001F0010....2.1.105
EXKO238001F0011....2.1.105
EXKO238001F0012....2.1.105
GEH 001 01 61....2.6.74
GEH 001 01 62....2.6.74
GEH 002 01 61....2.6.74
GEH 002 01 62....2.6.74
GEH 003 01 61....2.6.74
GEH 003 01 62....2.6.74
GEH 003 02 61....2.6.74
GEH 003 02 62....2.6.74
GEH 003 03....2.6.74
GEH 004 01 61....2.6.74
GEH 004 01 62....2.6.74
GEH 004 02 61....2.6.74
GEH 004 02 62....2.6.74
GEH 004 03 61....2.6.74
GEH 004 03 62....2.6.74
GEH 004 04....2.6.74
GEH 100 00....2.6.76
GEH 100 01 61....2.6.76
GEH 100 01 62....2.6.76
GEH 200 00....2.6.76
GEH 200 01 61....2.6.76
GEH 200 01 62....2.6.76
GEH 300 00....2.6.76
GEH 300 01 61....2.6.76
GEH 300 01 62....2.6.76
GEH 300 02 61....2.6.76
GEH 300 02 62....2.6.76
GEH 300 03....2.6.76
GEH 400 00....2.6.76
GEH 400 01 61....2.6.76
GEH 400 01 62....2.6.76
GEH 400 02 61....2.6.76
GEH 400 02 62....2.6.76
GEH 400 03 61....2.6.76
GEH 400 03 62....2.6.76
GEH 400 04....2.6.76
GHG 260 1004 R0005....2.6.47
GHG 260 1004 R0006....2.6.47
GHG 260 1005 R0005....2.6.47
GHG 260 1005 R0006....2.6.47
GHG 260 1006 R0003....2.6.47
GHG 260 1006 R0004....2.6.47
GHG 260 1007 R0003....2.6.47
GHG 260 1007 R0004....2.6.47
GHG 260 1008 R0003....2.6.47
GHG 260 1008 R0004....2.6.47
GHG 261 0005 R0005....2.5.8
GHG 261 0005 R0009....2.5.8
GHG 261 0005 R0010....2.5.8
GHG 261 0006 R0001....2.5.70
GHG 262 0014 R0001....2.5.31
GHG 262 0016 R0001....2.5.72
GHG 262 0016 R0002....2.5.72
GHG 262 0016 R0003....2.5.72
GHG 262 0016 R0004....2.5.72
GHG 262 0016 R0005....2.5.72
GHG 262 1301 R0001....2.5.72
GHG 262 2301 R0001....2.5.10
GHG 262 2301 R0002....2.5.10
GHG 262 2301 R0007....2.5.10
GHG 262 2301 R0010....2.5.10
GHG 262 2601 R0001....2.5.10
GHG 262 2601 R0002....2.5.10
GHG 262 2601 R0005....2.5.10
GHG 263 0048 R0002....2.5.75
GHG 263 0048 R0003....2.5.75
GHG 263 0048 R0004....2.5.75
GHG 263 0048 R0005....2.5.75
GHG 263 0048 R0006....2.5.75
GHG 263 0050 R0001....2.5.13
GHG 263 0050 R0002....2.5.13
GHG 263 0050 R0006....2.5.13
GHG 263 0053 R0001....2.5.33
GHG 263 1301 R0001....2.5.75
GHG 263 2301 R0001....2.5.13
GHG 263 2301 R0002....2.5.13
GHG 263 2301 R0007....2.5.13
GHG 264 0019 R0003....2.5.78
GHG 264 0019 R0004....2.5.78
GHG 264 0020 R0001....2.5.16
GHG 264 0020 R0002....2.5.16
GHG 264 0021 R0001....2.5.16
GHG 264 0021 R0002....2.5.16
GHG 264 0022 R9015....2.5.78
GHG 264 0024 R0001....2.5.35
GHG 265 0010 R0001....2.5.18
GHG 265 0010 R0002....2.5.18
GHG 265 0010 R0005....2.5.18
GHG 266 0006 R0001....2.5.21
GHG 266 0006 R0002....2.5.21
GHG 273 2000 R0003....2.4.7
GHG 273 2000 R0010....2.4.7
GHG 273 2000 R0017....2.4.7
GHG 273 2000 R0018....2.4.7
GHG 273 2000 R0022....2.4.7
GHG 273 2000 R9017....2.4.7
GHG 273 4000 R0004....2.4.7
GHG 273 4000 R0007....2.4.7
GHG 273 6000 R0003....2.4.7
GHG 273 6000 R0011....2.4.7
GHG 273 6000 R0014....2.4.7
GHG 292 1000 R0001....2.4.118
GHG 292 1000 R0002....2.4.118
GHG 292 1000 R0003....2.4.118
GHG 292 1000 R0004....2.4.118
GHG 292 2000 R0002....2.4.118
GHG 292 2000 R0003....2.4.118
GHG 292 2000 R0004....2.4.118
GHG 292 2001 R0001....2.4.118
GHG 293 1000 R0001....2.4.118
GHG 293 1000 R0002....2.4.118
GHG 294 1000 R0001....2.4.124
GHG 294 1000 R0002....2.4.124
GHG 294 1000 R0003....2.4.124
GHG 294 1000 R0004....2.4.124
GHG 294 2000 R0002....2.4.124
GHG 294 2000 R0003....2.4.124
GHG 294 2000 R0004....2.4.124
GHG 295 1000 R0001....2.4.124
GHG 295 1000 R0002....2.4.124
GHG 410 1901 R0124....2.4.112
GHG 410 1901 R0125....2.4.112
GHG 410 1901 R0126....2.4.112
GHG 410 1901 R0128....2.4.112
GHG 410 1901 R0132....2.4.112
GHG 410 1901 R0133....2.4.112
GHG 410 1901 R0134....2.4.112
GHG 410 1901 R0135....2.4.112
GHG 410 1901 R0141....2.4.112
GHG 410 1901 R1033....2.4.112
GHG 410 1901 R1034....2.4.112
GHG 410 1901 R1035....2.4.112
GHG 410 1901 R1036....2.4.112
GHG 410 1901 R1036....2.4.112
GHG 410 1901 R1036....2.4.112
GHG 410 1914 R0001....2.4.112
GHG 410 1920 R0001....2.4.112
GHG 410 1921 R0001....2.4.112
GHG 410 1926 R0001....2.4.110
GHG 410 1926 R0002....2.4.110
GHG 410 1926 R0003....2.4.110
GHG 410 1926 R0004....2.4.110
GHG 410 1926 R0005....2.4.110
GHG 410 1926 R0006....2.4.110
GHG 410 1926 R0007....2.4.110
GHG 410 1926 R0008....2.4.110
GHG 410 1926 R0009....2.4.110
GHG 410 1926 R0010....2.4.110
GHG 410 1926 R0011....2.4.110
GHG 410 1926 R0012....2.4.110
GHG 410 1926 R0013....2.4.110
GHG 410 1926 R0014....2.4.110
GHG 410 1926 R0015....2.4.110
GHG 410 1926 R0016....2.4.110
GHG 410 1926 R0017....2.4.110
GHG 410 1926 R0018....2.4.110
GHG 410 1926 R0019....2.4.110
GHG 410 1926 R0020....2.4.110
GHG 410 1926 R0021....2.4.110
GHG 410 1928 R0001....2.4.110
GHG 410 1928 R0002....2.4.110
GHG 410 1928 R0003....2.4.110
GHG 410 1928 R0004....2.4.110
GHG 410 1928 R0005....2.4.110
GHG 410 1928 R0006....2.4.110
GHG 410 1928 R0007....2.4.110
GHG 410 1928 R0008....2.4.110
GHG 410 1928 R0009....2.4.110
GHG 410 1928 R0010....2.4.110
GHG 410 1928 R0011....2.4.110
GHG 410 1928 R0012....2.4.110
GHG 410 1928 R0013....2.4.110
GHG 410 1928 R0014....2.4.110
GHG 410 1928 R0015....2.4.110
GHG 410 1928 R0016....2.4.110
GHG 410 1928 R0017....2.4.110
GHG 410 1928 R0018....2.4.110
GHG 410 1928 R0019....2.4.110
GHG 410 1928 R0021....2.4.110
GHG 410 1928 R0051....2.4.110
GHG 410 1939 R0002....2.4.112
GHG 410 1953 R0001....2.4.112
GHG 410 1992 R0001....2.6.72
GHG 410 1992 R0002....2.6.72
GHG 410 1992 R0003....2.6.72
GHG 410 1992 R0004....2.6.72
GHG 410 1992 R0005....2.6.72
GHG 410 1992 R0006....2.6.72
GHG 410 1992 R0007....2.6.72
GHG 410 1992 R0008....2.6.72
GHG 410 1992 R0009....2.6.72
GHG 410 1992 R0010....2.6.72
GHG 410 1992 R0011....2.6.72
GHG 410 1992 R0012....2.6.72
GHG 410 1992 R0013....2.6.72
GHG 410 1992 R0014....2.6.72
GHG 410 1992 R0015....2.6.72
GHG 410 1992 R0016....2.6.72
GHG 410 1992 R0017....2.6.72
GHG 410 1992 R0018....2.6.72
GHG 410 1992 R0019....2.6.72
GHG 410 1992 R0020....2.6.72
GHG 410 1992 R0021....2.6.72
GHG 410 1994 R0001....2.4.112
GHG 410 1994 R0002....2.4.112
GHG 410 1994 R0003....2.4.112
GHG 410 1994 R0004....2.4.112
GHG 410 1994 R0005....2.4.112
GHG 411 8100 R0001....2.4.10
GHG 411 8100 R0002....2.4.10
GHG 411 8100 R0003....2.4.10
GHG 411 8100 R0004....2.4.10
GHG 411 8100 R0005....2.4.10
GHG 411 8100 R0006....2.4.10
GHG 411 8100 R0007....2.4.10
GHG 411 8100 R0008....2.4.10
GHG 411 8100 R0009....2.4.10
GHG 411 8100 R0012....2.4.10
GHG 411 8100 R0018....2.4.10
GHG 411 8200 R0001....2.4.11
GHG 411 8200 R0003....2.4.11
GHG 411 8200 R0016....2.4.11
GHG 411 8200 R0017....2.4.11
GHG 411 8200 R0018....2.4.11
GHG 411 8281 R0002....2.4.13
GHG 411 8281 R0003....2.4.13
GHG 411 8281 R0004....2.4.13
GHG 411 8281 R0005....2.4.13
GHG 411 8281 R0007....2.4.13
GHG 411 8282 R0002....2.4.13
GHG 411 8282 R0003....2.4.13
GHG 411 8282 R0004....2.4.13
GHG 411 8282 R0005....2.4.13
GHG 411 8282 R0007....2.4.13
GHG 411 8282 R0008....2.4.13
GHG 411 8282 R0009....2.4.13

Index of Order Code

GHG 411 8282 R0010 2.4.13
GHG 411 8282 R0011 2.4.13
GHG 411 8282 R0012 2.4.13
GHG 411 8282 R0013 2.4.13
GHG 411 8282 R0014 2.4.13
GHG 411 8285 R0033 2.4.13
GHG 411 8286 R0035 2.4.13
GHG 411 8300 R0001 2.4.12
GHG 411 8300 R0003 2.4.12
GHG 411 8300 R0004 2.4.12
GHG 411 8300 R0023 2.4.12
GHG 412 8281 R0002 2.4.109
GHG 412 8281 R0003 2.4.109
GHG 412 8281 R0004 2.4.109
GHG 412 8281 R0005 2.4.109
GHG 412 8281 R0007 2.4.109
GHG 412 8282 R0002 2.4.109
GHG 412 8282 R0003 2.4.109
GHG 412 8282 R0004 2.4.109
GHG 412 8282 R0005 2.4.109
GHG 412 8282 R0006 2.4.109
GHG 412 8282 R0008 2.4.109
GHG 412 8282 R0009 2.4.109
GHG 412 8282 R0010 2.4.109
GHG 412 8282 R0011 2.4.109
GHG 412 8282 R0012 2.4.109
GHG 412 8282 R0013 2.4.109
GHG 412 8282 R0014 2.4.109
GHG 412 8282 R0015 2.4.109
GHG 412 8282 R0016 2.4.109
GHG 412 8282 R0017 2.4.109
GHG 412 8282 R0018 2.4.109
GHG 412 8282 R0019 2.4.109
GHG 412 8282 R0020 2.4.109
GHG 412 8282 R0021 2.4.109
GHG 412 8282 R0031 2.4.109
GHG 412 8285 R0033 2.4.109
GHG 412 8286 R0035 2.4.109
GHG 413 8400 R0001 2.4.24
GHG 413 8400 R0002 2.4.24
GHG 413 8400 R0003 2.4.24
GHG 413 8400 R0004 2.4.24
GHG 413 8481 R0002 2.4.26
GHG 413 8481 R0003 2.4.26
GHG 413 8481 R0004 2.4.26
GHG 413 8481 R0005 2.4.26
GHG 413 8481 R0007 2.4.26
GHG 413 8482 R0002 2.4.26
GHG 413 8482 R0003 2.4.26
GHG 413 8482 R0004 2.4.26
GHG 413 8482 R0005 2.4.26
GHG 413 8482 R0007 2.4.26
GHG 413 8482 R0008 2.4.26
GHG 413 8482 R0009 2.4.26
GHG 413 8482 R0010 2.4.26
GHG 413 8482 R0011 2.4.26
GHG 413 8482 R0012 2.4.26
GHG 413 8482 R0013 2.4.26
GHG 413 8482 R0014 2.4.26
GHG 413 8482 R0033 2.4.26
GHG 413 8500 R0001 2.4.25
GHG 413 8500 R0002 2.4.25
GHG 413 8500 R0003 2.4.25
GHG 414 8100 R0001 2.4.30
GHG 414 8100 R0002 2.4.30
GHG 414 8100 R0003 2.4.30
GHG 414 8100 R0004 2.4.30
GHG 414 8181 R0002 2.4.32
GHG 414 8181 R0003 2.4.32
GHG 414 8181 R0004 2.4.32
GHG 414 8181 R0005 2.4.32
GHG 414 8181 R0007 2.4.32
GHG 414 8181 R0033 2.4.32
GHG 414 8181 R0035 2.4.32
GHG 414 8182 R0002 2.4.32
GHG 414 8182 R0003 2.4.32
GHG 414 8182 R0004 2.4.32
GHG 414 8182 R0005 2.4.32
GHG 414 8182 R0007 2.4.32
GHG 414 8182 R0008 2.4.32
GHG 414 8182 R0009 2.4.32
GHG 414 8182 R0010 2.4.32
GHG 414 8182 R0011 2.4.32
GHG 414 8182 R0012 2.4.32
GHG 414 8182 R0013 2.4.32
GHG 414 8182 R0014 2.4.32
GHG 414 8182 R0033 2.4.32
GHG 414 8200 R0001 2.4.31
GHG 414 8200 R0002 2.4.31
GHG 414 8200 R0003 2.4.31
GHG 432 0001 R0003 2.4.17
GHG 432 0001 R0004 2.4.17
GHG 432 0001 R0005 2.4.17
GHG 432 0001 R0006 2.4.17
GHG 432 0001 R0012 2.4.17
GHG 432 0001 R0013 2.4.17
GHG 432 0001 R0014 2.4.17
GHG 432 0001 R0015 2.4.17
GHG 432 0001 R0016 2.4.17
GHG 432 0001 R0017 2.4.17
GHG 432 0001 R0018 2.4.17
GHG 432 0001 R0019 2.4.17
GHG 432 0001 R0020 2.4.17
GHG 432 0011 R0001 2.4.16
GHG 432 0011 R0002 2.4.16
GHG 432 0011 R0003 2.4.16
GHG 432 0011 R0005 2.4.16
GHG 432 0011 R0006 2.4.18
GHG 432 0011 R0008 2.4.18
GHG 432 0011 R0009 2.4.18
GHG 434 0111 R0002 2.4.19
GHG 434 0111 R0010 2.4.19
GHG 434 0111 R0011 2.4.19
GHG 434 1111 R0004 2.4.20
GHG 434 1111 R0005 2.4.20
GHG 434 1111 R0009 2.4.20
GHG 440 1917 R0001 2.4.112
GHG 510 1901 R0001 2.1.21
GHG 510 1901 R0001 2.1.60
GHG 510 1901 R0001 2.1.76
GHG 510 1901 R0002 2.1.21
GHG 510 1901 R0002 2.1.60
GHG 510 1901 R0002 2.1.76
GHG 510 1901 R0003 2.1.21
GHG 510 1901 R0003 2.1.60
GHG 510 1901 R0003 2.1.76
GHG 510 1901 R0004 2.1.25
GHG 510 1901 R0004 2.1.64
GHG 510 1901 R0004 2.1.80
GHG 510 1901 R0005 2.1.25
GHG 510 1901 R0005 2.1.64
GHG 510 1901 R0005 2.1.80
GHG 511 3304 R0001 2.1.18
GHG 511 3306 R0001 2.1.19
GHG 511 3405 R0001 2.1.19
GHG 511 3406 R0001 2.1.19
GHG 511 3407 R0001 2.1.19
GHG 511 3409 R0001 2.1.19
GHG 511 3506 R0001 2.1.19
GHG 511 4304 R0001 2.1.18
GHG 511 4304 R0002 2.1.18
GHG 511 4304 R0301 2.1.44
GHG 511 4304 R0351 2.1.44
GHG 511 4304 R1001 2.1.47
GHG 511 4304 R3001 2.1.18
GHG 511 4304 R3003 2.1.18
GHG 511 4306 R0001 2.1.19
GHG 511 4306 R0002 2.1.19
GHG 511 4306 R0301 2.1.44
GHG 511 4306 R0351 2.1.44
GHG 511 4306 R0901 2.1.90
GHG 511 4306 R0902 2.1.90
GHG 511 4306 R0903 2.1.90
GHG 511 4306 R1001 2.1.47
GHG 511 4306 R3001 2.1.19
GHG 511 4306 R3003 2.1.19
GHG 511 4306 R3901 2.1.90
GHG 511 4306 R3902 2.1.90
GHG 511 4306 R3903 2.1.90
GHG 511 4306 R3904 2.1.90
GHG 511 4306 R3905 2.1.90
GHG 511 4306 R3906 2.1.90
GHG 511 4405 R0001 2.1.19
GHG 511 4405 R0501 2.1.19
GHG 511 4405 R1001 2.1.47
GHG 511 4405 R3001 2.1.19
GHG 511 4405 R3003 2.1.19
GHG 511 4406 R0001 2.1.19
GHG 511 4406 R0501 2.1.19
GHG 511 4406 R1001 2.1.47
GHG 511 4406 R3001 2.1.19
GHG 511 4406 R3003 2.1.19
GHG 511 4406 R3003 2.1.23
GHG 511 4407 R0001 2.1.19
GHG 511 4407 R0501 2.1.19
GHG 511 4407 R3001 2.1.19
GHG 511 4407 R3003 2.1.23
GHG 511 4409 R0001 2.1.19
GHG 511 4409 R3001 2.1.19
GHG 511 4409 R3003 2.1.19
GHG 511 4409 R3003 2.1.23
GHG 511 4504 R0301 2.1.44
GHG 511 4504 R0351 2.1.44
GHG 511 4506 R0001 2.1.19
GHG 511 4506 R0301 2.1.44
GHG 511 4506 R0351 2.1.44
GHG 511 4506 R0501 2.1.19
GHG 511 4506 R0901 2.1.90
GHG 511 4506 R0902 2.1.90
GHG 511 4506 R0903 2.1.90
GHG 511 4506 R0904 2.1.90
GHG 511 4506 R1001 2.1.47
GHG 511 4506 R3001 2.1.19
GHG 511 4506 R3003 2.1.19
GHG 511 4506 R3003 2.1.23
GHG 511 4506 R3901 2.1.90
GHG 511 4506 R3902 2.1.90
GHG 511 4508 R0301 2.1.44
GHG 511 4508 R0351 2.1.44
GHG 511 4706 R0001 2.1.17
GHG 511 4706 R3001 2.1.17
GHG 511 4707 R0003 2.1.17
GHG 511 4707 R3003 2.1.17
GHG 511 4905 R0001 2.1.15
GHG 511 4905 R3001 2.1.15
GHG 511 4906 R0001 2.1.15
GHG 511 4906 R3001 2.1.15
GHG 511 4907 R0001 2.1.15
GHG 511 4907 R3001 2.1.15
GHG 511 7304 R0001 2.1.18
GHG 511 7306 R0001 2.1.19
GHG 511 7306 R0001 2.1.90
GHG 511 7306 R0001 2.1.90
GHG 511 7405 R0001 2.1.19
GHG 511 7406 R0001 2.1.19
GHG 511 7407 R0001 2.1.19
GHG 511 7409 R0001 2.1.19
GHG 511 7506 R0001 2.1.19
GHG 511 7506 R0001 2.1.90
GHG 511 7506 R0001 2.1.90
GHG 511 8304 R0001 2.1.18
GHG 511 8306 R0001 2.1.19
GHG 511 8405 R0001 2.1.19
GHG 511 8406 R0001 2.1.19
GHG 511 8407 R0001 2.1.19
GHG 511 8409 R0001 2.1.19
GHG 511 8506 R0001 2.1.19
GHG 512 3405 R0001 2.1.23
GHG 512 3406 R0001 2.1.23
GHG 512 3407 R0001 2.1.23
GHG 512 3409 R0001 2.1.23
GHG 512 3506 R0001 2.1.23
GHG 512 4405 R0001 2.1.23
GHG 512 4405 R0501 2.1.23
GHG 512 4405 R1001 2.1.48
GHG 512 4405 R3001 2.1.23
GHG 512 4406 R0001 2.1.23
GHG 512 4406 R0501 2.1.23
GHG 512 4406 R1001 2.1.48
GHG 512 4406 R3001 2.1.23
GHG 512 4407 R0001 2.1.23
GHG 512 4407 R0501 2.1.23
GHG 512 4407 R1001 2.1.48
GHG 512 4407 R3001 2.1.23
GHG 512 4409 R0001 2.1.23
GHG 512 4409 R1001 2.1.48
GHG 512 4409 R3001 2.1.23
GHG 512 4506 R0001 2.1.23
GHG 512 4506 R0501 2.1.23
GHG 512 4506 R0901 2.1.93
GHG 512 4506 R0903 2.1.93
GHG 512 4506 R0904 2.1.93
GHG 512 4506 R0905 2.1.93
GHG 512 4506 R1001 2.1.48
GHG 512 4506 R3001 2.1.23
GHG 512 4506 R3901 2.1.93
GHG 512 4506 R3902 2.1.93
GHG 512 7405 R0001 2.1.23
GHG 512 7406 R0001 2.1.23
GHG 512 7407 R0001 2.1.23
GHG 512 7409 R0001 2.1.23
GHG 512 7506 R0001 2.1.23
GHG 512 8405 R0001 2.1.23
GHG 512 8406 R0001 2.1.23
GHG 512 8407 R0001 2.1.23
GHG 512 8409 R0001 2.1.23
GHG 512 8506 R0001 2.1.23
GHG 513 3200 R0001 2.1.13
GHG 513 3212 R0001 2.1.13
GHG 513 3300 R0001 2.1.13
GHG 513 3312 R0001 2.1.13
GHG 513 4200 R0001 2.1.13
GHG 513 4212 R0001 2.1.13
GHG 513 4300 R0001 2.1.13
GHG 513 4312 R0001 2.1.13
GHG 514 4405 R0001 2.1.29
GHG 514 4405 R0501 2.1.29
GHG 514 4405 R1001 2.1.49
GHG 514 4405 R3001 2.1.29
GHG 514 4405 R3003 2.1.29
GHG 514 4406 R0001 2.1.29
GHG 514 4406 R0501 2.1.29
GHG 514 4406 R1001 2.1.49
GHG 514 4406 R3001 2.1.29
GHG 514 4406 R3002 2.1.29
GHG 514 4407 R0001 2.1.29
GHG 514 4407 R0501 2.1.29
GHG 514 4407 R1001 2.1.49
GHG 514 4407 R3001 2.1.29
GHG 514 4407 R3003 2.1.29
GHG 514 4409 R0001 2.1.29
GHG 514 4409 R3001 2.1.29

GHG 514 4504 R0301 ..... 2.1.44
GHG 514 4504 R0351 ..... 2.1.44
GHG 514 4506 R0001 ..... 2.1.29
GHG 514 4506 R0301 ..... 2.1.44
GHG 514 4506 R0351 ..... 2.1.44
GHG 514 4506 R0501 ..... 2.1.29
GHG 514 4506 R0901 ..... 2.1.95
GHG 514 4506 R0903 ..... 2.1.95
GHG 514 4506 R0904 ..... 2.1.95
GHG 514 4506 R0905 ..... 2.1.95
GHG 514 4506 R1001 ..... 2.1.49
GHG 514 4506 R3001 ..... 2.1.29
GHG 514 4506 R3002 ..... 2.1.29
GHG 514 4506 R3901 ..... 2.1.95
GHG 514 4506 R3902 ..... 2.1.95
GHG 514 4508 R0301 ..... 2.1.44
GHG 514 4508 R0351 ..... 2.1.44
GHG 514 7405 R0001 ..... 2.1.29
GHG 514 7406 R0001 ..... 2.1.29
GHG 514 7407 R0001 ..... 2.1.29
GHG 514 7409 R0001 ..... 2.1.29
GHG 514 7506 R0001 ..... 2.1.29
GHG 515 4405 R0001 ..... 2.1.32
GHG 515 4405 R0501 ..... 2.1.32
GHG 515 4405 R1001 ..... 2.1.50
GHG 515 4405 R3001 ..... 2.1.32
GHG 515 4405 R3002 ..... 2.1.32
GHG 515 4406 R0001 ..... 2.1.32
GHG 515 4406 R0501 ..... 2.1.32
GHG 515 4406 R1001 ..... 2.1.50
GHG 515 4406 R3001 ..... 2.1.32
GHG 515 4406 R3002 ..... 2.1.32
GHG 515 4407 R0001 ..... 2.1.32
GHG 515 4407 R0501 ..... 2.1.32
GHG 515 4407 R1001 ..... 2.1.50
GHG 515 4407 R3001 ..... 2.1.32
GHG 515 4407 R3002 ..... 2.1.32
GHG 515 4409 R0001 ..... 2.1.32
GHG 515 4409 R0501 ..... 2.1.32
GHG 515 4409 R1001 ..... 2.1.50
GHG 515 4409 R3001 ..... 2.1.32
GHG 515 4504 R0301 ..... 2.1.44
GHG 515 4504 R0351 ..... 2.1.44
GHG 515 4506 R0001 ..... 2.1.32
GHG 515 4506 R0301 ..... 2.1.44
GHG 515 4506 R0351 ..... 2.1.44
GHG 515 4506 R0501 ..... 2.1.32
GHG 515 4506 R1001 ..... 2.1.50
GHG 515 4506 R3001 ..... 2.1.32
GHG 515 4506 R3005 ..... 2.1.32
GHG 515 4508 R0301 ..... 2.1.44
GHG 515 4508 R0351 ..... 2.1.44
GHG 515 7405 R0001 ..... 2.1.32
GHG 515 7406 R0001 ..... 2.1.32
GHG 515 7407 R0001 ..... 2.1.32
GHG 515 7409 R0001 ..... 2.1.32
GHG 515 7506 R0001 ..... 2.1.32
GHG 516 3304 R0001 ..... 2.1.58
GHG 516 3306 R0001 ..... 2.1.58
GHG 516 3405 R0001 ..... 2.1.58
GHG 516 3406 R0001 ..... 2.1.58
GHG 516 3407 R0001 ..... 2.1.58
GHG 516 3409 R0001 ..... 2.1.58
GHG 516 3506 R0001 ..... 2.1.58
GHG 516 4304 R0001 ..... 2.1.58
GHG 516 4304 R3001 ..... 2.1.58
GHG 516 4306 R0001 ..... 2.1.58
GHG 516 4306 R3001 ..... 2.1.58
GHG 516 4405 R0001 ..... 2.1.58
GHG 516 4405 R3001 ..... 2.1.58
GHG 516 4406 R0001 ..... 2.1.58
GHG 516 4406 R3001 ..... 2.1.58
GHG 516 4407 R0001 ..... 2.1.58
GHG 516 4407 R3001 ..... 2.1.58
GHG 516 4409 R0001 ..... 2.1.58
GHG 516 4409 R3001 ..... 2.1.58
GHG 516 4506 R0001 ..... 2.1.58
GHG 516 4506 R3001 ..... 2.1.58
GHG 516 7304 R0001 ..... 2.1.58
GHG 516 7306 R0001 ..... 2.1.58
GHG 516 7405 R0001 ..... 2.1.58
GHG 516 7406 R0001 ..... 2.1.58
GHG 516 7407 R0001 ..... 2.1.58
GHG 516 7409 R0001 ..... 2.1.58
GHG 516 7506 R0001 ..... 2.1.58
GHG 516 8304 R0001 ..... 2.1.58
GHG 516 8306 R0001 ..... 2.1.58
GHG 516 8405 R0001 ..... 2.1.58
GHG 516 8406 R0001 ..... 2.1.58
GHG 516 8407 R0001 ..... 2.1.58
GHG 516 8409 R0001 ..... 2.1.58
GHG 516 8506 R0001 ..... 2.1.58
GHG 517 3405 R0001 ..... 2.1.62
GHG 517 3406 R0001 ..... 2.1.62
GHG 517 3407 R0001 ..... 2.1.62
GHG 517 3409 R0001 ..... 2.1.62
GHG 517 3506 R0001 ..... 2.1.62
GHG 517 4405 R0001 ..... 2.1.62
GHG 517 4405 R3001 ..... 2.1.62
GHG 517 4406 R0001 ..... 2.1.62
GHG 517 4406 R3001 ..... 2.1.62
GHG 517 4407 R0001 ..... 2.1.62
GHG 517 4407 R3001 ..... 2.1.62
GHG 517 4409 R0001 ..... 2.1.62
GHG 517 4409 R3001 ..... 2.1.62
GHG 517 4506 R0001 ..... 2.1.62
GHG 517 4506 R3001 ..... 2.1.62
GHG 517 7405 R0001 ..... 2.1.62
GHG 517 7406 R0001 ..... 2.1.62
GHG 517 7407 R0001 ..... 2.1.62
GHG 517 7409 R0001 ..... 2.1.62
GHG 517 7506 R0001 ..... 2.1.62
GHG 517 8405 R0001 ..... 2.1.62
GHG 517 8406 R0001 ..... 2.1.62
GHG 517 8407 R0001 ..... 2.1.62
GHG 517 8409 R0001 ..... 2.1.62
GHG 517 8506 R0001 ..... 2.1.62
GHG 518 4405 R0001 ..... 2.1.66
GHG 518 4405 R3001 ..... 2.1.66
GHG 518 4406 R0001 ..... 2.1.66
GHG 518 4406 R3001 ..... 2.1.66
GHG 518 4407 R0001 ..... 2.1.66
GHG 518 4407 R3001 ..... 2.1.66
GHG 518 4409 R0001 ..... 2.1.66
GHG 518 4409 R3001 ..... 2.1.66
GHG 518 4506 R0001 ..... 2.1.66
GHG 518 4506 R3001 ..... 2.1.66
GHG 518 7405 R0001 ..... 2.1.66
GHG 518 7406 R0001 ..... 2.1.66
GHG 518 7407 R0001 ..... 2.1.66
GHG 518 7409 R0001 ..... 2.1.66
GHG 518 7506 R0001 ..... 2.1.66
GHG 519 4405 R0001 ..... 2.1.69
GHG 519 4405 R3001 ..... 2.1.69
GHG 519 4406 R0001 ..... 2.1.69
GHG 519 4406 R3001 ..... 2.1.69
GHG 519 4407 R0001 ..... 2.1.69
GHG 519 4407 R3001 ..... 2.1.69
GHG 519 4409 R0001 ..... 2.1.69
GHG 519 4409 R3001 ..... 2.1.69
GHG 519 4506 R0001 ..... 2.1.69
GHG 519 4506 R3001 ..... 2.1.69
GHG 519 7405 R0001 ..... 2.1.69
GHG 519 7406 R0001 ..... 2.1.69
GHG 519 7407 R0001 ..... 2.1.69
GHG 519 7409 R0001 ..... 2.1.69
GHG 519 7506 R0001 ..... 2.1.69
GHG 521 2304 R0001 ..... 2.1.74
GHG 521 2306 R0001 ..... 2.1.74
GHG 521 2405 R0001 ..... 2.1.74
GHG 521 2406 R0001 ..... 2.1.74
GHG 521 2407 R0001 ..... 2.1.74
GHG 521 2409 R0001 ..... 2.1.74
GHG 521 2506 R0001 ..... 2.1.74
GHG 521 3304 R0001 ..... 2.1.74
GHG 521 3306 R0001 ..... 2.1.74
GHG 521 3405 R0001 ..... 2.1.74
GHG 521 3406 R0001 ..... 2.1.74
GHG 521 3407 R0001 ..... 2.1.74
GHG 521 3409 R0001 ..... 2.1.74
GHG 521 3506 R0001 ..... 2.1.74
GHG 521 4405 R0001 ..... 2.1.74
GHG 521 4406 R0001 ..... 2.1.74
GHG 521 4407 R0001 ..... 2.1.74
GHG 521 4409 R0001 ..... 2.1.74
GHG 521 4506 R0001 ..... 2.1.74
GHG 521 7304 R0001 ..... 2.1.74
GHG 521 7306 R0001 ..... 2.1.74
GHG 521 7405 R0001 ..... 2.1.74
GHG 521 7406 R0001 ..... 2.1.74
GHG 521 7407 R0001 ..... 2.1.74
GHG 521 7409 R0001 ..... 2.1.74
GHG 521 7506 R0001 ..... 2.1.74
GHG 521 8304 R0001 ..... 2.1.74
GHG 521 8306 R0001 ..... 2.1.74
GHG 521 8405 R0001 ..... 2.1.74
GHG 521 8406 R0001 ..... 2.1.74
GHG 521 8407 R0001 ..... 2.1.74
GHG 521 8409 R0001 ..... 2.1.74
GHG 521 8506 R0001 ..... 2.1.74
GHG 521 9304 R0001 ..... 2.1.74
GHG 521 9306 R0001 ..... 2.1.74
GHG 521 9405 R0001 ..... 2.1.74
GHG 521 9406 R0001 ..... 2.1.74
GHG 521 9407 R0001 ..... 2.1.74
GHG 521 9409 R0001 ..... 2.1.74
GHG 521 9506 R0001 ..... 2.1.74
GHG 522 2405 R0001 ..... 2.1.78
GHG 522 2406 R0001 ..... 2.1.78
GHG 522 2407 R0001 ..... 2.1.78
GHG 522 2409 R0001 ..... 2.1.78
GHG 522 2506 R0001 ..... 2.1.78
GHG 522 3405 R0001 ..... 2.1.78
GHG 522 3406 R0001 ..... 2.1.78
GHG 522 3407 R0001 ..... 2.1.78
GHG 522 3409 R0001 ..... 2.1.78
GHG 522 3506 R0001 ..... 2.1.78
GHG 522 4405 R0001 ..... 2.1.78
GHG 522 4406 R0001 ..... 2.1.78
GHG 522 4407 R0001 ..... 2.1.78
GHG 522 4409 R0001 ..... 2.1.78
GHG 522 4506 R0001 ..... 2.1.78
GHG 522 7405 R0001 ..... 2.1.78
GHG 522 7406 R0001 ..... 2.1.78
GHG 522 7407 R0001 ..... 2.1.78
GHG 522 7409 R0001 ..... 2.1.78
GHG 522 7506 R0001 ..... 2.1.78
GHG 522 8405 R0001 ..... 2.1.78
GHG 522 8406 R0001 ..... 2.1.78
GHG 522 8407 R0001 ..... 2.1.78
GHG 522 8409 R0001 ..... 2.1.78
GHG 522 8506 R0001 ..... 2.1.78
GHG 522 9405 R0001 ..... 2.1.78
GHG 522 9406 R0001 ..... 2.1.78
GHG 522 9407 R0001 ..... 2.1.78
GHG 522 9409 R0001 ..... 2.1.78
GHG 522 9506 R0001 ..... 2.1.78
GHG 524 3405 R0001 ..... 2.1.82
GHG 524 3406 R0001 ..... 2.1.82
GHG 524 3407 R0001 ..... 2.1.82
GHG 524 3409 R0001 ..... 2.1.82
GHG 524 3506 R0001 ..... 2.1.82
GHG 524 4405 R0001 ..... 2.1.82
GHG 524 4406 R0001 ..... 2.1.82
GHG 524 4407 R0001 ..... 2.1.82
GHG 524 4409 R0001 ..... 2.1.82
GHG 524 4506 R0001 ..... 2.1.82
GHG 524 7405 R0001 ..... 2.1.82
GHG 524 7406 R0001 ..... 2.1.82
GHG 524 7407 R0001 ..... 2.1.82
GHG 524 7409 R0001 ..... 2.1.82
GHG 524 7506 R0001 ..... 2.1.82
GHG 524 8405 R0001 ..... 2.1.82
GHG 524 8406 R0001 ..... 2.1.82
GHG 524 8407 R0001 ..... 2.1.82
GHG 524 8409 R0001 ..... 2.1.82
GHG 524 8506 R0001 ..... 2.1.82
GHG 524 9405 R0001 ..... 2.1.82
GHG 524 9406 R0001 ..... 2.1.82
GHG 524 9407 R0001 ..... 2.1.82
GHG 524 9409 R0001 ..... 2.1.82
GHG 524 9506 R0001 ..... 2.1.82
GHG 525 3405 R0001 ..... 2.1.85
GHG 525 3406 R0001 ..... 2.1.85
GHG 525 3407 R0001 ..... 2.1.85
GHG 525 3409 R0001 ..... 2.1.85
GHG 525 3506 R0001 ..... 2.1.85
GHG 525 4405 R0001 ..... 2.1.85
GHG 525 4406 R0001 ..... 2.1.85
GHG 525 4407 R0001 ..... 2.1.85
GHG 525 4409 R0001 ..... 2.1.85
GHG 525 4506 R0001 ..... 2.1.85
GHG 525 7405 R0001 ..... 2.1.85
GHG 525 7406 R0001 ..... 2.1.85
GHG 525 7407 R0001 ..... 2.1.85
GHG 525 7409 R0001 ..... 2.1.85
GHG 525 7506 R0001 ..... 2.1.85
GHG 525 8405 R0001 ..... 2.1.85
GHG 525 8406 R0001 ..... 2.1.85
GHG 525 8407 R0001 ..... 2.1.85
GHG 525 8409 R0001 ..... 2.1.85
GHG 525 8506 R0001 ..... 2.1.85
GHG 525 9405 R0001 ..... 2.1.85
GHG 525 9406 R0001 ..... 2.1.85
GHG 525 9407 R0001 ..... 2.1.85
GHG 525 9409 R0001 ..... 2.1.85
GHG 525 9506 R0001 ..... 2.1.85
GHG 530 1935 R0002 ..... 2.1.11
GHG 530 1935 R0002 ..... 2.1.26
GHG 530 1935 R0005 ..... 2.1.11
GHG 530 1935 R0005 ..... 2.1.26
GHG 530 1935 R0008 ..... 2.1.15
GHG 531 6469 V0000 ..... 2.1.11
GHG 531 6469 V5005 ..... 2.1.11
GHG 531 6469 V5025 ..... 2.1.11
GHG 531 6566 V0000 ..... 2.1.11
GHG 531 6566 V5005 ..... 2.1.11
GHG 531 6566 V5023 ..... 2.1.11
GHG 531 6566 V5025 ..... 2.1.11
GHG 531 7536 V0000 ..... 2.1.11
GHG 532 6469 V0000 ..... 2.1.26
GHG 532 6469 V5005 ..... 2.1.26
GHG 532 6566 V0000 ..... 2.1.26
GHG 532 6566 V5005 ..... 2.1.26
GHG 532 6566 V5023 ..... 2.1.26
GHG 532 6566 V5025 ..... 2.1.26
GHG 532 7536 V0000 ..... 2.1.26
GHG 540 1935 R0002 ..... 2.1.17
GHG 542 2200 V0000 ..... 2.1.13
GHG 542 2212 V0000 ..... 2.1.13
GHG 542 2300 V0000 ..... 2.1.13
GHG 542 2312 V0000 ..... 2.1.13

Index of Order Code

GHG 542 5200 V0000.....2.1.13
GHG 542 5212 V0000.....2.1.13
GHG 542 5300 V0000.....2.1.13
GHG 542 5312 V0000.....2.1.13
GHG 570 1901 R0001.....2.1.132
GHG 570 1901 R0002.....2.1.148
GHG 570 1902 R0001.....2.1.132
GHG 570 1902 R0001.....2.1.148
GHG 570 1903 R0001.....2.1.132
GHG 570 1903 R0002.....2.1.132
GHG 570 1903 R0003.....2.1.132
GHG 570 1903 R0004.....2.1.132
GHG 570 1903 R0005.....2.1.148
GHG 570 1903 R0006.....2.1.148
GHG 570 1903 R0007.....2.1.148
GHG 570 1903 R0008.....2.1.148
GHG 570 1904 R0001.....2.1.132
GHG 570 1904 R0002.....2.1.132
GHG 570 1904 R0003.....2.1.132
GHG 570 1904 R0004.....2.1.132
GHG 570 1904 R0005.....2.1.132
GHG 570 1904 R0006.....2.1.132
GHG 570 1904 R0007.....2.1.148
GHG 570 1904 R0008.....2.1.148
GHG 570 1904 R0009.....2.1.148
GHG 570 1904 R0010.....2.1.148
GHG 570 1904 R0011.....2.1.132
GHG 570 1904 R0012.....2.1.132
GHG 570 1904 R0013.....2.1.148
GHG 570 1904 R0014.....2.1.148
GHG 570 1905 R0001.....2.1.132
GHG 570 1905 R0002.....2.1.132
GHG 570 1905 R0003.....2.1.132
GHG 570 1905 R0004.....2.1.132
GHG 570 1905 R0005.....2.1.148
GHG 570 1905 R0006.....2.1.148
GHG 570 1905 R0007.....2.1.132
GHG 570 1905 R0008.....2.1.148
GHG 570 1907 R0001.....2.1.132
GHG 570 1907 R0002.....2.1.132
GHG 570 1907 R0003.....2.1.148
GHG 570 1907 R0004.....2.1.148
GHG 570 1907 R0005.....2.1.148
GHG 570 1907 R0006.....2.1.148
GHG 570 1908 R0001.....2.1.132
GHG 570 1908 R0001.....2.1.148
GHG 571 3102 R2001.....2.1.130
GHG 571 3102 R4001.....2.1.130
GHG 571 3104 R2001.....2.1.130
GHG 571 3104 R4001.....2.1.130
GHG 571 3106 R2001.....2.1.130
GHG 571 3106 R4001.....2.1.130
GHG 571 3106 R7003.....2.1.153
GHG 571 3108 R2001.....2.1.130
GHG 571 3108 R4001.....2.1.130
GHG 571 3108 R7003.....2.1.153
GHG 571 3112 R2001.....2.1.130
GHG 571 3112 R4001.....2.1.130
GHG 571 3112 R7003.....2.1.153
GHG 571 3204 R2001.....2.1.130
GHG 571 3204 R4001.....2.1.130
GHG 571 3206 R2001.....2.1.130
GHG 571 3206 R4001.....2.1.130
GHG 571 3206 R7003.....2.1.153
GHG 571 3208 R2001.....2.1.130
GHG 571 3208 R4001.....2.1.130
GHG 571 3208 R7003.....2.1.153
GHG 571 3212 R2001.....2.1.130
GHG 571 3212 R4001.....2.1.130
GHG 571 3212 R7003.....2.1.153
GHG 571 6102 R1001.....2.1.128
GHG 571 6102 R3001.....2.1.128
GHG 571 6102 R5001.....2.1.128
GHG 571 6102 R6001.....2.1.128
GHG 571 6104 R1001.....2.1.128
GHG 571 6104 R3001.....2.1.128
GHG 571 6104 R5001.....2.1.128
GHG 571 6104 R6001.....2.1.128
GHG 571 6106 R1001.....2.1.128
GHG 571 6106 R3001.....2.1.128
GHG 571 6106 R5001.....2.1.128
GHG 571 6106 R6001.....2.1.128
GHG 571 6108 R1001.....2.1.128
GHG 571 6108 R3001.....2.1.128
GHG 571 6108 R5001.....2.1.128
GHG 571 6108 R6001.....2.1.128
GHG 571 6112 R1001.....2.1.128
GHG 571 6112 R3001.....2.1.128
GHG 571 6112 R5001.....2.1.128
GHG 571 6112 R6001.....2.1.128
GHG 571 6204 R1001.....2.1.128
GHG 571 6204 R3001.....2.1.128
GHG 571 6204 R5001.....2.1.128
GHG 571 6204 R6001.....2.1.128
GHG 571 6206 R1001.....2.1.128
GHG 571 6206 R3001.....2.1.128
GHG 571 6206 R5001.....2.1.128
GHG 571 6206 R6001.....2.1.128
GHG 571 6208 R1001.....2.1.128
GHG 571 6208 R3001.....2.1.128
GHG 571 6208 R5001.....2.1.128
GHG 571 6208 R6001.....2.1.128
GHG 571 6212 R1001.....2.1.128
GHG 571 6212 R3001.....2.1.128
GHG 571 6212 R5001.....2.1.128
GHG 571 6212 R6001.....2.1.128
GHG 571 7102 R2001.....2.1.130
GHG 571 7102 R4001.....2.1.130
GHG 571 7104 R2001.....2.1.130
GHG 571 7104 R4001.....2.1.130
GHG 571 7106 R2001.....2.1.130
GHG 571 7106 R4001.....2.1.130
GHG 571 7106 R7003.....2.1.153
GHG 571 7108 R2001.....2.1.130
GHG 571 7108 R4001.....2.1.130
GHG 571 7108 R7003.....2.1.153
GHG 571 7112 R2001.....2.1.130
GHG 571 7112 R4001.....2.1.130
GHG 571 7112 R7003.....2.1.153
GHG 571 7204 R2001.....2.1.130
GHG 571 7204 R4001.....2.1.130
GHG 571 7206 R2001.....2.1.130
GHG 571 7206 R4001.....2.1.130
GHG 571 7206 R7003.....2.1.153
GHG 571 7208 R2001.....2.1.130
GHG 571 7208 R4001.....2.1.130
GHG 571 7208 R7003.....2.1.153
GHG 571 7212 R2001.....2.1.130
GHG 571 7212 R4001.....2.1.130
GHG 571 7212 R7003.....2.1.153
GHG 571 8102 R0001.....2.1.124
GHG 571 8102 R0002.....2.1.124
GHG 571 8102 R3003.....2.1.137
GHG 571 8102 R3004.....2.1.137
GHG 571 8104 R0001.....2.1.124
GHG 571 8104 R0002.....2.1.124
GHG 571 8106 R0001.....2.1.124
GHG 571 8106 R0002.....2.1.124
GHG 571 8106 R0003.....2.1.124
GHG 571 8106 R7001.....2.1.153
GHG 571 8108 R0001.....2.1.124
GHG 571 8108 R0002.....2.1.124
GHG 571 8108 R7001.....2.1.153
GHG 571 8112 R0001.....2.1.124
GHG 571 8112 R0002.....2.1.124
GHG 571 8112 R7001.....2.1.153
GHG 571 8204 R0001.....2.1.124
GHG 571 8204 R0002.....2.1.124
GHG 571 8206 R0001.....2.1.124
GHG 571 8206 R0002.....2.1.124
GHG 571 8206 R7001.....2.1.153
GHG 571 8208 R0001.....2.1.124
GHG 571 8208 R0002.....2.1.124
GHG 571 8208 R7001.....2.1.153
GHG 571 8212 R0001.....2.1.124
GHG 571 8212 R0002.....2.1.124
GHG 571 8212 R7001.....2.1.153
GHG 571 9102 R0001.....2.1.126
GHG 571 9102 R0002.....2.1.126
GHG 571 9102 R3003.....2.1.137
GHG 571 9102 R3004.....2.1.137
GHG 571 9104 R0001.....2.1.126
GHG 571 9104 R0002.....2.1.126
GHG 571 9106 R0001.....2.1.126
GHG 571 9106 R0002.....2.1.126
GHG 571 9106 R0003.....2.1.126
GHG 571 9106 R7001.....2.1.153
GHG 571 9108 R0001.....2.1.126
GHG 571 9108 R0002.....2.1.126
GHG 571 9108 R0003.....2.1.126
GHG 571 9108 R7001.....2.1.153
GHG 571 9112 R0001.....2.1.126
GHG 571 9112 R0002.....2.1.126
GHG 571 9112 R0003.....2.1.126
GHG 571 9112 R0004.....2.1.126
GHG 571 9112 R7001.....2.1.153
GHG 571 9204 R0001.....2.1.126
GHG 571 9204 R0001.....2.1.126
GHG 571 9206 R0001.....2.1.126
GHG 571 9206 R0002.....2.1.126
GHG 571 9206 R7001.....2.1.153
GHG 571 9208 R0001.....2.1.126
GHG 571 9208 R0002.....2.1.126
GHG 571 9208 R7001.....2.1.153
GHG 571 9212 R0001.....2.1.126
GHG 571 9212 R0002.....2.1.126
GHG 571 9212 R7001.....2.1.153
GHG 572 3104 R1001.....2.1.143
GHG 572 3104 R1002.....2.1.143
GHG 572 3104 R2001.....2.1.147
GHG 572 3104 R4001.....2.1.147
GHG 572 3104 R7003.....2.1.154
GHG 572 3106 R1001.....2.1.143
GHG 572 3106 R1002.....2.1.143
GHG 572 3106 R2001.....2.1.147
GHG 572 3106 R4001.....2.1.147
GHG 572 3106 R7003.....2.1.154
GHG 572 3108 R1001.....2.1.143
GHG 572 3108 R1002.....2.1.143
GHG 572 3108 R2001.....2.1.147
GHG 572 3108 R4001.....2.1.147
GHG 572 3108 R7003.....2.1.154
GHG 572 3110 R1001.....2.1.143
GHG 572 3110 R1002.....2.1.143
GHG 572 3110 R2001.....2.1.147
GHG 572 3110 R4001.....2.1.147
GHG 572 3110 R7003.....2.1.154
GHG 572 3112 R1001.....2.1.143
GHG 572 3112 R1002.....2.1.143
GHG 572 3112 R2001.....2.1.147
GHG 572 3112 R4001.....2.1.147
GHG 572 3112 R7003.....2.1.154
GHG 572 3204 R1001.....2.1.143
GHG 572 3204 R1002.....2.1.143
GHG 572 3204 R2001.....2.1.147
GHG 572 3204 R4001.....2.1.147
GHG 572 3204 R7003.....2.1.154
GHG 572 3206 R1001.....2.1.143
GHG 572 3206 R1002.....2.1.143
GHG 572 3206 R2001.....2.1.147
GHG 572 3206 R4001.....2.1.147
GHG 572 3206 R7003.....2.1.154
GHG 572 3208 R1001.....2.1.143
GHG 572 3208 R1002.....2.1.143
GHG 572 3208 R2001.....2.1.147
GHG 572 3208 R4001.....2.1.147
GHG 572 3208 R7003.....2.1.154
GHG 572 3210 R1001.....2.1.143
GHG 572 3210 R1002.....2.1.143
GHG 572 3210 R2001.....2.1.147
GHG 572 3210 R4001.....2.1.147
GHG 572 3210 R7003.....2.1.154
GHG 572 3212 R1001.....2.1.143
GHG 572 3212 R1002.....2.1.143
GHG 572 3212 R2001.....2.1.147
GHG 572 3212 R4001.....2.1.147
GHG 572 3212 R7003.....2.1.154
GHG 572 3604 R1001.....2.1.143
GHG 572 3604 R1002.....2.1.143
GHG 572 6104 R1001.....2.1.146
GHG 572 6104 R3001.....2.1.146
GHG 572 6104 R5001.....2.1.146
GHG 572 6104 R6001.....2.1.146
GHG 572 6106 R1001.....2.1.146
GHG 572 6106 R3001.....2.1.146
GHG 572 6106 R5001.....2.1.146
GHG 572 6106 R6001.....2.1.146
GHG 572 6108 R1001.....2.1.146
GHG 572 6108 R3001.....2.1.146
GHG 572 6108 R5001.....2.1.146
GHG 572 6108 R6001.....2.1.146
GHG 572 6110 R1001.....2.1.146
GHG 572 6110 R1001.....2.1.146
GHG 572 6110 R5001.....2.1.146
GHG 572 6110 R6001.....2.1.146
GHG 572 6112 R1001.....2.1.146
GHG 572 6112 R3001.....2.1.146
GHG 572 6112 R5001.....2.1.146
GHG 572 6112 R6001.....2.1.146
GHG 572 6204 R1001.....2.1.146
GHG 572 6204 R3001.....2.1.146
GHG 572 6204 R5001.....2.1.146
GHG 572 6204 R6001.....2.1.146
GHG 572 6206 R1001.....2.1.146
GHG 572 6206 R3001.....2.1.146
GHG 572 6206 R5001.....2.1.146
GHG 572 6206 R6001.....2.1.146
GHG 572 6208 R1001.....2.1.146
GHG 572 6208 R3001.....2.1.146
GHG 572 6208 R5001.....2.1.146
GHG 572 6208 R6001.....2.1.146
GHG 572 6210 R1001.....2.1.146
GHG 572 6210 R1001.....2.1.146
GHG 572 6210 R5001.....2.1.146
GHG 572 6210 R6001.....2.1.146
GHG 572 6212 R1001.....2.1.146
GHG 572 6212 R3001.....2.1.146
GHG 572 6212 R5001.....2.1.146
GHG 572 6212 R6001.....2.1.146
GHG 572 7104 R1001.....2.1.142
GHG 572 7104 R1002.....2.1.142
GHG 572 7104 R2001.....2.1.147
GHG 572 7104 R4001.....2.1.147
GHG 572 7104 R7003.....2.1.154
GHG 572 7106 R1001.....2.1.142
GHG 572 7106 R1002.....2.1.142
GHG 572 7106 R2001.....2.1.147
GHG 572 7106 R4001.....2.1.147
GHG 572 7106 R7003.....2.1.154
GHG 572 7108 R1001.....2.1.142
GHG 572 7108 R1002.....2.1.142
GHG 572 7108 R2001.....2.1.147

GHG 572 7108 R4001 ..... 2.1.147
GHG 572 7108 R7003 ..... 2.1.154
GHG 572 7110 R1001 ..... 2.1.142
GHG 572 7110 R1002 ..... 2.1.142
GHG 572 7110 R2001 ..... 2.1.147
GHG 572 7110 R4001 ..... 2.1.147
GHG 572 7110 R7003 ..... 2.1.154
GHG 572 7112 R1001 ..... 2.1.142
GHG 572 7112 R1002 ..... 2.1.142
GHG 572 7112 R2001 ..... 2.1.147
GHG 572 7112 R4001 ..... 2.1.147
GHG 572 7112 R7003 ..... 2.1.154
GHG 572 7204 R1001 ..... 2.1.142
GHG 572 7204 R1002 ..... 2.1.142
GHG 572 7204 R2001 ..... 2.1.147
GHG 572 7204 R4001 ..... 2.1.147
GHG 572 7204 R7003 ..... 2.1.154
GHG 572 7206 R1001 ..... 2.1.142
GHG 572 7206 R1002 ..... 2.1.142
GHG 572 7206 R2001 ..... 2.1.147
GHG 572 7206 R4001 ..... 2.1.147
GHG 572 7206 R7003 ..... 2.1.154
GHG 572 7208 R1001 ..... 2.1.142
GHG 572 7208 R1002 ..... 2.1.142
GHG 572 7208 R2001 ..... 2.1.147
GHG 572 7208 R4001 ..... 2.1.147
GHG 572 7208 R7003 ..... 2.1.154
GHG 572 7210 R1001 ..... 2.1.142
GHG 572 7210 R1002 ..... 2.1.142
GHG 572 7210 R2001 ..... 2.1.147
GHG 572 7210 R4001 ..... 2.1.147
GHG 572 7210 R7003 ..... 2.1.154
GHG 572 7212 R1001 ..... 2.1.142
GHG 572 7212 R1002 ..... 2.1.142
GHG 572 7212 R2001 ..... 2.1.147
GHG 572 7212 R4001 ..... 2.1.147
GHG 572 7212 R7003 ..... 2.1.154
GHG 572 7604 R1001 ..... 2.1.142
GHG 572 7604 R1002 ..... 2.1.142
GHG 572 7606 R1001 ..... 2.1.142
GHG 572 7606 R1002 ..... 2.1.142
GHG 572 7608 R1001 ..... 2.1.142
GHG 572 7608 R1002 ..... 2.1.142
GHG 572 8104 R0001 ..... 2.1.144
GHG 572 8104 R7001 ..... 2.1.154
GHG 572 8106 R0001 ..... 2.1.144
GHG 572 8106 R7001 ..... 2.1.154
GHG 572 8108 R0001 ..... 2.1.144
GHG 572 8108 R7001 ..... 2.1.154
GHG 572 8110 R0001 ..... 2.1.144
GHG 572 8110 R7001 ..... 2.1.154
GHG 572 8112 R0001 ..... 2.1.144
GHG 572 8112 R7001 ..... 2.1.154
GHG 572 8204 R0001 ..... 2.1.144
GHG 572 8204 R7001 ..... 2.1.154
GHG 572 8206 R0001 ..... 2.1.144
GHG 572 8206 R7001 ..... 2.1.154
GHG 572 8208 R0001 ..... 2.1.144
GHG 572 8208 R7001 ..... 2.1.154
GHG 572 8210 R0001 ..... 2.1.144
GHG 572 8210 R7001 ..... 2.1.154
GHG 572 8212 R0001 ..... 2.1.144
GHG 572 8212 R7001 ..... 2.1.154
GHG 572 9104 R0001 ..... 2.1.145
GHG 572 9104 R7001 ..... 2.1.154
GHG 572 9106 R0001 ..... 2.1.145
GHG 572 9106 R7001 ..... 2.1.154
GHG 572 9108 R0001 ..... 2.1.145
GHG 572 9108 R7001 ..... 2.1.154
GHG 572 9110 R0001 ..... 2.1.145
GHG 572 9110 R7001 ..... 2.1.154
GHG 572 9112 R0001 ..... 2.1.145
GHG 572 9112 R7001 ..... 2.1.154
GHG 572 9204 R0001 ..... 2.1.145
GHG 572 9204 R7001 ..... 2.1.154
GHG 572 9206 R0001 ..... 2.1.145
GHG 572 9206 R7001 ..... 2.1.154
GHG 572 9208 R0001 ..... 2.1.145
GHG 572 9208 R7001 ..... 2.1.154
GHG 572 9210 R0001 ..... 2.1.145
GHG 572 9210 R7001 ..... 2.1.154
GHG 572 9212 R0001 ..... 2.1.145
GHG 572 9212 R7001 ..... 2.1.154
GHG 574 3101 R0001 ..... 2.1.123
GHG 574 3101 R0002 ..... 2.1.123
GHG 574 3101 R1001 ..... 2.1.123
GHG 574 3101 R1002 ..... 2.1.123
GHG 574 3101 R2001 ..... 2.1.131
GHG 574 3101 R3001 ..... 2.1.123
GHG 574 3101 R3002 ..... 2.1.123
GHG 574 3101 R4001 ..... 2.1.131
GHG 574 3101 R7003 ..... 2.1.152
GHG 574 3105 R0001 ..... 2.1.123
GHG 574 3105 R0002 ..... 2.1.123
GHG 574 3105 R1001 ..... 2.1.123
GHG 574 3105 R1002 ..... 2.1.123
GHG 574 3105 R2001 ..... 2.1.131
GHG 574 3105 R3001 ..... 2.1.123
GHG 574 3105 R3002 ..... 2.1.123
GHG 574 3105 R4001 ..... 2.1.131
GHG 574 3105 R7003 ..... 2.1.152
GHG 574 3110 R0001 ..... 2.1.123
GHG 574 3110 R0002 ..... 2.1.123
GHG 574 3110 R1001 ..... 2.1.123
GHG 574 3110 R1002 ..... 2.1.123
GHG 574 3110 R2001 ..... 2.1.131
GHG 574 3110 R3001 ..... 2.1.123
GHG 574 3110 R3002 ..... 2.1.123
GHG 574 3110 R4001 ..... 2.1.131
GHG 574 3110 R7003 ..... 2.1.152
GHG 574 3205 R0001 ..... 2.1.123
GHG 574 3205 R0002 ..... 2.1.123
GHG 574 3205 R1001 ..... 2.1.123
GHG 574 3205 R1002 ..... 2.1.123
GHG 574 3205 R2001 ..... 2.1.131
GHG 574 3205 R3001 ..... 2.1.123
GHG 574 3205 R3002 ..... 2.1.123
GHG 574 3205 R4001 ..... 2.1.131
GHG 574 3205 R7003 ..... 2.1.152
GHG 574 3210 R0001 ..... 2.1.123
GHG 574 3210 R0002 ..... 2.1.123
GHG 574 3210 R1001 ..... 2.1.123
GHG 574 3210 R1002 ..... 2.1.123
GHG 574 3210 R2001 ..... 2.1.131
GHG 574 3210 R3001 ..... 2.1.123
GHG 574 3210 R3002 ..... 2.1.123
GHG 574 3210 R4001 ..... 2.1.131
GHG 574 3210 R7003 ..... 2.1.152
GHG 574 6101 R1001 ..... 2.1.129
GHG 574 6101 R3001 ..... 2.1.129
GHG 574 6101 R5001 ..... 2.1.129
GHG 574 6101 R6001 ..... 2.1.129
GHG 574 6105 R1001 ..... 2.1.129
GHG 574 6105 R3001 ..... 2.1.129
GHG 574 6105 R5001 ..... 2.1.129
GHG 574 6105 R6001 ..... 2.1.129
GHG 574 6110 R1001 ..... 2.1.129
GHG 574 6110 R3001 ..... 2.1.129
GHG 574 6110 R5001 ..... 2.1.129
GHG 574 6110 R6001 ..... 2.1.129
GHG 574 6205 R1001 ..... 2.1.129
GHG 574 6205 R3001 ..... 2.1.129
GHG 574 6205 R5001 ..... 2.1.129
GHG 574 6205 R6001 ..... 2.1.129
GHG 574 6210 R1001 ..... 2.1.129
GHG 574 6210 R3001 ..... 2.1.129
GHG 574 6210 R5001 ..... 2.1.129
GHG 574 6210 R6001 ..... 2.1.129
GHG 574 7101 R0001 ..... 2.1.121
GHG 574 7101 R0002 ..... 2.1.121
GHG 574 7101 R1001 ..... 2.1.121
GHG 574 7101 R1002 ..... 2.1.121
GHG 574 7101 R2001 ..... 2.1.131
GHG 574 7101 R3001 ..... 2.1.121
GHG 574 7101 R3002 ..... 2.1.121
GHG 574 7101 R4001 ..... 2.1.131
GHG 574 7101 R7003 ..... 2.1.152
GHG 574 7105 R0001 ..... 2.1.121
GHG 574 7105 R0002 ..... 2.1.121
GHG 574 7105 R1001 ..... 2.1.121
GHG 574 7105 R1002 ..... 2.1.121
GHG 574 7105 R2001 ..... 2.1.131
GHG 574 7105 R3001 ..... 2.1.121
GHG 574 7105 R3002 ..... 2.1.121
GHG 574 7105 R4001 ..... 2.1.131
GHG 574 7105 R7003 ..... 2.1.152
GHG 574 7110 R0001 ..... 2.1.121
GHG 574 7110 R0002 ..... 2.1.121
GHG 574 7110 R1001 ..... 2.1.121
GHG 574 7110 R1002 ..... 2.1.121
GHG 574 7110 R2001 ..... 2.1.131
GHG 574 7110 R3001 ..... 2.1.121
GHG 574 7110 R3002 ..... 2.1.121
GHG 574 7110 R4001 ..... 2.1.131
GHG 574 7110 R7003 ..... 2.1.152
GHG 574 7205 R0001 ..... 2.1.121
GHG 574 7205 R0002 ..... 2.1.121
GHG 574 7205 R1001 ..... 2.1.121
GHG 574 7205 R1002 ..... 2.1.121
GHG 574 7205 R2001 ..... 2.1.131
GHG 574 7205 R3001 ..... 2.1.121
GHG 574 7205 R3002 ..... 2.1.121
GHG 574 7205 R4001 ..... 2.1.131
GHG 574 7205 R7003 ..... 2.1.152
GHG 574 7210 R0001 ..... 2.1.121
GHG 574 7210 R0002 ..... 2.1.121
GHG 574 7210 R1001 ..... 2.1.121
GHG 574 7210 R1002 ..... 2.1.121
GHG 574 7210 R2001 ..... 2.1.131
GHG 574 7210 R3001 ..... 2.1.121
GHG 574 7210 R3002 ..... 2.1.121
GHG 574 7210 R4001 ..... 2.1.131
GHG 574 7210 R7003 ..... 2.1.152
GHG 574 8101 R0001 ..... 2.1.125
GHG 574 8101 R0002 ..... 2.1.125
GHG 574 8101 R1001 ..... 2.1.125
GHG 574 8101 R3001 ..... 2.1.125
GHG 574 8101 R3002 ..... 2.1.136
GHG 574 8101 R3004 ..... 2.1.136
GHG 574 8101 R5001 ..... 2.1.125
GHG 574 8101 R6001 ..... 2.1.125
GHG 574 8101 R7001 ..... 2.1.152
GHG 574 8105 R0001 ..... 2.1.125
GHG 574 8105 R0002 ..... 2.1.125
GHG 574 8105 R1001 ..... 2.1.125
GHG 574 8105 R3001 ..... 2.1.125
GHG 574 8105 R5001 ..... 2.1.125
GHG 574 8105 R6001 ..... 2.1.125
GHG 574 8105 R7001 ..... 2.1.152
GHG 574 8110 R0001 ..... 2.1.125
GHG 574 8110 R0002 ..... 2.1.125
GHG 574 8110 R1001 ..... 2.1.125
GHG 574 8110 R3001 ..... 2.1.125
GHG 574 8110 R5001 ..... 2.1.125
GHG 574 8110 R6001 ..... 2.1.125
GHG 574 8110 R7001 ..... 2.1.152
GHG 574 8205 R0001 ..... 2.1.125
GHG 574 8205 R0002 ..... 2.1.125
GHG 574 8205 R1001 ..... 2.1.125
GHG 574 8205 R3001 ..... 2.1.125
GHG 574 8205 R5001 ..... 2.1.125
GHG 574 8205 R6001 ..... 2.1.125
GHG 574 8205 R7001 ..... 2.1.152
GHG 574 8210 R0001 ..... 2.1.125
GHG 574 8210 R0002 ..... 2.1.125
GHG 574 8210 R1001 ..... 2.1.125
GHG 574 8210 R3001 ..... 2.1.125
GHG 574 8210 R5001 ..... 2.1.125
GHG 574 8210 R6001 ..... 2.1.125
GHG 574 8210 R7001 ..... 2.1.152
GHG 574 9101 R0001 ..... 2.1.127
GHG 574 9101 R0002 ..... 2.1.127
GHG 574 9101 R1001 ..... 2.1.127
GHG 574 9101 R3001 ..... 2.1.127
GHG 574 9101 R3002 ..... 2.1.136
GHG 574 9101 R3004 ..... 2.1.136
GHG 574 9101 R5001 ..... 2.1.127
GHG 574 9101 R6001 ..... 2.1.127
GHG 574 9101 R7001 ..... 2.1.152
GHG 574 9105 R0001 ..... 2.1.127
GHG 574 9105 R0002 ..... 2.1.127
GHG 574 9105 R1001 ..... 2.1.127
GHG 574 9105 R3001 ..... 2.1.127
GHG 574 9105 R5001 ..... 2.1.127
GHG 574 9105 R6001 ..... 2.1.127
GHG 574 9105 R7001 ..... 2.1.152
GHG 574 9110 R0001 ..... 2.1.127
GHG 574 9110 R0002 ..... 2.1.127
GHG 574 9110 R1001 ..... 2.1.127
GHG 574 9110 R3001 ..... 2.1.127
GHG 574 9110 R5001 ..... 2.1.127
GHG 574 9110 R6001 ..... 2.1.127
GHG 574 9110 R7001 ..... 2.1.152
GHG 574 9205 R0001 ..... 2.1.127
GHG 574 9205 R1001 ..... 2.1.127
GHG 574 9205 R3001 ..... 2.1.127
GHG 574 9205 R5001 ..... 2.1.127
GHG 574 9205 R6001 ..... 2.1.127
GHG 574 9205 R7001 ..... 2.1.152
GHG 574 9210 R0001 ..... 2.1.127
GHG 574 9210 R0002 ..... 2.1.127
GHG 574 9210 R1001 ..... 2.1.127
GHG 574 9210 R3001 ..... 2.1.127
GHG 574 9210 R5001 ..... 2.1.127
GHG 574 9210 R6001 ..... 2.1.127
GHG 574 9210 R7001 ..... 2.1.152
GHG 590 1301 R0102 ..... 2.1.15
GHG 590 1301 R0102 ..... 2.1.17
GHG 590 1302 R0102 ..... 2.1.15
GHG 590 1302 R0102 ..... 2.1.17
GHG 590 1902 R0001 ..... 2.1.15
GHG 590 1902 R0001 ..... 2.1.17
GHG 590 1903 R0001 ..... 2.1.15
GHG 590 1903 R0001 ..... 2.1.17
GHG 591 2201 R0001 ..... 2.1.15
GHG 591 2201 R0002 ..... 2.1.15
GHG 591 2201 R0003 ..... 2.1.15
GHG 592 2001 R0002 ..... 2.1.17
GHG 592 2001 R0022 ..... 2.1.17
GHG 600 0101 R0001 ..... 2.6.74
GHG 600 0201 R0001 ..... 2.6.74
GHG 600 0301 R0001 ..... 2.6.74
GHG 600 0401 R0001 ..... 2.6.74
GHG 600 0501 R0001 ..... 2.6.74
GHG 600 0601 R0001 ..... 2.6.74
GHG 610 1940 R0001 ..... 2.6.45
GHG 610 1940 R0002 ..... 2.6.45
GHG 610 1940 R0006 ..... 2.6.45
GHG 610 1953 R0011 ..... 2.2.64
GHG 610 1953 R0011 ..... 2.5.13
GHG 610 1953 R0011 ..... 2.5.16
GHG 610 1953 R0020 ..... 2.1.21

Index of Order Code

GHG 610 1953 R0020.....2.1.25
GHG 610 1953 R0020.....2.1.60
GHG 610 1953 R0020.....2.1.64
GHG 610 1953 R0020.....2.1.76
GHG 610 1953 R0020.....2.1.80
GHG 610 1953 R0020.....2.2.64
GHG 610 1953 R0020.....2.5.8
GHG 610 1953 R0020.....2.5.10
GHG 610 1953 R0020.....2.5.13
GHG 610 1953 R0020.....2.5.16
GHG 610 1953 R0020.....2.5.18
GHG 610 1953 R0020.....2.5.21
GHG 610 1953 R0020.....2.5.31
GHG 610 1953 R0020.....2.5.33
GHG 610 1953 R0020.....2.5.35
GHG 610 1953 R0020.....2.5.46
GHG 610 1953 R0020.....2.5.48
GHG 610 1953 R0020.....2.5.51
GHG 610 1953 R0020.....2.5.54
GHG 610 1953 R0020.....2.5.56
GHG 610 1953 R0020.....2.5.59
GHG 610 1953 R0020.....2.5.70
GHG 610 1953 R0020.....2.5.72
GHG 610 1953 R0020.....2.5.75
GHG 610 1953 R0020.....2.5.78
GHG 610 1953 R0020.....2.5.97
GHG 610 1953 R0041.....2.2.64
GHG 610 1953 R0041.....2.4.119
GHG 610 1953 R0041.....2.5.13
GHG 610 1953 R0041.....2.5.48
GHG 610 1953 R0041.....2.5.51
GHG 610 1953 R0041.....2.5.72
GHG 610 1953 R0041.....2.5.75
GHG 610 1953 R0041.....2.4.14
GHG 610 1953 R0041.....2.4.21
GHG 610 1953 R0057.....2.2.64
GHG 610 1953 R0057.....2.5.8
GHG 610 1953 R0057.....2.5.10
GHG 610 1953 R0057.....2.5.18
GHG 610 1953 R0057.....2.5.21
GHG 610 1953 R0057.....2.5.31
GHG 610 1953 R0057.....2.5.33
GHG 610 1953 R0057.....2.5.35
GHG 610 1953 R0057.....2.5.46
GHG 610 1953 R0057.....2.5.48
GHG 610 1953 R0057.....2.5.51
GHG 610 1953 R0057.....2.5.54
GHG 610 1953 R0057.....2.5.56
GHG 610 1953 R0057.....2.5.59
GHG 610 1953 R0057.....2.5.70
GHG 610 1953 R0057.....2.5.72
GHG 610 1953 R0057.....2.5.75
GHG 610 1953 R0057.....2.5.78
GHG 610 1953 R0057.....2.5.97
GHG 610 1953 R0101.....2.2.8
GHG 610 1953 R0101.....2.2.63
GHG 610 1953 R0101.....2.5.8
GHG 610 1953 R0101.....2.5.46
GHG 610 1953 R0101.....2.5.70
GHG 610 1953 R0101.....2.2.16
GHG 610 1953 R0101.....2.4.14
GHG 610 1953 R0102.....2.2.8
GHG 610 1953 R0102.....2.2.63
GHG 610 1953 R0102.....2.5.8
GHG 610 1953 R0102.....2.5.46
GHG 610 1953 R0102.....2.5.70
GHG 610 1953 R0102.....2.2.16
GHG 610 1953 R0102.....2.4.14
GHG 610 1953 R0103.....2.2.8
GHG 610 1953 R0103.....2.2.63
GHG 610 1953 R0103.....2.5.8
GHG 610 1953 R0103.....2.5.46
GHG 610 1953 R0103.....2.5.70
GHG 610 1953 R0103.....2.2.16
GHG 610 1953 R0103.....2.4.14
GHG 610 1953 R0104.....2.2.8
GHG 610 1953 R0104.....2.2.63
GHG 610 1953 R0104.....2.5.10
GHG 610 1953 R0104.....2.5.48
GHG 610 1953 R0104.....2.5.72
GHG 610 1953 R0104.....2.2.16
GHG 610 1953 R0104.....2.2.18
GHG 610 1953 R0104.....2.2.57
GHG 610 1953 R0104.....2.4.14
GHG 610 1953 R0104.....2.4.21
GHG 610 1953 R0104.....2.4.119
GHG 610 1953 R0105.....2.2.8
GHG 610 1953 R0105.....2.2.63
GHG 610 1953 R0105.....2.5.10
GHG 610 1953 R0105.....2.5.48
GHG 610 1953 R0105.....2.5.72
GHG 610 1953 R0105.....2.2.16
GHG 610 1953 R0105.....2.2.18
GHG 610 1953 R0105.....2.2.57
GHG 610 1953 R0105.....2.4.14
GHG 610 1953 R0105.....2.4.21
GHG 610 1953 R0105.....2.4.119
GHG 610 1953 R0106.....2.2.8
GHG 610 1953 R0106.....2.2.63
GHG 610 1953 R0106.....2.5.10
GHG 610 1953 R0106.....2.5.48
GHG 610 1953 R0106.....2.5.72
GHG 610 1953 R0106.....2.2.16
GHG 610 1953 R0106.....2.2.18
GHG 610 1953 R0106.....2.2.57
GHG 610 1953 R0106.....2.4.14
GHG 610 1953 R0106.....2.4.21
GHG 610 1953 R0106.....2.4.119
GHG 610 1953 R0107.....2.2.63
GHG 610 1953 R0107.....2.2.18
GHG 610 1953 R0107.....2.2.21
GHG 610 1953 R0107.....2.2.21
GHG 610 1953 R0107.....2.2.58
GHG 610 1953 R0108.....2.2.63
GHG 610 1953 R0108.....2.2.18
GHG 610 1953 R0108.....2.2.21
GHG 610 1953 R0108.....2.2.21
GHG 610 1953 R0108.....2.2.58
GHG 610 1953 R0108.....2.2.59
GHG 610 1953 R0109.....2.2.63
GHG 610 1953 R0109.....2.2.18
GHG 610 1953 R0109.....2.2.21
GHG 610 1953 R0109.....2.2.21
GHG 610 1953 R0109.....2.2.58
GHG 610 1953 R0110.....2.2.63
GHG 610 1953 R0110.....2.5.10
GHG 610 1953 R0110.....2.5.13
GHG 610 1953 R0110.....2.5.13
GHG 610 1953 R0110.....2.5.16
GHG 610 1953 R0110.....2.5.18
GHG 610 1953 R0110.....2.5.21
GHG 610 1953 R0110.....2.5.31
GHG 610 1953 R0110.....2.5.33
GHG 610 1953 R0110.....2.5.35
GHG 610 1953 R0110.....2.5.48
GHG 610 1953 R0110.....2.5.51
GHG 610 1953 R0110.....2.5.51
GHG 610 1953 R0110.....2.5.54
GHG 610 1953 R0110.....2.5.56
GHG 610 1953 R0110.....2.5.59
GHG 610 1953 R0110.....2.5.75
GHG 610 1953 R0110.....2.5.75
GHG 610 1953 R0110.....2.5.78
GHG 610 1953 R0110.....2.5.97
GHG 610 1953 R0110.....2.2.24
GHG 610 1953 R0110.....2.2.24
GHG 610 1953 R0110.....2.4.21
GHG 610 1953 R0110.....2.4.119
GHG 610 1953 R0118.....2.2.63
GHG 610 1953 R0118.....2.2.63
GHG 610 1953 R0118.....2.5.10
GHG 610 1953 R0118.....2.5.10
GHG 610 1953 R0118.....2.5.13
GHG 610 1953 R0118.....2.5.13
GHG 610 1953 R0118.....2.5.31
GHG 610 1953 R0118.....2.5.31
GHG 610 1953 R0118.....2.5.48
GHG 610 1953 R0118.....2.5.48
GHG 610 1953 R0118.....2.5.51
GHG 610 1953 R0118.....2.5.51
GHG 610 1953 R0118.....2.5.75
GHG 610 1953 R0118.....2.5.75
GHG 610 1953 R0118.....2.5.97
GHG 610 1953 R0118.....2.5.97
GHG 610 1953 R0118.....2.2.24
GHG 610 1953 R0118.....2.2.24
GHG 610 1953 R0118.....2.4.21
GHG 610 1953 R0118.....2.4.21
GHG 610 1953 R0118.....2.4.119
GHG 610 1953 R0118.....2.4.119
GHG 610 1953 R0126.....2.1.21
GHG 610 1953 R0126.....2.1.21
GHG 610 1953 R0126.....2.1.60
GHG 610 1953 R0126.....2.1.60
GHG 610 1953 R0126.....2.1.76
GHG 610 1953 R0126.....2.1.76
GHG 610 1953 R0126.....2.2.63
GHG 610 1953 R0126.....2.2.63
GHG 610 1953 R0126.....2.4.14
GHG 610 1953 R0126.....2.4.14
GHG 610 1953 R0126.....2.4.14
GHG 610 1953 R0126.....2.4.14
GHG 610 1953 R0128.....2.1.15
GHG 610 1953 R0128.....2.1.15
GHG 610 1953 R0128.....2.1.17
GHG 610 1953 R0128.....2.1.17
GHG 610 1953 R0128.....2.1.25
GHG 610 1953 R0128.....2.1.25
GHG 610 1953 R0128.....2.1.64
GHG 610 1953 R0128.....2.1.64
GHG 610 1953 R0128.....2.1.80
GHG 610 1953 R0128.....2.1.80
GHG 610 1953 R0128.....2.2.63
GHG 610 1953 R0128.....2.2.63
GHG 610 1953 R0128.....2.4.21
GHG 610 1953 R0128.....2.4.21
GHG 610 1953 R0128.....2.4.21
GHG 610 1953 R0128.....2.4.21
GHG 610 1953 R0128.....2.4.119
GHG 610 1953 R0128.....2.4.119
GHG 610 1953 R0128.....2.4.119
GHG 610 1953 R0128.....2.4.119
GHG 610 1953 R0130.....2.1.21
GHG 610 1953 R0130.....2.1.60
GHG 610 1953 R0130.....2.1.76
GHG 610 1953 R0130.....2.2.63
GHG 610 1953 R0130.....2.4.14
GHG 610 1953 R0130.....2.4.14
GHG 610 1953 R0132.....2.1.15
GHG 610 1953 R0132.....2.1.17
GHG 610 1953 R0132.....2.1.25
GHG 610 1953 R0132.....2.1.64
GHG 610 1953 R0132.....2.1.80
GHG 610 1953 R0132.....2.2.63
GHG 610 1953 R0132.....2.4.21
GHG 610 1953 R0132.....2.4.119
GHG 610 1953 R0132.....2.4.119
GHG 610 1953 R0132.....2.4.21
GHG 610 1953 R0134.....2.2.64
GHG 610 1953 R0134.....2.5.13
GHG 610 1954 R0001.....2.6.79
GHG 610 1954 R0003.....2.6.79
GHG 610 1954 R0011.....2.6.79
GHG 610 1954 R0013.....2.6.79
GHG 610 1955 R0101.....2.2.8
GHG 610 1955 R0101.....2.2.64
GHG 610 1955 R0101.....2.5.8
GHG 610 1955 R0101.....2.5.46
GHG 610 1955 R0101.....2.5.70
GHG 610 1955 R0101.....2.2.16
GHG 610 1955 R0102.....2.2.8
GHG 610 1955 R0102.....2.2.16
GHG 610 1955 R0102.....2.2.57
GHG 610 1955 R0102.....2.2.64
GHG 610 1955 R0102.....2.5.10
GHG 610 1955 R0102.....2.5.48
GHG 610 1955 R0102.....2.5.72
GHG 610 1955 R0102.....2.2.18
GHG 610 1955 R0103.....2.2.18
GHG 610 1955 R0103.....2.2.21
GHG 610 1955 R0103.....2.2.58
GHG 610 1955 R0103.....2.2.64
GHG 610 1955 R0103.....2.5.10
GHG 610 1955 R0103.....2.5.48
GHG 610 1955 R0103.....2.5.72
GHG 610 1955 R0104.....2.2.21
GHG 610 1955 R0104.....2.2.24
GHG 610 1955 R0104.....2.2.24
GHG 610 1955 R0104.....2.2.59
GHG 610 1955 R0104.....2.2.64
GHG 610 1955 R0104.....2.5.10
GHG 610 1955 R0104.....2.5.31
GHG 610 1955 R0104.....2.5.48
GHG 610 1955 R0104.....2.5.51
GHG 610 1955 R0104.....2.5.75
GHG 610 1955 R0104.....2.5.78
GHG 610 1955 R0104.....2.5.97
GHG 610 1955 R0105.....2.2.64
GHG 610 1955 R0105.....2.5.10
GHG 610 1955 R0105.....2.5.31
GHG 610 1955 R0105.....2.5.48
GHG 610 1955 R0105.....2.5.51
GHG 610 1955 R0105.....2.5.75
GHG 610 1955 R0105.....2.5.78
GHG 610 1955 R0105.....2.5.97
GHG 610 1955 R0106.....2.2.64
GHG 610 1955 R0106.....2.5.10
GHG 610 1955 R0106.....2.5.31
GHG 610 1955 R0106.....2.5.48
GHG 610 1955 R0106.....2.5.51
GHG 610 1955 R0106.....2.5.75
GHG 610 1955 R0106.....2.5.78
GHG 610 1955 R0106.....2.5.97
GHG 610 1955 R0107.....2.1.21
GHG 610 1955 R0107.....2.1.60
GHG 610 1955 R0107.....2.1.76
GHG 610 1955 R0107.....2.2.64
GHG 610 1955 R0107.....2.5.13
GHG 610 1955 R0108.....2.1.25
GHG 610 1955 R0108.....2.1.64
GHG 610 1955 R0108.....2.1.80
GHG 610 1955 R0108.....2.2.64
GHG 612 1003 R0001.....2.6.68
GHG 618 0001 R0001.....2.6.55
GHG 618 0001 R0002.....2.6.55
GHG 618 0001 R0003.....2.6.55
GHG 618 0001 R0004.....2.6.55
GHG 618 0001 R0005.....2.6.55
GHG 618 0001 R0006.....2.6.55
GHG 618 0001 R0007.....2.6.55
GHG 618 0001 R0008.....2.6.55
GHG 618 0001 R0009.....2.6.55

GHG 618 0001 R0010....2.6.55
GHG 618 0001 R0011....2.6.55
GHG 618 0001 R0012....2.6.55
GHG 618 0001 R0013....2.6.55
GHG 618 0001 R0014....2.6.55
GHG 618 0001 R0015....2.6.55
GHG 618 0001 R0016....2.6.55
GHG 618 0001 R0017....2.6.55
GHG 618 0001 R0018....2.6.55
GHG 618 0002 R0004....2.6.61
GHG 618 0002 R0008....2.6.61
GHG 618 0002 R0012....2.6.61
GHG 618 1102 R 0001....2.6.69
GHG 618 3103 R0001....2.6.66
GHG 618 3103 R0002....2.6.66
GHG 618 3103 R0003....2.6.66
GHG 618 3103 R0004....2.6.66
GHG 618 3103 R0005....2.6.66
GHG 618 3103 R0006....2.6.66
GHG 618 3103 R0007....2.6.66
GHG 618 3103 R0008....2.6.66
GHG 618 3103 R0009....2.6.66
GHG 618 3103 R0010....2.6.66
GHG 618 3103 R0011....2.6.66
GHG 618 3103 R0012....2.6.66
GHG 619 0001 R0001....2.1.44
GHG 619 0001 R0002....2.1.44
GHG 619 0001 R0003....2.1.44
GHG 619 0001 R0004....2.1.44
GHG 619 0001 R0005....2.1.44
GHG 619 0001 R0006....2.1.44
GHG 619 0001 R0007....2.1.53
GHG 619 0001 R0008....2.1.53
GHG 619 0001 R0009....2.1.53
GHG 619 0001 R0010....2.1.53
GHG 619 0001 R0011....2.1.53
GHG 619 0001 R0012....2.1.53
GHG 619 0001 R0013....2.1.53
GHG 630 1925 R0001....2.5.100
GHG 630 1925 R0002....2.5.100
GHG 630 1926 R0001....2.5.100
GHG 635 1200 R0001....2.5.99
GHG 635 1200 R0002....2.5.99
GHG 635 1200 R0003....2.5.99
GHG 635 1200 R0004....2.5.99
GHG 635 1200 R0005....2.5.99
GHG 635 1200 R0006....2.5.99
GHG 635 1200 R0007....2.5.99
GHG 635 1200 R0008....2.5.99
GHG 635 1200 R0009....2.5.99
GHG 635 1200 R0010....2.5.99
GHG 635 1200 R0011....2.5.99
GHG 635 1200 R0012....2.5.99
GHG 635 1220 R0001....2.5.99
GHG 635 1220 R0002....2.5.99
GHG 635 1220 R0003....2.5.99
GHG 635 1220 R0004....2.5.99
GHG 635 1220 R0005....2.5.99
GHG 635 1220 R0006....2.5.99
GHG 635 1220 R0007....2.5.99
GHG 635 1220 R0008....2.5.99
GHG 635 1220 R0009....2.5.99
GHG 635 1220 R0010....2.5.99
GHG 635 1220 R0011....2.5.99
GHG 635 1220 R0012....2.5.99
GHG 640 1901 R02XX....2.6.101
GHG 640 1902 R02XX....2.6.101
GHG 640 1903 R02XX....2.6.101
GHG 640 1904 R02XX....2.6.101
GHG 640 1905 R02XX....2.6.101
GHG 640 1906 R02XX....2.6.101
GHG 640 1907 R02XX....2.6.101
GHG 640 1908 R02XX....2.6.101
GHG 640 1909 R02XX....2.6.101
GHG 640 1910 R02XX....2.6.101
GHG 640 1911 R02XX....2.6.101
GHG 640 9601 P0003....2.6.106
GHG 640 9603 P0011....2.6.105
GHG 640 9603 P0012....2.6.105
GHG 640 9603 P0013....2.6.105
GHG 640 9603 P0014....2.6.105
GHG 640 9604 P0011....2.6.105
GHG 640 9604 P0012....2.6.105
GHG 640 9606 P0011....2.6.105
GHG 640 9606 P0012....2.6.105
GHG 640 9607 P0011....2.6.105
GHG 640 9607 P0012....2.6.105
GHG 640 9607 P0013....2.6.105
GHG 640 9607 P0014....2.6.105
GHG 640 9607 P0015....2.6.105
GHG 640 9607 P0016....2.6.105
GHG 640 9607 P0022....2.6.105
GHG 640 9607 P0023....2.6.105
GHG 640 9607 P0024....2.6.105
GHG 640 9607 P0025....2.6.105
GHG 640 9607 P0026....2.6.105
GHG 640 9608 P0011....2.6.105
GHG 640 9608 P0012....2.6.105
GHG 640 9612 P0001....2.6.106
GHG 640 9614 P0001....2.6.106
GHG 640 9614 P0002....2.6.106
GHG 640 9614 P0011....2.6.105
GHG 640 9614 P0012....2.6.105
GHG 640 9614 P0013....2.6.105
GHG 640 9614 P0014....2.6.105
GHG 640 9614 P0015....2.6.105
GHG 640 9614 P0021....2.6.105
GHG 640 9614 P0022....2.6.105
GHG 640 9614 P0023....2.6.105
GHG 640 9614 P0024....2.6.105
GHG 640 9614 P0025....2.6.105
GHG 640 9617 P0001....2.6.105
GHG 640 9617 P0002....2.6.105
GHG 640 9617 P0003....2.6.105
GHG 640 9617 P0004....2.6.105
GHG 640 9617 P0005....2.6.105
GHG 640 9617 P0006....2.6.105
GHG 640 9617 P0007....2.6.105
GHG 640 9617 P0008....2.6.105
GHG 640 9617 P0009....2.6.105
GHG 640 9617 P0010....2.6.105
GHG 640 9617 P0011....2.6.105
GHG 640 9617 P0012....2.6.105
GHG 721 0001 R0005....2.2.20
GHG 721 0001 R0006....2.2.20
GHG 721 0001 R0007....2.2.20
GHG 721 0001 R0008....2.2.20
GHG 721 0001 R0010....2.2.20
GHG 721 0001 R0011....2.2.20
GHG 721 0001 R0012....2.2.20
GHG 721 0001 R0013....2.2.58
GHG 721 0001 R0014....2.2.58
GHG 721 1001 R0003....2.2.20
GHG 721 1001 R0004....2.2.20
GHG 721 1001 R0013....2.2.20
GHG 721 1001 R0015....2.2.20
GHG 721 1001 R0017....2.2.20
GHG 721 1001 R0018....2.2.20
GHG 721 1001 R0019....2.2.20
GHG 723 0001 R0002....2.2.32
GHG 723 1001 R0002....2.2.32
GHG 723 2001 R0002....2.2.32
GHG 731 1102 R0531....2.2.18
GHG 731 1102 R1088....2.2.18
GHG 731 1102 R1485....2.2.18
GHG 731 1201 R5001....2.1.159
GHG 731 1201 R5002....2.1.159
GHG 731 1202 R0387....2.2.18
GHG 731 1202 R0976....2.2.18
GHG 731 1202 R1345....2.2.18
GHG 744 0101 R0005....2.2.23
GHG 744 2101 R0001....2.2.55
GHG 745 0201 R0002....2.2.59
GHG 745 0201 R0003....2.2.59
GHG 745 0201 R0004....2.2.23
GHG 745 0201 R0012....2.2.23
GHG 745 0201 R0013....2.2.23
GHG 745 0201 R0014....2.2.23
GHG 745 0201 R0015....2.2.23
GHG 745 0201 R0016....2.2.23
GHG 745 0201 R0017....2.2.23
GHG 745 0201 R0018....2.2.23
GHG 745 0201 R0020....2.2.23
GHG 745 0201 R0021....2.2.23
GHG 745 0201 R0022....2.2.23
GHG 745 2201 R0001....2.2.55
GHG 746 0301 R0001....2.2.60
GHG 746 0301 R0002....2.2.26
GHG 746 0301 R0008....2.2.60
GHG 746 0301 R0020....2.2.60
GHG 746 2301 R0001....2.2.55
GHG 749 0401 R0001....2.2.26
GHG 749 2401 R0001....2.2.55
GHG 791 0101 R0001....2.2.8
GHG 791 0101 R0002....2.2.8
GHG 791 0101 R0003....2.2.15
GHG 791 0101 R0004....2.2.15
GHG 791 0101 R0005....2.2.15
GHG 791 0101 R0006....2.2.15
GHG 791 0101 R0008....2.2.15
GHG 791 0101 R0009....2.2.15
GHG 791 0101 R0010....2.2.15
GHG 791 0101 R0019....2.2.8
GHG 791 0101 R0068....2.2.8
GHG 791 0101 R0069....2.2.8
GHG 791 0101 R5006....2.1.158
GHG 791 0101 R5106....2.1.158
GHG 791 0101 R5201....2.1.158
GHG 791 0101 R5202....2.1.158
GHG 791 0101 R5203....2.1.158
GHG 791 0101 R5204....2.1.158
GHG 791 0101 R5206....2.1.158
GHG 791 0101 R5208....2.1.158
GHG 791 0101 R5210....2.1.158
GHG 791 0101 R5212....2.1.158
GHG 791 0101 R5213....2.1.158
GHG 791 0101 R5214....2.1.158
GHG 791 0101 R5215....2.1.158
GHG 791 0101 R5216....2.1.158
GHG 791 0101 R5217....2.1.158
GHG 791 0101 R5218....2.1.158
GHG 791 0101 R5219....2.1.158
GHG 791 0101 R5220....2.1.158
GHG 791 0101 R5221....2.1.158
GHG 791 0101 R5222....2.1.158
GHG 791 0101 R5223....2.1.158
GHG 791 0101 R5224....2.1.158
GHG 791 0101 R5226....2.1.159
GHG 791 0101 R5227....2.1.159
GHG 791 0101 R5228....2.1.159
GHG 791 0201 R0001....2.2.8
GHG 791 0201 R0002....2.2.8
GHG 791 0201 R0003....2.2.8
GHG 791 0201 R0006....2.2.8
GHG 791 0201 R0007....2.2.8
GHG 791 0201 R0008....2.2.15
GHG 791 0201 R0009....2.2.15
GHG 791 0201 R0010....2.2.15
GHG 791 0201 R0011....2.2.15
GHG 791 0201 R0013....2.2.15
GHG 791 0201 R0014....2.2.15
GHG 791 0201 R0015....2.2.15
GHG 791 0201 R0016....2.2.57
GHG 791 0201 R5001....2.1.159
GHG 791 0201 R5002....2.1.159
GHG 791 0201 R5003....2.1.159
GHG 791 0201 R5004....2.1.159
GHG 791 0201 R5005....2.1.159
GHG 791 0201 R5006....2.1.159
GHG 791 0201 R5007....2.1.159
GHG 791 0201 R5008....2.1.159
GHG 791 0201 R5009....2.1.159
GHG 791 0201 R5011....2.1.159
GHG 793 0101 R0001....2.2.11
GHG 793 0101 R0002....2.2.11
GHG 793 0101 R0003....2.2.30
GHG 931 0003 R0011....2.1.100
GHG 931 0003 R0012....2.1.100
GHG 931 0003 R0013....2.1.100
GHG 931 0003 R0021....2.1.100
GHG 931 0003 R0022....2.1.100
GHG 931 0003 R0023....2.1.100
GHG 931 0003 R0031....2.1.101
GHG 931 0003 R0032....2.1.101
GHG 931 0003 R0033....2.1.101
GHG 931 0003 R0034....2.1.101
GHG 931 0003 R0035....2.1.101
GHG 931 0003 R0036....2.1.101
GHG 960 1927 R0105....2.3.10
GHG 960 1941 R0031....2.3.11
GHG 960 1941 R0032....2.3.11
GHG 960 1941 R0033....2.3.11
GHG 960 1941 R0034....2.3.11
GHG 960 1941 R0035....2.3.11
GHG 960 1941 R0036....2.3.11
GHG 960 1941 R0037....2.3.11
GHG 960 1941 R0038....2.3.11
GHG 960 1944 R0101....2.3.7
GHG 960 1944 R0102....2.3.7
GHG 960 1944 R0103....2.3.7
GHG 960 1944 R0104....2.3.7
GHG 960 1944 R0105....2.3.7
GHG 960 1944 R0106....2.3.7
GHG 960 1944 R0107....2.3.7
GHG 960 1944 R0108....2.3.7
GHG 960 1946 R0056....2.3.7
GHG 960 1946 R0059....2.3.7
GHG 960 1946 R0062....2.3.7
GHG 960 1946 R0065....2.3.7
GHG 960 1946 R0071....2.3.7
GHG 960 1946 R0072....2.3.7
GHG 960 1946 R0074....2.3.7
GHG 960 1946 R0077....2.3.7
GHG 960 1946 R0080....2.3.7
GHG 960 1946 R0083....2.3.7
GHG 960 1949 R0111....2.3.9
GHG 960 1949 R0112....2.3.9
GHG 960 1949 R0113....2.3.9
GHG 960 1949 R0114....2.3.9
GHG 960 1949 R0115....2.3.9
GHG 960 1949 R0116....2.3.9
GHG 960 1951 R0001....2.3.11
GHG 960 1951 R0002....2.3.11
GHG 960 1952 R0111....2.3.7
GHG 960 1952 R0112....2.3.7
GHG 960 1952 R0113....2.3.7
GHG 960 1952 R0114....2.3.7
GHG 960 1952 R0115....2.3.7
GHG 960 1952 R0116....2.3.7
GHG 960 1952 R0117....2.3.7
GHG 960 1954 R0002....2.3.10
GHG 960 1954 R0014....2.3.10

Index of Order Code

GHG 960 1955 R 0001 ..... 2.3.6
GHG 960 1955 R 0002 ..... 2.3.6
GHG 960 1955 R 0003 ..... 2.3.6
GHG 960 1955 R 0004 ..... 2.3.6
GHG 960 1955 R 0005 ..... 2.3.6
GHG 960 1955 R 0021 ..... 2.3.6
GHG 960 1955 R 0022 ..... 2.3.6
GHG 960 1955 R 0023 ..... 2.3.6
GHG 960 1955 R 0024 ..... 2.3.6
GHG 960 1955 R 0025 ..... 2.3.6
GHG 960 1955 R 0026 ..... 2.3.6
GHG 960 1955 R 0027 ..... 2.3.6
GHG 960 1955 R 0028 ..... 2.3.6
GHG 960 1955 R0054 ..... 2.3.6
GHG 960 1955 R0055 ..... 2.3.6
GHG 960 1955 R0101 ..... 2.3.6
GHG 960 1955 R0102 ..... 2.3.6
GHG 960 1955 R0103 ..... 2.3.6
GHG 960 1955 R0104 ..... 2.3.6
GHG 960 1955 R0105 ..... 2.3.6
GHG 960 1955 R0121 ..... 2.3.6
GHG 960 1955 R0122 ..... 2.3.6
GHG 960 1955 R0123 ..... 2.3.6
GHG 960 1955 R0124 ..... 2.3.6
GHG 960 1955 R0125 ..... 2.3.6
GHG 960 1955 R0126 ..... 2.3.6
GHG 960 1955 R0127 ..... 2.3.6
GHG 960 1955 R0128 ..... 2.3.6
GHG 960 1956 R0002 ..... 2.3.6
GHG 960 1956 R0003 ..... 2.3.6
GHG 960 1956 R0004 ..... 2.3.6
GHG 960 1956 R0005 ..... 2.3.6
GHG 960 1956 R0006 ..... 2.3.6
GHG 960 1956 R0007 ..... 2.3.6
GHG 981 0014 R0011 ..... 2.5.46
GHG 981 0014 R0012 ..... 2.5.46
GHG 981 0024 R0001 ..... 2.5.51
GHG 981 0024 R0002 ..... 2.5.51
GHG 981 0025 R0001 ..... 2.5.54
GHG 981 0025 R0002 ..... 2.5.54
GHG 981 0026 R0001 ..... 2.5.54
GHG 981 0026 R0002 ..... 2.5.54
GHG 981 0029 R0004 ..... 2.5.56
GHG 981 0029 R0005 ..... 2.5.56
GHG 981 0030 R0001 ..... 2.5.56
GHG 981 0030 R0002 ..... 2.5.56
GHG 981 0031 R0003 ..... 2.5.59
GHG 981 0031 R0004 ..... 2.5.59
GHG 981 0032 R0003 ..... 2.5.59
GHG 981 0032 R0004 ..... 2.5.59
GHG 981 0037 R0001 ..... 2.5.48
GHG 981 0037 R0002 ..... 2.5.48
GHG 981 0038 R0001 ..... 2.5.48
GHG 981 0038 R0002 ..... 2.5.48
GHG 981 0039 R0001 ..... 2.5.51
GHG 981 0039 R0002 ..... 2.5.51
GHG 981 0042 R0001 ..... 2.1.97
GHG 981 0043 R0001 ..... 2.1.97
GHG 981 0048 R0211 ..... 2.5.37
GHG 981 0048 R0212 ..... 2.5.37
GHG 981 0048 R0213 ..... 2.5.37
GHG 981 0048 R0214 ..... 2.5.37
GHG 981 0048 R0215 ..... 2.5.37
GHG 981 0048 R0216 ..... 2.5.37
GHG 981 0048 R0217 ..... 2.5.37
GHG 981 0048 R0218 ..... 2.5.37
GHG 981 0048 R0219 ..... 2.5.37
GHG 981 0048 R0221 ..... 2.5.37
GHG 981 0048 R0222 ..... 2.5.37
GHG 981 0048 R0223 ..... 2.5.37
GHG 981 0048 R0224 ..... 2.5.37
GHG 981 0048 R0225 ..... 2.5.37
GHG 981 0048 R0226 ..... 2.5.37
GHG 981 0048 R0227 ..... 2.5.37
GHG 981 0048 R0228 ..... 2.5.37
GHG 981 0048 R0229 ..... 2.5.37
GHG 981 0048 R0231 ..... 2.5.38
GHG 981 0048 R0232 ..... 2.5.38
GHG 981 0048 R0233 ..... 2.5.38
GHG 981 0048 R0234 ..... 2.5.38
GHG 981 0048 R0235 ..... 2.5.38
GHG 981 0048 R0236 ..... 2.5.38
GHG 981 0048 R0237 ..... 2.5.38
GHG 981 0048 R0238 ..... 2.5.38
GHG 981 0048 R0239 ..... 2.5.38
GHG 981 0048 R0241 ..... 2.5.38
GHG 981 0048 R0242 ..... 2.5.38
GHG 981 0048 R0243 ..... 2.5.38
GHG 981 0048 R0244 ..... 2.5.38
GHG 981 0048 R0245 ..... 2.5.38
GHG 981 0048 R0246 ..... 2.5.38
GHG 981 0048 R0247 ..... 2.5.38
GHG 981 0048 R0248 ..... 2.5.38
GHG 981 0048 R0249 ..... 2.5.38
GHG 981 0048 R0251 ..... 2.5.39
GHG 981 0048 R0252 ..... 2.5.39
GHG 981 0048 R0253 ..... 2.5.39
GHG 981 0048 R0254 ..... 2.5.39
GHG 981 0048 R0255 ..... 2.5.39
GHG 981 0048 R0256 ..... 2.5.39
GHG 981 0048 R0257 ..... 2.5.39
GHG 981 0048 R0258 ..... 2.5.39
GHG 981 0048 R0259 ..... 2.5.39
GHG 981 0048 R0261 ..... 2.5.39
GHG 981 0048 R0262 ..... 2.5.39
GHG 981 0048 R0263 ..... 2.5.39
GHG 981 0048 R0264 ..... 2.5.39
GHG 981 0048 R0265 ..... 2.5.39
GHG 981 0048 R0266 ..... 2.5.39
GHG 981 0048 R0271 ..... 2.5.39
GHG 981 0048 R0272 ..... 2.5.39
GHG 981 0048 R0273 ..... 2.5.39
GHG 981 0048 R0274 ..... 2.5.39
GHG 981 0048 R0275 ..... 2.5.39
GHG 981 0048 R0276 ..... 2.5.39
GHG 981 0048 R0281 ..... 2.5.40
GHG 981 0048 R0282 ..... 2.5.40
GHG 981 0048 R0284 ..... 2.5.40
GHG 981 0048 R0285 ..... 2.5.40
GHG 981 0048 R0291 ..... 2.5.40
GHG 981 0048 R0292 ..... 2.5.40
GHG 981 0048 R0294 ..... 2.5.40
GHG 981 0048 R0295 ..... 2.5.40
KO 731713 W0001 ..... 2.5.62
KO 731713 X0001 ..... 2.5.64
KO 731713 Y0001 ..... 2.5.66
KO 731716 W0001 ..... 2.5.62
KO 731723 W0001 ..... 2.5.62
KO 731723 X0001 ..... 2.5.64
KO 731723 Y0001 ..... 2.5.66
KO 731726 W0001 ..... 2.5.62
KO238001G0001 ..... 2.1.103
KO238001G0002 ..... 2.1.103
KO238001G0003 ..... 2.1.103
KO238001G0004 ..... 2.1.103
KO238001G0005 ..... 2.1.103
KO238001K0001 ..... 2.1.104
KO238001K0002 ..... 2.1.104
KO238001K0003 ..... 2.1.104
KO238001K0004 ..... 2.1.104
KO238001K0005 ..... 2.1.104
KO238001K0006 ..... 2.1.104
KO238001K0007 ..... 2.1.104
KO238001K0008 ..... 2.1.104
KO238001K0009 ..... 2.1.104
KO238001K0010 ..... 2.1.104
KO238001K0011 ..... 2.1.104
KO238001K0012 ..... 2.1.104
KO238001K0013 ..... 2.1.104
KO238001K0014 ..... 2.1.104
KO238001K0015 ..... 2.1.104
KO238001K0016 ..... 2.1.104
KO238001K0017 ..... 2.1.104
KO238001K0018 ..... 2.1.104
KO238001K0019 ..... 2.1.104
KO238001K0020 ..... 2.1.104
KO238001K0021 ..... 2.1.104
KO238001K0022 ..... 2.1.104
KO238001K0023 ..... 2.1.104
KO238001K0024 ..... 2.1.104
KO238001K0025 ..... 2.1.104
KO238001K0026 ..... 2.1.104
KO238001K0027 ..... 2.1.104
KO238001K0028 ..... 2.1.104
KO238001K0029 ..... 2.1.104
KO238001K0030 ..... 2.1.104
KO238001K0031 ..... 2.1.104
KO238001K0032 ..... 2.1.104
KO238001K0033 ..... 2.1.104
KO238001K0034 ..... 2.1.104
KO238001K0035 ..... 2.1.104
KO238001K0036 ..... 2.1.104
KO238001L0001 ..... 2.1.105
KO238001L0002 ..... 2.1.105
KO238001L0003 ..... 2.1.105
KO238001L0004 ..... 2.1.105
KO238001L0005 ..... 2.1.105
KO238001L0006 ..... 2.1.105
KO238001L0007 ..... 2.1.105
KO238001L0008 ..... 2.1.105
KO238001L0009 ..... 2.1.105
KO238001L0010 ..... 2.1.105
KO238001L0011 ..... 2.1.105
KO238001L0012 ..... 2.1.105
KO238001L0013 ..... 2.1.105
KO238001L0014 ..... 2.1.105
KO238001L0015 ..... 2.1.105
KO238001L0016 ..... 2.1.105
KO238001L0017 ..... 2.1.105
KO238001L0018 ..... 2.1.105
KO238001L0019 ..... 2.1.105
KO238001L0020 ..... 2.1.105
KO238001L0021 ..... 2.1.105
KO238001L0022 ..... 2.1.105
KO238001L0023 ..... 2.1.105
KO238001L0024 ..... 2.1.105
KO238001L0025 ..... 2.1.105
KO238001L0026 ..... 2.1.105
KO238001L0027 ..... 2.1.105
KO238001L0028 ..... 2.1.105
KO238001L0029 ..... 2.1.105
KO238001L0030 ..... 2.1.105
KO238001L0031 ..... 2.1.105
KO238001L0032 ..... 2.1.105
KO238001L0033 ..... 2.1.105
KO238001L0034 ..... 2.1.105
KO238001L0035 ..... 2.1.105
KO238001L0036 ..... 2.1.105
NOR 000 000 115 302 ..... 2.2.36
NOR 000 000 115 306 ..... 2.2.36
NOR 000 000 115 311 ..... 2.2.36
NOR 000 000 115 314 ..... 2.2.36
NOR 000 000 115 315 ..... 2.2.36
NOR 000 001 151 181 ..... 2.2.36
NOR 000 001 151 199 ..... 2.2.36
NOR 000 001 151 206 ..... 2.2.36
NOR 000 001 151 214 ..... 2.2.36
NOR 000 001 151 222 ..... 2.2.36
NOR 000 001 151 506 ..... 2.2.36
NOR 000 001 151 514 ..... 2.2.36
NOR 000 001 151 581 ..... 2.2.36
NOR 000 001 151 599 ..... 2.2.36
NOR 000 001 160 116 ..... 2.6.124
NOR 000 001 160 124 ..... 2.6.124
NOR 000 001 160 132 ..... 2.6.124
NOR 000 001 170 000 ..... 2.6.121
NOR 000 001 170 001 ..... 2.6.121
NOR 000 001 170 002 ..... 2.6.121
NOR 000 001 170 003 ..... 2.6.121
NOR 000 001 170 004 ..... 2.6.119
NOR 000 001 170 005 ..... 2.6.119
NOR 000 001 170 006 ..... 2.6.119
NOR 000 001 170 007 ..... 2.6.119
NOR 000 001 170 008 ..... 2.6.119
NOR 000 001 170 009 ..... 2.6.119
NOR 000 001 170 010 ..... 2.6.119
NOR 000 001 170 011 ..... 2.6.119
NOR 000 001 170 012 ..... 2.6.119
NOR 000 001 170 013 ..... 2.6.119
NOR 000 001 170 014 ..... 2.6.119
NOR 000 001 170 015 ..... 2.6.119
NOR 000 001 170 016 ..... 2.6.119
NOR 000 001 170 017 ..... 2.6.119
NOR 000 001 170 018 ..... 2.6.119
NOR 000 001 170 019 ..... 2.6.119
NOR 000 001 170 020 ..... 2.6.119
NOR 000 001 170 021 ..... 2.6.119
NOR 000 001 170 022 ..... 2.6.119
NOR 000 001 170 023 ..... 2.6.119
NOR 000 001 170 024 ..... 2.6.119
NOR 000 001 170 025 ..... 2.6.119
NOR 000 001 170 026 ..... 2.6.121
NOR 000 001 170 027 ..... 2.6.121
NOR 000 001 170 028 ..... 2.6.121
NOR 000 001 170 029 ..... 2.6.121
NOR 000 001 170 030 ..... 2.6.106
NOR 000 001 170 030 ..... 2.6.121
NOR 000 001 170 031 ..... 2.6.106
NOR 000 001 170 031 ..... 2.6.121
NOR 000 001 170 032 ..... 2.6.106
NOR 000 001 170 032 ..... 2.6.121
NOR 000 001 170 033 ..... 2.6.121
NOR 000 001 170 034 ..... 2.6.121
NOR 000 001 170 035 ..... 2.6.121
NOR 000 001 170 036 ..... 2.6.123
NOR 000 001 170 037 ..... 2.6.123
NOR 000 001 170 038 ..... 2.6.123
NOR 000 001 170 039 ..... 2.6.123
NOR 000 001 170 116 ..... 2.6.119
NOR 000 001 170 117 ..... 2.6.119
NOR 000 001 170 118 ..... 2.6.119
NOR 000 001 170 154 ..... 2.6.121
NOR 000 001 170 438 ..... 2.6.115
NOR 000 001 170 446 ..... 2.6.115
NOR 000 001 170 462 ..... 2.6.115
NOR 000 001 170 488 ..... 2.6.115
NOR 000 001 170 496 ..... 2.6.115
NOR 000 001 170 503 ..... 2.6.115
NOR 000 001 170 511 ..... 2.6.115
NOR 000 001 170 529 ..... 2.6.115
NOR 000 001 170 537 ..... 2.6.115
NOR 000 001 170 545 ..... 2.6.115
NOR 000 001 170 553 ..... 2.6.115
NOR 000 001 170 565 ..... 2.6.121
NOR 000 001 170 569 ..... 2.6.121
NOR 000 001 170 600 ..... 2.6.121
NOR 000 001 170 892 ..... 2.6.121
NOR 000 001 170 909 ..... 2.6.121
NOR 000 001 170 917 ..... 2.6.121
NOR 000 001 170 925 ..... 2.6.121
NOR 000 001 170 933 ..... 2.6.121
NOR 000 001 190 062 ..... 2.6.115

NOR 000 001 190 064 ..... 2.6.115
NOR 000 001 190 139 ..... 2.6.115
NOR 000 001 190 171 ..... 2.6.115
NOR 000 001 190 197 ..... 2.6.115
NOR 000 003 110 937 ..... 2.4.127
NOR 000 003 110 945 ..... 2.4.127
NOR 000 003 110 953 ..... 2.4.127
NOR 000 003 110 995 ..... 2.4.127
NOR 000 003 230 016 ..... 2.1.55
NOR 000 003 230 024 ..... 2.1.55
NOR 000 003 230 032 ..... 2.1.55
NOR 000 003 230 058 ..... 2.1.55
NOR 000 003 230 066 ..... 2.1.55
NOR 000 003 230 074 ..... 2.1.55
NOR 000 111 150 001 ..... 2.2.36
NOR 000 111 150 002 ..... 2.2.36
NOR 000 111 150 003 ..... 2.2.36
NOR 000 111 150 004 ..... 2.2.36
NOR 000 111 150 005 ..... 2.2.36
NOR 000 111 150 006 ..... 2.2.36
NOR 000 111 150 009 ..... 2.2.36
NOR 000 111 150 011 ..... 2.2.36
NOR 000 111 150 013 ..... 2.2.36
NOR 000 111 150 501 ..... 2.2.36
NOR 000 111 150 502 ..... 2.2.36
NOR 000 111 150 504 ..... 2.2.36
NOR 000 111 150 505 ..... 2.2.36
NOR 000 111 170 469 ..... 2.6.115
NOR 000 111 170 601 ..... 2.6.115
NOR 000 111 170 606 ..... 2.6.115
NOR 000 114 110 511 ..... 2.4.127
NOR 000 114 110 540 ..... 2.4.127
NOR 000 114 110 553 ..... 2.4.127
NOR 000 114 110 587 ..... 2.4.127
NOR 000 114 110 595 ..... 2.4.127
NOR 000 114 110 738 ..... 2.4.127
NOR 000 114 110 740 ..... 2.4.127
NOR 000 114 110 747 ..... 2.4.127
NOR 000 114 110 748 ..... 2.4.127
NXTS12215130 ..... 2.2.42
NXTS12626160 ..... 2.2.42
NXTS12626200 ..... 2.2.42
NXTS13030160 ..... 2.2.42
NXTS13030163-HASP 2.2.42
NXTS13030200 ..... 2.2.42
NXTS13826200 ..... 2.2.42
NXTS13838230 ..... 2.2.43
NXTS14538160 ..... 2.2.42
NXTS14538200 ..... 2.2.43
NXTS14848200 ..... 2.2.43
NXTS162445203-HASP 2.2.43
NXTS16245200 ..... 2.2.43
NXTS17455200 ..... 2.2.43
NXTS17650200 ..... 2.2.43
NXTS18664200 ..... 2.2.43
NXTS19874200 ..... 2.2.43
STBS1121208 ..... 2.2.52
STBS1151509-UL 2.2.52
STBS1191509 ..... 2.2.52
STBS1191910 ..... 2.2.52
STBS1252512 ..... 2.2.52
STBS1254013 ..... 2.2.52
STBS12540200 ..... 2.2.53
STBS13838220 ..... 2.2.53
STBS13838223 ..... 2.2.53
STBS14848200 ..... 2.2.53
STBS16040220 ..... 2.2.53
XLHPS 3020153-B-HASP 2.2.46
XLHPS6050203-HASP 2.2.48
XLHS12315130 ..... 2.2.46
XLHS12626150 ..... 2.2.46
XLHS13020150 ..... 2.2.46
XLHS13030150 ..... 2.2.46
XLHS13030200 ..... 2.2.46
XLHS14030150 ..... 2.2.46
XLHS14030200 ..... 2.2.46
XLHS14040150 ..... 2.2.47
XLHS14040200 ..... 2.2.47
XLHS14050150 ..... 2.2.47
XLHS14050200 ..... 2.2.47
XLHS14050201-B-HASP 2.2.47
XLHS15040150 ..... 2.2.47
XLHS15040200 ..... 2.2.47
XLHS15050150 ..... 2.2.48
XLHS15050200 ..... 2.2.48
XLHS15060200 ..... 2.2.48
XLHS16040150 ..... 2.2.48
XLHS16040200 ..... 2.2.48
XLHS16050150 ..... 2.2.48
XLHS16050200 ..... 2.2.48
XLHS16060150 ..... 2.2.49
XLHS16060200 ..... 2.2.49
XLHS16076200 ..... 2.2.49
XLHS16076203-B-HASP 2.2.49
XLHS17650200 ..... 2.2.49
XLHS17660200 ..... 2.2.49
XLHS17676200 ..... 2.2.49

Eaton's Crouse-Hinds Business

The safety you rely on.

See the complete offering of Hazardous and Industrial Products at www.crouse-hinds.de.

U.S. (Global Headquarters): Eaton's Crouse-Hinds Business

1201 Wolf Street
Syracuse, NY 13208

(866) 764-5454
FAX: (315) 477-5179
FAX Orders Only:
(866) 653-0640

CrouseCustomerCTR@
Eaton.com

For more information:
If further assistance is required, please contact an authorized Eaton Distributor, Sales Office, or Customer Service Department.

Australia
Phone +61-2-8787-2777
Fax +61-2-9609-2342
CEASales@
cooperindustries.com

China
Phone +86-21-2899-3600
Fax +86-21-2899-4055
cchsales@cooperindustries.com

Great Britain
Phone +44-247-630-89 30
Fax +44-247-630-10 27
sales.CCH.gb@
cooperindustries.com

India
Phone +91-124-4683888
Fax +91-124-4683899
cchindia@cooperindustries.com

Canada
Toll Free +1-800-265-0502
Fax +1-800-263-9504
Fax orders only:
+1-866-653-0645

Korea
Phone +82-2-3484-6783
Fax +82-2-3484-6778
CCHK-sales@
cooperindustries.com

Mexico/Latin America/ Caribbean
Phone +52-555-804-4000
Fax +52-555-804-4020
mxmercadotecnia@
cooperindustries.com

Spain
Phone +34-9-37362710
Fax +34-9-37835055
sales.CCH.es@
cooperindustries.com

Middle East (Dubai)
Phone +971-4-427-2522 / 2500
Fax +971-4-429-8521
sales.CCH.me@
cooperindustries.com

The Netherlands
Phone +31-10-2452145
Fax +31-10-2452121
sales.CCH.nl@
cooperindustries.com

Norway
Phone +47-32-244600
Fax +47-32-244646
sales.CCH.no@
cooperindustries.com

Singapore:
Phone +65-6645-9888
Fax +65-6297-4819
chsi-sales@
cooperindustries.com

Turkey
Phone +90-216-464-20-20
Fax +90-216-464-20-10
infoEGTurkey@eaton.com

Russia
Phone +7-495 510-24-27
Fax +7-495 510-24-28
info@cooper.ru.com
www.cooper-russia.ru

Eaton's Crouse-Hinds Business
Neuer Weg – Nord 49
D-69412 Eberbach

Phone +49 (0) 6271/806-500
Fax +49 (0) 6271/806-476
E-mail info-ex@eaton.com
Internet www.crouse-hinds.de

Crouse-Hinds by EATON

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

© 2014 Eaton Corporation
All Rights Reserved

Printed in Germany
Publication No. BR 2237
October 2014

Changes to the products, to the information contained in this document, and to prices are reserved; so are errors and omissions. Only order confirmations and technical documentation by Eaton is binding. Photos and pictures also do not warrant a specific layout or functionality. Their use in whatever form is subject to prior approval by Eaton. The same applies to Trademarks (especially Eaton, Moeller, and Cutler-Hammer). The Terms and Conditions of Eaton apply, as referenced on Eaton Internet pages and Eaton order confirmations.

Eaton's Crouse-Hinds Business
1201 Wolf Street
Syracuse, NY 13208
(866) 764-5454
CrouseCustomerCTR@Eaton.com

Eaton is a registered trademark.

All other trademarks are property of their respective owners.