



GENERAL CATALOGUE

SOLUTIONS THROUGH TECHNOLOGY



EDITO

TECHNOR® is a worldwide technology company of MARECHAL ELECTRIC GROUP, with operational businesses in Italy, United Arab Emirates and Singapore, and is leader in the **design and manufacture of luminaires, enclosures and electrical panels for potentially explosive atmospheres.**

TECHNOR® has a high level of experience in developing and designing Ex equipment for most applications.

These include offshore oil installations, refineries, petrochemical plants, ships and FPSOs, chemical, pharmaceutical, food industries as well as other industries in which explosive dusts might represent a hazard, such as foodstuffs manufacture grain silos and textile.

Products enable safe transport and application of electric signals and power in hazardous areas. The core business is in the electrical, instrumentation and electronics fields.

All the equipment for use in explosive atmosphere satisfy the requirements of international and national regulations (Atex, IECEx and Gost) and each individual systems' component is certified in accordance with specific Ex-certification requirements.

TECHNOR®'s product range and geographic locations nicely complement those of the MARECHAL ELECTRIC GROUP, providing significant product and distribution channel synergies.

LIGHTING FIXTURES

Fluorescent lighting//Wellglass//LED lighting//Floodlights

CONTROL STATIONS

Increased safety//Flameproof

JUNCTION BOXES

Increased safety//Flameproof

FLAMEPROOF ENCLOSURES & Ex-P CABINETS

Gas Group IIB + H₂//Gas Group IIC

EARTHING SYSTEMS

VISUAL SIGNALS

CABLE GLANDS & FITTINGS

Metallic//Plastic//Accessories//Fittings

PLUGS AND SOCKET-OUTLETS

MARECHAL ELECTRIC PRODUCTS

Explosion proof range//Industrial range

65 Years of expertise in the industrial electrical equipment

Founded in 1952, the MARECHAL ELECTRIC Group counts among the major players in Low Voltage LT electrical connection systems in industrial environments with or without the presence of an ATEX explosive atmosphere. With a consolidated turnover of nearly €100 million, its operational and/or sales subsidiaries in Europe, America, Asia, the Middle East, Africa and Australia, offer the best products and local services to the most demanding customers. A workforce of nearly 500 worldwide includes R&D, manufacturing and commercial development skills. The product range is intended for all sectors of industrial activity where safety and endurance are required.

→ INTERNATIONAL COVERAGE

The MARECHAL ELECTRIC Group has an international presence with its own sales forces in more than 20 countries and a strong network of global partners and distributors. Its production, assembly and sales subsidiaries allow MARECHAL® to maintain a close relationship with its customers in more than 100 countries.

10 subsidiaries at your service:

MARECHAL ELECTRIC S.A.S (Head office - France)

MELTRIC Corporation (USA)

MARECHAL ELECTRIC Africa (Pty) Limited (South Africa)

MARECHAL ELECTRIC Asia Pte Ltd (Asia)

MARECHAL AUSTRALIA Pty Ltd (Australia)

TECHNOR Italsmea (Italy)

MARECHAL GmbH (Germany)

TECHNOR Middle East DMCC (Middle East).

MARECHAL CHINA



Our history

Since its creation in 1952, MARECHAL ELECTRIC is a French family business, independent, committed to its customers, its employees and its suppliers.

The company is specialized in the manufacture of low voltage electrical connectors from 5A to 700A, as well as electrical solutions for potentially explosive atmospheres through the TECHNOR® brand.

Our customers benefit from MARECHAL® products designed to ensure safety, durability, performance, ease of use and energy efficiency.

The company offers products under two complementary brands MARECHAL® and TECHNOR® with the same level of quality requirement worldwide. Committed to this approach, MARECHAL ELECTRIC has remained since 1952 an example of success, offering products of unrivalled quality, resulting from the research and development that make the reputation of the French electrical industry.

The principles of MARECHAL ELECTRIC stands also for collaboration based on trust, proximity with partners, suppliers, customers and employees.

Our research strategy revolves around 4 main approaches:

→ THE SAFETY AND RELIABILITY OF OUR PRODUCTS

Boasting of a unique level of know-how, MEG first and foremost prioritises the safety of the individuals in the facilities and during the use and maintenance of its equipments. Their design goes hand in hand with sustainability and performance over the long-term, irrelevant of the number of operations, outer environment or conditions of use.

→ OPTIMISING THE MODULAR DESIGN

MEG offers its customers the possibility of customising the functions and modular assembly options for its products. For large-scale projects, a dedicated Specific Equipments Technical Team is available to support the customer for their projects so as to offer a comprehensive solution.

→ ENRICHING PARTNERSHIP DEVELOPMENTS WITH ITS CUSTOMERS

MEG is present on turnkey markets and the close partnerships developed with all market actors enables us to grow and to continuously develop our product portfolio. We are therefore constantly improving the performances and functions of our products to exceed our customers' expectations.

→ COMPLYING WITH INTERNATIONAL REGULATIONS

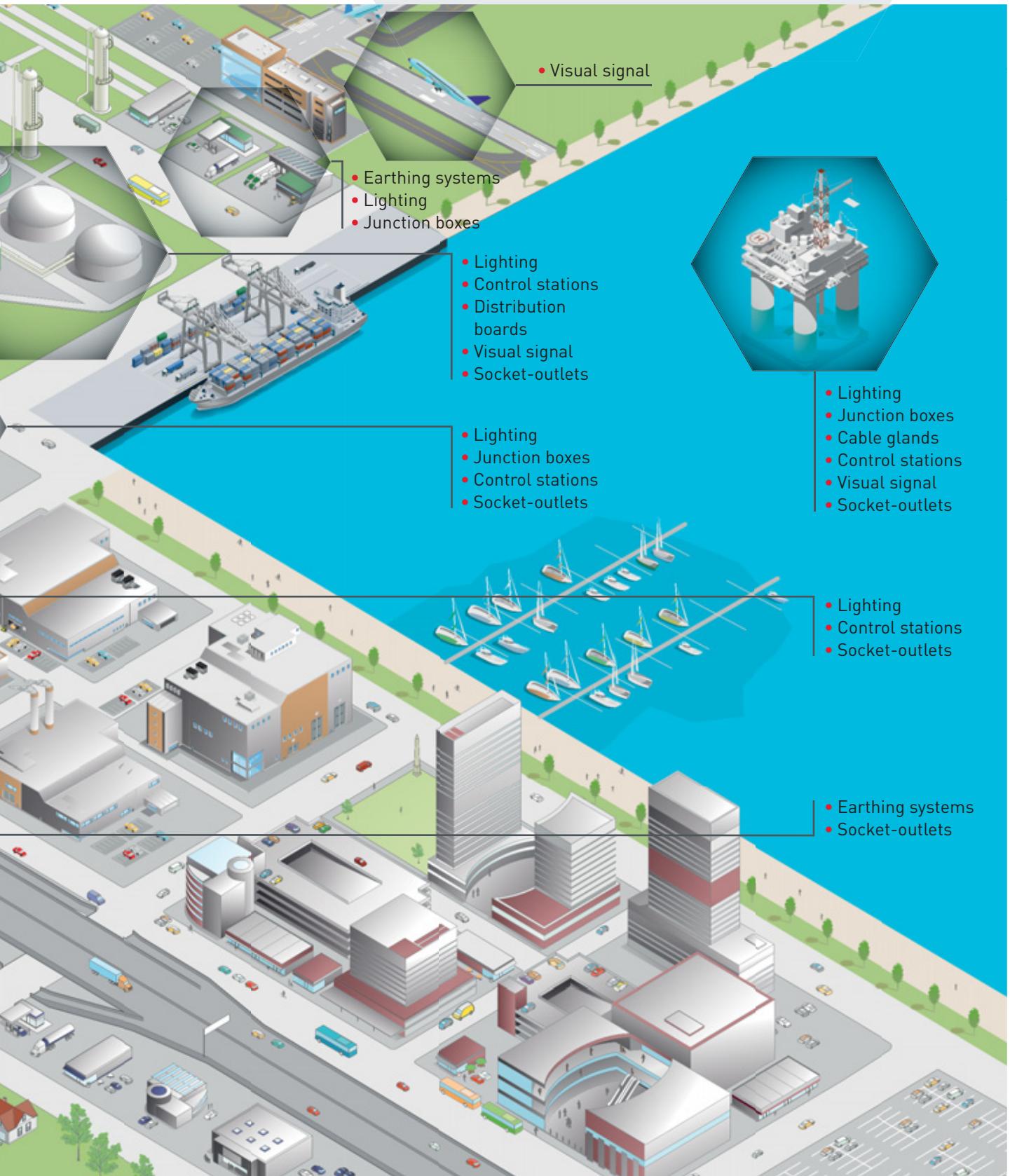


TECHNOR® APPLICATIONS FIELDS

Safety of people, equipment & infrastructure



in potentially explosive atmosphere



Ex REGULATIONS

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European ATEX Directive

→ EUROPEAN DIRECTIVE 2014/34/EU

ATEX Directive 2014/34/EU is a "new approach" directive that applies to protective systems against explosions as well as all equipment used in or related to explosive atmospheres, such as electrical and non-electrical equipment, components and safety, control and adjusting devices that are necessary for the safe operation of those equipment and protective systems. As a "new approach" directive, the 2014/34/EU Directive defines the essential requirements for the safety and health which shall be respected by all manufacturers. Devices falling within the scope of the European Directive and answering to the essential requirements for the safety and health are identified by a marking plate on which the  logo appears.

→ EUROPEAN DIRECTIVE 1999/92/EC

- The 1999/92/EC Directive aims to improve the safety and health protection of workers who may be exposed to potentially explosive atmospheres.
- The site manager has the obligation:
 - to prevent the formation of explosive atmospheres or if this is not possible, prevent ignition of explosive atmospheres,
 - to assess the specific risks arising from explosive atmospheres ; to draw up and keep up to date an explosion protection document,
 - to classify places where explosive atmospheres may occur into zones,
 - to mitigate the detrimental effects of an explosion to protect the health and safety of workers (install appropriate equipment, take organizational measures such as staff training, ...).

International scheme : IECEx

IECEx Scheme: A voluntary certification scheme complying with international standards for electrical and non-electrical equipment for use in explosive atmospheres.

Its aim is to facilitate the international flow of equipment intended to be used in potentially explosive atmospheres (in compliance with one or more international standards

defining the type of protection against the risk of explosion) and thus avoiding multiple national certifications and at the same time ensuring an appropriate level of safety. The IECEx certification scheme allows the manufacturers of "Ex proof" equipment to obtain a Certificate of Conformity that would be accepted in Member States in which this certification scheme is recognized.

Hazardous areas

→ EXPLOSION

An explosion is a release of energy (mechanical, chemical...) in a sudden and often violent manner with high temperature and high pressure due to oxidation or another exothermic reaction.

→ EXPLOSIVE ATMOSPHERE

An explosive atmosphere is a result of the mixture with air, under atmospheric conditions, and flammable substances in the form of gas, vapor, dust, fibers or flyings which, after ignition, permits self-sustaining propagation.

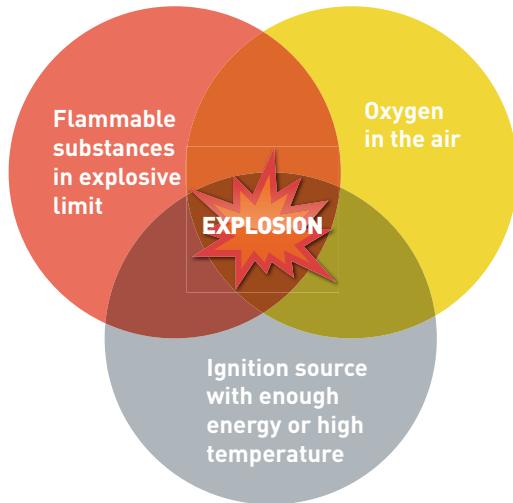
→ A POTENTIALLY EXPLOSIVE ATMOSPHERE

An atmosphere is defined as potentially explosive when its usual composition is not explosive, but due to unforeseen circumstances, it can vary to such an extent that it becomes explosive (the danger exists as a potential state). Main foreseeable circumstances are as follow:

- various stages of a manufacturing process,
- incidents or accidents (rupture of a pipe-line, leak, supply loss),
- meteorological conditions (high ambient temperature, air movements).

Ex REGULATIONS

→ CONDITIONS FOR EXPLOSION



→ AREAS CLASSIFICATION DEFINED BY DIRECTIVE 1999/92/EC

| Probability of ATEX presence | Very High | High and Normal | Low |
|---------------------------------------|--|--|---|
| Definition | Location where an explosive atmosphere is present continuously or for a long period or frequently. | Location in which an explosive atmosphere occurs occasionally during normal operation. | Location where an explosive atmosphere is not liable to occur during normal operation or, if it does, is only short-lived (foreseeable abnormal operation). |
| Zoning for gas & vapours (1999/92/EC) | Zone 0 | Zone 1 | Zone 2 |
| Zoning for dust & fiber (1999/92/EC) | Zone 20 | Zone 21 | Zone 22 |

→ ATEX/IECEx CLASSIFICATION

| ATEX Category | IEC protection Level (EPL) | Zone of installation | Atmosphere |
|---------------|----------------------------|----------------------|----------------------|
| 1G | Ga | 0 | GAS |
| 2G | Gb | 1 | |
| 3G | Gc | 2 | |
| 1D | Da | 20 | DUST |
| 2D | Db | 21 | |
| 3D | Dc | 22 | |
| M1 | Ma | MINING | COAL DUST METHANE |
| M2 | Mb | | |

→ GAS AND VAPOURS EXPLOSION

In general, the substances, gases, liquids or vapors which can be at the origin of explosion are:

- heating gas,
- hydrocarbons,
- glue and adhesive solvents,
- varnishes and resins,
- manufacturing additives for pharmaceutical products, artificial dyes, aromas and perfumes,
- manufacturing agents for the following materials : plastics, rubbers, man-made textiles and chemical cleaning products,
- products used in the treatment and manufacturing of alcohols and derivatives...

→ DUST EXPLOSION

Organic and metallic products which create powder and dust form can also in certain conditions become active agents of an explosion.

These are powders and dust of:

- magnesium,
- aluminum,
- sulfur,
- cellulose,
- corn starch,
- epoxy resins,
- polystyrenes,
- dust of plastic,
- coal,
- wood,
- medics,
- sugar (icing sugar),
- flour...

→ GAS AND VAPOURS CLASSIFICATION AND TEMPERATURE CLASSIFICATION

Gases are divided into

- three groups by IEC/EN standards
- four groups by the CEC (Canadian Electrical Code) and the NEC (National Electrical Code - US) standards.

The groups defined in European, International and North American standards are fundamentally the same, as illustrated by the following table.

| Gas group | | Typical gas |
|-----------|---------------|--|
| En/IEC | North America | |
| IIC | A | Acetylene |
| IIC | B | Hydrogen |
| IIB | C | Ethylene, Ethyl ether, Cyclopropane, Butadene 1-3 |
| IIA | D | Propane, Ethane, Butane, Heptane, Acetone, Ethyl Alcohol |

IEC/EN defined a temperature classification for materials used in hazardous areas. CEC and NEC have also been modified to include a temperature classification.

| Temperatures (°C) | Temperature Classification | |
|-------------------|----------------------------|-------------------|
| | For IEC/EN | For North America |
| 450 | T1 | T1 |
| 300 | T2 | T2 |
| 280 | T2 | T2A |
| 260 | T2 | T2B |
| 230 | T2 | T2C |
| 215 | T2 | T2D |
| 200 | T3 | T3 |
| 180 | T3 | T3A |
| 165 | T3 | T3B |
| 160 | T3 | T3C |
| 135 | T4 | T4 |
| 120 | T4 | T4A |
| 100 | T5 | T5 |
| 85 | T6 | T6 |

Ex REGULATIONS

→ DUST CLASSIFICATION

IEC/EN defined a classification of dust:

| Dust group | Definition | | |
|------------|---------------------|----------|-----------------------|
| | Dust type | Size | Resistivity |
| IIIA | combustible flyings | > 500 µm | - |
| IIIB | non-conductive dust | ≤ 500 µm | > 10 ³ Ω.m |
| IIIC | conductive dust | ≤ 500 µm | ≤ 10 ³ Ω.m |

→ EXAMPLES OF FLAMMABLE SUBSTANCES

| Gas/Vapors | Boiling temperature | Flash point | Self-ignition temperature | Ideal conditions for explosion LEL - UEL | Temperature class | Gas group |
|---------------------------|---------------------|-------------|---------------------------|---|-------------------|-----------|
| Formaldehyde (= Methanal) | -6°C | 60°C | 424°C | 7% - 73% | T2 | IIB |
| Ether | 35°C | -45°C | 175°C | 1.7%-39.2% | T4 | IIB |
| Aniline Oil | 184°C | 75°C | 615°C | 1.2%-11% | T1 | IIA |
| Ethanol (= Ethyl alcohol) | 78°C | 12°C | 400°C | 3,1% - 19,0% @ 60°C 3,1% - 27,7% @ 100°C | T2 | IIB |
| Formic acid | 101°C | 42°C | 525°C | 18%-57% | T2 | IIA |
| Acetic acid | 118°C | 39°C | 510°C | 4%19.9% | T1 | IIA |
| Diethyl sulfate | 208°C | 104°C | 360°C | | T2 | IIA |
| Methanol | 65°C | 9°C | 440°C | 6%-36% @ 60°C 6%-50% @ 100°C | T2 | IIA |
| Isopropyl alcohol | 83°C | 12°C | 399°C | 2%-12.7% | T2 | IIA |
| Acetone | 56°C | <-20°C | 539°C | 2.5%-14.3% @100°C | T1 | IIA |
| n propyl alcohol | 97°C | 15°C | 385°C | 2.1%-17.5% | T2 | IIB |
| n butyl alcohol | 118°C | 35°C | 343°C | 1.4%-12% | T2 | IIA |
| n amyl alcohol | 138°C | 42°C | 320°C | 1.06%-10.5% | T2 | IIA |
| Benzene | 80°C | -11°C | 498°C | 1.2%-8.6% | T1 | IIA |
| Natural gas | -162°C | gas | 600°C | 4.4%-17% | T1 | IIA |
| Ethane | -86°C | gas | 515°C | 2.4%-15.5% | T1 | IIA |
| Ethylene | -104°C | gas | 440°C | 2.3%-36% | T2 | IIB |
| Acetylene | | gas | 305°C | 2.3%-100% | T2 | IIC |
| Methyl chloride | -24°C | gas | 625°C | 7.6%-19% | T1 | IIA |
| Methylamine | -6°C | gas | 430°C | 4.2%-20.7% | T2 | IIA |
| Bromoethane | 38°C | | 511°C | 6.7%-11.3% | T1 | IIA |
| Propane | -42°C | gas | 450°C | 1.7%-10.9% | T2 | IIA |
| Vinyl Chloride | -14°C | gas | 415°C | 3.6%-33% | T2 | IIA |
| Methyl cyanide | 82°C | 2°C | 523°C | 3%-16% | T1 | IIA |
| Acetaldehyde | 20°C | -38°C | 155°C | 4%-60% | T4 | IIA |
| carbon disulphide | 46°C | -30°C | 90°C | 0.6%-60% | T6 | IIC |
| Cyclopropane | -33°C | gas | 500°C | 2.4%-10.4% | T1 | IIA |
| ethylene oxide | 20°C | gas | 429°C | 2.6%-100% | T2 | IIB |
| Iso Butane | -12°C | gas | 460°C | 1.3%-9.8% | T1 | IIA |
| Vinydene fluoride | -86°C | gas | 380°C | 3.9%-25.1% | T2 | IIA |
| Nitromethane | 101°C | 35°C | 414°C | 7.3%-63% | T2 | IIA |
| propylene oxide | 34°C | -37°C | 430°C | 1.9%-37% | T2 | IIB |
| Isobutanol | 108°C | 28°C | 408°C | 1.4%-11% | T2 | IIA |
| Isobutanal | 64°C | -22°C | 165°C | 1.6%-11% | T4 | IIA |
| s-butyle chloride | 68°C | -21°C | 415°C | 2%-8.8% | T2 | IIA |
| Propylene dichloride | 96°C | 15°C | 557°C | 3.4%-14.5% | T1 | IIA |
| s-butyl alcohol | 99°C | 24°C | 406°C | 1.7%-9.8% | T2 | IIA |
| Acrylic acid | 141°C | 55°C | 406°C | 2.4%-8% | T2 | IIB |

| Gas/Vapors | Boiling temperature | Flash point | Self-ignition temperature | Ideal conditions for explosion LEL - UEL | Temperature class | Gas group |
|----------------------------------|---------------------|-------------|---------------------------|--|-------------------|-----------|
| Nitroethane | 114°C | 27°C | 412°C | 3.4% | T2 | IIB |
| Diisopropyl | 58°C | <-20°C | 396°C | 1% | T2 | IIA |
| Isobutyric acide | 155°C | 58°C | 443°C | 2%-10% | T2 | IIA |
| Naphthalene | 218°C | 77°C | 540°C | 0.6% to 150°C – 5.9% | T1 | IIA |
| Methylcyclopentane | 72°C | <-10°C | 258°C | 1%-8.4% | T3 | IIA |
| Mirbane Oil | 211°C | 88°C | 481°C | 1.4%-40% | T1 | IIA |
| Isopropyltoluene | 177°C | 47°C | 436°C | 0.7%-5.6% | T2 | IIA |
| Styrene | 145°C | 30°C | 490°C | 1%-8% | T1 | IIA |
| s-butac | 112°C | -18°C | 422°C | 1.3%-7.5% | T2 | |
| Diethyl carbonate | 126°C | 24°C | 450°C | 1.4%-11.7% | T2 | IIB |
| Dichloride | 174°C | 66°C | 648°C | 2.2%-9.2% | T1 | IIA |
| Oxirane (chloromethyl) | 116°C | 28°C | 385°C | 2.3%-34.4% | T2 | IIB |
| Allyl glycidyl ether | 154°C | 45°C | 249°C | | T3 | IIB |
| Bromo propyne | 89°C | 10°C | 324°C | 3% | T2 | |
| Allyle chloride | 45°C | -32°C | 390°C | 2.9%-11.2% | T2 | IIA |
| Ethylene chloride | 84°C | 13°C | 438°C | 6.2%-16% | T2 | IIA |
| Ethylene chlorohydrin | 128°C | 55°C | 425°C | 4.9%-16% | T2 | IIA |
| Vinyl cianide, VCN | 77°C | -5°C | 480°C | 2.8%-28% | T1 | IIB |
| Allylic Alcohol | 97°C | 21°C | 378°C | 2.5%-18% | T2 | IIB |
| Propargyl Alcohol | 115°C | 33°C | 346°C | 2.4% | T2 | IIB |
| Chloromethoxyl methane | 59°C | -8°C | | | | IIA |
| Methylformate | 32°C | -20°C | 525°C | 5%-23% | T2 | IIA |
| Vinyl acetate | 72°C | -7°C | 385°C | 2.6%-13.4% | T2 | IIA |
| Iso acetone propyl | 116°C | 16°C | 475°C | 1.2%-8% | T1 | IIA |
| Ether diisopropyle | 69°C | -28°C | 405°C | 1%-21% | T2 | IIA |
| iso-propyl acetate | 90°C | 1°C | 425°C | 1.7%-8.1% | T2 | IIA |
| acetic anhydride | 140°C | 49°C | 316°C | 2%-10.3% | T2 | IIA |
| methylcyclohexane | 101°C | -4°C | 250°C | 1-6%.7% | T3 | IIA |
| toluene | 111°C | 4°C | 530°C | 1-7%.8% | T1 | IIA |
| Chlorobenzene | 132°C | 28°C | 593°C | 1,3%-11,0% | T1 | IIA |
| Cyclohexylamine | 134°C | 27°C | 275°C | 1,1%-9,4% | T3 | IIA |
| Cyclohexanol | 161°C | 61°C | 300 °C | 1,2%-11,1% | T3 | IIA |
| Cyclohexanone | 156°C | 43°C | 419°C | 1,3%-9,4% | T2 | IIA |
| Phenol | 182°C | 75°C | 595°C | 1,3%-9,5% | T1 | IIA |
| n- propyl acetate acid | 102°C | 10°C | 430°C | 1.7%-8% | T2 | IIA |
| n-Pentane | 36°C | -40°C | 243°C | 1.1%-8.7% | T3 | IIA |
| ethylene glycol monomethyl ether | 104°C | 39°C | 285°C | 1.8%-20.6% | T3 | IIB |
| dimethoxymethane | 43°C | -21°C | 235°C | 2.2%-19.9% | T3 | IIB |
| diethamine | 56°C | -23°C | 312°C | 1.7%-10.1% | T2 | IIA |
| Formic acid ethyl ester | 54°C | -20°C | 440°C | 2.7%-16.5% | T2 | IIA |
| Ethyl ester of nitrous acid | 17°C | -35°C | 95°C | 3%-50% | T6 | IIA |
| Oxolan | 64°C | -14°C | 230°C | 1.5%-12.4% | T3 | IIB |
| Furane | 32°C | <-20°C | 390°C | 2.3%-14.3% | T2 | IIB |
| Tetrahydrothiophene | 121°C | 13°C | 200°C | 1.1%-12.3% | T4 | IIA |
| divenylenesulfide | 84°C | -9°C | 395°C | 1.5%-12.5% | T2 | IIA |
| Formal butyl | 103°C | 6°C | 206°C | 1.4%-9.5% | T3 | |
| Cyclohexane | 81°C | -17°C | 244°C | 1%-8% | T3 | IIA |
| Cyclohexene | 83°C | -17°C | 244°C | 1.1%-8.3% | T3 | IIA |
| Pyridine | 116°C | 18°C | 482°C | 1.7%-12.4% | T1 | IIA |
| morpholins | 129°C | 33°C | 275°C | 1.4%-15.2% | T3 | IIA |
| Diisobutylamine | 139°C | 26°C | 256°C | 0.8%-3.6% | T3 | IIA |
| Azepane | 135°C to 137°C | 23°C | 279°C | | T3 | IIA |

Ex REGULATIONS

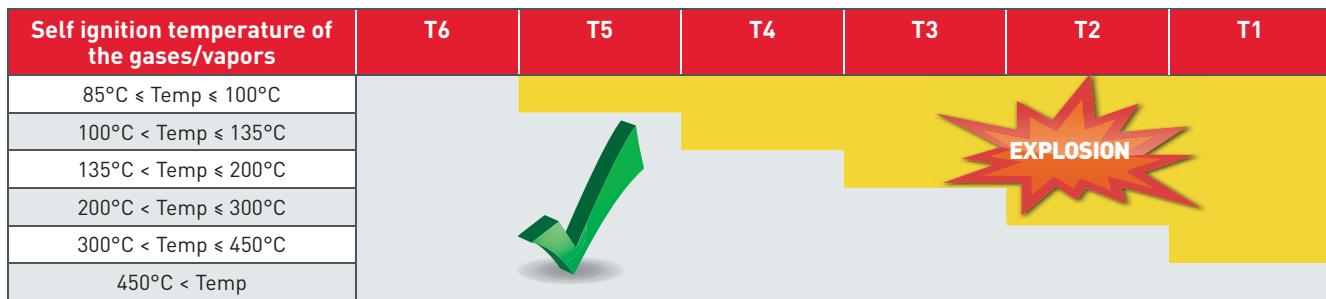
| Gas/Vapors | Boiling temperature | Flash point | Self-ignition temperature | Ideal conditions for explosion LEL - UEL | Temperature class | Gas group |
|--|---------------------|---------------|---------------------------|--|-------------------|------------|
| n- Octane | 126°C | 13°C | 206°C | 0.8%-6.5% | T3 | IIA |
| Tetramethylene cyanide | 295°C | 93°C | 550°C | 1.7%-5% | T1 | |
| Ethylene glycol monobutyl ether | 171°C | 61°C | 238°C | 1.1%-12.7% | T3 | |
| Nonane (= nonyl hydride) | 151°C | 30°C | 205°C | 0.7%-5.6% | T3 | IIA |
| Decyl Alcohol | 230°C | 82°C | 288°C | 0.7%-5.5% | T3 | |
| Dihéxyl ether | 227°C | 75°C | 187°C | | T4 | IIA |
| Propene | -48°C | Gas | 455°C | 2-11.1% | T1 | IIA |
| Wood Ether | -25°C | Gas | 240°C | 2.7-32% | T3 | IIB |
| Isobutylene | -7°C | Gas | 483°C | 1.6-10% | T1 | IIA |
| tetrafluoroethylene | -76°C | Gas | 255°C | 10-59% | T3 | IIB |
| triethylamine | 89°C | -8°C | 215°C | 1.2-8% | T3 | IIA |
| diacetone | 166°C | 58°C | 680°C | 1.8-6.9% | T1 | IIA |
| Isoamyl Alcohol | 131°C | 42°C | 339°C | 1.3-10.5% | T2 | IIA |
| acetylacetone | 140°C | 34°C | 340°C | 1.7% | T2 | IIA |
| n butylester acetic acid | 127°C | 22°C | 390°C | 1.2%-8.5% | T2 | IIA |
| Octanal | 171°C | 52°C | 200°C | | T4 | IIA |
| Dimethylamine | 7°C | Gas | 400°C | 2.8%-14.4% | T2 | IIA |
| Chloroprene | 60°C | -29°C | 320°C | 1.9%-20% | T2 | |
| Ethyl esters of acrylic acid | 100°C | 9°C | 350°C | 1.4%-14% | T2 | IIB |
| aminoethane-2 | 172°C | 85°C | 410°C | | T2 | IIA |
| Ethyl esters of acetic acid | 77°C | -4°C | 470°C | 2%-12.8% | T1 | IIA |
| Ether dibutyl | 141°C | 25°C | 175°C | 0.9%-8.5% | T4 | IIB |
| Cyclobutane | 13°C | Gas | | 1.8% | | IIA |
| Cyclopentane | 49°C | -37°C | 320°C | 1.4% | T2 | IIA |
| Cycloheptane | 119°C | 6°C | | 1.1%-6.7% | | IIA |
| Piperylene | 41°C | <-31°C | 361°C | 1.2%-9.4% | T2 | IIA |
| Amylene | 38°C | -53°C | 290°C | 1.3%-6.6% | T3 | IIA |
| phenylacetylene | 142°C | 41°C | 420°C | | T2 | IIB |
| iso-Octane | 99°C | -12°C | 413°C | 0.7%-6% | T2 | IIA |
| Acetyl fluoride | 21°C | <-17°C | 434°C | 5.6%-19.9% | T2 | IIA |
| carbon monoxide (in 18% water vapor-saturated air) | | Gas | 607°C | 10.9%-74% | T1 | IIB |
| Acetyl ketene | 127°C | 33°C | 262°C | | T3 | IIB |
| acryloyl chloride | 74°C | -8°C | 463°C | 2.68%-18% | T1 | IIA |
| Decene 1 | 172°C | 47°C | 235°C | 0.55%-5.7% | T3 | |
| xylidene (isomers mixture) | | 90°C to 98°C | 500°C to 545°C | 1%-7% | T1 | |
| Cresol (isomers mixture) | | 81°C | 557°C | 1.1% | T1 | IIA |
| Hydrogen | -253°C | Gas | 560°C | 4%-77% | T1 | IIC |
| Ester isopropyl of nitric acid | 101°C | 11°C | 175°C | 2.0%-100% | T4 | IIB |
| anhydrous ammonia | -33°C | Gas | 630°C | 15%-33.6% | T1 | IIA |
| hydrogen sulphide | -60°C | Gas | 260°C | 4%-45.5% | T3 | IIB |
| Petrol (= Fuel) | | -46°C | 280°C | 1.4%-7.6% | T3 | |
| Turpentine oil | 154°C to 170°C | 35°C | 253°C | 0.8% | T3 | IIA |
| Kerosene (= Gas oil No. 1) (= Oil No. 1) | | 38°C to 72°C | 210°C | 0.7%-5% | T3 | IIA |
| Phenol hexahydroxymethyl | 155°C to 180°C | 68°C | 295°C | | T3 | IIA |
| paraformaldehyde | | 70°C | 380°C | 7%-73% | T2 | IIB |
| Diesel No. 2 (= Gas oil No. 2) (= Oil No. 2) | | 52°C to 96°C | 254°C to 285°C | 0.6%-6.5% | T3 | |
| crude gas | | Gas | | | | IIB or IIC |
| Oil -6 | | 66°C to 132°C | | | | |

How chose the equipment?

→ GAS/VAPOR

| Gas/vapor Subdivision | Equipment groups (according type of protection) which can be used | | |
|-----------------------|---|--------------------------|---|
| | Increased safety "e" | Flameproof enclosure "d" | Associated type of protection "d" + "e" |
| A | IIA-IIIB-IIC | IIA-IIIB-IIC | IIA-IIIB-IIC |
| B | IIB-IIC | IIB-IIC | IIB-IIC |
| C | IIC | IIC | IIC |

→ TEMPERATURE CLASSES



Equipment must never be used in an atmosphere capable of ignition at the temperature indicated on the marking (temperature class).

| Application area | IIA | | | | | | | | | | | | IIB | | | IIC | | | Self-ignition temp + gas group + temp class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|-----------|---------|-----------|--------------------|-----------|---------------|-----------|--------|-----------|----------|-----------|-----------------|-----------|---------|-----------|---------|-----------|------------|---|--------|-----------|---------|-----------|--------|-----------|-------------|-----------|----------|-----------|----------------|-----------|------------------|----------------|------------------|------------------|------------------|------------------|---------|----------|----------------|-----------|----------|-----------|---------------|-----------|----------------|-----------|----------|----------|-------------------|-----------|
| | T1 539 °C | Acetone | T1 600 °C | Industrial methane | T2 470 °C | Ethyl acetate | T3 225 °C | Hexane | T1 630 °C | Ammoniac | T1 607 °C | Carbon monoxide | T3 243 °C | Pentane | T3 204 °C | Heptane | T2 413 °C | Iso-octane | T3 235 °C | Decane | T1 498 °C | Benzene | T1 470 °C | Xylene | T3 244 °C | Cyclohexane | T2 404 °C | Butanone | T1 505 °C | Methyl acetate | T2 450 °C | n-propyl acetate | T2 422 °C | n-butyl acetate | T2 360 °C | Amyl acetate | T2 343 °C | Butanol | T6 90 °C | Ethyle nitrate | T2 423 °C | Ethylene | T2 420 °C | Butadiene 1,3 | T2 429 °C | Ethylene oxide | T1 560 °C | Hydrogen | T6 90 °C | Carbon disulphide | T2 305 °C |
| Cleaning product industry | • | | • | | | | | | | | | | • | • | • | • | • | • | | | | | | | | | | | | | | | | | 244°C - T3 - IIB | | | | | | | | | | | | | | | | |
| Pharmaceutical industry | | • | • | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 90°C - T6 - IIC | | | | | | | | | | | | | | | |
| Dye industry | | • | | • | | | | | | | | | • | • | | • | | | | | | | | | | | | | | | | | | | 404°C - T2 - IIA | | | | | | | | | | | | | | | | |
| Artificial rubber industry | | • | • | | | | | | | | | | • | | | | | | | | | | | | | | | | | | | | | | | 305°C - T2 - IIC | | | | | | | | | | | | | | | |
| Perfumery | • | | • | • | • | | | | | | | | • | • | | | | | | | | | | | | | | | | | | | | | | 360°C - T2 - IIA | | | | | | | | | | | | | | | |
| Spirits 375 | | | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 360°C - T2 - IIA | | | | | | | | | | | | | | |
| Artificial fruit flavourings | | | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 90°C - T6 - IIA | | | | | | | | | | | | | | |
| Artificial textile manufacture | | | | • | | | | | • | | | | • | • | | | | | | | | | | | | | | | | | | | | | | 90°C - T6 - IIC | | | | | | | | | | | | | | | |
| Paint manufacture | • | | • | | | | | | | | | | • | | | • | | • | | • | • | • | • | • | | | | | | | | | | 343 - T2 - IIB | | | | | | | | | | | | | | | | | |
| Varnish manufacture | • | | • | | | | | | | | | | • | | | • | | • | | • | • | • | • | | | | | | | | | | 343 - T2 - IIB | | | | | | | | | | | | | | | | | | |
| Grease solvent | • | | | | | | | • | | | | | • | | | • | | | | | | | | | | | | | | | | | | | 498°C - T1 - IIA | | | | | | | | | | | | | | | | |
| Resin solvent | • | | | | • | | | | | | | | | | | | | • | • | | | | | | | | | | | | | | | | 343°C - T2 - IIA | | | | | | | | | | | | | | | | |
| Plastic manufacture | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 305°C - T2 - IIC | | | | | | | | | | | | | | | |
| Hydrocarbons | | • | | | • | • | • | • | • | | | | • | • | • | • | • | • | • | | | | | | | | | | | | | 90°C - T6 - IIC | | | | | | | | | | | | | | | | | | | |
| Gas used as a fuel | | • | | | • | • | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | 305°C - T2 - IIC | | | | | | | | | | | | | | | | | |
| Fertiliser manufacture | | | | | | | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | 560°C - T1 - IIC | | | | | | | | | | | | | | | | |

Conclusion to the site

Ex REGULATIONS

Explanation of marking

Manufacturer identification:

- Name and trademark
- Address

Identification of notify body
in charge of the quality
surveillance (ex: **0080** =
certified and **0081** = LCIE)

Mark for product in the scope of directive
2014/34/EU and in compliance with EHSR

Conformity to all
relevant European
directives

Mark for product in the scope of
directive 2014/34/EU and in compliance
with EHSR

Product type

Electrical parameters for a
safe use of equipment

 Technor Italsmea
Via Italia 33
20060 Gessate (MI)
Italy

Type AQ 8
380/415V 50/60Hz 63A
Max Dis. P. 55W

 0080 Ex II 2GD

Year of construction 2013
IMQ 08ATEX028 X

WARNING - DO NOT OPEN WHEN ENERGIZED

European certificate number
(which can be follow by IECEx
certificate number ex: IECEx
INE 10.0015X)

Marking for Gas
according standards (*)

Marking for Dust
according standards (**)

Safety WARNING

Ambient temperature
range which shall be
marked when different
than -20°C/+40°C

| * : Gas details | ** : Dust details |
|--|--|
| Ex : Electrical apparatus intended to be installed in hazardous location e : type of protection (e = increased safety) IIC : Gas group/Subdivision C T6 : temperature class Gb : Equipment protection level b (use in zone 1 and 2) | Ex : Electrical apparatus intended to be installed in hazardous location tb : type of protection (tb = protection by enclosure) IIIC : Dust group/Subdivision C T85°C : Maximum surface temperature Db : Equipment protection level b (use in zone 21 and 22) IP66 : degree of protection provided by the enclosure |

EHSR : Essential Health and Safety Requirements

IP table (IEC/EN 60529)

Protection against ingress of solid foreign objects and against harmful effects due to the ingress of water.

| 1st digit : protection against ingress of solid objects | | | 2nd digit: protection against the ingress of water | | |
|---|---|--|--|--|--|
| IP | Explanation | | IP | Explanation | |
| 0 | No protection | | 0 | No protection | |
| 1 |  | Protected against solid bodies larger than 50 mm (e.g. accidental contact with the hand) | 1 |  | Protected against vertically-falling drops of water (condensation) |
| 2 |  | Protected against solid bodies larger than 12.5 mm (e.g. finger of the hand) | 2 |  | Protected against drops of water falling at up to 15° from the vertical |
| 3 |  | Protected against solid bodies larger than 2.5 mm (tools, wires) | 3 |  | Protected against drops of rainwater at up to 60° from the vertical |
| 4 |  | Protection against solid bodies larger than 1mm (fine tools, small wires) | 4 |  | Protected against projections of water from all directions |
| 5 |  | Protected against dust (no harmful deposit) | 5 |  | Protected against jets of water from all directions |
| 6 |  | Completely protected | 6 |  | Completely protected against jets of water of similar force to heavy seas |
| | | | 7 |  | Protected against the effects of temporary immersion |
| | | | 8 |  | Protected against effects of prolonged immersion under specified conditions |
| | | | 9k |  | Protected against jets of water from all directions with significantly increased pressure (vapors) |

IK table (IEC/EN 62262)

Protection provided by enclosures for electrical equipment against external mechanical impacts.

| Code | IK 00 | IK 01 | IK 02 | IK 03 | IK 04 | IK 05 | IK 06 | IK 07 | IK 08 | IK 09 | IK 10 |
|---------------------------|-------|--------|-------|---------|-------|-------|-------|-------|---------|-------|-------|
| Shocks energy (in Joules) | 0 | 0,15 | 0,20 | 0,35 | 0,50 | 0,70 | 1 | 2 | 5 | 10 | 20 |
| Corresponds to | 0 g | 200 g | 200 g | 200 g | 200 g | 200 g | 500 g | 500 g | 1700 g | 5 Kg | 5 Kg |
| Dropped to | 0 cm | 2,5 cm | 10 cm | 17,5 cm | 25 cm | 35 cm | 20 cm | 40 cm | 29,5 cm | 20 cm | 40 cm |

Presentation of most common types of protection

→ FLAMEPROOF « Ex d » EQUIPMENT

A flameproof equipment offers an enclosure in which the parts which can ignite an explosive gas atmosphere can be placed. It withstands the pressure developed during an internal explosion of an explosive mixture, and prevents the transmission of the explosion to the explosive gas atmosphere surrounding the enclosure.

A flameproof enclosure must meet three criteria:

- Contain an internal explosion without permanent distortions.
- Guarantee that the explosion cannot be transmitted to the surrounding atmosphere.
- Have a temperature at any points on the surface that is lower than the self ignition temperature of the surrounding gases or vapours.

There are two construction values which are essential for a flameproof equipment to answer to the 3 criteria:

- the length of flameproof gasket (L)
- the gap (i)

These values depend on gas group and the maximum allowed gap depends on the length of flameproof gasket. It is necessary to lubricate the thread and to ensure that at least 5 threads are engaged for metric thread and that 5 threads are present on each parts for NPT threads.

Holes which are not used for cable entries must be blanked using the appropriate blanking plugs.

The equipment is supplied with the lubricated gasket. When the equipment is installed, the flamespaths must be lubricated to keep it in good condition. Use a non-hardening, anti-corrosive grease (see technical note).

In order to successfully retain the flameproof character of the equipment:

- Care must be taken before starting up to ensure that all the screws for closing the covers and cable entries are firmly tightened and that the blocking device is well screwed, if necessary.
- Modification of the original predrilled holes is prohibited.

→ INCREASED SAFETY « Ex e » EQUIPMENT

Method of protection applicable to electrical equipment such as light fittings, sockets, switches, etc, which consists of preventing the occurrence of any accidental ignition.

The construction principles for increased safety « e » equipment are as follows:

- Use of high-quality insulation materials
- Specially dimensioned clearance and creepage distance
- Electrical connection which cannot become loose
- Minimum IP54 weatherproof protection of the enclosure
- Respect of the temperature classes
- Conformity of cable entries
- Labelling.

These principles are respected by screwing the cable gland directly onto the enclosure or, for untapped holes, by fixing with a locknut. Holes which are not used for cable entries must be blanked using the appropriate blanking plugs.

The equipment has a protection level of at least IP 54; it is therefore important to ensure that the sealing gasket is in good condition when the product is installed.

Defective seals must be systematically replaced.

It is important to be sure that the gasket is properly positioned for the plugs and sockets and for all the luminaries before connecting the male and female parts (for plugs and sockets) and before closing the light transmitting part of the lighting fixture.

For the connection, all technical note or instruction sheet shall be followed.

→ PRODUCTS MARKED « Ex de »

Except «Ex d» enclosure, equipment having a combined protection type « d » and « e » are the most commonly used. Some apparatuses such as power sockets, lampholders, etc, which create arcs and sparks in normal operation, can't be designed only with protection mode « e ».

- The part where the electric arc is produced is enclosed in a small flameproof chamber.
- The connection terminals are « e » increased safety.
- The assembly is mounted in an « e » increased safety enclosure.

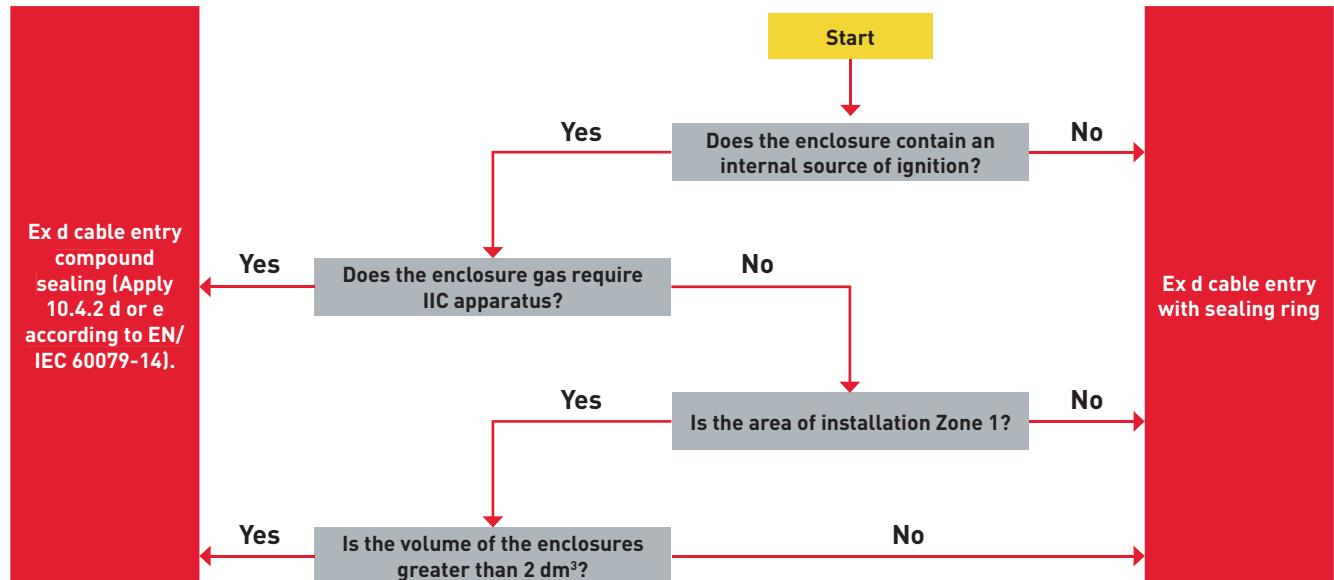
Cables entries

The connection of cables to the electrical equipment shall maintain the explosion protection integrity of the relevant type of protection. When the cable gland certificate has an 'X' marking, this cable gland shall only be used for fixed installations. When the equipment is only portable, cable glands without 'X' marking shall be used.

Cable Entries into Ex d Enclosures

Two situations can be considered, direct cable entry (Ex d enclosures) and indirect cable entry (Ex d e enclosures - on Ex e part).

For the direct cable entry, to choose the correct cable gland the scheme shall be followed if it is not tested with the equipment.



Installation recommendation

→ GENERAL REQUIREMENTS

Electrical installations for explosive atmosphere must comply with the requirements concerning installations in both non hazardous and hazardous locations:

- national rules (Example NFC 15-100 + condition BE3 for France),
- EN/IEC 60079-14,
- IEC/EN 60079-17.

→ EQUIPMENT SELECTION (EXCEPT CABLE ENTRIES)

| Zones | Type of protection | Marking | EN/IEC standard |
|--------------------------------------|----------------------|---------|-----------------|
| - | General requirements | - | 60079-0 |
| For use in Zones 1, 2 | Flameproof enclosure | | Ex d |
| For use in Zones 1, 2 | Increased safety | | Ex e |
| For use in Zones 0, 1, 2, 20, 21, 22 | Intrinsic safety | | Ex i |
| For use in Zones 1, 2 | Pressurisation | | Ex p |
| For use in Zones 0, 1, 2, 20, 21, 22 | Encapsulation | | Ex m |
| For use in Zones 1, 2 | Oil immersion | | Ex o |
| For use in Zones 1, 2 | Powder filling | | Ex q |
| For use in Zone 2 | "Non sparking" | | Ex n |
| For use in Zones 20, 21, 22 | Dust atmospheres | | Ex t |

Ex REGULATIONS

→ EXTERNAL INFLUENCES

The material must be selected and installed so that it is protected against external, chemical, mechanical, thermal and electrical influences, vibrations, humidity, etc., which are likely to counteract the protection modes provided.

→ PROTECTION AGAINST DANGEROUS SPARKS

Limitation of earth fault currents. It is difficult to cover all systems, but the methods presented in EN/IEC 60079-14 represent general cases.

These systems can be used in Zones 1 and 2 up to 1 000 V~/1 500 V. (Low voltage equipment).

Nota: the equipment intended to be used in explosive atmosphere are not in the scope of LVD 2006/95/EC dated 12/12/2006.

→ EQUALIZATION OF POTENTIALS

All exposed conductive parts and all extraneous metallic parts must be connected to the equipotential connection system.

The connection system may comprise protective conductors,

metal pipes in metal cable ducts and metallic structural elements, but must not include the neutral conductor.

It must be impossible for connections to come loose by themselves.

→ CABLES

Cables and accessories should be installed such that they are not exposed to mechanical damage, vibration and corrosive or chemical influences, for example due to solvents, and the effects of heat.

When this type of exposure is inevitable, protective measures must be taken to install or to select appropriate cables (using reinforced cables with shielding inside a seamless aluminum conduit, cables with a mineral insulation casing, a semi-rigid metal casing ...).

→ CABLE JOINTING

Whenever possible, complete cable lengths shall be installed in hazardous locations. Where this is impossible, a cable joint must be made to the mechanical, electrical or chemical constraints; it must also be enclosed in an enclosure in which the protection mode is appropriate for the Zone like junction boxes (AQR, EJB, GUB,...).

→ ADDITIONAL REQUIREMENTS FOR TYPE OF PROTECTION 'd' – FLAMEPROOF ENCLOSURES

Solid obstacles

When installing equipment, care shall be exercised to prevent the flameproof flange joint approaching nearer than the distance specified in table below to any solid obstacle which is not part of the equipment, such as steelwork, walls, weather guards, mounting brackets, pipes or other electrical equipment.

| Minimum distance of obstruction from the flameproof flange joints related to the gas group of the hazardous area | |
|--|-----------------------|
| Gas group | Minimum distance (mm) |
| IIA | 10 |
| IIB | 30 |
| IIC | 40 |

Protection of flameproof joints

Flameproof joints shall be protected against corrosion. Flameproof joints shall not be painted. (WARNING: Painting of the enclosure after complete assembly is permitted. The application of grease to the flameproof joint faces will reduce, but not eliminate, the quantity of paint penetrating the gap (Silicone based greases are often suitable for this purpose) – see § ELECTRICAL INSTALLATIONS INSPECTION AND MAINTENANCE).

Cable glands shall:

- be appropriate to the type of cable employed,
- maintain the type of protection,
- be in accordance with § CABLE GLANDS.

Thread engagement shall be at least five full threads (5 threads engaged for metric threaded, 3.5 threads engaged for NPT). Suitable grease may be used provided it is non setting, non-metallic and non-combustible and any earthing between the two is maintained.

Where the threaded entry or hole size is different to that of the cable gland, a flameproof threaded adapter complying with IEC 60079-1 shall be fitted which complies with thread engagement requirements detailed above.

Only one adapter is authorized.

Unused cable entries shall be sealed with a flameproof blanking element complying with IEC 60079-1.

Conduit systems

Conduit sealing devices shall be provided, either as part of the flameproof enclosure or immediately or as close as practical to the entry to the flameproof enclosure using a minimum number of fittings.

Conduit sealing devices, having parallel threads may be fitted with a sealing washer between the device and the flameproof enclosure providing that after the washer has been fitted, the applicable thread engagement is still achieved. Thread engagement shall be at least five full threads. (5 threads engaged for metric threaded, 3.5 threads engaged for NPT). Suitable grease may be used provided it is non-setting and any earthing between the two is maintained.

→ ADDITIONAL REQUIREMENTS FOR TYPE OF PROTECTION 'e' - INCREASED SAFETY

Enclosures containing bare live parts shall have a degree of ingress protection of at least IP54, whereas enclosures containing insulated parts shall only have a degree of ingress protection of at least IP44.

The connection of cables to increased safety equipment shall be effected by means of cable glands appropriate to the type of cable used. Cable entries shall also respect «e» protection mode and must incorporate an appropriate sealing element in order to obtain a minimum degree of protection at least equal to IP54 at the enclosure connection. Some terminals (e.g. slot types) may permit the entry of more than one conductor. Where more than one conductor is connected to the same terminal, care shall be taken to ensure that each conductor is adequately clamped.

Unless authorized by the documentation supplied with the equipment, two conductors with different diameters must not be connected to the same terminal, unless they have

firstly been fixed by means of a single compression sleeve. To avoid the risk of short-circuits between adjacent conductors in terminal blocks, the insulation of each conductor shall be maintained up to the metal of the terminal.

Combination of terminals and conductors in connection boxes and junction boxes: Care shall be taken to ensure that the heat dissipated within the enclosure does not result in temperatures in excess of the required equipment temperature class. This can be achieved by:

- a) following the guidance technical note given relating to the permissible number of terminals, the conductor size and the maximum current, or
- b) contacting us.

→ ADDITIONAL REQUIREMENTS FOR TYPES OF PROTECTION 'i' - INTRINSIC SAFETY AND 'nL' TYPE OF PROTECTION - ENERGY-LIMITED CIRCUITS

The aim of the installation rules for intrinsically safe circuits is to maintain separation from other circuits.

Requirements of EPL 'Gb' or 'Gc'

In installations to meet the requirements of EPL 'Gb', the intrinsically safe apparatus and the intrinsically safe parts of associated apparatus shall comply at least to level of protection 'ib'.

In installations to meet the requirements of EPL 'Gc', the intrinsically safe apparatus and the intrinsically safe parts of associated apparatus shall comply at least to level of protection 'ic'.

Simple apparatus need not be marked, but shall comply with the requirements of IEC 60079-0 and IEC 60079-11, in so far as intrinsic safety is dependent on them. No certification is required for a simple apparatus.

Associated apparatus should preferably be located outside the hazardous area or, if installed inside a hazardous area, shall be provided with another appropriate type of protection in like inside a EJB enclosures.

All apparatus forming part of an intrinsically safe system should, where reasonably practicable, be identifiable as being part of an intrinsically safe system. If sheaths or coverings are marked by a colour, the colour used for cables containing intrinsically safe circuits shall be light blue. Where intrinsically safe circuits have been identified by the use of light blue covered cable, then light blue covered cable shall not be used for other purposes in a manner or location which could lead to confusion or detract from the effectiveness of the identification of intrinsically safe circuits. If all intrinsically safe circuit cables or all cables of circuits which are not intrinsically safe are armoured,

Ex REGULATIONS

metal sheathed or screened, then marking of intrinsically safe circuit cables is not required.

Alternative marking measures shall be taken inside control cabinets:

- combining the cores in a common light blue harness,
- labelling,
- clear arrangement and spatial separation.

The installation shall ensure that intrinsically safe circuit cables cannot be inadvertently connected to circuit cables which are not intrinsically safe. This may be achieved by:

- a) separating the different types of circuit cables, or
- b) placing the cables so as to protect against the risk of mechanical damage, or
- c) using cables which are armoured, metal sheathed or screened for specific types of circuits (e.g. all circuits which are not intrinsically safe are run in armoured cable or all intrinsically safe circuits are armoured).

Terminals for intrinsically safe circuits shall be separated from terminals of circuits which are not intrinsically safe:

- a) When separation is accomplished by distance, then the clearance between terminals shall be at least 50 mm,
- b) When separation is accomplished by use of an insulating partition or earthed metal partition, the partitions used shall extend to within 1,5 mm of the walls of the enclosure, or alternatively provide a minimum measurement of 50 mm between the terminals when taken in any direction around the partition.

The minimum clearances between the bare conducting parts of external conductors connected to terminals and earthed metal or other conducting parts shall be 3 mm.

The clearance between the bare conducting parts of field wiring terminals of separate intrinsically safe circuits shall be such that there is at least 6 mm between the bare conducting parts of connected external conductors.

The terminals of the intrinsically safe circuits shall be marked as such. This marking may be by the use of colour, in which case it shall be light blue.

Electrical installations inspection and maintenance

Standard EN/IEC 60079-17 covers factors directly related to the inspection and maintenance of electrical installations within hazardous areas only, where the hazard may be caused by flammable gases, vapours, mists, dusts, fibers or flyings. This standard stipulates that the inspection and maintenance of installations shall be carried out only by experienced personnel, whose training has included instruction on the various types of protection and installation practices, the requirements of this standard, the relevant national regulations/company rules applicable to the installation and on the general principles of area classification.

Three inspections are normally requested:

- initial inspection before plant or equipment is brought into service,
- regular inspections in time,
- inspection following any adjustment, maintenance, repair, reclamation, modification or replacement.

Frequency of inspection

The determination of the time interval between inspections shall be taken into account the process and the factors effecting the deterioration of equipment (susceptibility to corrosion, exposure to chemicals or solvents, likelihood of accumulation of dust or dirt, likelihood of water ingress, exposure to excessive ambient temperature, risk of mechanical damage, exposure to undue vibration, training and experience of personnel, likelihood of unauthorized modifications or adjustments and likelihood of inappropriate maintenance, for example that which is not in accordance with the manufacturer's recommendation).

But the interval between periodic inspections shall not exceed three years without seeking expert advice.

Degree of inspection

- Visual inspection: faults directly visible such as missing buttons or missing gasket, not well screw cable entries,....
- Close inspection: visual inspection and in addition detection faults (Close inspection does not normally require the enclosure to be opened, nor the equipment switched off).
- Detailed inspection: such as loose connections, detected after opening the enclosure.

→ SPECIFIC REQUIREMENTS

“Ex d” equipment:

It is preferable to obtain new parts from the manufacturer. Particular attention shall be paid to the correct assembly of flameproof enclosures after repair or overhaul, in order to ensure that the flameproof joints comply with the requirements of the standard. The flameproof enclosure are not gasketed thus they may be **protected by the use of grease, non-setting sealing compound or non-hardening tape** applied externally in accordance with IEC 60079-14. **The drilling of holes into a flameproof enclosure is forbidden.** No re-cement or repair light-transmitting parts shall be made and only complete replacement assemblies, as specified by the manufacturer, shall be used. **No modification affecting the explosion protection shall be carried out on parts of a flameproof enclosure.**

“Ex n” or “Ex e” equipment:

Care shall be taken when refurbishing terminations to maintain clearance and creepage distances. Any replacement

terminals, bushings or parts should be obtained from us or shall conform to the relevant certification documents only for the enclosure. It is preferable to obtain new parts from the manufacturer to guarantee the preservation of the degree of ingress protection and temperature classification as stipulated on the certification label.

All equipment:

For equipment with a gasket, replacements shall be of the same materials and dimensions as the original. Any proposed change of material shall be referred to the equipment manufacturer, user or certification authority. For luminaries: Light-transmitting or other parts made from plastics shall not be cleaned with solvents. Household detergents are recommended for this purpose. The maximum wattage of lamps specified shall not be exceeded. Care shall be taken when changing surface finish, paint, etc., as this may affect the surface temperature of the enclosure and thus the temperature classification. Care shall be taken to ensure that the specified type of protection and degree of ingress protection are maintained.

→ INSPECTION PROGRAM

| Check that | Ex d | Ex e | Ex n | Ex t |
|--|------|------|------|------|
| EQUIPMENT | | | | |
| Equipment is appropriate to the EPL/Zone requirements of the location | ● | ● | ● | ● |
| Apparatus group is correct | ● | ● | ● | ● |
| IP grade of equipment is appropriate to conductivity of dust | | | | ● |
| Equipment temperature class is correct | ● | ● | ● | |
| Equipment maximum surface temperature is correct | | | | ● |
| Equipment circuit identification is correct | ● | ● | ● | ● |
| Equipment circuit identification is available | | ● | ● | ● |
| Enclosure, glass parts and glass-to-metal sealing gaskets and/or compounds are satisfactory | ● | ● | ● | ● |
| There are no unauthorized modifications | ● | ● | ● | ● |
| There are no visible unauthorized modifications | ● | ● | ● | ● |
| Bolts, cable entry devices (direct and indirect) and blanking elements are of the correct type and are complete and tight | ● | ● | ● | ● |
| Flange faces are clean and undamaged and gaskets, if any, are satisfactory | ● | | | |
| Lamp rating, type and position are correct | ● | ● | ● | ● |
| Breathing and draining devices are satisfactory | ● | ● | ● | |
| INSTALLATION | | | | |
| The installation is such as to minimize the risk of dust accumulations | | | | ● |
| Type of cable is appropriate | ● | ● | ● | ● |
| There is no obvious damage to cables | ● | ● | ● | ● |
| Sealing of trunking, ducts, pipes and/or conduits is satisfactory | ● | ● | ● | ● |
| Stopping boxes and cable boxes are correctly filled | ● | ● | ● | ● |
| Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section) | ● | ● | ● | ● |
| Insulation resistance is satisfactory | ● | ● | ● | ● |
| Specific conditions of use (if applicable) are complied with | ● | ● | ● | ● |
| Obstructions adjacent to flameproof flanged joints are in accordance with IEC 60079-14 | ● | | | |
| Variable voltage/frequency installation in accordance with documentation | ● | ● | ● | ● |
| Cables not in use are correctly terminated | | ● | ● | ● |
| ENVIRONMENT | | | | |
| Equipment is adequately protected against corrosion, weather, vibration and other adverse factors | ● | ● | ● | ● |
| No undue accumulation of dust and dirt | ● | ● | ● | ● |
| Electrical insulation is clean and dry | ● | ● | ● | |



LIGHTING

P.26

Fluorescent lighting

- EVF-P.. Series - Zones 1, 2, 21 & 22 -
End-cups in Copper free aluminium 26
- Spares & Accessories 28
- EVF-F.. Series - Zones 1, 2, 21 & 22,
end-cups in GRP 30
- RMS-560.. Series - Zones 1, 2, 21 & 22 -
Stainless steel AISI 304..... 34
- RMS-550.. Series - Zones 2 & 22 -
Stainless steel AISI 304..... 36
- RMS-540.. Series - Safe area -
Stainless steel AISI 304..... 38
- Spares & Accessories 40
- G2X Series - Zones 2 & 22 42

P.46

Wellglass

- EV.. Series - H.I.D. well glass lighting
fixture 46
- EV.. Series Lighting fixtures for
fluorescent compact/halogen lamps -
Copper free aluminium..... 50
- EV.. Series - Hand lamps
for incandescent lamps -
Copper free aluminium..... 54
- EVCC-PR Series - Tank lighting fixtures -
Copper free aluminium 56
- Spares & Accessories 58



P.60

LED lighting

- EV LED.. Series - Spotlight -
Copper free aluminium 60
- EVCC-PR LED Series - Tank lighting fixtures -
Copper free aluminium 62
- FL-LED.. Series - Floodlight -
Copper free aluminium 64
- G2X LED Series - Zones 2 & 22..... 68
- EVF-P LED.. Series - Zones 1, 2, 21 & 22 -
End-cups in Copper free aluminium 70
- EVF-L.. Series - Tubular GRP led lighting..... 72
- RMS-560 LED.. Series - Zones 1, 2, 21 & 22 -
Stainless steel AISI 304..... 76

P.78

Floodlights

- FL.. Series - Copper free aluminium
or Stainless steel AISI 316 L 78
- Spares & Accessories 80

P.80

Lamps/spare parts

FLUORESCENT LIGHTING

EVF-P.. Series - Zones 1, 2, 21 & 22 - End-cups in Copper free aluminium



EVF-P lighting fixtures are manufactured with an high resistance cylindrical polycarbonate lamp housing and with end cups made of corrosion resistant copper free aluminium. Polycarbonate lamp housing is a three layers-extrusion UV resistant able to grant the best protection against sun rays and related yellowing effect.

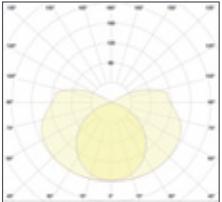
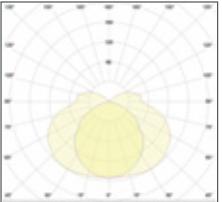
Circular shape grants the best possible "CX" factor, therefore it is less affected by wind-dusts, no flat surfaces to avoid pollution and dirty bunching.

Components and design make EVF-P lighting fixtures suitable for high corrosion environments.

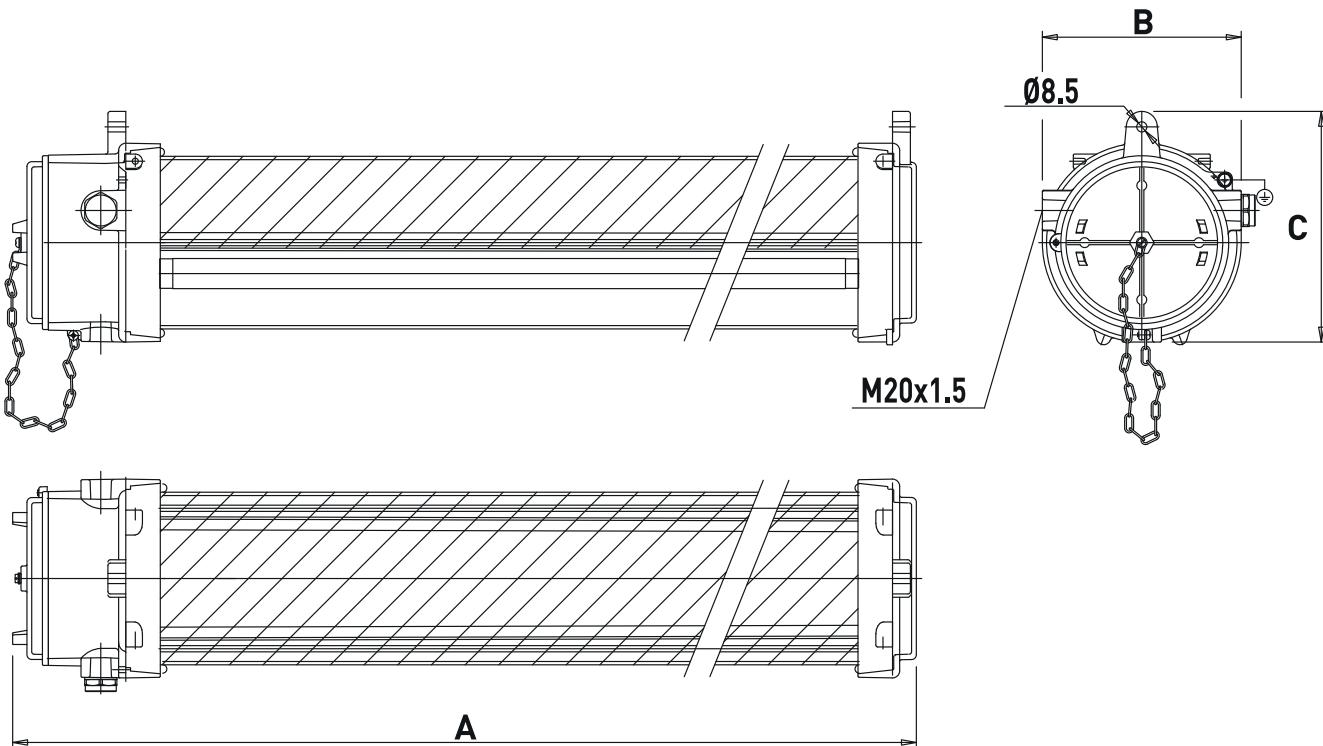
To increase further surface protection, upon request it is possible to apply an OFF-SHORE painting cycle suitable for marine environments.

All lighting fixtures are supplied ready for LOOP IN-LOOP OUT facility with cable up to 4 sqmm.

TECHNICAL FEATURES

| | |
|---|--|
| Material | End cups in aluminium with low content of copper/Light housing in polycarbonate |
| IP/IK rating | IP66/IK10 according to EN 62262:2002 |
| Ambient temperature range | -20°C to +55°C |
| Approvals | Certified 02ATEX0039X (standard)/TR CU (marking upon request, ordering code to be required) IECEx INE 15.0032X |
| Marking | II 2 GD Ex e mb IIC T4 Gb (Normal service)/Ex d e mb IIIC T4 Gb (Emergency service) EX de IIC T4 Gb (available upon request) Ex tb IIIC T85°C Db IP66 |
| Gaskets | O-ring made of Nitrile Rubber (NBR) |
| Surface treatment | End cups painted by green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | N° 2 entries M20x1,5. One plugged-off by Ex d brass nickel chrome plated plug and relevant gasket. |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | EVF-P series lighting fixtures are suitable for two pins fluorescent lamps G13 socket Philips TL-D or equivalent (lamps excluded) |
| Ballast | High frequency electronic ballast conforming with EN 60079 – 18 and IEC 60079 – 18 |
| Rated operation voltage (UE) | 2x58W SOLO 220-240V - 110-240V or 220-277V (normal service) - 220-240V (emergency service) |
| Frequency | 0/50-60 Hz (normal service) - 50-60 Hz (emergency service) |
| Power factor | > 0,95 |
| Accessories available upon request | AISI304 Pole mounting kit/AISI304 Ceiling/Wall mounting kit/AISI304 Suspension mounting kit/3° bottom entry M20x1,5/AISI304 protection guard/Mounting kit in stainless steel AISI316 |
| Operating principles | Available EVF-P lighting fixtures for emergency service of one tube: - 90 minutes; guarantees 60' duration with constant flux (emergency lumen factor 17%) and 30' with decreasing flux - 120 minutes (emergency lumen factor 10%) - 180 minutes; constant flux (emergency lumen factor 9%) |
| Photometric light curves | 1 lamp 2 lamps   |

Dimensions EVF-P



(EVF-P) Lighting fixtures for normal service

| TYPE | CODE | POWER [W] | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|------------------|---------------|-----------|-----------------|-----|-----|-------------|
| | | | A | B | C | |
| EVF-P 118-Ex emb | A030111180011 | 1X18 | 764 | 176 | 194 | 6.50 |
| EVF-P 218-Ex emb | A030112180011 | 2X18 | 764 | 176 | 194 | 6.50 |
| EVF-P 136-Ex emb | A030111360011 | 1X36 | 1374 | 176 | 194 | 8.50 |
| EVF-P 236-Ex emb | A030112360011 | 2X36 | 1374 | 176 | 194 | 8.50 |
| EVF-P 158-Ex emb | A030111580011 | 1X58 | 1680 | 176 | 194 | 9.50 |
| EVF-P 258-Ex emb | A030112580011 | 2X58 | 1680 | 176 | 194 | 10.50 |

(EVF-P) Lighting fixtures for emergency service

| TYPE | CODE | POWER [W] | EMERGENCY DURATION | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|----------------------------|---------------|-----------|--------------------|-----------------|-----|-----|-------------|
| | | | | A | B | C | |
| EVF-P 118 LE-P-90 Ex demb | A030211180111 | 1X18 | 90' | 764 | 176 | 194 | 9.00 |
| EVF-P 118 LE-P-120 EX demb | A030211180211 | 1X18 | 120' | 764 | 176 | 194 | 10.00 |
| EVF-P 218 LE-P-90 Ex demb | A030212180111 | 2X18 | 90' | 764 | 176 | 194 | 9.00 |
| EVF-P 218 LE-P-120 Ex demb | A030212180211 | 2X18 | 120' | 764 | 176 | 194 | 10.00 |
| EVF-P 136 LE-P-90 Ex demb | A030211360111 | 1X36 | 90' | 1374 | 176 | 194 | 11.00 |
| EVF-P 136 LE-P-120 Ex demb | A030211360211 | 1X36 | 120' | 1374 | 176 | 194 | 12.00 |
| EVF-P 136 LE-P-180 Ex demb | A030211360311 | 1X36 | 180' | 1374 | 176 | 194 | 12.50 |
| EVF-P 236 LE-P-90 Ex demb | A030212360111 | 2X36 | 90' | 1374 | 176 | 194 | 11.00 |
| EVF-P 236 LE-P-120 Ex demb | A030212360211 | 2X36 | 120' | 1374 | 176 | 194 | 12.00 |
| EVF-P 236 LE-P-180 Ex demb | A030212360311 | 2X36 | 180' | 1374 | 176 | 194 | 12.50 |
| EVF-P 158 LE-P-90 Ex demb | A030211580111 | 1X58 | 90' | 1680 | 176 | 194 | 12.00 |
| EVF-P 158 LE-P-120 Ex demb | A030211580211 | 1X58 | 120' | 1680 | 176 | 194 | 13.00 |
| EVF-P 158 LE-P-180 Ex demb | A030211580311 | 1X58 | 180' | 1680 | 176 | 194 | 13.50 |
| EVF-P 258 LE-P-90 Ex demb | A030212580111 | 2X58 | 90' | 1680 | 176 | 194 | 12.00 |
| EVF-P 258 LE-P-120 Ex demb | A030212580211 | 2X58 | 120' | 1680 | 176 | 194 | 13.00 |
| EVF-P 258 LE-P-180 Ex demb | A030212580311 | 2X58 | 180' | 1680 | 176 | 194 | 13.50 |

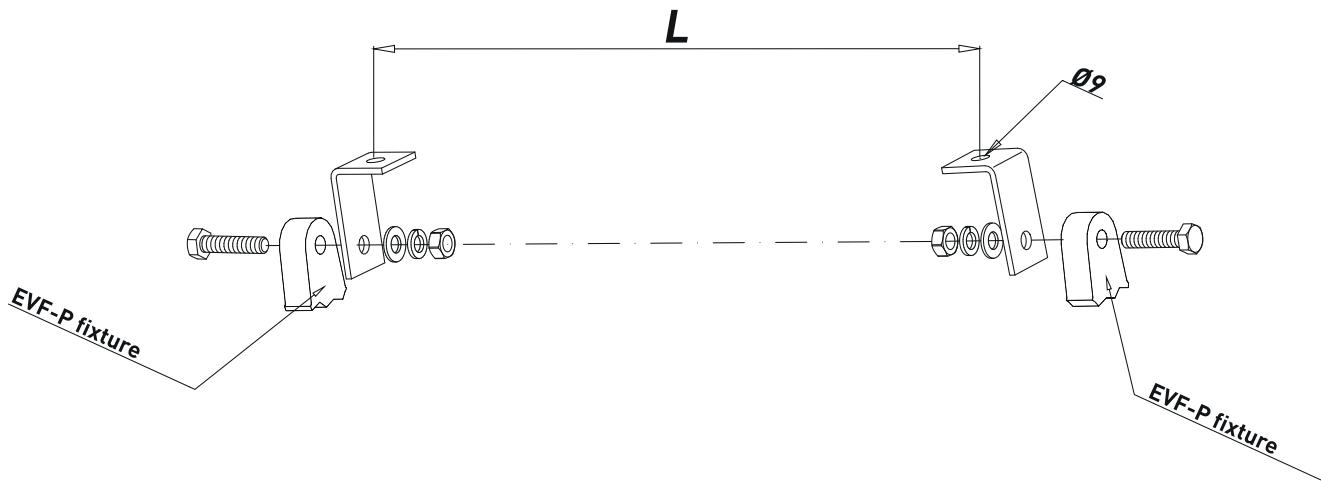
FLUORESCENT LIGHTING

EVF-P.. Series - Zones 1, 2, 21 & 22 - End-cups in Copper free aluminium

SPARES & ACCESSORIES

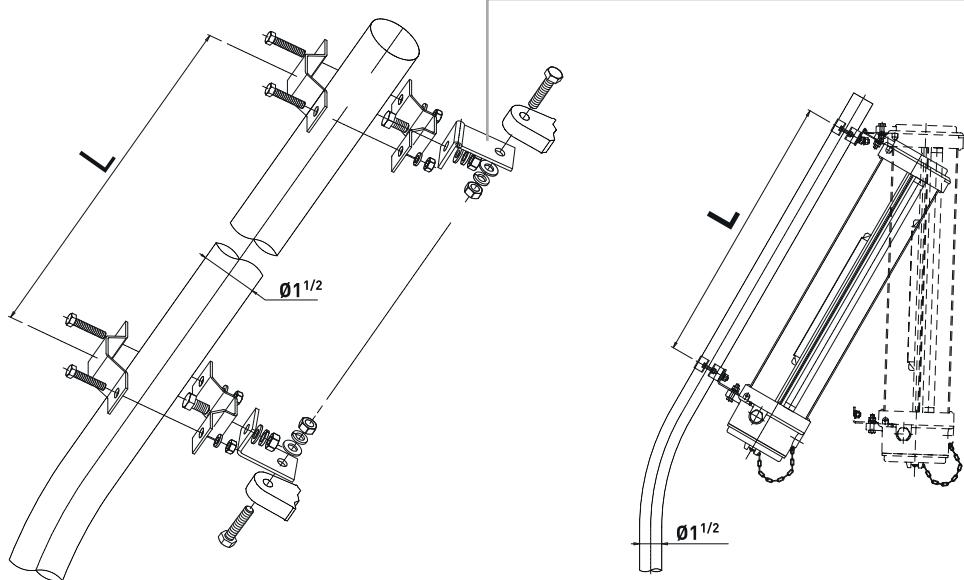
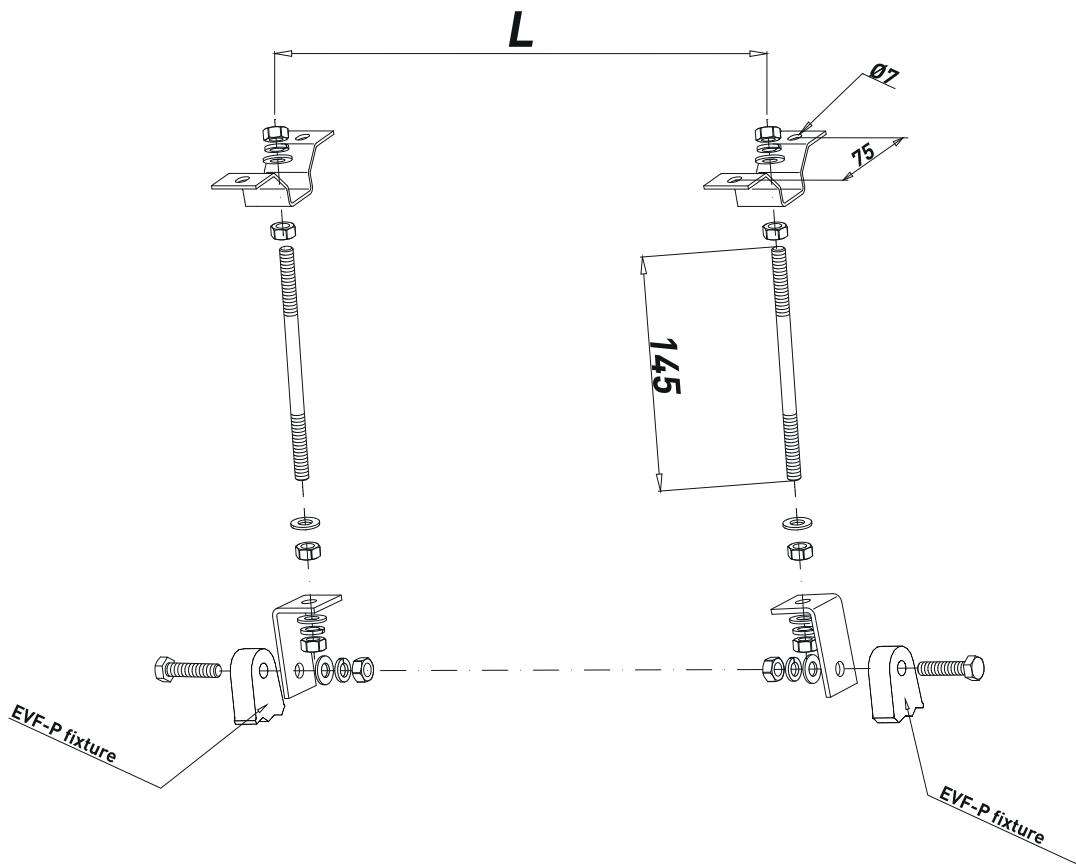
| CODE | TYPE |
|---------------|--------------------------------------|
| A0A0300010000 | 1"1/2 POLE MOUNTING KIT P14 AISI316L |
| A0A0300009000 | 2" POLE MOUNTING KIT P14 AISI316L |
| A0A0300001000 | CEILING MOUNTING KIT G3 AISI316L |
| A0A0200017000 | SUSPENSION MOUNTING KIT G4 AISI304 |

G3 - Ceiling mounting kit



P14 - Pole mounting kit

- Hinge for easy maintenance

**G4 - Suspension mounting kit**

| TYPE | L (mm) |
|-----------|--------|
| EVF-P 118 | 605 |
| EVF-P 218 | 605 |
| EVF-P 136 | 1215 |
| EVF-P 236 | 1215 |
| EVF-P 158 | 1520 |
| EVF-P 258 | 1520 |

FLUORESCENT LIGHTING

EVF-F.. Series - Zones 1, 2, 21 & 22, end-cups in GRP



- EVF-F lighting fixtures are manufactured with a high resistance cylindrical polycarbonate lamp housing and with end cups made of corrosion resistant and high mechanical resistance GRP
- Polycarbonate lamp housing is a three layers-extrusion UV resistant able to grant the best protection against sun rays and related yellowing effect.
- Circular shape grants the best possible "CX" factor, therefore it is less affected by winddusts, no flat surfaces to avoid pollution and dirty bunching.
- Components and design make EVF-F lighting fixtures suitable for high corrosion environments.
- All lighting fixtures are supplied ready for LOOP IN-LOOP OUT facility.

TECHNICAL FEATURES

Material

- Transparent polycarbonate envelope UV protected
- White lacquered steel plate for increased reflectivity
- GRP flanges
- Stainless steel fastening collar
- Stainless steel screws

IP, IK rating

IP66/IP 69K - IK 10

Ambient temperature range

-20 °C to + 60 °C

Approval

ATEX LCIE 17 ATEX 3035 X

IECEx: IECEx LCIE 17.0064X

ATEX markings

Ex II 2 G Ex db eb mb IIC T6 to T3 Gb (type of protection and temp. class depend on electrical equipment)

Ex II 2 D Ex tb IIIC T80 °C to T140 °C Db

Standards compliance IEC/EN 60079-0, 60079-1, 60079-7, 60079-18 and 60079-31

Gas and Dust: zones 1&2, 21 & 22

ATEX zones

Cable entries

PNCX connector for cable diameters 7 to 14 mm. On request:

- 1 polyamide cable gland and 1 plug M20 for cable diameters 7 to 14 mm
- 1 polyamide cable gland and 1 plug M25 for cable diameters 10 to 18 mm
- Metal cable gland for armoured or unarmoured cable
- Loop In/Loop Out
- Through wiring
- + 2 PNCX loop In/loop Out

Lamps

EVF-F series lighting fixtures are suitable for two pins fluorescent lamps G13 socket Philips TL-D or equivalent (lamps excluded)

Ballast

Possibility to have High frequency electronic ballast in compliance with IEC/EN 60079-18

Electrical specifications

Voltage

220-240 Vac (normal and emergency service)/198-278 Vdc (normal service)

Frequency

0/50-60 Hz

Power factor

> 0.95

Automatic emergency version

Available EVF-F lighting fixtures for emergency service of one tube:

- 90 minutes; guarantees 60' duration with constant flux (emergency lumen factor 17%) and 30' with decreasing flux
- 120 minutes (emergency lumen factor 10%)
- 180 minutes; constant flux (emergency lumen factor 9%)

Accessories available

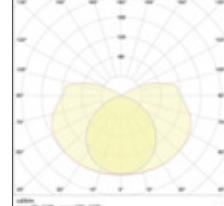
AISI304 Pole mounting kit/AISI304 Ceiling/Wall mounting kit/AISI304 Suspension

Upon request

Mounting kit/3° bottom entry M20x1,5/AISI304 protection guard/Mounting kit in stainless steel AISI316

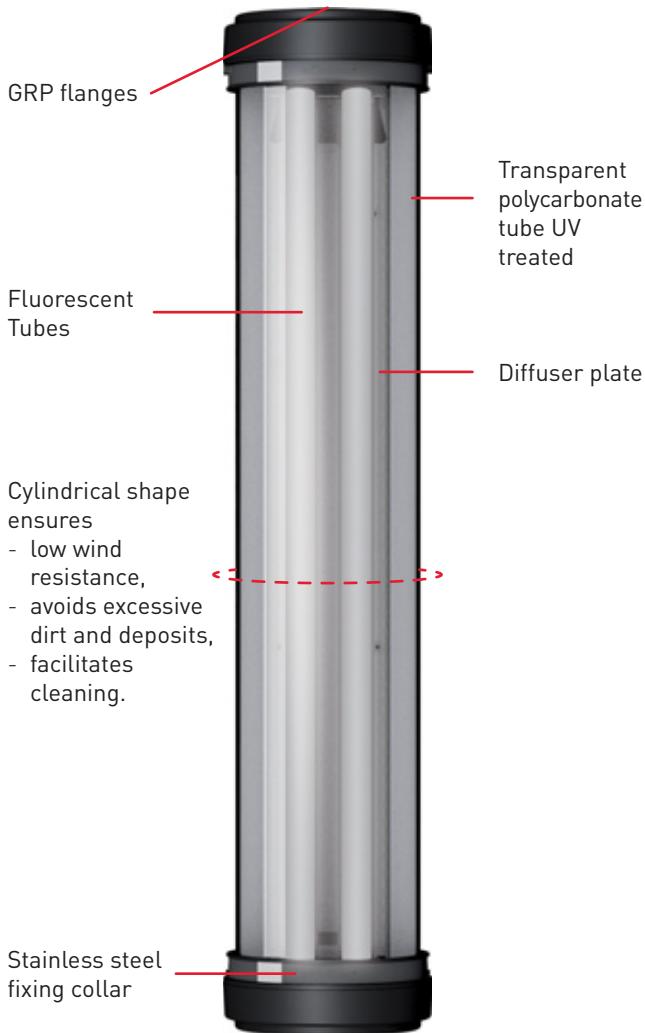
Photometric light curves

1 strip



The EVF-F luminaries have a very high mechanical resistance to shocks IK10 and corrosion while being particularly bright. Thus they meet all requirements of aggressive environments (humidity, corrosion, pollution) for industrial areas at risk of explosion.

EVF-F LUMINARIES



Two opening switches allow the light source and the battery to be switched off automatically when the luminary flange is open.

MODULAR CONNEXION WAY

Through PNCX connector

- easier and quicker installation & maintenance
- easier loop in loop out, you can keep lighting throughout other lightings during maintenance operations.



**LOOP IN/LOOP OUT
1 SOCKET + 1 PLUG
PNCX VERSION**

With cable gland

- Metric threads M20 or M25
- Loop in loop out facility
- Available for armoured cables or unarmoured.



**LOOP IN/LOOP OUT
POLY GLAND VERSION**



**ARMoured CABLE GLAND
VERSION**

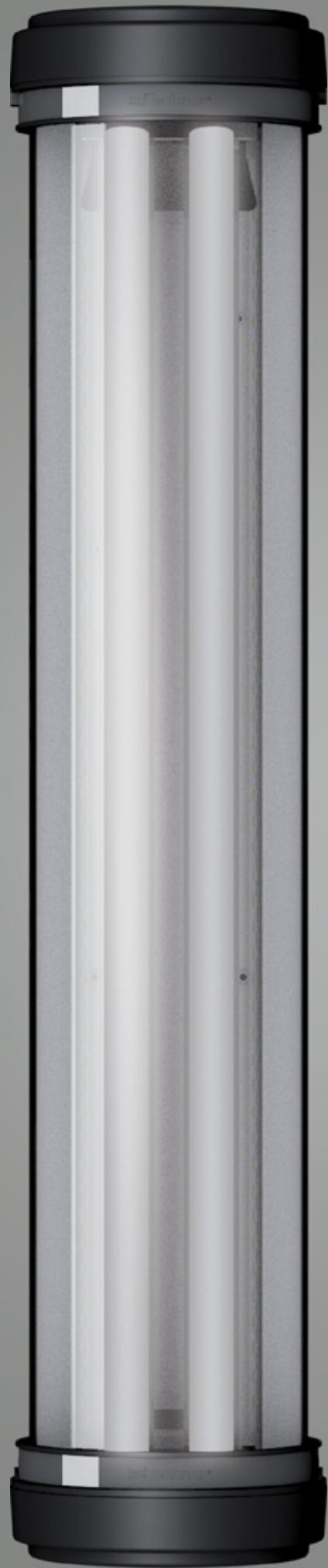
EVF-F.. Series for normal service

| TYPE | CODE | LAMP [W] | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|-----------|----------------|----------|-----------------|-----|-----|-------------|
| | | | A | B | C | |
| EVF-F 118 | A120111200040 | 18 | 745 | 153 | 166 | 4.50 |
| EVF-F 218 | A1201112200040 | 2 X 18 | 745 | 153 | 166 | 4.50 |
| EVF-F 136 | A120111400040 | 36 | 1342 | 153 | 166 | 6.50 |
| EVF-F 236 | A1201112400040 | 2 X 36 | 1342 | 153 | 166 | 6.50 |
| EVF-F 158 | A120111500040 | 58 | 1642 | 153 | 166 | 8.50 |
| EVF-F 258 | A1201112500040 | 2 X 58 | 1642 | 153 | 166 | 8.50 |

EVF-F.. Series for emergency service

| TYPE PERMANENT | CODE | POWER [W] | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|--------------------|---------------|-----------|-----------------|-----|-----|-------------|
| | | | A | B | C | |
| EVF-F 118 LE P 90 | A120211200540 | 1X18 | 745 | 153 | 166 | 7.00 |
| EVF-F 118 LE P 120 | A120211201540 | 1X18 | 745 | 153 | 166 | 8.00 |
| EVF-F 218 LE P 90 | A120212200540 | 2X18 | 745 | 153 | 166 | 7.00 |
| EVF-F 218 LE P 120 | A120212201540 | 2X18 | 745 | 153 | 166 | 8.00 |
| EVF-F 136 LE P 90 | A120211400540 | 1X36 | 1342 | 153 | 166 | 9.00 |
| EVF-F 136 LE P 120 | A120211401540 | 1X36 | 1342 | 153 | 166 | 10.00 |
| EVF-F 136 LE P 180 | A120211402540 | 1X36 | 1342 | 153 | 166 | 10.50 |
| EVF-F 236 LE P 90 | A120212400540 | 2X36 | 1342 | 153 | 166 | 9.00 |
| EVF-F 236 LE P 120 | A120212401540 | 2X36 | 1342 | 153 | 166 | 10.00 |
| EVF-F 236 LE P 180 | A120212402540 | 2X36 | 1342 | 153 | 166 | 10.50 |
| EVF-F 158 LE P 90 | A120211500540 | 1X58 | 1642 | 153 | 166 | 10.00 |
| EVF-F 158 LE P 120 | A120211501540 | 1X58 | 1642 | 153 | 166 | 11.00 |
| EVF-F 158 LE P 180 | A120211502540 | 1X58 | 1642 | 153 | 166 | 11.50 |
| EVF-F 258 LE P 90 | A120212500540 | 2X58 | 1642 | 153 | 166 | 10.00 |
| EVF-F 258 LE P 120 | A120212501540 | 2X58 | 1642 | 153 | 166 | 11.00 |
| EVF-F 258 LE P 180 | A120212502540 | 2X58 | 1642 | 153 | 166 | 11.50 |

| TYPE NON PERMANENT | CODE | POWER [W] | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|---------------------|---------------|-----------|-----------------|-----|-----|-------------|
| | | | A | B | C | |
| EVF-F 118 LE NP 90 | A120201210540 | 1X18 | 745 | 153 | 166 | 7.00 |
| EVF-F 118 LE NP 120 | A120201211540 | 1X18 | 745 | 153 | 166 | 8.00 |
| EVF-F 136 LE NP 90 | A120201410540 | 1X36 | 1342 | 153 | 166 | 9.00 |
| EVF-F 136 LE NP 120 | A120201411540 | 1X36 | 1342 | 153 | 166 | 10.00 |
| EVF-F 136 LE NP 180 | A120201412540 | 1X36 | 1342 | 153 | 166 | 10.50 |
| EVF-F 158 LE NP 90 | A120201510540 | 2X58 | 1642 | 153 | 166 | 10.00 |
| EVF-F 158 LE NP 120 | A120201511540 | 2X58 | 1642 | 153 | 166 | 11.00 |
| EVF-F 158 LE NP 180 | A120201512540 | 2X58 | 1642 | 153 | 166 | 11.50 |



FLUORESCENT LIGHTING

RMS-560.. Series - Zones 1, 2, 21 & 22 - Stainless steel AISI 304



RMS.. series lighting fixtures are ideally suited for ON and OFF-SHORE applications and all kinds of industries where there is an high level of corrosion. Both body and glass frame are made of stainless steel AISI304 and manufactured from a single sheet of steel with no invasive mounting holes, to minimize the risk of water ingress through the housing. Out of holes for power supply cable, whatever protected by a suitable cable gland (available upon request), there are no passing through holes between inside and outside of luminaire. Therefore during the time there is no risk of IP rating decrease as it would be possible where, for fixing devices, there are through holes and relevant gaskets. Design has been studied to allow operator working with free hands and no need to support any part of lighting fixture. One person can take care of start-up or maintenance without any aid and assistance. Due to inorganic materials like stainless steel and glass, RMS.. series lighting fixtures are 95% recyclable; only components and insulation of single core wires need some more care.

TECHNICAL FEATURES

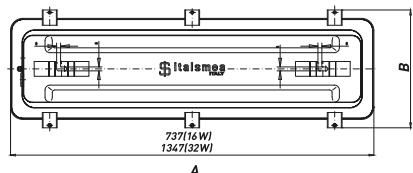
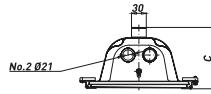
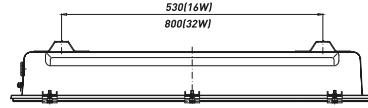
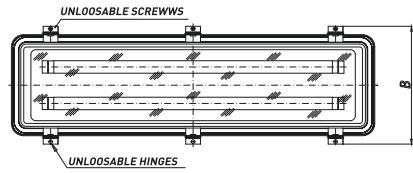
| | |
|---|---|
| Material | AISI304 stainless steel, 0,8mm thickness and transparent part in tempered glass (AISI 316 L version available upon request) |
| IP rating | IP65 |
| Ambient temperature range | -20°C to +60°C |
| Approvals | Certified 01ATEX0060 (standard) TR CU (marking upon request, ordering code to be required) |
| Marking | II 2 GD Ex de IIC T(**) Ex TD A21 IP65 T(**) ** T6/T85°C, T5/T100°C, T4/T135°C |
| Gaskets | Special cross-section tightness gasket, silicon rubber made (closed cell), located in housing channel between body and window frame. |
| Entries | Body complete of two 21mm Ø through holes (on one side) for cable entry, one complete of metallic plug with M20 locknut and gasket and the other one with temporary plastic plug to prevent dust ingress. |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | RMS series lighting fixtures are suitable for two pins fluorescent lamps G13 socket Philips TL-D or equivalent (lamps excluded) |
| Ballast | High frequency electronic ballast conforming with EN 60079 – 1 and IEC 60079 – 1 |
| Rated operation voltage (UE) | 220-240 V |
| Frequency | 50-60 Hz |
| Power factor | > 0,95 |
| Accessories available upon request | Pole mounting kit/Ceiling mounting kit/Suspension mounting kit/Wall mounting kit 3°- 4° through holes opposite side |
| Operating principles | Available RMS.. lighting fixtures for emergency service of one tube: - 90 minutes ; guarantees 60' duration with constant flux (emergency lumen factor 18%) and 30' with decreasing flux |
| Photometric light curves | |

Dimensions RMS-560

RMS-560

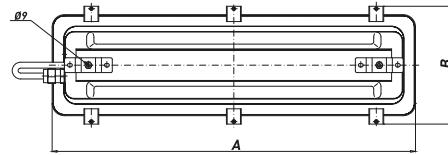
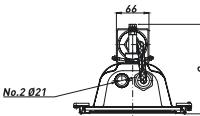
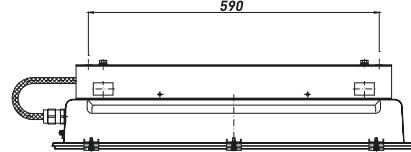
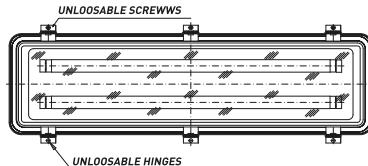
(18W)

(36W)



RMS-560 EM

(18W)



(RMS-560) Lighting fixtures for normal service

| TYPE | CODE | POWER [W] | TEMPERATURE CLASS | AMBIENT TEMPERATURE | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|----------------|---------------|-----------|-----------------------|---------------------|-----------------|-----|-----|-------------|
| | | | | | A | B | C | |
| RMS-560-03 | A020121180300 | 1X18 | GAS T5 DUST T100°C | (-20 °C;+55 °C)** | 737 | 239 | 123 | 5.60 |
| RMS-560-04 | A020122180300 | 2X18 | GAS T5 DUST T100°C | (-20 °C;+55 °C)** | 737 | 239 | 123 | 5.70 |
| RMS-560-01 | A020121360300 | 1X36 | GAS T5 DUST T100°C | (-20 °C;+55 °C)** | 1347 | 239 | 123 | 8.90 |
| RMS-560-02 | A020122360300 | 2X36 | GAS T5 DUST T100°C | (-20 °C;+55 °C)** | 1347 | 239 | 123 | 9.10 |
| RMS-560-03/MS* | A020121180301 | 1X18 | GAS T5 DUST T100°C | (-20 °C;+55 °C)** | 737 | 239 | 123 | 5.65 |
| RMS-560-04/MS* | A020122180301 | 2X18 | GAS T5 DUST T100°C | (-20 °C;+55 °C)** | 737 | 239 | 123 | 5.75 |
| RMS-560-01/MS* | A020121360301 | 1X36 | GAS T5 DUST T100°C | (-20 °C;+55 °C)** | 1347 | 239 | 123 | 8.95 |
| RMS-560-02/MS* | A020122360301 | 2X36 | GAS T5 DUST T100°C | (-20 °C;+55 °C)** | 1347 | 239 | 123 | 9.15 |

* With micro-switch

** In case of maximum ambient temperature reach +60°C, temperature class changes into T4/T135°C (ordering code to be required).

In case of maximum ambient temperature reach +40°C, temperature class changes into T6/T85°C (ordering code to be required).

(RMS-560) Lighting fixtures for emergency service

| TYPE | CODE | POWER [W] | TEMPERATURE CLASS | AMBIENT TEMPERATURE | EMERGENCY DURATION | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|--------------------|---------------|-----------|-----------------------|---------------------|--------------------|-----------------|-----|-----|-------------|
| | | | | | | A | B | C | |
| RMS-560-03 LE-P-90 | A020221181310 | 1X18 | GAS T5 DUST T100°C | (-20 °C;+55 °C)* | 90' | 737 | 239 | 183 | 9.50 |
| RMS-560-04 LE-P-90 | A020222181310 | 2X18 | GAS T5 DUST T100°C | (-20 °C;+55 °C)* | 90' | 737 | 239 | 183 | 9.60 |
| RMS-560-01 LE-P-90 | A020221361310 | 1X36 | GAS T5 DUST T100°C | (-20 °C;+55 °C)* | 90''** | 1347 | 239 | 123 | 14.10 |
| RMS-560-02 LE-P-90 | A020222361310 | 2X36 | GAS T5 DUST T100°C | (-20 °C;+55 °C)* | 90''** | 1347 | 239 | 123 | 14.30 |

* In case of maximum ambient temperature reach +60°C, temperature class changes into T4/T135°C (ordering code to be required).

In case of maximum ambient temperature reach +40°C, temperature class changes into T6/T85°C (ordering code to be required).

** 120' version available upon request (ordering code to be required).

FLUORESCENT LIGHTING

RMS-550.. Series - Zones 2 & 22 - Stainless steel AISI 304

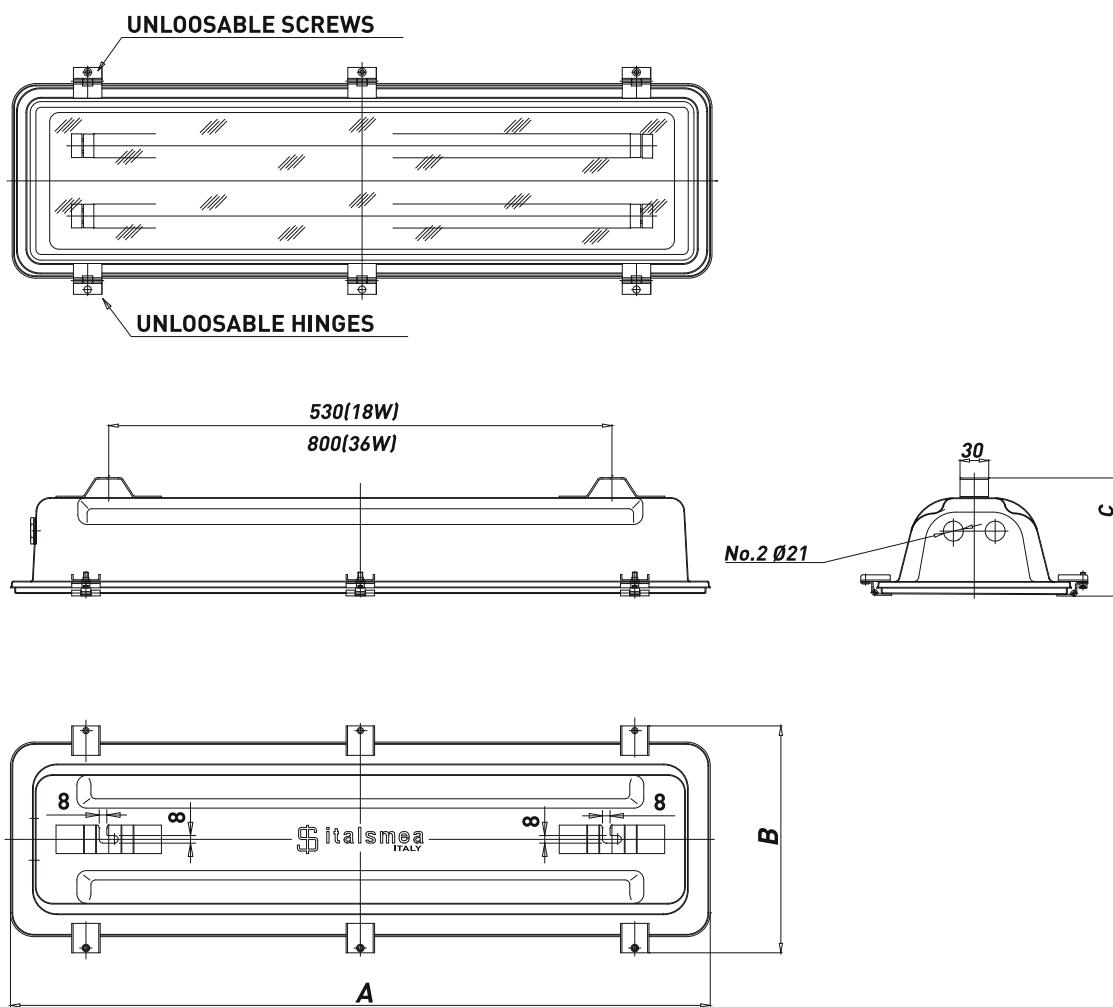


RMS.. series lighting fixtures are ideally suited for ON and OFF-SHORE applications and all kinds of industries where there is an high level of corrosion. Both body and glass frame are made of stainless steel AISI304 and manufactured from a single sheet of steel with no invasive mounting holes, to minimize the risk of water ingress through the housing. Out of holes for power supply cable, whatever protected by a suitable cable gland (available upon request), there are no passing through holes between inside and outside of luminaire. Therefore during the time there is no risk of IP rating decrease as it would be possible where, for fixing devices, there are through holes and relevant gaskets. Design has been studied to allow operator working with free hands and no need to support any part of lighting fixture. One person can take care of start-up or maintenance without any aid and assistance. Due to inorganic materials like stainless steel and glass, RMS.. series lighting fixtures are 95% recyclable; only components and insulation of single core wires need some more care.

TECHNICAL FEATURES

| | |
|---|---|
| Material | AISI304 stainless steel, 0,8mm thickness and transparent part in tempered glass (AISI 316 L version available upon request) |
| IP rating | IP65 |
| Ambient temperature range | -30°C to +55°C |
| Approvals | Certified 01ATEX3002X (standard) TR CU (marking upon request, ordering code to be required) |
| Marking | II 3 GD Ex nA II T(**) Ex td A22 IP65 T(**) ** T5/T90°C, T5/100°C, T4/T105°C |
| Gaskets | Special cross-section tightness gasket, silicon rubber made [closed cell], located in housing channel between body and window frame. |
| Entries | Body complete of two 21mm Ø through holes (on one side) for cable entry, one complete of metallic plug with M20 locknut and gasket and the other one with temporary plastic plug to prevent dust ingress. |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | RMS series lighting fixtures are suitable for two pins fluorescent lamps G13 socket Philips TL-D or equivalent (lamps excluded) |
| Ballast | High frequency electronic ballast conforming with EN 60079 – 15 and IEC 60079 – 15 |
| Rated operation voltage (UE) | 220-240 V |
| Frequency | 50-60 Hz |
| Power factor | > 0,95 |
| Accessories available upon request | Pole mounting kit/Ceiling mounting kit/Suspension mounting kit/Wall mounting kit/3°- 4° through holes opposite side |
| Operating principles | Available RMS.. lighting fixtures for emergency service of one tube: - 90 minutes; guarantees 60' duration with constant flux (emergency lumen factor 18%) and 30' with decreasing flux |
| Photometric light curves | |

Dimensions RMS-550



(RMS-550) Lighting fixtures for normal service

| TYPE | CODE | POWER [W] | TEMPERATURE CLASS | AMBIENT TEMPERATURE | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|------------|---------------|-----------|-----------------------|---------------------|-----------------|-----|-----|-------------|
| | | | | | A | B | C | |
| RMS-550-03 | A020111180200 | 1X18 | GAS T5 DUST T100°C | (-20 °C;+50 °C)** | 737 | 239 | 123 | 5.10 |
| RMS-550-04 | A020112180200 | 2X18 | GAS T5 DUST T100°C | (-20 °C;+50 °C)** | 737 | 239 | 123 | 5.20 |
| RMS-550-01 | A020111360200 | 1X36 | GAS T5 DUST T100°C | (-20 °C;+50 °C)** | 1347 | 239 | 123 | 8.40 |
| RMS-550-02 | A020112360200 | 2X36 | GAS T5 DUST T100°C | (-20 °C;+50 °C)** | 1347 | 239 | 123 | 8.60 |

* In case of maximum ambient temperature reach +55°C, temperature class changes into T4/T105°C (ordering code to be required).

(RMS-550) Lighting fixtures for emergency service

| TYPE | CODE | POWER [W] | TEMPERATURE CLASS | AMBIENT TEMPERATURE | EMERGENCY DURATION | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|--------------------|---------------|-----------|-----------------------|---------------------|--------------------|-----------------|-----|-----|-------------|
| | | | | | | A | B | C | |
| RMS-550-03 LE-P-90 | A020211181210 | 1X18 | GAS T5 DUST T100°C | (-20 °C;+50 °C)** | 90' | 737 | 239 | 123 | 5.80 |
| RMS-550-04 LE-P-90 | A020212181210 | 2X18 | GAS T5 DUST T100°C | (-20 °C;+50 °C)** | 90' | 737 | 239 | 123 | 5.90 |
| RMS-550-01 LE-P-90 | A020211361210 | 1X36 | GAS T5 DUST T100°C | (-20 °C;+50 °C)** | 90** | 1347 | 239 | 123 | 9.10 |
| RMS-550-02 LE-P-90 | A020212361210 | 2X36 | GAS T5 DUST T100°C | (-20 °C;+50 °C)* | 90** | 1347 | 239 | 123 | 9.30 |

* In case of maximum ambient temperature reach +55°C, temperature class changes into T4/T105°C (ordering code to be required).

** 120' version available upon request (ordering code to be required).

FLUORESCENT LIGHTING

RMS-540.. Series - Safe area - Stainless steel AISI 304

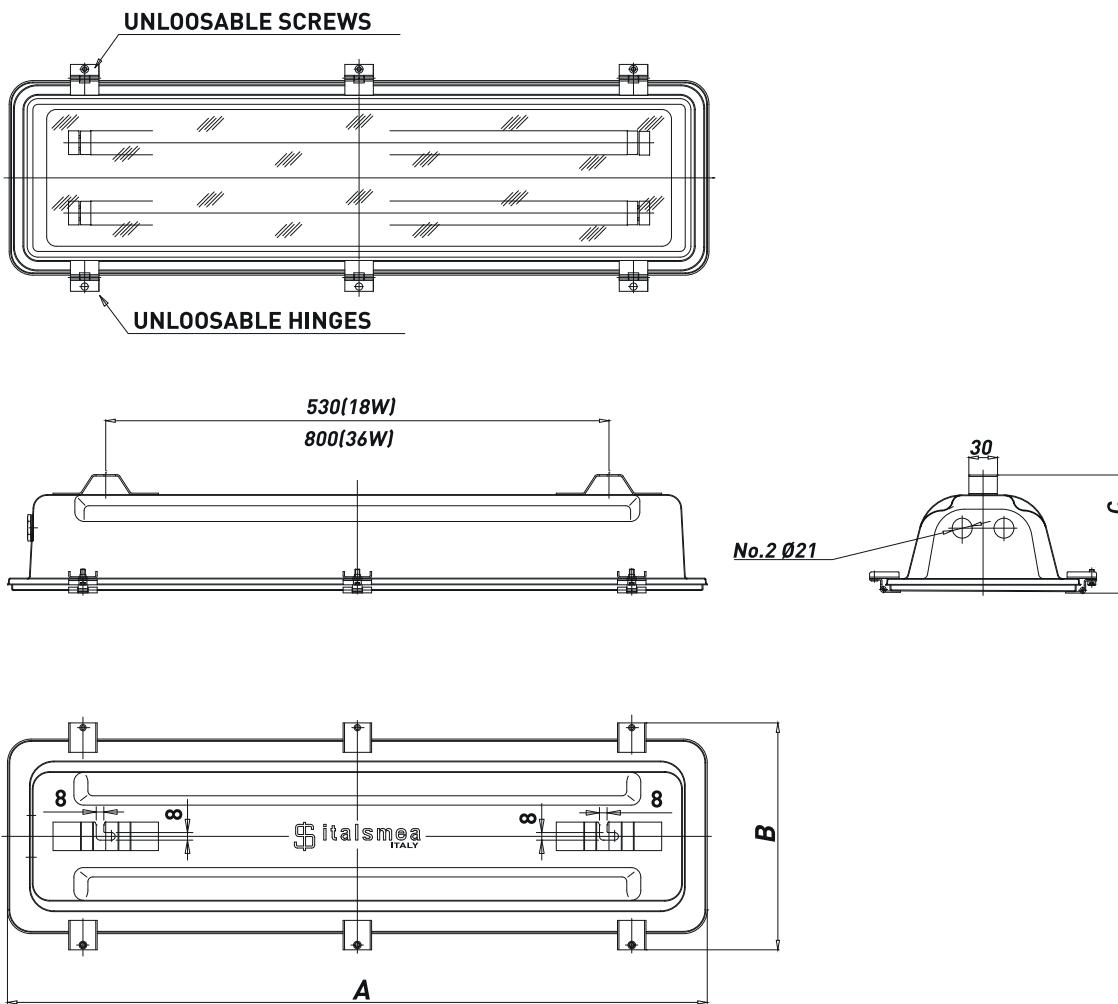


RMS.. series lighting fixtures are ideally suited for ON and OFF-SHORE applications and all kinds of industries where there is an high level of corrosion. Both body and glass frame are made of stainless steel AISI304 and manufactured from a single sheet of steel with no invasive mounting holes, to minimize the risk of water ingress through the housing. Out of holes for power supply cable, whatever protected by a suitable cable gland (available upon request), there are no passing through holes between inside and outside of luminaire. Therefore during the time there is no risk of IP rating decrease as it would be possible where, for fixing devices, there are through holes and relevant gaskets. Design has been studied to allow operator working with free hands and no need to support any part of lighting fixture. One person can take care of start-up or maintenance without any aid and assistance. Due to inorganic materials like stainless steel and glass, RMS.. series lighting fixtures are 95% recyclable; only components and insulation of single core wires need some more care.

TECHNICAL FEATURES

| | |
|---|---|
| Material | AISI304 stainless steel, 0,8mm thickness and transparent part in tempered glass (AISI 316 L version available upon request) |
| IP rating | IP65 |
| Ambient temperature range | -20°C to +60°C |
| Standards | Compliance with Electromagnetic Compatibility (EMC) according to European Directive 2004/108/CE |
| Gaskets | Special cross-section tightness gasket, silicon rubber made (closed cell), located in housing channel between body and window frame. |
| Entries | Body complete of two 21mm Ø through holes (on one side) for cable entry, one complete of metallic plug with M20 locknut and gasket and the other one with temporary plastic plug to prevent dust ingress. |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | RMS series lighting fixtures are suitable for two pins fluorescent lamps G13 socket Philips TL-D or equivalent (lamps excluded) |
| Ballast | Electromechanical ballast with starter and capacitor |
| Rated operation voltage (UE) | 230 V |
| Frequency | 50 Hz |
| Power factor | > 0,9 |
| Accessories available upon request | Wiring with High frequency electronic ballast [220-240 V 50-60 Hz]/Pole mounting kit/Ceiling mounting kit/Suspension mounting kit/Wall mounting kit/3°- 4° through holes opposite side |
| Operating principles | Available RMS.. lighting fixtures for emergency service of one tube: - 90 minutes; guarantees 60' duration with constant flux (emergency lumen factor 18%) and 30' with decreasing flux |
| Photometric light curves | |

Dimensions RMS 540



(RMS-540) Lighting fixtures for normal service

| TYPE | CODE | POWER [W] | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|------------|---------------|-----------|-----------------|-----|-----|-------------|
| | | | A | B | C | |
| RMS-540-03 | A020101180200 | 1X18 | 737 | 239 | 123 | 5.10 |
| RMS-540-04 | A020102180200 | 2X18 | 737 | 239 | 123 | 5.20 |
| RMS-540-01 | A020101360200 | 1X36 | 1347 | 239 | 123 | 8.40 |
| RMS-540-02 | A020102360200 | 2X36 | 1347 | 239 | 123 | 8.60 |

(RMS-540) Lighting fixtures for emergency service

| TYPE | CODE | POWER [W] | AMBIENT TEMPERATURE | EMERGENCY DURATION | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|--------------------|---------------|-----------|---------------------|--------------------|-----------------|-----|------|-------------|
| | | | | | A | B | C | |
| RMS-540-03 LE-P-90 | A020201181210 | 1X18 | (-20 °C; +60 °C) | 737 | 239 | 123 | 5.80 | 5.80 |
| RMS-540-04 LE-P-90 | A020202181210 | 2X18 | (-20 °C; +60 °C) | 737 | 239 | 123 | 5.90 | 5.90 |
| RMS-540-01 LE-P-90 | A020201361210 | 1X36 | (-20 °C; +60 °C) | 1347 | 239 | 123 | 9.10 | 9.10 |
| RMS-540-02 LE-P-90 | A020202361210 | 2X36 | (-20 °C; +60 °C) | 1347 | 239 | 123 | 9.30 | 9.30 |

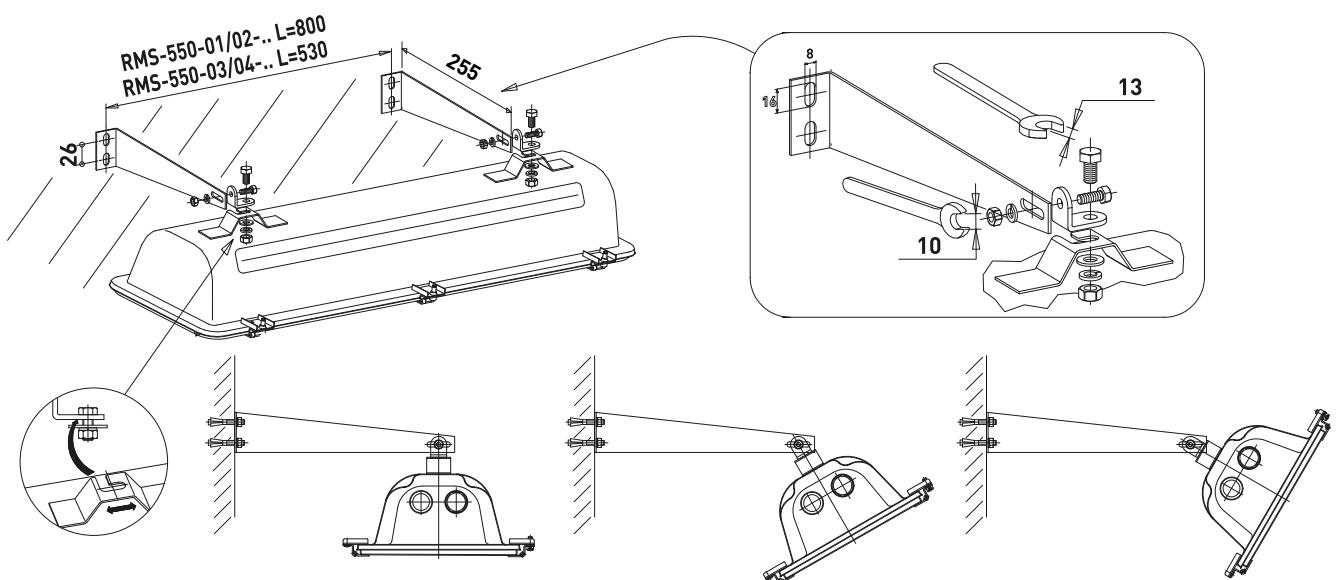
FLUORESCENT LIGHTING

RMS Series

SPARES & ACCESSORIES

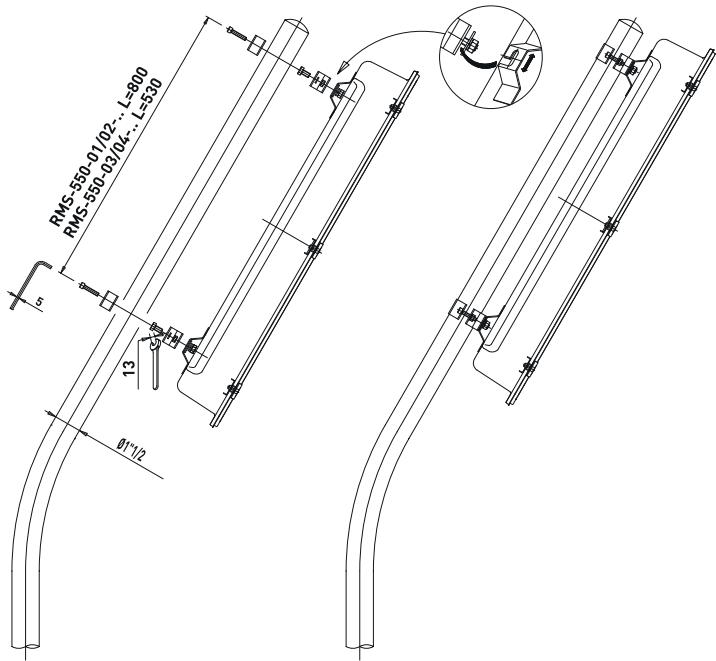
| CODE | TYPE |
|---------------|--------------------------------------|
| A0A0205371000 | 1"1/2 POLE MOUNTING KIT P12 AISI316L |
| A0A0215371000 | 2" POLE MOUNTING KIT P12 AISI304 |
| A0A0253076000 | WALL MOUNTING KIT H1 AISI316 |
| A0A0253075000 | SUSPENSION MOUNTING KIT G1 AISI304 |

H1 - Wall mounting kit

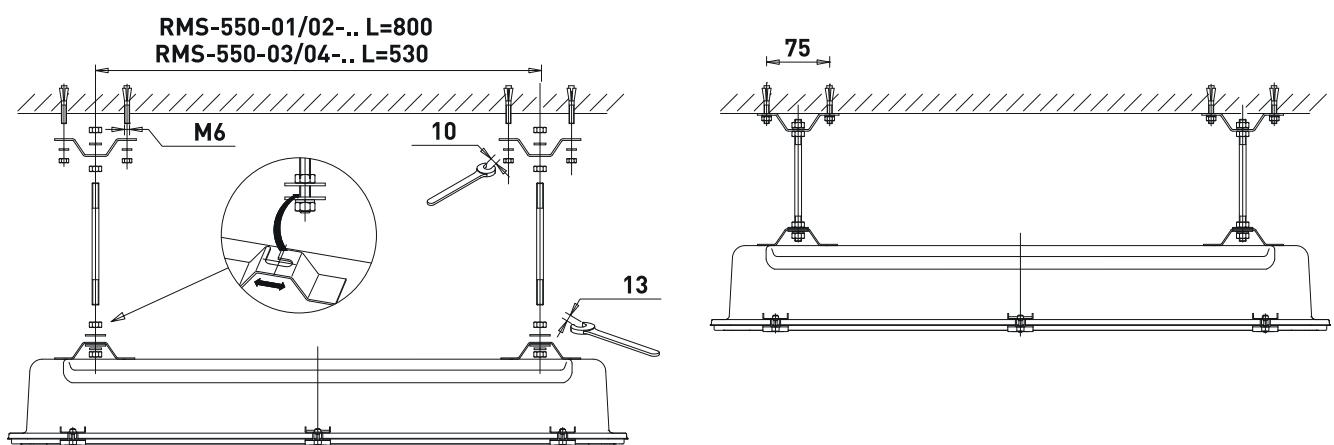


Note: Expansion bolts (for concrete) or bolts (for steel frame) are not included in our kit.

P12 - Pole mounting kit

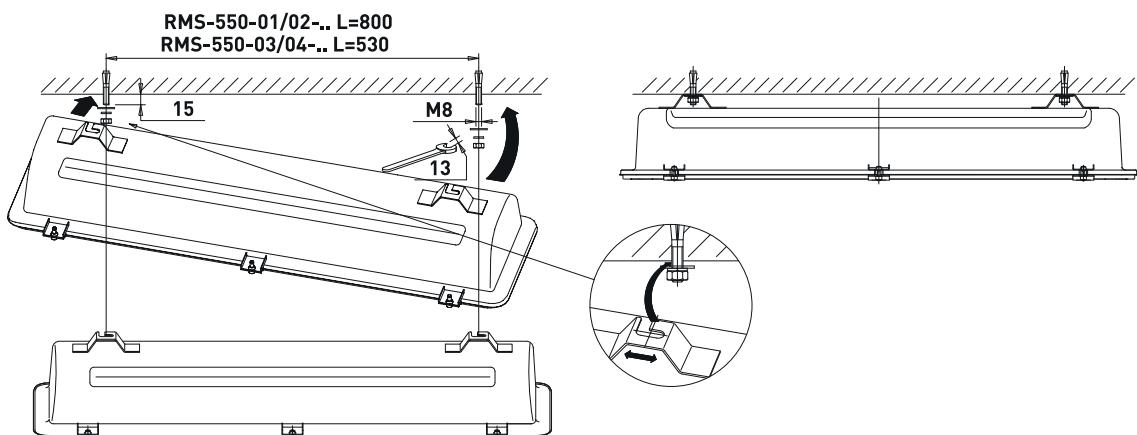


G1 - Suspension mounting kit



Note: Expansion bolts (for concrete) or bolts (for steel frame) are not included in our kit.

Ceiling mounting (STANDARD VERSION)



Note: Expansion bolts (for concrete) or bolts (for steel frame) are not included in our kit.

FLUORESCENT LIGHTING

G2X Series - Zones 2 & 22

Luminaires G2X are suited for hazardous areas of industrial plants and space included in Zone 2 and 22.

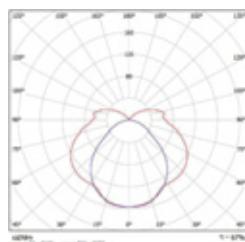


The advantages of this luminaires series:

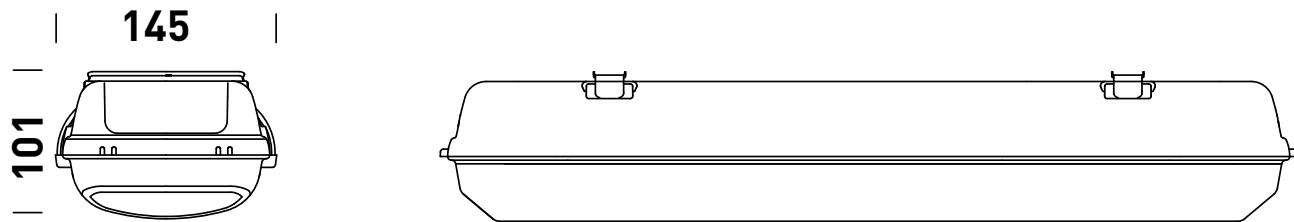
- Solid & compact structure
- Simple , easy and quick installation
- Possibility to suspend the lens hinge when replacing fluorescent lamps
- High resistance to corrosive industrial environment
- High luminous efficiency
- Quality ignition systems
- UV resistant
- Easy maintenance
- Transparent diffuser in PC with UV protection.

TECHNICAL FEATURES

| | |
|-------------------------------------|--|
| Material | GRP + 2 gear tray holders in white lacquered steel plate Transparent diffuser in PC with UV protection and high impact resistance |
| IP rating | IP66 |
| Ambient temperature range | -20°C to +40°C |
| Approvals | OBAC 15 CZ/ATEX 163X |
| Marking | II 3G Ex nA IIC T6 Gc II 3D Ex tc IIIC T85°C Dc IP66 |
| Standards | EN 60079-0, EN 60079-15, EN 60079-31 |
| Zones | Zone 2 , 22 |
| Gaskets | Gasket in polyurethane |
| Entries | N° 1 passing entry M20 |
| Hardware and screws | Fixing springs and closing clips in stainless steel |
| Lamps | T8 lamps , with power 18W , 36W, 58W T5, with a power 14W, 24W,28W, 35W, 49W,54W,80W |
| Ballast | Electronic |
| Rated operation voltage (UE) | 230V AC/DC (normal service); 230V AC (emergency service); 110V according to execution |
| Frequency | 50-60Hz in AC |
| Accessories upon request | Polyamide ATEX cable gland M20x1,5 |
| Maximum number of terminals | 3x2,5mm ² |
| Colour | GRP housing in graphite (RAL 7035) |
| Options | Emergency kit 1h or 3h, Black GRP housing RAL9011, Yellow GRP housing RAL1003 |
| Photometric light curves | Impact resistance IK08 |



Dimensions G2X FLUO



G2X Fluo - T8

| CODE | DESCRIPTION | DIMENSIONS [MM] | POWER [W] | SERVICE | WEIGHT [Kg] | POWER SUPPLY |
|---------------|--------------------------|------------------|-----------|--------------------------|-------------|--------------|
| A110100118111 | G2X 2-118 E PC INOX | 665 X 145 X 101 | 1 X 18W | NORMAL | 3,3 | 230V AC/DC |
| A110100136111 | G2X 2-136 E PC INOX | 1282 X 145 X 101 | 1 X 36W | NORMAL | 3,8 | |
| A110100158111 | G2X 2-158 E PC INOX | 1578 X 145 X 101 | 1 X 58W | NORMAL | 5 | |
| A110100218111 | G2X 218 E PC INOX | 665 X 145 X 101 | 2 X 18W | NORMAL | 3,3 | |
| A110100236111 | G2X 236 E PC INOX | 1282 X 145 X 101 | 2 X 36W | NORMAL | 3,8 | |
| A110100258111 | G2X 258 E PC INOX | 1578 X 145 X 101 | 2 X 58W | NORMAL | 5 | |
| A110100136121 | G2X 2-136 E EB1H PC INOX | 1282 X 145 X 101 | 1 X 36W | NORMAL - 1H EMERGENCY | | 230V AC |
| A110100218121 | G2X 218 E EB1H PC INOX | 665 X 145 X 101 | 2 X 18W | NORMAL - 1H EMERGENCY | | |
| A110100236121 | G2X 236 E EB1H PC INOX | 1282 X 145 X 101 | 2 X 36W | NORMAL - 1H EMERGENCY | | |
| A110100258121 | G2X 258 E EB1H PC INOX | 1578 X 145 X 101 | 2 X 58W | NORMAL - 1H EMERGENCY | | |
| A110100136131 | G2X 2-136 E EB3H PC INOX | 1282 X 145 X 101 | 1 X 36W | NORMAL - 3H EMERGENCY | | 230V AC |
| A110100218131 | G2X 218 E EB3H PC INOX | 665 X 145 X 101 | 2 X 18W | NORMAL - 3H EMERGENCY | | |
| A110100236131 | G2X 236 E EB3H PC INOX | 1282 X 145 X 101 | 2 X 36W | NORMAL - 3H EMERGENCY | | |
| A110100258131 | G2X 258 E EB3H PC INOX | 1578 X 145 X 101 | 2 X 58W | NORMAL - 3H EMERGENCY | | |

G2X Fluo - T5

| CODE | DESCRIPTION | DIMENSIONS [MM] | POWER [W] | SERVICE | WEIGHT [Kg] | POWER SUPPLY |
|---------------|--------------------------|-----------------|-----------|-----------------------|-------------|--------------|
| A110100114111 | G2X 2-114 E PC INOX | 665X145X101 | 1 X 14W | NORMAL | 1.8 | 230V AC/DC |
| A110100124111 | G2X 2-124 E PC INOX | 665X145X101 | 1 X 24W | NORMAL | 1.8 | |
| A110100128111 | G2X 2-128 E PC INOX | 1282X145X101 | 1 X 28W | NORMAL | 2.9 | |
| A110100135111 | G2X 2-135 E PC INOX | 1578X145X101 | 1 X 35W | NORMAL | 3.6 | |
| A110100149111 | G2X 2-149 E PC INOX | 1578X145X101 | 1 X 49W | NORMAL | 3.6 | |
| A110100154111 | G2X 2-154 E PC INOX | 1282X145X101 | 1 X 54W | NORMAL | 2.9 | |
| A110100180111 | G2X 2-180 E PC INOX | 1578X145X101 | 1 X 80W | NORMAL | 5 | |
| A110100214111 | G2X 214 E PC INOX | 665X145X101 | 2 X 14W | NORMAL | 1.8 | |
| A110100224111 | G2X 224 E PC INOX | 665X145X101 | 2 X 24W | NORMAL | 1.8 | |
| A110100228111 | G2X 228 E PC INOX | 1282X145X101 | 2 X 28W | NORMAL | 2.9 | |
| A110100235111 | G2X 235 E PC INOX | 1578X145X101 | 2 X 35W | NORMAL | 3.6 | |
| A110100249111 | G2X 249 E PC INOX | 1578X145X101 | 2 X 49W | NORMAL | 3.6 | |
| A110100254111 | G2X 254 E PC INOX | 1282X145X101 | 2 X 54W | NORMAL | 2.9 | |
| A110100128121 | G2X 2-128 E EB1H PC INOX | 1282X145X101 | 1 X 28W | NORMAL - 1H EMERGENCY | 3.7 | |
| A110100135121 | G2X 2-135 E EB1H PC INOX | 1578X145X101 | 1 X 35W | NORMAL - 1H EMERGENCY | 4.4 | |
| A110100149121 | G2X 2-149 E EB1H PC INOX | 1578X145X101 | 1 X 49W | NORMAL - 1H EMERGENCY | 4.4 | |
| A110100154121 | G2X 2-154 E EB1H PC INOX | 1282X145X101 | 1 X 54W | NORMAL - 1H EMERGENCY | 3.7 | |
| A110100180121 | G2X 2-180 E EB1H PC INOX | 1578X145X101 | 1 X 80W | NORMAL - 1H EMERGENCY | 4.4 | |
| A110100214121 | G2X 214 E EB1H PC INOX | 665X145X101 | 2 X 14W | NORMAL - 1H EMERGENCY | 2.6 | 230V AC |
| A110100224121 | G2X 224 E EB1H PC INOX | 665X145X101 | 2 X 24W | NORMAL - 1H EMERGENCY | 2.6 | |
| A110100228121 | G2X 228 E EB1H PC INOX | 1282X145X101 | 2 X 28W | NORMAL - 1H EMERGENCY | 3.7 | |
| A110100235121 | G2X 235 E EB1H PC INOX | 1578X145X101 | 2 X 35W | NORMAL - 1H EMERGENCY | 4.4 | |
| A110100249121 | G2X 249 E EB1H PC INOX | 1578X145X101 | 2 X 49W | NORMAL - 1H EMERGENCY | 4.4 | |
| A110100254121 | G2X 254 E EB1H PC INOX | 1282X145X101 | 2 X 54W | NORMAL - 1H EMERGENCY | 3.7 | |
| A110100128131 | G2X 2-128 E EB3H PC INOX | 1282X145X101 | 1 X 28W | NORMAL - 3H EMERGENCY | 3.7 | |
| A110100135131 | G2X 2-135 E EB3H PC INOX | 1578X145X101 | 1 X 35W | NORMAL - 3H EMERGENCY | 4.4 | |
| A110100149131 | G2X 2-149 E EB3H PC INOX | 1578X145X101 | 1 X 49W | NORMAL - 3H EMERGENCY | 4.4 | |
| A110100154131 | G2X 2-154 E EB3H PC INOX | 1282X145X101 | 1 X 54W | NORMAL - 3H EMERGENCY | 3.7 | |
| A110100180131 | G2X 2-180 E EB3H PC INOX | 1578X145X101 | 1 X 80W | NORMAL - 3H EMERGENCY | 4.4 | |
| A110100214131 | G2X 214 E EB3H PC INOX | 665X145X101 | 2 X 14W | NORMAL - 3H EMERGENCY | 2.6 | 230V AC |
| A110100224131 | G2X 224 E EB3H PC INOX | 665X145X101 | 2 X 24W | NORMAL - 3H EMERGENCY | 2.6 | |
| A110100228131 | G2X 228 E EB3H PC INOX | 1282X145X101 | 2 X 28W | NORMAL - 3H EMERGENCY | 3.7 | |
| A110100235131 | G2X 235 E EB3H PC INOX | 1578X145X101 | 2 X 35W | NORMAL - 3H EMERGENCY | 4.4 | |
| A110100249131 | G2X 249 E EB3H PC INOX | 1578X145X101 | 2 X 49W | NORMAL - 3H EMERGENCY | 4.4 | |
| A110100254131 | G2X 254 E EB3H PC INOX | 1282X145X101 | 2 X 54W | NORMAL - 3H EMERGENCY | 3.7 | |



WELLGLASS

EV.. Series - H.I.D. well glass lighting fixture



EV.. series well glass lighting fixtures are suitable for hazardous areas of industrial plants for lighting of indoor and outdoor structures, for which narrow or wide beam lighting is needed.

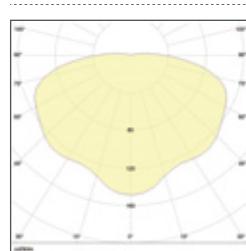
These luminaries have been designed to house built-in control gears for high intensity discharge lamps, mercury vapour, metal halide and high pressure sodium; light source can be driven where required by way of suitable reflectors.

EV.. H.I.D. luminaries, provided in a wide range of wattage, have an excellent corrosion resistance due to the body made of aluminium with low content of copper and tempered glass of lamp compartment.

TECHNICAL FEATURES

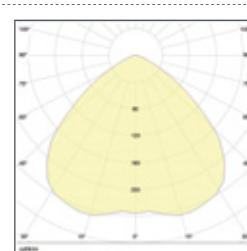
| | | |
|---|---|--|
| Material | Aluminium with low content of copper | |
| IP rating | IP66 | |
| Ambient temperature range | -52°C to +60°C | |
| Approvals | Certified 01ATEX0019X, IECEx INE 15.0031X, TR CU (marking upon request, ordering code to be required) | |
| Marking | ATEX II 2 GD Ex d IIC T(**) Gb Ex de IIC T(**) Gb Ex tb IIIC T(**) Db IP66 ** T4/T135 °C ; T3/200°C | IEC-Ex Ex db IIC T(**) Gb Ex db e IIC T(**) Gb Ex tb IIIC T(**) Db IP66 |
| Gaskets | O-ring made of Nitrile Rubber (NBR) | |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) | |
| Entries | N° 2 entries M25x1,5 (EVde and EVCC version)/N° 1 entry M25x1,5 (EVA version)/(plugs and cable glands excluded) | |
| Hardware and screws | AISI304 Stainless steel external hardware and screws | |
| Lamps | Included | |
| Ballast | Electromechanical ballast | |
| Rated operation voltage (UE) | 230 V (standard)/220 V, 240 V, 250 V, 277 V (upon request) | |
| Frequency | 50 Hz (standard)/60 Hz (upon request) | |
| Accessories available upon request | Protection guard/Reflector/Pole mounting kit (EVde version) | |
| Options upon request | <p>HOT INSTANT RESTRIKE solution available via twin-arc lamp assuring immediate hot instant restrike ignition with flux that will reach 80% of the nominal lamp flux in about 3 minutes. HOT INSTANT RESTRIKE solution also available via INSTANT RESTRIKE BALLAST, assuring immediate hot instant restrike ignition with 80% of the lamp nominal flux in 7 seconds. (for high pressure sodium version)</p> | |

Photometric light curves



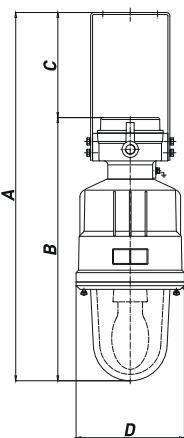
EV.. 2/3/4 with REV reflector

EV.. -4/5 with REVD reflector

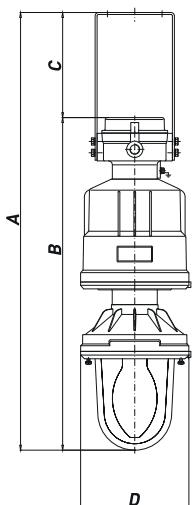


Dimensions EVde (H.I.D.)

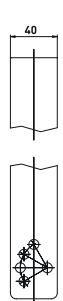
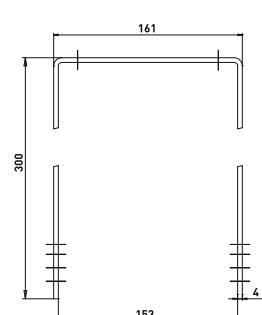
TAB. A-1



TAB. A-2

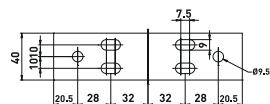


Bracket details



• Adjustable fixing facility

Bracket fixing details



EVde well glass lighting fixtures

EVde version, with integrated Ex e junction box, allows end users and contractors the possibility to save one junction box, two cable glands and a minimum of 30 minutes of labour during installation process.

This version is supplied complete with an adjustable AISI304 stainless steel mounting bracket suitable for ceiling, wall and suspension installation.

(NA) High pressure sodium

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | | | DRAWING |
|-----------------|---------------|----------|-------------|-------------|-----------------|-----|-----|-----|----------|
| | | | | | A | B | C | D | |
| EVDE-2/NA-B 50 | A041121F01114 | 50** | 6.00 | T3* | 680 | 466 | 214 | 162 | TAB. A-1 |
| EVDE-3/NA-B 50 | A041131F01114 | 50 | 6.00 | T3* | 686 | 472 | 214 | 194 | TAB. A-1 |
| EVDE-2/NA-B 70 | A041121H01114 | 70** | 6.00 | T3* | 680 | 466 | 214 | 162 | TAB. A-1 |
| EVDE-3/NA-B 70 | A041131H01114 | 70 | 7.40 | T3* | 686 | 472 | 214 | 194 | TAB. A-1 |
| EVDE-4/NA-B 100 | A041141101114 | 100 | 7.60 | T3* | 748 | 533 | 214 | 220 | TAB. A-1 |
| EVDE-4/NA-B 150 | A041141151114 | 150 | 8.40 | T3* | 748 | 533 | 214 | 220 | TAB. A-1 |
| EVDE-4/NA-B 250 | A041141251114 | 250 | 15.00 | T3 | 890 | 676 | 214 | 220 | TAB. A-1 |
| EVDE-5/NA-B 250 | A041151251114 | 250 | 16.70 | T3* | 970 | 756 | 214 | 281 | TAB. A-2 |
| EVDE-5/NA-B 400 | A041151401114 | 400 | 18.00 | T3 | 970 | 756 | 214 | 281 | TAB. A-2 |

* In case of maximum ambient temperature reaches +40°C and except for light/bulb oriented on top (topward), temperature class changes into T4 (ordering code to be required)

** Lamp with built-in glow discharge ignitor

(HG) Mercury vapour

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | | | DRAWING |
|-----------------|---------------|----------|-------------|-------------|-----------------|-----|-----|-----|----------|
| | | | | | A | B | C | D | |
| EVDE-2/HG-B 50 | A042121F00114 | 50 | 6.00 | T3* | 680 | 466 | 214 | 162 | TAB. A-1 |
| EVDE-2/HG-B 80 | A042121I00114 | 80 | 6.00 | T3* | 686 | 472 | 214 | 194 | TAB. A-1 |
| EVDE-3/HG-B 125 | A0421311B0113 | 125 | 7.40 | T3 | 686 | 472 | 214 | 194 | TAB. A-1 |
| EVDE-5/HG-B 250 | A042151250114 | 250 | 15.70 | T3 | 970 | 756 | 214 | 281 | TAB. A-2 |
| EVDE-5/HG-B 400 | A042151400114 | 400 | 16.50 | T3 | 970 | 756 | 214 | 281 | TAB. A-2 |

*In case of maximum ambient temperature reaches +40°C and except for light/bulb oriented on top (topward), temperature class changes into T4 (ordering code to be required)

Notes:

- Below -20°C, the mercury vapour light can be used, providing they are switched on 24 hours a day
- Mercury vapour light bulb is not included (banned by the European Community)

(IM) Metal halide

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | | | DRAWING |
|-----------------|---------------|----------|-------------|-------------|-----------------|-----|-----|-----|----------|
| | | | | | A | B | C | D | |
| EVDE-3/IM-B 70 | A043131H01114 | 70 | 6.00 | T3* | 686 | 472 | 214 | 194 | TAB. A-1 |
| EVDE-4/IM-B 100 | A043141101114 | 100 | 6.00 | T3* | 748 | 533 | 214 | 220 | TAB. A-1 |
| EVDE-4/IM-B 150 | A043141151114 | 150 | 7.40 | T3* | 748 | 533 | 214 | 220 | TAB. A-1 |
| EVDE-4/IM-B 250 | A043141251114 | 250 | 14.80 | T3 | 890 | 676 | 214 | 220 | TAB. A-2 |
| EVDE-5/IM-B 250 | A043151251114 | 250 | 15.70 | T3* | 890 | 676 | 214 | 220 | TAB. A-2 |
| EVDE-5/IM-B 400 | A043151401114 | 400 | 16.50 | T3 | 970 | 756 | 214 | 281 | TAB. A-2 |

*In case of maximum ambient temperature reaches +40°C and except for light/bulb oriented on top (topward), temperature class changes into T4 (ordering code to be required).

Below -20°C, the metal halide light can be used, providing they are switched on 24 hours a day

EVCC well glass lighting fixtures

EVCC version, without integrated Ex e junction box, allows standard ceiling installation.

(NA) High pressure sodium

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | DRAWING |
|-----------------|---------------|----------|-------------|-------------|-----------------|-----|---------|
| | | | | | A | B | |
| EVCC-2/NA-B 50 | A041221F01114 | 50** | 5.50 | T3* | 406 | 162 | TAB. B |
| EVCC-3/NA-B 50 | A041231F01114 | 50 | 6.90 | T3* | 411 | 194 | TAB. B |
| EVCC-2/NA-B 70 | A041221H01114 | 70** | 5.50 | T3* | 406 | 162 | TAB. B |
| EVCC-3/NA-B 70 | A041231H01114 | 70 | 6.90 | T3* | 411 | 194 | TAB. B |
| EVCC-4/NA-B 100 | A041241101114 | 100 | 7.10 | T3* | 474 | 220 | TAB. B |
| EVCC-4/NA-B 150 | A041241151114 | 150 | 7.90 | T3* | 474 | 220 | TAB. B |

*In case of maximum ambient temperature reaches +40°C and except for light/bulb oriented on top (topward), temperature class changes into T4 (ordering code to be required)

** Lamp with built-in glow discharge ignitor

(HG) Mercury vapour

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | DRAWING |
|-----------------|---------------|----------|-------------|-------------|-----------------|-----|---------|
| | | | | | A | B | |
| EVCC-2/HG-B 50 | A042221F00114 | 50 | 5.50 | T3* | 406 | 162 | TAB. B |
| EVCC-2/HG-B 80 | A042221I00114 | 80 | 5.50 | T3* | 406 | 162 | TAB. B |
| EVCC-3/HG-B 125 | A0422311B0114 | 125 | 6.90 | T3 | 411 | 194 | TAB. B |

*In case of maximum ambient temperature reaches +40°C and except for light/bulb oriented on top (topward), temperature class changes into T4 (ordering code to be required)

Notes:

- Below -20°C, the mercury vapour light can be used, providing they are switched on 24 hours a day

- Mercury vapour light bulb is not included (banned by the European Community)

(IM) Metal halide

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | DRAWING |
|-----------------|---------------|----------|-------------|-------------|-----------------|-----|---------|
| | | | | | A | B | |
| EVCC-3/IM-B 70 | A043231H01114 | 70 | 6.90 | T3* | 411 | 194 | TAB. B |
| EVCC-4/IM-B 100 | A043241101114 | 100 | 7.10 | T3* | 474 | 220 | TAB. B |
| EVCC-4/IM-B 150 | A043241151114 | 150 | 7.90 | T3* | 474 | 220 | TAB. B |

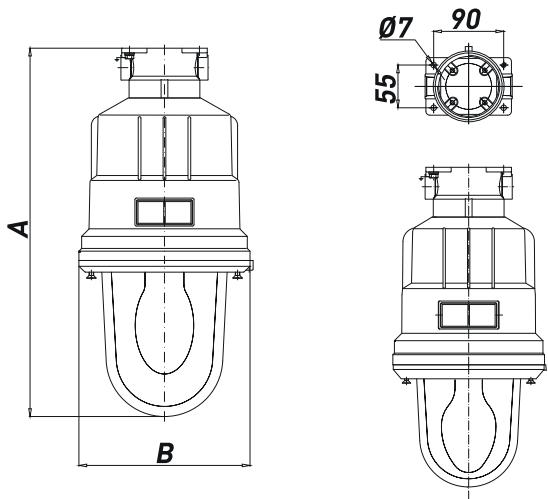
*In case of maximum ambient temperature reaches +40°C and except for light/bulb oriented on top (topward), temperature class changes into T4 (ordering code to be required)

Notes:

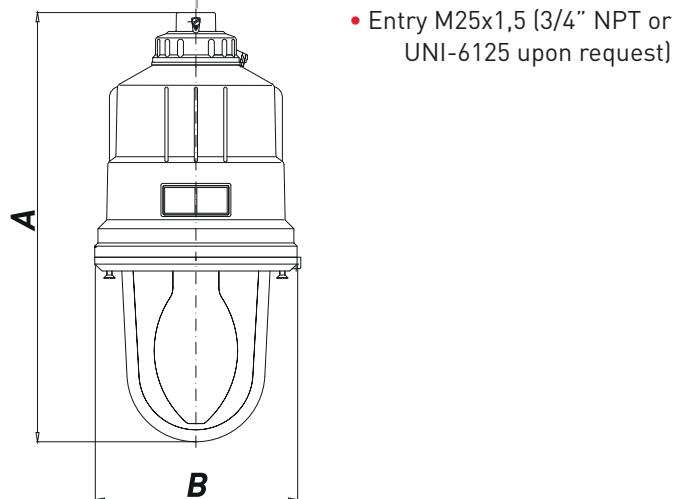
- Below -20°C, the metal halide light can be used, providing they are switched on 24 hours a day

Dimensions EVCC (H.I.D.)

TAB. B

**Dimensions EVA (H.I.D.)**

TAB. C



EVA well glass lighting fixtures

EVA version, without integrated Ex e junction box, allows standard suspension installation by conduit system and pastoral pole.

(NA) High pressure sodium

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | DRAWING |
|----------------|---------------|----------|-------------|-------------|-----------------|-----|---------|
| | | | | | A | B | |
| EVA-2/NA-B 50 | A041321F01114 | 50** | 5.50 | T3* | 400 | 162 | TAB. C |
| EVA-3/NA-B 50 | A041331F01114 | 50 | 6.90 | T3* | 404 | 194 | TAB. C |
| EVA-2/NA-B 70 | A041321H01114 | 70** | 5.50 | T3* | 400 | 162 | TAB. C |
| EVA-3/NA-B 70 | A041331H01114 | 70 | 6.90 | T3* | 404 | 194 | TAB. C |
| EVA-4/NA-B 100 | A041341101114 | 100 | 7.10 | T3* | 467 | 220 | TAB. C |
| EVA-4/NA-B 150 | A041341151114 | 150 | 7.90 | T3* | 467 | 220 | TAB. C |

*In case of maximum ambient temperature reaches +40°C and except for light/bulb oriented on top (topward), temperature class changes into T4 (ordering code to be required)

** Lamp with built-in glow discharge ignitor

(HG) Mercury vapour

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | DRAWING |
|----------------|---------------|----------|-------------|-------------|-----------------|-----|---------|
| | | | | | A | B | |
| EVA-2/HG-B 50 | A042321F00114 | 50 | 5.50 | T3* | 400 | 162 | TAB. C |
| EVA-2/HG-B 80 | A042321I00114 | 80 | 5.50 | T3* | 400 | 162 | TAB. C |
| EVA-3/HG-B 125 | A042331B0114 | 125 | 6.90 | T3 | 404 | 194 | TAB. C |

*In case of maximum ambient temperature reaches +40°C and except for light/bulb oriented on top (topward), temperature class changes into T4 (ordering code to be required)

Notes:

- Below -20°C, the mercury vapour light can be used, providing they are switched on 24 hours a day
- Mercury vapour light bulb is not included (banned by the European Community)

(IM) Metal halide

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | DRAWING |
|----------------|---------------|----------|-------------|-------------|-----------------|-----|---------|
| | | | | | A | B | |
| EVA-3/IM-B 70 | A043331H01114 | 70 | 6.90 | T3* | 404 | 194 | TAB. C |
| EVA-4/IM-B 100 | A043341101114 | 100 | 7.10 | T3* | 467 | 220 | TAB. C |
| EVA-4/IM-B 150 | A043341151114 | 150 | 7.90 | T3* | 467 | 220 | TAB. C |

*In case of maximum ambient temperature reaches +40°C and except for light/bulb oriented on top (topward), temperature class changes into T4 (ordering code to be required)

Notes:

- Below -20°C, the metal halide light can be used, providing they are switched on 24 hours a day

WELLGLASS

EV.. Series Lighting fixtures for fluorescent compact/halogen lamps - Copper free aluminium



EV.. series well glass lighting fixtures are suitable for hazardous areas of industrial plants for lighting of indoor and outdoor structures, for which narrow or wide beam lighting is needed.

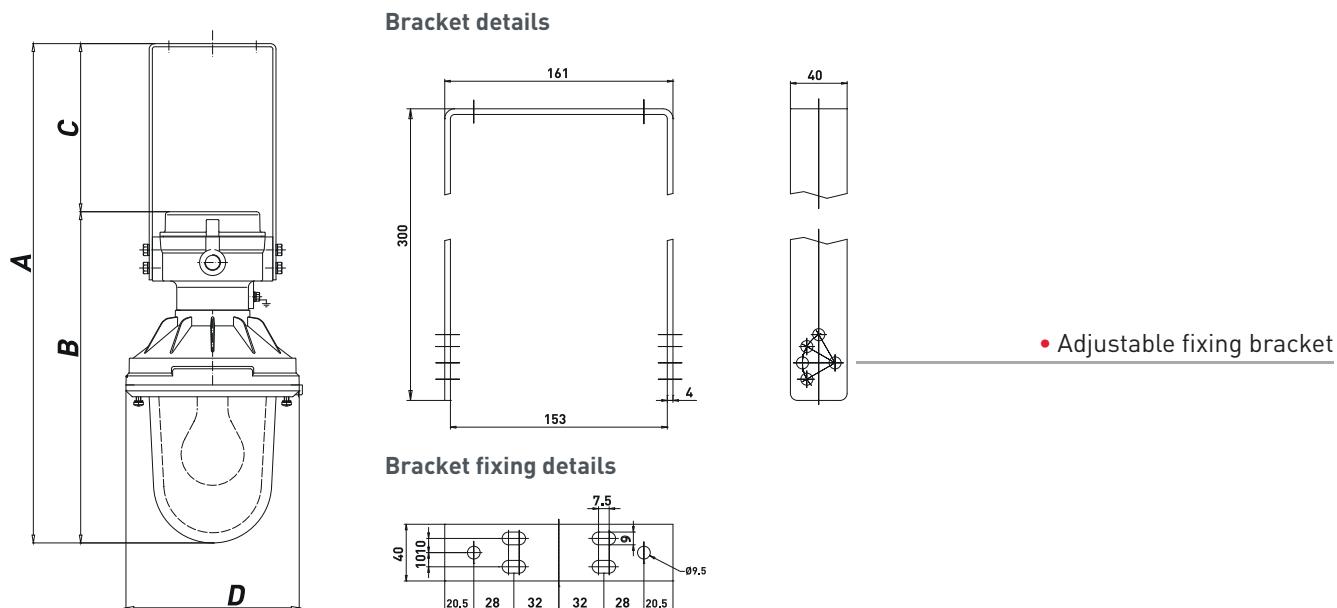
These luminaries have been designed to house energy saving lamps; light source can be driven where required by way of suitable reflectors.

EV.. luminaires, provided in a wide range of wattage, have an excellent corrosion resistance due to the body made of aluminium with low content of copper and tempered glass of lamp compartment.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -52°C to +60°C |
| Approvals | Certified 01ATEX0019X (standard) IECEx INE 15.0031X CoC TR CU 012/2011 (marking upon request, ordering code to be required) |
| Marking | II 2 GD Ex d IIC T(**) Gb for all EV.. Ex de IIC T(**) Gb for all EVde.. Ex tb IIIC T(**) Db IP66 ** T5/T100°C, T4/T135°C, T3/200°C |
| Gaskets | O-ring made of Nitrile Rubber (NBR) |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | N° 2 entries M25x1,5 (EVde and EVCC version) N° 1 entry M25x1,5 (EVA version) (plugs and cable glands excluded) |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | Included |
| Rated operation voltage (UE) | HALOGEN LAMPS 230V (standard) 220V, 240V (upon request) FLUORESCENT LAMPS 220/240V |
| Frequency | 50/60 Hz |
| Accessories available upon request | Protection guard Reflector Pole mounting kit (EVde version) |

Dimensions EVde



EVde well glass lighting fixtures

EVde version, with integrated Ex e junction box, allows end users and contractors the possibility to save one junction box, two cable glands and a minimum of 30 minutes of labour during installation process.

This version is supplied complete with an adjustable AISI304 stainless steel mounting bracket suitable for ceiling, wall and suspension installation.

(HA) Halogen – Energy saving

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | | |
|---------------|---------------|---------------------|-------------|-------------|-----------------|-----|-----|-----|
| | | | | | A | B | C | D |
| EVDE-1/HA 42 | A044111E2171D | 42 (OLD 60W INC.) | 2.90 | T4* | 505 | 291 | 214 | 146 |
| EVDE-2/HA 42 | A044121E21714 | 42 (OLD 60W INC.) | 3.10 | T3** | 550 | 336 | 214 | 163 |
| EVDE-2/HA 70 | A044121H01714 | 70 (OLD 100W INC.) | 3.10 | T3** | 550 | 336 | 214 | 163 |
| EVDE-2/HA 105 | A0441211A1714 | 105 (OLD 150W INC.) | 3.10 | T3** | 550 | 336 | 214 | 163 |
| EVDE-3/HA 105 | A0441311A1714 | 105 (OLD 150W INC.) | 4.40 | T3** | 584 | 370 | 214 | 194 |
| EVDE-4/HA 140 | A04414114171D | 140 (OLD 200W INC.) | 7.00 | T4 | 635 | 421 | 214 | 220 |
| EVDE-5/HA 200 | A044151201714 | 200 | 9.00 | T3*** | 715 | 501 | 214 | 281 |

*In case of maximum ambient temperature reaches +40°C , temperature class changes into T5 (ordering code to be required)

**In case of maximum ambient temperature reaches +55°C , temperature class changes into T4 (ordering code to be required)

***In case of maximum ambient temperature reaches +40°C , temperature class changes into T4 (ordering code to be required)

(FC) Fluorescent compact – Energy saving long life (8000h)

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | | |
|--------------|---------------|--------------------|-------------|-------------|-----------------|-----|-----|-----|
| | | | | | A | B | C | D |
| EVDE-2/FC 26 | A045121C6171D | 26 | 3.10 | T4* | 550 | 336 | 214 | 163 |
| EVDE-3/FC 45 | A045131E5171D | 45 (OLD 200W INC.) | 4.40 | T4* | 584 | 370 | 214 | 194 |
| EVDE-4/FC 45 | A045141E5171D | 45 (OLD 200W INC.) | 7.00 | T4** | 635 | 421 | 214 | 220 |
| EVDE-5/FC 45 | A045151E5171D | 45 (OLD 200W INC.) | 9.00 | T4** | 715 | 501 | 214 | 281 |

*In case of maximum ambient temperature reaches +40°C , temperature class changes into T5 (ordering code to be required)

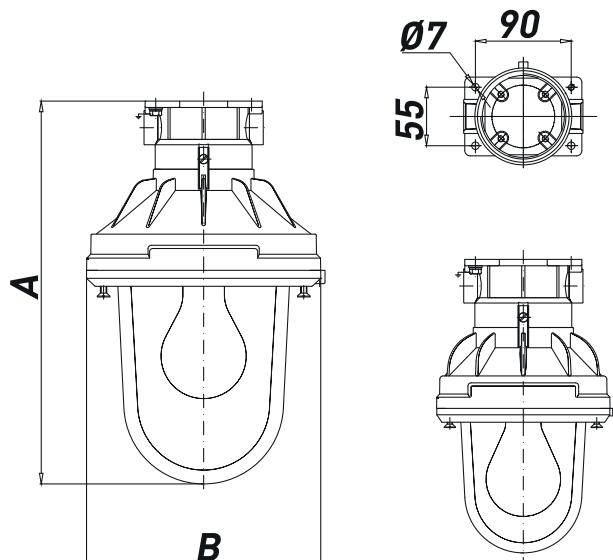
**In case of maximum ambient temperature reaches +40°C , temperature class changes into T6 (ordering code to be required)

In case of maximum ambient temperature reaches +55°C , temperature class changes into T5 (ordering code to be required)

Notes:

- Below -20°C, the fluorescent compact light can be used, providing they are switched on 24 hours a day

Dimensions EVCC



EVCC well glass lighting fixtures

EVCC version, without integrated Ex e junction box, allows standard ceiling installation.

(HA) Halogen – Energy saving

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | |
|---------------|---------------|---------------------|-------------|-------------|-----------------|-----|
| | | | | | A | B |
| EVCC-1/HA 42 | A044211E2171D | 42 (OLD 60W INC.) | 2.40 | T4* | 230 | 146 |
| EVCC-2/HA 42 | A044221E21714 | 42 (OLD 60W INC.) | 2.60 | T3** | 276 | 162 |
| EVCC-2/HA 70 | A044221H01714 | 70 (OLD 100W INC.) | 2.60 | T3** | 276 | 162 |
| EVCC-2/HA 105 | A0442211A1714 | 105 (OLD 150W INC.) | 2.60 | T3** | 276 | 162 |
| EVCC-3/HA 105 | A0442311A1714 | 105 (OLD 150W INC.) | 3.90 | T3** | 309 | 194 |
| EVCC-4/HA 140 | A04424114171D | 140 (OLD 200W INC.) | 6.50 | T4 | 360 | 220 |
| EVCC-5/HA 200 | A044251201714 | 200 | 8.50 | T3*** | 440 | 281 |

*In case of maximum ambient temperature reaches +40°C , temperature class changes into T5 (ordering code to be required)

**In case of maximum ambient temperature reaches +55°C , temperature class changes into T4 (ordering code to be required)

***In case of maximum ambient temperature reaches +40°C , temperature class changes into T4 (ordering code to be required)

(FC) Fluorescent compact – Energy saving long life (8000h)

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | |
|--------------|---------------|--------------------|-------------|-------------|-----------------|-----|
| | | | | | A | B |
| EVCC-2/FC 26 | A045221C6171D | 26 | 2.60 | T4* | 276 | 162 |
| EVCC-3/FC 45 | A045231E5171D | 45 (OLD 200W INC.) | 3.90 | T4* | 309 | 194 |
| EVCC-4/FC 45 | A045241E5171D | 45 (OLD 200W INC.) | 6.50 | T4** | 360 | 220 |
| EVCC-5/FC 45 | A045251E5171D | 45 (OLD 200W INC.) | 8.50 | T4** | 440 | 281 |

*In case of maximum ambient temperature reaches +40°C , temperature class changes into T5 (ordering code to be required)

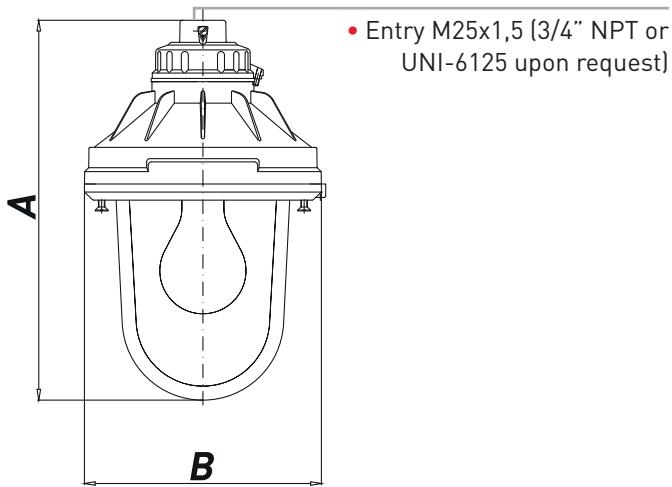
**In case of maximum ambient temperature reaches +40°C , temperature class changes into T6 (ordering code to be required)

In case of maximum ambient temperature reaches +55°C , temperature class changes into T5 (ordering code to be required)

Notes:

- Below -20°C, the fluorescent compact light can be used, providing they are switched on 24 hours a day

Dimensions EVA



EVA well glass lighting fixtures

EVA version, without integrated Ex e junction box, allows standard suspension installation by conduit system and pastoral pole.

(HA) Halogen – Energy saving

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | |
|--------------|---------------|---------------------|-------------|-------------|-----------------|-----|
| | | | | | A | B |
| EVA-1/HA 42 | A044311E2171D | 42 (OLD 60W INC.) | 2.40 | T4* | 230 | 146 |
| EVA-2/HA 42 | A044321E21714 | 42 (OLD 60W INC.) | 2.60 | T3** | 276 | 162 |
| EVA-2/HA 70 | A044321H01714 | 70 (OLD 100W INC.) | 2.60 | T3** | 276 | 162 |
| EVA-2/HA 105 | A0443211A1714 | 105 (OLD 150W INC.) | 2.60 | T3** | 276 | 162 |
| EVA-3/HA 105 | A0443311A1714 | 105 (OLD 150W INC.) | 3.90 | T3** | 309 | 194 |
| EVA-4/HA 140 | A04434114171D | 140 (OLD 200W INC.) | 6.50 | T4 | 360 | 220 |
| EVA-5/HA 200 | A044351201714 | 200 | 8.50 | T3*** | 440 | 281 |

*In case of maximum ambient temperature reaches +40°C , temperature class changes into T5 (ordering code to be required)

**In case of maximum ambient temperature reaches +55°C , temperature class changes into T4 (ordering code to be required)

***In case of maximum ambient temperature reaches +40°C , temperature class changes into T4 (ordering code to be required)

(FC) Fluorescent compact – Energy saving long life (8000h)

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | |
|-------------|---------------|--------------------|-------------|-------------|-----------------|-----|
| | | | | | A | B |
| EVA-2/FC 26 | A045321C6171D | 26 | 2.60 | T4* | 276 | 162 |
| EVA-3/FC 45 | A045331E5171D | 45 (OLD 200W INC.) | 3.90 | T4* | 309 | 194 |
| EVA-4/FC 45 | A045341E5171D | 45 (OLD 200W INC.) | 6.50 | T4** | 360 | 220 |
| EVA-5/FC 45 | A045351E5171D | 45 (OLD 200W INC.) | 8.50 | T4** | 440 | 281 |

*In case of maximum ambient temperature reaches +40°C , temperature class changes into T5 (ordering code to be required)

**In case of maximum ambient temperature reaches +40°C , temperature class changes into T6 (ordering code to be required)

In case of maximum ambient temperature reaches +55°C , temperature class changes into T5 (ordering code to be required)

Notes:

- Below -20°C, the fluorescent compact light can be used, providing they are switched on 24 hours a day

WELLGLASS

EV.. Series - Hand lamps for incandescent lamps - Copper free aluminium

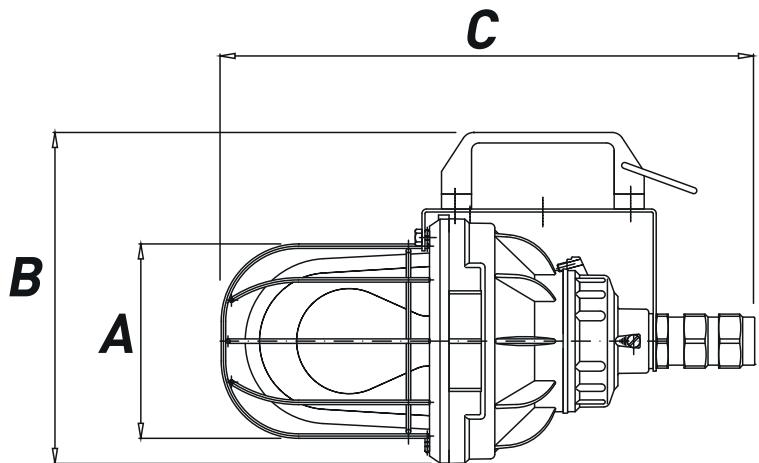


Portable lights with insulated handle and protection guard made of aluminium with low content of copper.

TECHNICAL FEATURES

| | |
|-------------------------------------|--|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -52°C to +60°C |
| Approvals | Certified 01ATEX0019X (standard) IECEx INE 15.0031X TR CU (marking upon request, ordering code to be required) |
| Marking | II 2 GD Ex d IIC T(**) Gb Ex tb IIIC T(**) Db IP66 ** T4/135°C, T3/200°C |
| Gaskets | O-ring made of Nitrile Rubber (NBR) |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | N° 1 entry M25x1,5 complete with brass nickel chrome plated cable gland PAP type |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | Included |
| Rated operation voltage (UE) | 230V (standard) 220V, 240V (marking upon request) |
| Frequency | 50/60 Hz |
| Accessories included | Protection guard Brass nickel chrome plated cable gland PAP type complete with set of inner and outer seals |

Dimensions EVA



EV.. Portable lights

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | |
|----------------------|---------------|----------|-------------|-------------|-----------------|-----|-----|
| | | | | | A | B | C |
| EVA-1/HA 42 (EVP 60) | A044311E21714 | 42 | 2.90 | T4* | 123 | 212 | 312 |

*In case of maximum ambient temperature reaches +40°C , temperature class changes into T5 (ordering code to be required)

WELLGLASS

EVCC-PR Series - Tank lighting fixtures - Copper free aluminium

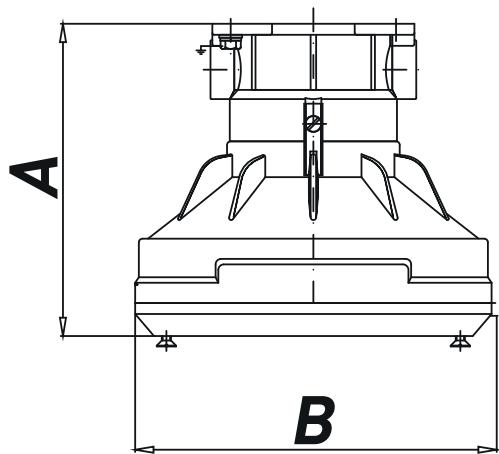


Tank inspection lights suitable for ON-SHORE and OFF-SHORE application by suitable painting cycle (upon request).

TECHNICAL FEATURES

| | |
|---|--|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -52°C to +60°C |
| Approvals | Certified 01ATEX0019X (standard) IECEx INE 15.0031X TR CU (marking upon request, ordering code to be required) |
| Marking | II 2 GD Ex d IIC T3 Gb Ex tb IIIC T200°C Db IP66 |
| Gaskets | O-ring made of Nitrile Rubber (NBR) |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | Nº 2 entries M25x1,5 (plugs and cable glands excluded) |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | Included |
| Rated operation voltage (UE) | 230V (standard) 220V, 240V (marking upon request) |
| Frequency | 50/60 Hz |
| Accessories available upon request | Fixing flange for porthole |

Dimensions EVCC-PR



(EVCC-PR) Tank inspection lights

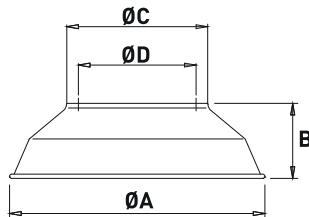
| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | |
|----------------|---------------|----------|-------------|-------------|-----------------|-----|
| | | | | | A | B |
| EVCC-PR2/HA 42 | A044621E2171D | 42 | 3.10 | T4 | 153 | 165 |
| EVCC-PR3/HA 53 | A044631F3171D | 53 | 4.40 | T4 | 170 | 195 |

SPARES & ACCESSORIES

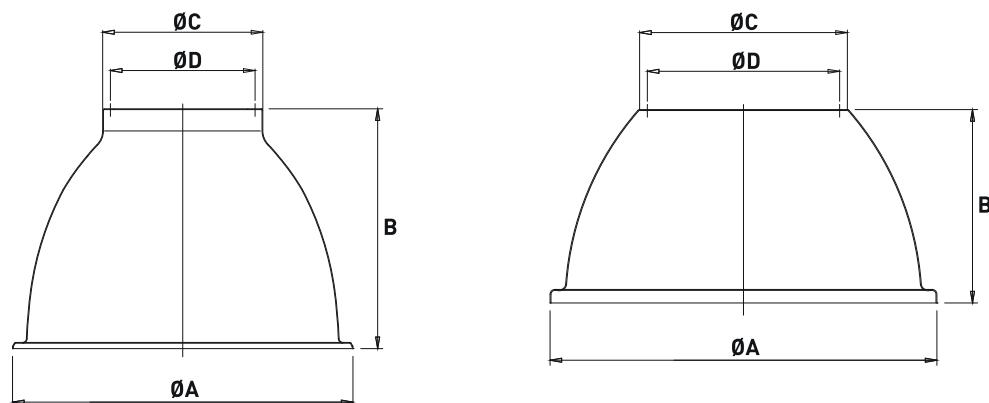
Reflectors

| CODE | TYPE | DIMENSIONS (mm) | | | | WEIGHT [Kg] |
|---------------|--|-----------------|-----|-----|-----|----------------|
| | | A | B | C | D | |
| AOA040007000 | REV-1 STANDARD REFLECTOR FOR EV..-1 RAL9003 PAINTED | 330 | 97 | 183 | 123 | 0,260 |
| AOA040008000 | REV-2 STANDARD REFLECTOR FOR EV..-2 RAL9003 PAINTED | 330 | 97 | 183 | 138 | 0,260 |
| AOA040009000 | REV-3 STANDARD REFLECTOR FOR EV..-3 RAL9003 PAINTED | 330 | 97 | 183 | 160 | 0,260 |
| AOA0400010000 | REV-4 STANDARD REFLECTOR FOR EV..-4 RAL9003 PAINTED | 400 | 90 | 263 | 188 | 0,360 |
| AOA0400011000 | REVD-4 POLISHED AND ANODIZED DOME REFLECTOR FOR EV..-4 | 440 | 310 | 207 | 188 | 0,800 |
| AOA0400043000 | REVD-5 POLISHED AND ANODIZED DOME REFLECTOR FOR EV..-5 | 500 | 250 | 271 | 252 | 0,800 |

Dimensions REV



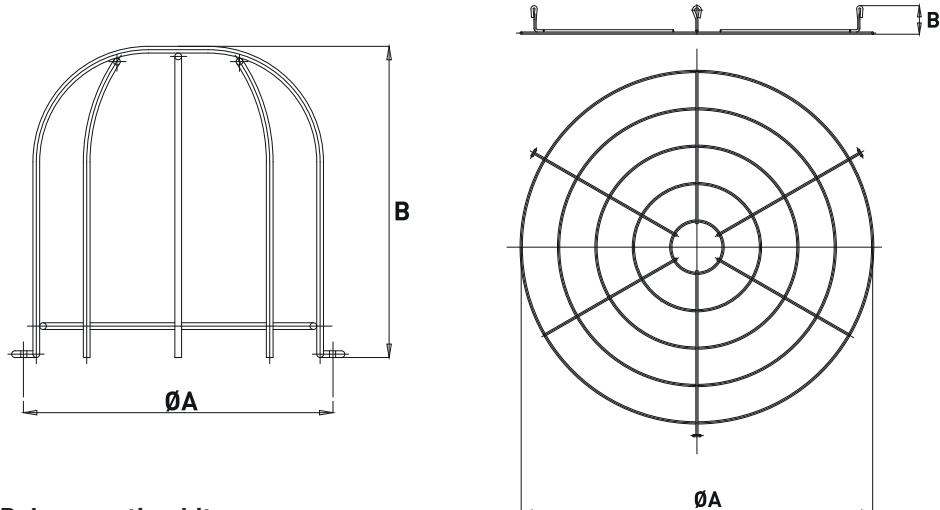
Dimensions REVD



Protection guard (Stainless Steel AISI316 L version available upon request)

| CODE | TYPE | DIMENSIONS AxB (mm) | WEIGHT [Kg] |
|---------------|---|------------------------|----------------|
| A0A0400017000 | GEV-1 PROTECTION GUARD FOR EV..-1 - AISI 304 | 123X103 | 0.160 |
| A0A0400018000 | GEV-2 PROTECTION GUARD FOR EV..-2 - AISI 304 | 138X139 | 0.230 |
| A0A0400046000 | GEV-3 PROTECTION GUARD FOR EV..-3 - AISI 304 | 151X152 | 0.240 |
| A0A0400016000 | GEV-4 PROTECTION GUARD FOR EV..-4 - AISI 304 | 178X200 | 0.370 |
| A0A0400047000 | GEV-5 PROTECTION GUARD FOR EV..-5 - AISI 304 | 252X233 | 0.400 |
| A0A0400044000 | GEV-5-P PROTECTION GUARD FOR EV..-5 C/W REVD - AISI 304 | 470 X38 | 0.310 |

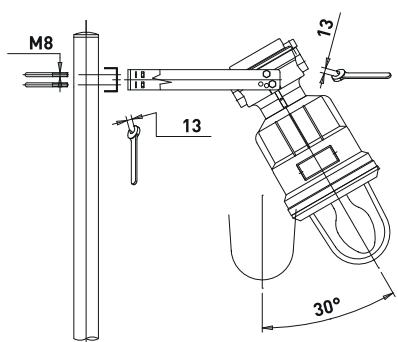
Dimensions GEV



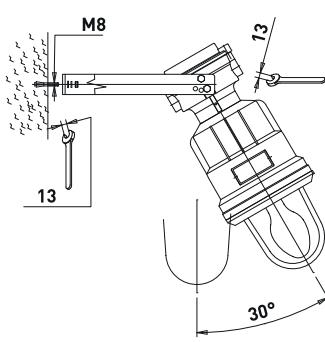
Pole mounting kit

| CODE | TYPE |
|--------------|-----------------------------------|
| A0A040001000 | P4 KIT - 1" 1/2 POLE MOUNTING KIT |
| A0A040002000 | P5 KIT - 2" POLE MOUNTING KIT |

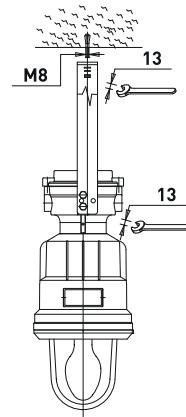
Pole mounting



Wall mounting



Ceiling mounting



Note: Pole mounting kit to be ordered separately and as additional accessories out of the standard adjustable stainless steel fixing bracket. Expansion bolts (for concrete) or bolts (for steel frame) are not included in our kit.

LED LIGHTING

EV LED.. Series - Spotlight - Copper free aluminium



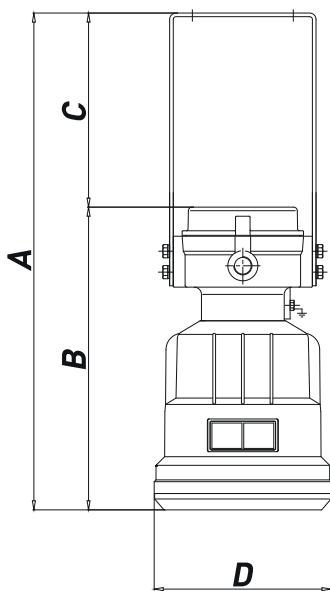
Spot lights are used where a high illumination is required, without causing neither dazzling nor light pollution.

Due to LED technology, these luminaires are especially resistant to shock or vibration and free from infrared and ultraviolet wavelengths.

TECHNICAL FEATURES

| | |
|-------------------------------------|---|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -52°C to +60°C |
| Approvals | Certified 01ATEX0019X (standard) IECEx INE 15.0031X CoC TR CU 012/2011 (marking upon request, ordering code to be required) |
| Marking | II 2 GD Ex de IIC T(**) Gb Ex tb IIIC T(**) Db IP66 ** T5/T100°C, T4/T135°C |
| Gaskets | O-ring made of Nitrile Rubber (NBR) |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | Nº 2 entries M25x1,5 (plugs and cable glands excluded) |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | Included |
| Rated operation voltage (UE) | 115/240V, 24Vdc |
| Frequency | 50/60 Hz |

Dimensions LED EV



LED EV.. Spot lights

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | | | | VOLTAGE |
|---------------|---------------|----------|-------------|-------------|-----------------|-----|-----|-----|------------------|
| | | | | | A | B | C | D | |
| EVDE-3/LED 18 | A04713118181D | 18 | 6.00 | T4* | 547 | 333 | 214 | 195 | 115/240V 50/60HZ |
| EVDE-3/LED 18 | A04713118191D | 18 | 6.00 | T4* | 547 | 333 | 214 | 195 | 24VDC |

* In case of maximum ambient temperature reaches +40°C, temperature class changes into T5 (ordering code to be required)

LED LIGHTING

EVCC-PR LED Series - Tank lighting fixtures - Copper free aluminium

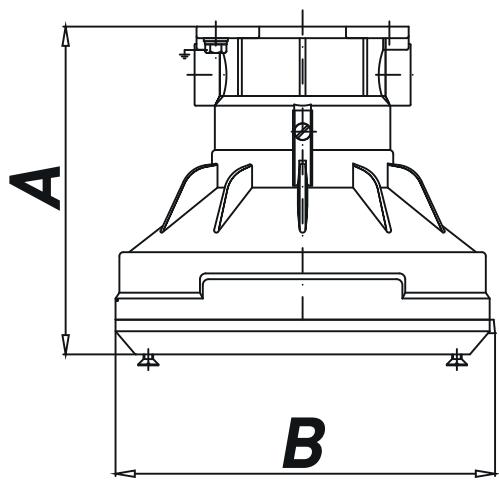


Tank inspection lights suitable for ON-SHORE and OFF-SHORE application by suitable painting cycle (upon request); LED version.

TECHNICAL FEATURES

| | |
|---|--|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -52°C to +60°C |
| Approvals | Certified 01ATEX0019X (standard) TR CU (marking upon request, ordering code to be required) IECEx INE 15.0031X |
| Marking | II 2 GD Ex d IIC T3 Gb Ex tb IIIC T200°C Db IP66 |
| Gaskets | O-ring made of Nitrile Rubber (NBR) |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | N° 2 entries M25x1,5 (plugs and cable glands excluded) |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | Included |
| Rated operation voltage (UE) | 230 V |
| Frequency | 50/60 Hz |
| Accessories available upon request | Fixing flange for porthole |

Dimensions LED EVCC



LED EVCC-PR tank inspection lights

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | DIMENSIONS [mm] | |
|----------------|---------------|----------|-------------|-------------|-----------------|-----|
| | | | | | A | B |
| EVCC-PR3/LED 7 | A047631071G14 | 7 | 4.40 | T3 | 170 | 195 |

LED LIGHTING

FL-LED.. Series - Floodlight - Copper free aluminium



LED FL.. floodlights have been design for street and sidewalk lighting.

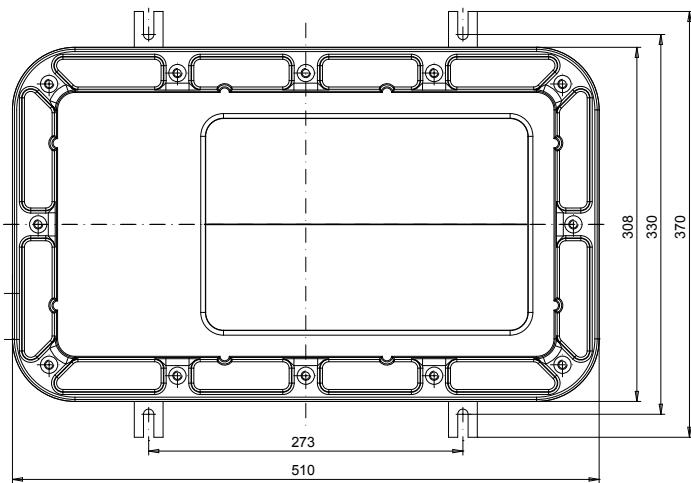
Due to the body made of aluminium with low content of copper and tempered glass, these floodlights have an excellent corrosion resistance.

TECHNICAL FEATURES

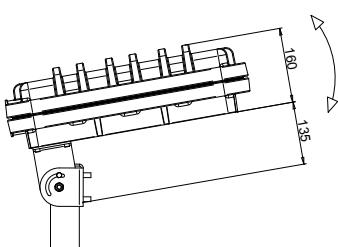
| | |
|-------------------------------------|--|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -50°C to +55°C |
| Approvals | Certified 00ATEX0023X (standard)/Certified 01ATEX0059 (battery pack) IECEx INE 16.0038X TR CU (marking upon request, ordering code to be required) |
| Marking | Standard: II 2 GD Ex d IIB+H2 T6 Gb Ex tb IIIC T85°C Db IP66 Battery pack: II 2 GD Ex d IIC T6 Gb Ex tb IIIC T85°C Db IP66 |
| Gaskets | Gasket made of Nitrile Rubber (NBR) on flat joint |
| Entries | Suitable for LOOP-IN LOOP-OUT UP TO 4mm ² |
| Hardware and screws | AISI 316 L Stainless steel external hardware and screws |
| Lamps | Included |
| Rated operation voltage (UE) | 110V/264V (standard version) 220V/240V (emergency version) |
| Frequency | 50/60Hz |
| Accessories | Ceiling mounting : N° 1 brass nickel chrome plated plug + N° 1 brass nickel chrome plated cable gland PNA type c/w set of inner seals Pole mounting : N°1 brass nickel chrome plated cable gland PNA type c/w set of inner seals Adjustable mounting bracket: : N°1 brass nickel chrome plated cable gland PNA type c/w set of inner seals Upon request: protection guard |
| Operating principles | FL.. floodlight for emergency service : 180 minutes; with constant flux 650 lm (other emergency duration available upon request) |
| Photometric light curves | |

Dimension FL -LED – Standard version 10W/30W/60W/95W

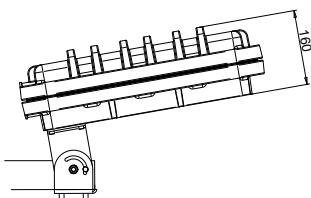
Front view/
ceiling mounting



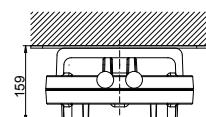
Straight
bracket



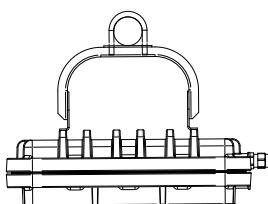
Curved bracket



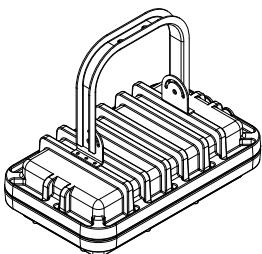
Ceiling/direct
wall mounting



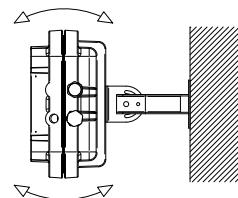
Adjustable pipe



Adjustable pendant



Adjustable wall



LED FL.. Floodlights - Standard version (Ceiling/Direct wall mounting)

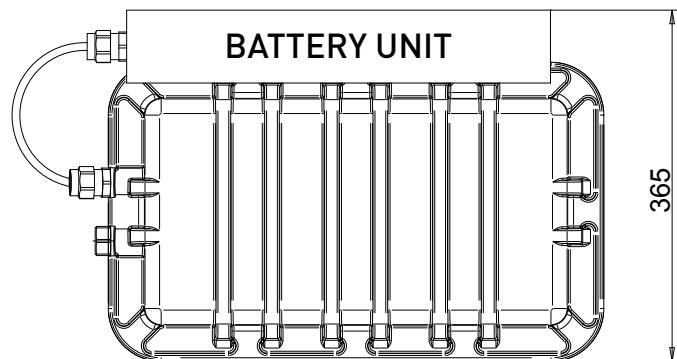
| TYPE | CODE | LAMP [W] | VOLTAGE | FREQUENCY | AMBIENT TEMPERATURE |
|-----------|---------------|----------|----------|-----------|---------------------|
| FL-LED 30 | A010195021112 | 95W | 110/264V | 50/60HZ | (-50°C;+55°C) |
| FL-LED 30 | A010160021112 | 60W | 110/264V | 50/60HZ | (-50°C;+55°C) |
| FL-LED 30 | A010130021112 | 30W | 110/264V | 50/60HZ | (-50°C;+55°C) |
| FL-LED 30 | A010110021112 | 10W | 110/264V | 50/60HZ | (-50°C;+55°C) |

LED FL.. Coventional efficiency comparison table

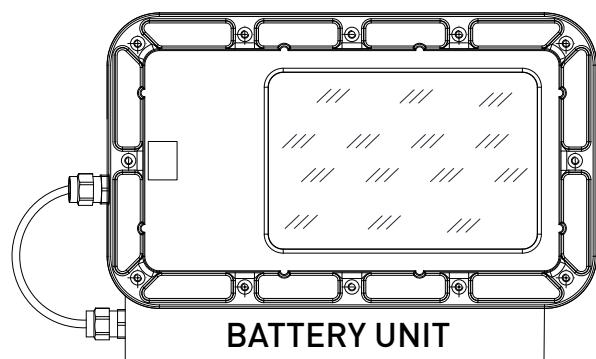
| LED -> | FLUORESCENT -> | HID |
|-------------|----------------|---------------------|
| FL-LED 30 W | 2X18 W | 50 W HPSV/80W HPMV |
| FL-LED 60 W | 2X36 W | 100 W HPSV/125 HPMV |
| FL-LED 95 W | 2X58 W | 150 W HPSV/250 HPMV |

Dimension FL..LED – Emergency version

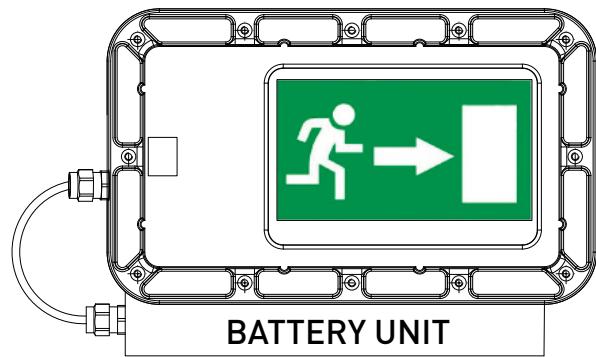
Top view



Front view



EXIT version



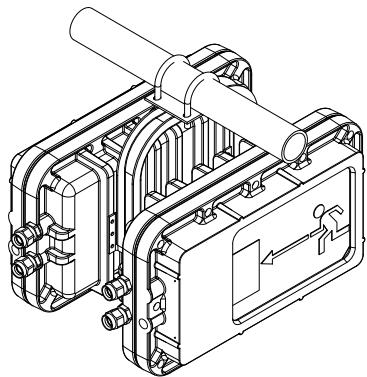
LED FL.. Floodlights – Emergency version/3 hours duration with 650 lm output in emergency

| TYPE | CODE | LAMP [W] | VOLTAGE | FREQUENCY | AMBIENT TEMPERATURE |
|-------------------------|---------------|----------|----------|-----------|---------------------|
| FL-LED 30 | A010295111122 | 95W | 220/240V | 50/60HZ | (-50°C;+55°C) |
| FL-LED 30 | A010260111122 | 60W | 220/240V | 50/60HZ | (-50°C;+55°C) |
| FL-LED 30 | A010230111122 | 30W | 220/240V | 50/60HZ | (-50°C;+55°C) |
| FL-LED 30 | A010210111122 | 10W | 220/240V | 50/60HZ | (-50°C;+55°C) |
| FL-LED 30 (DOUBLE SIDE) | A010410111122 | 2X10W | 220/240V | 50/60HZ | (-50°C;+55°C) |

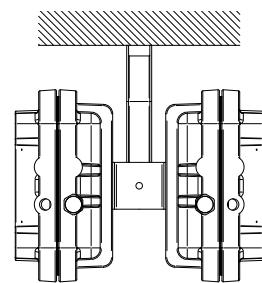
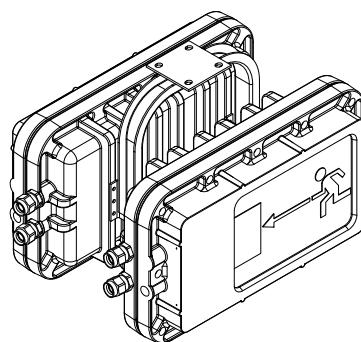
Note: 1300 lm available in emergency condition (upon request)

FL-LED 30 (double side for emergency exit application)

Pipe/pendant mounting

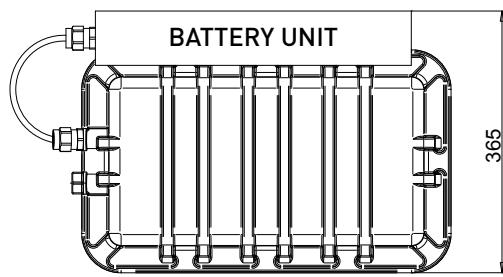


Ceiling mounting

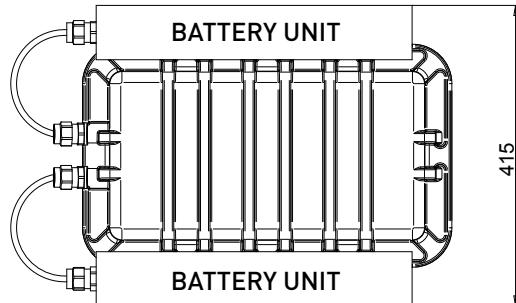


Top view of the emergency floodlight version

650lm/EMERGENCY



1300lm/EMERGENCY



LED LIGHTING

G2X LED Series - Zones 2 & 22

Luminaires G2X LED are suited for hazardous areas of industrial plants and space included in Zone 2 and 22.

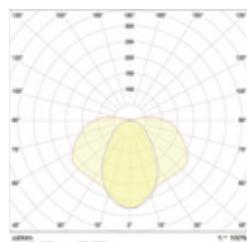


The advantages of this luminaires series:

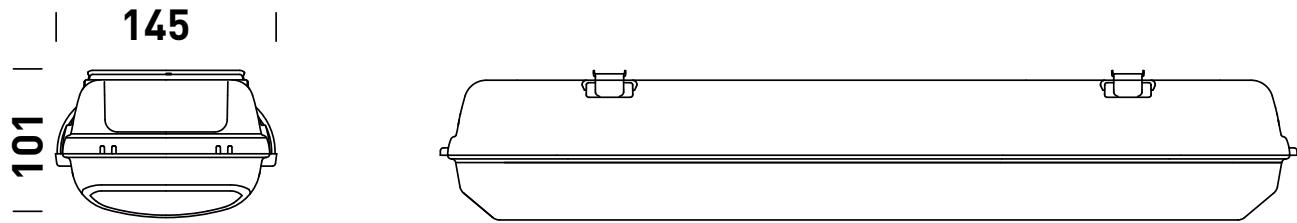
- Simple, easy and quick installation
- High resistance to corrosive industrial environment
- High luminous efficiency
- Quality ignition systems
- UV resistant.
- Easy maintenance
- A high-quality LED source with high colour rendering

TECHNICAL FEATURES

| | |
|-------------------------------------|---|
| Material | GRP + 2 gear tray holders in white lacquered steel plate Transparent diffuser in PC with UV protection |
| IP rating | IP66 |
| Ambient temperature range | From -20°C TO +40°C |
| Approvals | OBAC 15 CZ/ATEX 163X |
| Marking | II 3 G Ex nA IIC T6 Gc II 3 D Ex tc IIIC T85°C Dc IP66 |
| Standards | EN 60079-0, EN 60079-15, EN 60079-31 |
| Zones | Zone 2 , 22 |
| Gaskets | Gasket in polyurethane (to obtain IP66 rating) |
| Entries | N° 1 passing entry M20 |
| Hardware and screws | Fixing springs and closing clips in stainless steel |
| Lamps | LED lamps |
| Rated operation voltage (UE) | 230V AC/DC (normal service); 230V AC (emergency service); 110V according to execution |
| Frequency | 50-60Hz in AC |
| Accessories upon request | Polyamide ATEX cable gland M20x1,5 |
| Maximum number of terminals | 3x2,5mm ² |
| Colour | GRP housing in graphite (RAL 7035) |
| Options | Emergency kit 3h, Black GRP housing RAL9011, Yellow GRP housing RAL1003 |



Dimensions G2X LED



| CODE | DESCRIPTION | DIMENSIONS [MM] | POWER (W) | SERVICE | WEIGHT (Kg) | POWER SUPPLY |
|---------------|-------------------------|------------------|-----------|-----------------------|-------------|--------------|
| A11020021W111 | G2X LED 600 PC INOX | 665 X 145 X 101 | 22W | NORMAL | 2 | 230V AC/DC |
| A11020044W111 | G2X LED 1200 PC INOX | 1282 X 145 X 101 | 40W | NORMAL | 3,25 | |
| A11020056W111 | G2X LED 1500 PC INOX | 1578 X 145 X 101 | 45W | NORMAL | 3,6 | |
| A11020044W131 | G2X LED EB 1200 PC INOX | 1282 X 145 X 101 | 40W | NORMAL - 3H EMERGENCY | 3,45 | 230V AC |
| A11020056W131 | G2X LED EB 1500 PC INOX | 1578 X 145 X 101 | 45W | NORMAL - 3H EMERGENCY | 3,8 | |

LED LIGHTING

EVF-P LED.. Series - Zones 1, 2, 21 & 22 - End-cups in Copper free aluminium



EVF-P lighting fixtures are manufactured with an high resistance cylindrical polycarbonate lamp housing and with end cups made of corrosion resistant copper free aluminium. Polycarbonate lamp housing is a three layers-extrusion UV resistant able to grant the best protection against sun rays and related yellowing effect.

Circular shape grants the best possible "CX" factor, therefore it is less affected by wind-dusts, no flat surfaces to avoid pollution and dirty bunching.

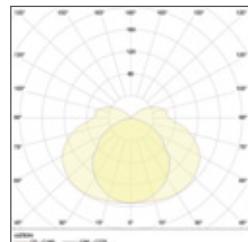
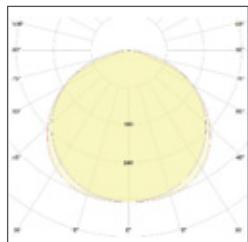
Components and design make EVF-P lighting fixtures suitable for high corrosion environments.

To increase further surface protection, upon request it is possible to apply an OFF-SHORE painting cycle suitable for marine environments.

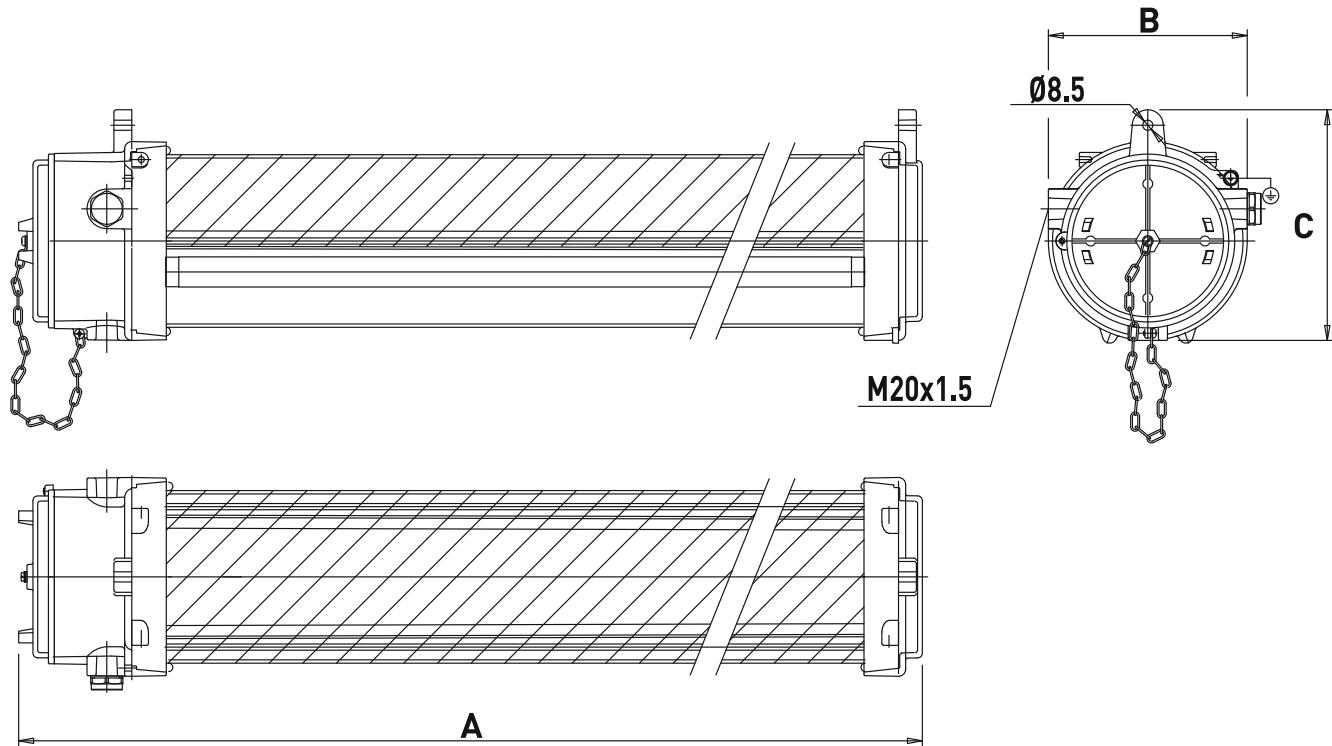
All lighting fixtures are supplied ready for LOOP IN-LOOP OUT facility with 4sqmm cable.

TECHNICAL FEATURES

| | |
|---|--|
| Material | End cups in aluminium with low content of copper/Light housing in polycarbonate |
| IP/IK rating | IP66/IK10 according to EN 62262:2002 |
| Ambient temperature range | -20°C to + 55°C (Normal service) -20°C to + 40°C (Emergency service) |
| Approvals | TÜV CY 17 ATEX 0205846 X |
| Marking | II 2 GD Ex eb mb op is IIC T4 Gb (normal service) Ex eb db mb op is IIC T4 Gb (emergency service) Ex tb IIIC T135°C Db IP66 |
| Gaskets | O-ring made of Nitrile Rubber (NBR) |
| Surface treatment | End cups painted by green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | N° 2 entries M20x1,5. One plugged-off by Ex d brass nickel chrome plated plug and relevant gasket. |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | Extended long life new LED technology with CRI > 85 |
| Ballast | Electronic |
| Rated operation voltage (UE) | 220-240Vac (normal and emergency service) 198-278Vdc (normal service) |
| Frequency | 0/50 – 60 Hz |
| Power factor | > 0,95 |
| Accessories available upon request | AISI304 Pole mounting kit/AISI304 Ceiling/Wall mounting kit/AISI304 Suspension mounting kit/3° bottom entry M20x1,5/AISI304 protection guard/Mounting kit in stainless steel AISI316 |
| Photometric light curves | 1 strip 2 strips |



Dimensions EVF-P



LED EVF-P.. Series for normal service

| TYPE | CODE | LAMP [W] | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|-----------|---------------|----------|-----------------|-----|-----|-------------|
| | | | A | B | C | |
| EVF-P 116 | A030311160011 | 16 | 764 | 176 | 194 | |
| EVF-P 216 | A030312160011 | 2 X 16 | 764 | 176 | 194 | |
| EVF-P 132 | A030311320011 | 32 | 1374 | 176 | 194 | |
| EVF-P 232 | A030312320011 | 2 X 32 | 1374 | 176 | 194 | |

LED EVF-P.. Series for 90° emergency service

| TYPE | CODE | LAMP [W] | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|--------------------|----------------|----------|-----------------|-----|-----|-------------|
| | | | A | B | C | |
| EVF-P 132 LE P 90 | A030321320111* | 32 | 1374 | 176 | 194 | |
| EVF-P 232 LE P 90 | A030322320111* | 2 X 32 | 1374 | 176 | 194 | |
| EVF-P 116 LE NP 90 | A030321161111 | 16 | 764 | 176 | 194 | |
| EVF-P 132 LE NP 90 | A030321321111* | 32 | 1374 | 176 | 194 | |

* 180° emergency version available upon request

LED LIGHTING

EVF-L.. Series - Tubular GRP led lighting



- EVF-L lighting fixtures are manufactured with a high resistance cylindrical polycarbonate lamp housing and with end cups made of corrosion resistant and high mechanical resistance GRP
- Polycarbonate lamp housing is a three layers-extrusion UV resistant able to grant the best protection against sun rays and related yellowing effect.
- Circular shape grants the best possible "CX" factor, therefore it is less affected by winddusts, no flat surfaces to avoid pollution and dirty bunching.
- Components and design make EVF-L lighting fixtures suitable for high corrosion environments.
- All lighting fixtures are supplied ready for LOOP IN-LOOP OUT facility.

TECHNICAL FEATURES

Material

- Transparent polycarbonate envelope UV protected
- White lacquered steel plate for increased reflectivity
- GRP flanges
- Stainless steel screws
- Stainless steel fastening collar

IP, IK rating

IP66/IP 69K - IK 10

Ambient temperature range

-20 °C to + 60 °C

Approval

ATEX LCIE 17 ATEX 3035 X

ATEX markings

II 2 G Ex db eb mb IIC T6 to T4 Gb (temp. class depend on electrical equipment and position)

II 2 D Ex tb IIIC T80 °C to T130 °C Db

Standards compliance IEC/EN 60079-0, 60079-7, 60079-18 and 60079-31

Gas and Dust: zones 1&2, 21 & 22

ATEX zones

PNCX connector for cable diameters 7 to 14 mm. On request:

- 1 polyamide cable gland and 1 plug M20 for cable diameters 7 to 14 mm
- 1 polyamide cable gland and 1 plug M25 for cable diameters 10 to 18 mm
- Metal cable gland for armoured or unarmoured cable
- Loop In/Loop Out
- Through wiring
- + 2 PNCX loop In/loop Out

LED photometric characteristics

Flux

2800 - 5600 lm

Color temperature

7000° K

CRI Colour Rendering Index

>80

Efficiency

98 to 100 lm/W

Electrical specifications

Voltage

220-240 Vac (normal and emergency service)/198-278 Vdc (normal service)

Frequency

0/50-60 Hz

Power factor

0.93 to 0.98

Automatic emergency version

Emergency LED lighting 90 to 180 minutes

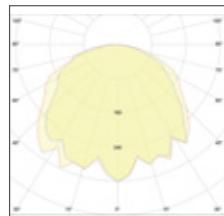
Accessories available upon request

Automatic switch-off of the light and battery when opening

Stainless steel wall mounting kit
Stainless steel ceiling mount kit

Stainless steel pole mounting kit

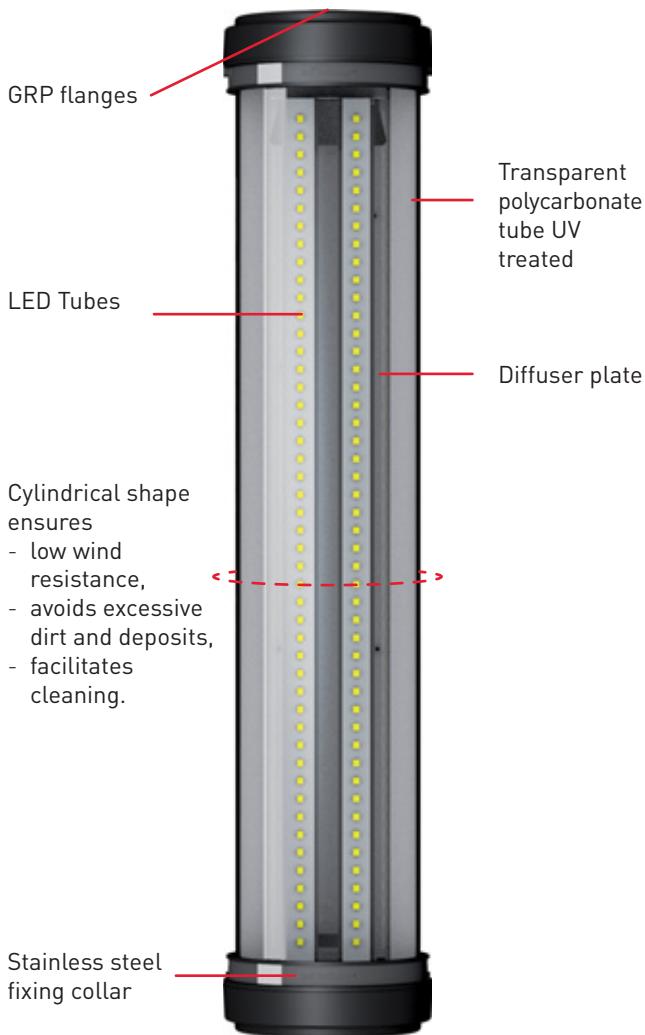
Photometric light curves



The EVF-L luminaries have a very high mechanical resistance to shocks IK10 and corrosion while being particularly bright. Thus they meet all requirements of aggressive environments (humidity, corrosion, pollution) for industrial areas at risk of explosion.

EVF-L LUMINARIES

MODULAR CONNEXION WAY



Two opening switches allow the light source and the battery to be switched off automatically when the luminary flange is open.

Through PNCX connector

- easier and quicker installation & maintenance
- easier loop in loop out, you can keep lighting throughout other lightings during maintenance operations.



**LOOP IN/LOOP OUT
1 SOCKET + 1 PLUG
PNCX VERSION**

With cable gland

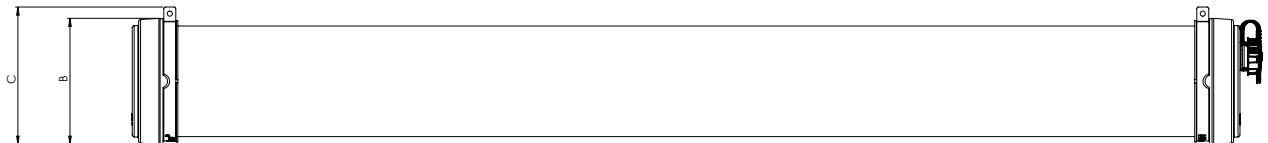
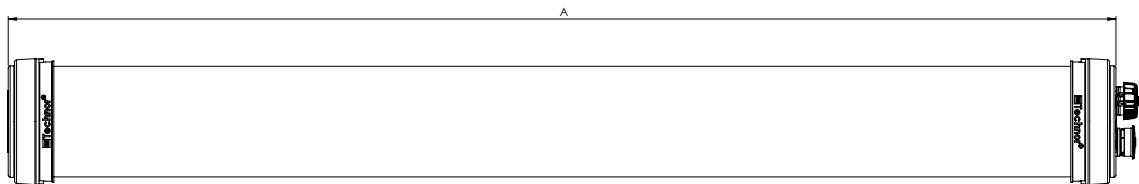
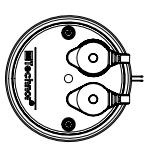
- Metric threads M20 or M25
- Loop in loop out facility
- Available for armoured cables or unarmoured.



**LOOP IN/LOOP OUT
POLY GLAND VERSION**



**ARMoured CABLE GLAND
VERSION**

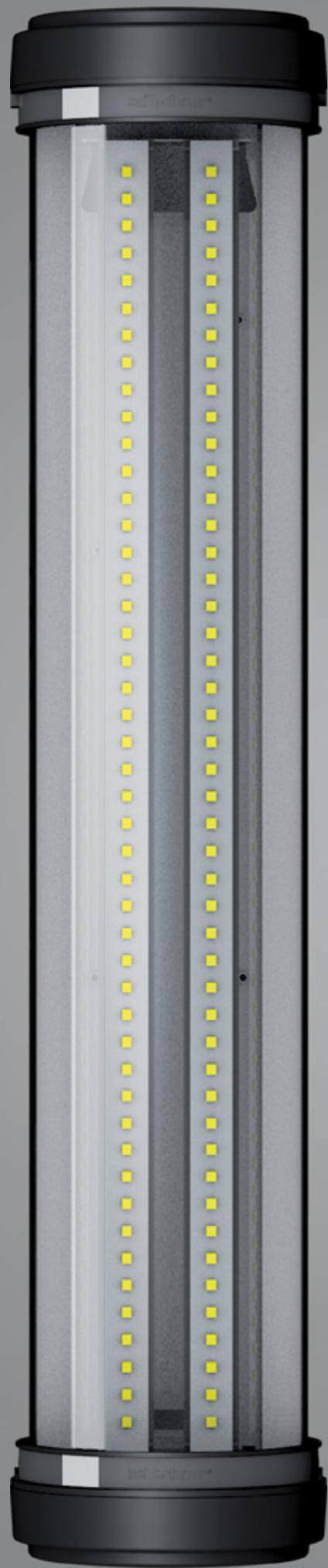


EVF-L.. Series for normal service

| TYPE | CODE | POWER [W] | PROTECTION MODE | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|-----------|---------------|-----------|-----------------|-----------------|-----|-----|-------------|
| | | | | A | B | C | |
| EVF-L 116 | A120301200040 | 1X16 | Ex-demb | 745 | 153 | 166 | 4.5 |
| EVF-L 216 | A120302200040 | 2X16 | Ex-demb | 745 | 153 | 166 | 4.5 |
| EVF-L 132 | A120301400040 | 1X32 | Ex-demb | 1342 | 153 | 166 | 6.5 |
| EVF-L 232 | A120302400040 | 2X32 | Ex-demb | 1342 | 153 | 166 | 6.5 |

EVF-L.. Series for 90° emergency service

| TYPE | CODE | POWER [W] | PROTECTION MODE | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|--------------------|---------------|-----------|-----------------|-----------------|-----|-----|-------------|
| | | | | A | B | C | |
| EVF-L 132 LE P 90 | A120401400540 | 1X32 | Ex-demb | 1342 | 153 | 166 | 9 |
| EVF-L 232 LE P 90 | A120402400540 | 2X32 | Ex-demb | 1342 | 153 | 166 | 9 |
| EVF-L 116 LE NP 90 | A120401210540 | 1X16 | Ex-demb | 745 | 153 | 166 | 7 |
| EVF-L 132 LE NP 90 | A120401410540 | 1X32 | Ex-demb | 1342 | 153 | 166 | 9 |



LED

RMS-560 LED.. Series - Zones 1, 2, 21 & 22 - Stainless steel AISI 304



RMS.. series lighting fixtures are ideally suited for ON and OFF-SHORE applications and all kinds of industries where there is an high level of corrosion. Both body and glass frame are made of stainless steel AISI304 and manufactured from a single sheet of steel with no invasive mounting holes, to minimize the risk of water ingress through the housing. Out of holes for power supply cable, whatever protected by a suitable cable gland (available upon request), there are no passing through holes between inside and outside of luminaire. Therefore during the time there is no risk of IP rating decrease as it would be possible where, for fixing devices, there are through holes and relevant gaskets. Design has been studied to allow operator working with free hands and no need to support any part of lighting fixture. One person can take care of start-up or maintenance without any aid and assistance. Due to inorganic materials like stainless steel and glass, RMS.. series lighting fixtures are 95% recyclable; only components and insulation of single core wires need some more care.

TECHNICAL FEATURES

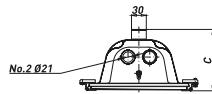
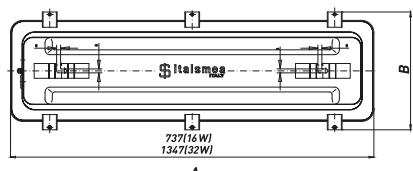
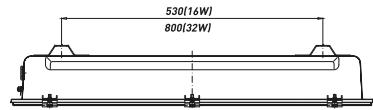
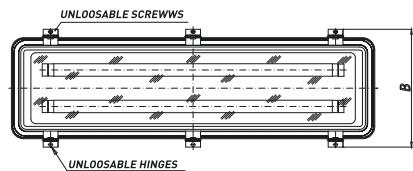
| | |
|---|---|
| Material | AISI304 stainless steel, 0,8mm thickness and transparent part in tempered glass (AISI 316 L version available upon request) |
| IP rating | IP65 |
| Ambient temperature range | -20°C to + 50°C (Normal & Standard Emergency models) -20°C to + 40°C (Emergency models with charging status pilot light) |
| Approvals | TÜV CY 17 ATEX 0205847 X |
| Marking | II 2 GD Ex eb db mb op is IIC T4 Gb Ex tb IIIC T135°C Db IP65 |
| Gaskets | Special cross-section tightness gasket, silicon rubber made (closed cell), located in housing channel between body and window frame. |
| Entries | Body complete of two 21mm Ø through holes (on one side) for cable entry, one complete of metallic plug with M20 locknut and gasket and the other one with temporary plastic plug to prevent dust ingress. |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | Extended long life new LED technology with CRI > 85 |
| Ballast | Electronic |
| Rated operation voltage (UE) | 220-240Vac (normal and emergency service) 198-278Vdc (normal service) |
| Frequency | 50-60 Hz |
| Power factor | > 0,95 |
| Accessories available upon request | Pole mounting kit/Ceiling mounting kit/Suspension mounting kit/Wall mounting kit 3°- 4° through holes opposite side |

Dimensions RMS-560

RMS-560

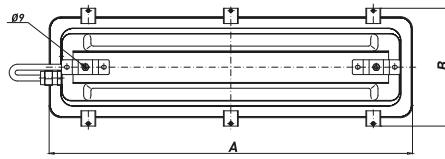
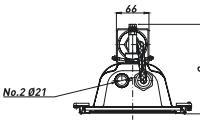
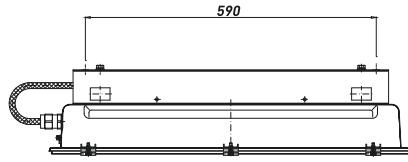
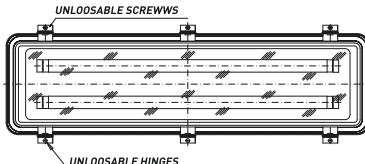
(16W)

(32W)



RMS-560 EM

(16W)



LED RMS-560.. Series for normal service

| TYPE | CODE | LAMP [W] | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|-----------------|---------------|----------|-----------------|-----|-----|-------------|
| | | | A | B | C | |
| RMS-560 116 | A020321160008 | 16 | 737 | 239 | 123 | |
| RMS-560 216 | A020322160008 | 2 X 16 | 737 | 239 | 123 | |
| RMS-560 132 | A020321320008 | 32 | 1347 | 239 | 123 | |
| RMS-560 232 | A020322320008 | 2 X 32 | 1347 | 239 | 123 | |
| RMS-560 116/MS* | A020321160108 | 16 | 737 | 239 | 123 | |
| RMS-560 216/MS* | A020322160108 | 2 X 16 | 737 | 239 | 123 | |
| RMS-560 132/MS* | A020321320108 | 32 | 1347 | 239 | 123 | |
| RMS-560 232/MS* | A020322320108 | 2 X 32 | 1347 | 239 | 123 | |

* With micro-switch

LED RMS-560 Series for 90° emergency service

| TYPE | CODE | LAMP [W] | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|----------------------|-----------------|----------|-----------------|-----|-----|-------------|
| | | | A | B | C | |
| RMS-560 116 LE P 90 | A020421161118* | 16 | 737 | 239 | 183 | |
| RMS-560 216 LE P 90 | A020422161118* | 2 X 16 | 737 | 239 | 183 | |
| RMS-560 132 LE P 90 | A020421321118** | 32 | 1347 | 239 | 123 | |
| RMS-560 232 LE P 90 | A020422321118** | 2 X 32 | 1347 | 239 | 123 | |
| RMS-560 116 LE NP 90 | A020421162118* | 16 | 737 | 239 | 123 | |
| RMS-560 132 LE NP 90 | A020421322118** | 32 | 737 | 239 | 123 | |

* External battery unit protected by stainless steel cover

**180° emergency version with external battery unit available upon request

FLOODLIGHTS

FL.. Series - Copper free aluminium or Stainless steel AISI 316 L



Due to the body made of aluminium with low content of copper and tempered glass, FL.. Series floodlights, provided in a wide range of wattage and power, are ideally suited for ON and OFF-SHORE applications and all kinds of industries where there is a high level of corrosion, mainly for lighting wide areas.

To increase further surface protection, upon request it is possible to apply an OFF-SHORE painting cycle suitable for marine environments.

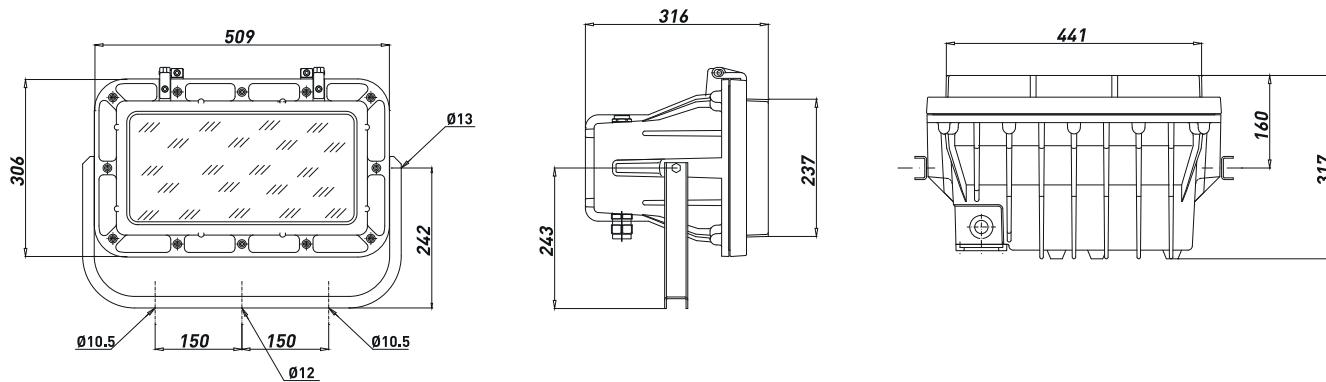
Standard floodlights are manufactured with symmetrical narrow beam reflector and symmetrical wide beam reflector upon request (ordering codes upon request).

For ease of installation and maintenance, the luminaire features an integral Ex e connection box and AISI304 stainless steel universal mounting bracket.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Aluminium with low content of copper Stainless steel AISI 316 L (ordering codes upon request) |
| IP rating | IP66 |
| Ambient temperature range | -50°C to +55°C ATEX/-20°C to +60°C IECEx |
| Approvals | Certified 00ATEX0023X (standard)/TR CU (marking upon request, ordering code to be required) IECEx INE 16.0038X |
| Marking | II 2 GD Ex de IIB+H2 T(**) Gb Ex tb IIIC T(**) Db IP66 ** T4/T135°C, T3/T200°C, T2/T205°-240°C |
| Gaskets | Gasket made of Nitrile Rubber (NBR) on flat joint |
| Surface treatment | Painted by green colour polyurethane painting cycle RAL6003 (other colour available upon request)/Internal anticondensate painting/AISI 316 L version unpainted |
| Entries | Nº 2 entries M25x1,5 |
| Hardware and screws | AISI 316 L Stainless steel screws and AISI304 Stainless steel adjustable bracket |
| Lamps | Included |
| Rated operation voltage (UE) | See table |
| Frequency | See table |
| Power factor | > 0,95 |
| Accessories | Nº 1 brass nickel chrome plated plug + Nº 1 brass nickel chrome plated cable gland PNA type c/w set of inner seals |
| Accessories available upon request | Protection guard (not to be sold separately unless as a spare part) Special brackets for pole mounting |
| Options upon request | <p>HOT INSTANT RESTRIKE solution available via twin-arc lamp assuring immediate hot instant restrike ignition with flux that will reach 80% of the nominal lamp flux in about 3 minutes. HOT INSTANT RESTRIKE solution also available via INSTANT RESTRIKE BALLAST, assuring immediate hot instant restrike ignition with 80% of the lamp nominal flux in 7 seconds. (for high pressure sodium version)</p> |
| Photometric light curves | <p>FL-SA IM HG</p> <p>FL-SA IM HG wide beam</p> |

Dimensions FL



(FL..) Floodlights ATEX

| TYPE | CODE | LAMP [W] | LAMP. TYPE | WEIGHT [Kg] | VOLTAGE | FREQUENCY | AMBIENT TEMPERATURE | T.CLASS |
|---------|---------------|----------|----------------|-------------|---------|-----------|---------------------|---------|
| FL-15SA | A011115111122 | 150 | HPS | 22.70 | 230V* | 50HZ*** | [-50 °C; +55 °C] | T3 |
| FL-25SA | A011125111122 | 250 | HPS | 23.80 | 230V* | 50HZ*** | [-50 °C; +55 °C] | T3 |
| FL-40SA | A011140111122 | 400 | HPS | 25.00 | 230V* | 50HZ*** | [-50 °C; +55 °C] | T3 |
| FL-25IM | A013125111122 | 250 | METAL HALIDE | 23.80 | 230V* | 50HZ*** | [-50 °C; +55 °C] | T3 |
| FL-40IM | A013140111122 | 400 | METAL HALIDE | 22.80 | 230V* | 50HZ*** | [-50 °C; +55 °C] | T3 |
| FL-25HG | A012125111122 | 250 | MERCURY VAPOUR | 23.70 | 230V* | 50HZ*** | [-50 °C; +55 °C] | T3 |
| FL-40HG | A012140111122 | 400 | MERCURY VAPOUR | 20.90 | 230V* | 50HZ*** | [-50 °C; +55 °C] | T3 |
| FL-14HA | A014114111722 | 2X70 | HALOGEN | 20 | 24VDC | - | [-50 °C; +55 °C] | T3 |
| FL-14HA | A014114111822 | 2X70 | HALOGEN | 20 | 48VDC | - | [-50 °C; +55 °C] | T3 |
| FL-50HA | A014150111922 | 500 | HALOGEN | 19 | 230V** | 50/60HZ | [-50 °C; +55 °C] | T3 |

* 220 V and 240 V versions available upon request

** 220 V, 240 V (marking upon request)

*** 60 Hz available upon request

Mercury vapour light bulb is not included (banned by the European Community)

(FL..) Floodlights IEC Ex

| TYPE | CODE | LAMP [W] | LAMP TYPE | WEIGHT [Kg] | VOLTAGE | FREQUENCY | AMBIENT TEMPERATURE | T. CLASS |
|---------|---------------|----------|----------------|-------------|---------|-----------|---------------------|----------|
| FL-15SA | A011115111123 | 150 | HPS | 22,7 | 230V* | 50HZ*** | [-20 °C; +50 °C] | T3 |
| FL-25SA | A011125111123 | 250 | HPS | 23,8 | 230V* | 50HZ*** | [-20 °C; +50 °C] | T3**** |
| FL-40SA | A011140111123 | 400 | HPS | 25 | 230V* | 50HZ*** | [-20 °C; +50 °C] | T3**** |
| FL-25IM | A013125111123 | 250 | METAL HALIDE | 23,8 | 230V* | 50HZ*** | [-20 °C; +50 °C] | T3**** |
| FL-40IM | A013140111123 | 400 | METAL HALIDE | 22,8 | 230V* | 50HZ*** | [-20 °C; +50 °C] | T3**** |
| FL-25HG | A012125111123 | 250 | MERCURY VAPOUR | 23,7 | 230V* | 50HZ*** | [-20 °C; +50 °C] | T3**** |
| FL-40HG | A012140111123 | 400 | MERCURY VAPOUR | 20,9 | 230V* | 50HZ*** | [-20 °C; +50 °C] | T3**** |
| FL-14HA | A014114111728 | 2X70 | HALOGEN | 20 | 24VDC | - | [-20 °C; +60 °C] | T4 |
| FL-14HA | A014114111828 | 2X70 | HALOGEN | 20 | 48VDC | - | [-20 °C; +60 °C] | T4 |
| FL-50HA | A014150111927 | 500 | HALOGEN | 19 | 230V** | 50/60HZ | [-20 °C; +60 °C] | T2 |

* 220V and 240V version available upon request

** 220V, 240V (marking upon request)

*** 60 Hz available upon request

**** in case of maximum ambient temperature reaches +55°C, temperature class changes into T2/205°C (ordering code to be required)

in case of maximum ambient temperature reaches +60°C, temperature class changes into T2/210°C (ordering code to be required)

Below -20°C mercury vapour and metal halide floodlight can be used, providing they are switched on 24 hours a day.

Mercury vapour light bulb is not included (banned by the European Community)

LAMPS/SPARE PARTS

Lighting section

SPARES & ACCESSORIES

| PRODUCT NAME | SHAPE | POWER [W] | CAP | VOLTAGE | FLUX [lm] | CODE | WHERE IT IS USED |
|-------------------------------------|---|-----------|-----|-------------|-----------|---------------|---|
| FLUORESCENT COMPACT |  | 45 | E27 | 230 VAC | 3000 | A500400087000 | EVDE-4/FC 45/EVCC-4/FC 45/EVA-4/FC 45 |
| HALOGEN BULB |  | 42 | E27 | 230 VAC | 630 | A500400083000 | EVDE-1/HA 42/EVDE-2/HA 42/EVCC-1/HA 42/EVCC-2/HA 42/EVA-1/HA 42/EVA-2/HA 42 |
| | | 53 | E27 | 230 VAC | 850 | A500400084000 | EVCC-PR3/HA 53 |
| | | 70 | E27 | 230 VAC | 1200 | A500400085000 | EVDE-2/HA 70 |
| | | 105 | E27 | 230 VAC | 1980 | A500400086000 | EVDE-2/HA 105/EVCC-2/HA 105/EVA-2/HA 105 |
| | | 140 | E27 | 230 VAC | 2840 | A500400128000 | EVDE-4/HA 140/EVCC-4/HA 140/EVA-4/HA 140 |
| HIGH PRESSURE SODIUM BULB + IGNITER |  | 70 | E27 | 220/240 VAC | 5900 | A500400044000 | EVDE-2/NA-B 70/EVCC-2/NA-B 70/EVA-2/NA-B 70 |
| HIGH PRESSURE SODIUM BULB |  | 50 | E27 | 220/240 VAC | | A500400043000 | EVDE-2/NA-B 50/EVCC-2/NA-B 50/EVCC-3/NA-B 50/EVA-2/NA-B 50/EVA-3/NA-B 50 |
| | | 70 | E27 | 220/240 VAC | 5900 | A500400064000 | EVDE-3/NA-B 70/EVCC-3/NA-B 70/EVA-3/NA-B 70 |
| | | 100 | E40 | 220/240 VAC | 10000 | A500400062000 | EVDE-4/NA-B 100/EVCC-4/NA-B 100/EVA-4/NA-B 100 |
| | | 150 | E40 | 220/240 VAC | 16100 | A500400045000 | EVDE-4/NA-B 150/EVCC-4/NA-B 150/EVA-4/NA-B 150 |
| | | 250 | E40 | 220/240 VAC | 30900 | A500400046000 | EVDE-4/NA-B 250/EVDE-5/NA-B 250 |
| | | 400 | E40 | 220/240 VAC | 55400 | A500400047000 | EVDE-5/NA-B 400 |
| METAL HALIDE BULB |  | 70 | E27 | 220/240 VAC | 7230 | A500500003000 | EVDE-3/IM-B 70/EVCC-3/IM-B 70/EVA-3/IM-B 70 |
| | | 100 | E40 | 220/240 VAC | 9400 | A500500004000 | EVDE-4/IM-B 100/EVCC-4/IM-B 100/EVA-4/IM-B 100 |
| | | 150 | E40 | 220/240 VAC | 15100 | A500500005000 | EVDE-4/IM-B 150/EVCC-4/IM-B 150/EVA-4/IM-B 150 |
| | | 250 | E40 | 220/240 VAC | 18000 | A500400030000 | EVDE-4/IM-B 250/EVDE-5/IM-B 250 |
| | | 400 | E40 | 220/240 VAC | 32500 | A500400032000 | EVDE-5/IM-B 400 |
| LED |  | 7 | E27 | 230 VAC | 430 | A500600121000 | EVCC-PR3/LED 7 |
| HIGH PRESSURE SODIUM TUBE |  | 150 | E40 | 230 VAC | 18000 | A500400068000 | FL-15SA |
| | | 250 | E40 | 230 VAC | 33000 | A500400069000 | FL-25SA |
| | | 400 | E40 | 230 VAC | 55800 | A500400070000 | FL-40SA |

| PRODUCT NAME | SHAPE | POWER [W] | CAP | VOLTAGE | FLUX [lm] | CODE | WHERE IT IS USED |
|-------------------|---|-----------|-----|-------------|-----------|---------------|---|
| METAL HALIDE TUBE |  | 250 | E40 | 230 VAC | 20 500 | A500400053000 | FL-25IM |
| | | 400 | E40 | 230 VAC | 41000 | A500400054000 | FL-40IM |
| HALOGEN |  | 70 | H3 | 24 VDC | 1750 | A500400061000 | FL-14HA |
| HALOGEN TUBE |  | 500 | E40 | 230 VAC | 10250 | A500400059000 | FL-50HA |
| FLUORESCENT TUBE |  | 18 | G13 | 220/240 VAC | 1300 | A500400112000 | EVF-P 118/EVF-P 218/RMS-540/RMS-550/RMS-560 |
| | | 36 | G13 | 220/240 VAC | 3250 | A500400113000 | EVF-P 236/RMS-540/RMS-550/RMS-560 |
| | | 58 | G13 | 220/240 VAC | 5240 | A500400111000 | EVF-P 258 |

COMPRESSOR
RUNNING
РАБОТАЮЩИЙ
КОМПРЕССОР



NITROGEN
RUN
РАБОТАЮЩИЙ
АЗОТ



PROCESS
RUN
РАБОТАЮЩИЙ
ПРОЦЕСС



COMPRESSOR
READY TO START
КОМПРЕССОР
ГОТОВ ДЛЯ ЗАПУСКА

COMMON
ALARMS
ОБЩИЕ
ТРЕВОГИ

COMMON
SHUTDOWN
ОБЩИЙ
ОСТАНОВ



COMPRESSOR
START
ЗАПУСК
КОМПРЕССОРА

COMPRESSOR
STOP
ОСТАНОВ
КОМПРЕССОРА

LOAD STEP
DECREASE
СНИЖЕНИЕ ЭТАПА
НАГРУЖЕНИЯ



ALARMS
RESET
СБРОС
ТРЕВОГ

LAMP
TEST
ИСПЫТАНИЕ
ЛАМПИ



CONTROL STATIONS



P.84

Increased safety

- EFXE Series -
Stainless steel AISI 316 L..... 84
- EFXE Series - Copper free
aluminium low thickness..... 86
- EFE Series - GRP 88
- Spares & Accessories 90

P.94

Flameproof

- CP../EFDCN.. Series -
Copper free aluminium..... 94
- CP../EFSRC.. Series -
Copper free aluminium 98
- EPKZM Series - Circuit breaker enclosure -
Copper free aluminium 102
- Spares & Accessories 104

INCREASED SAFETY

EFXE Series - Stainless steel AISI 316 L



Push button stations EFXE Series, made of stainless steel AISI 316 L, are manufactured by using enclosures AQ../AR.. and SB Series.

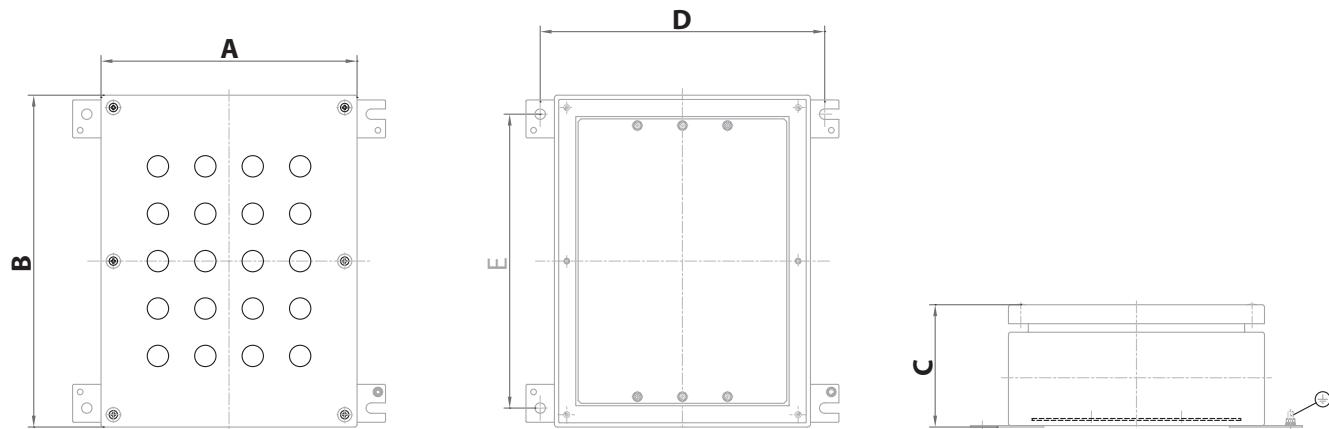
They are designed to meet the requirements for use ON and OFF-SHORE, in petrochemical and marine applications and for any other industry where an explosive atmosphere may be present.

They can be equipped with following Ex de certified components:

- Standard and emergency push buttons,
- Rotating switches,
- Signalling lamps,
- Measurement instruments.

TECHNICAL FEATURES

| | |
|---|--|
| Material | Stainless steel AISI-316L |
| IP rating | IP65/IP66 |
| Ambient temperature range | -50°C to +60°C (ATEX) -50°C to +95°C (IECEx) |
| Approvals | IMQ 08 ATEX 028X IECEx IMQ 15.0002X TR CU |
| Marking | II 2 GD Ex de IIC T(**) Gb/Ex mb IIC T(**) Gb Ex tb IIIC T(**) Db IP65/66 ** T6/T85°C, T5/T100°C, T4/T135°C |
| Surface treatment | Acid treatment |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory |
| Accessories available upon request | Electropolish treatment Side gland plates Hinges Drain/breather valve Taffolyte/Stainless steel certificate label Internal mounting plate Locking facility Passing through earth bolt |

Dimensions EFXE**EFXE Series - Stainless steel push button stations**

| TYPE | DIMENSIONS [mm] | | | | | WEIGHT [Kg] |
|-----------|-----------------|-----|-----|-----|-----|-------------|
| | A | B | C | D | E | |
| EFXE-2727 | 270 | 270 | 130 | 300 | 230 | 4,5 |
| EFXE-3535 | 350 | 350 | 160 | 380 | 310 | 5,6 |
| EFXE-1320 | 137 | 200 | 130 | 170 | - | 4 |
| EFXE-2027 | 200 | 270 | 130 | 230 | 230 | 7 |
| EFXE-2735 | 270 | 350 | 130 | 300 | 310 | 9,5 |
| EFXE-3550 | 350 | 500 | 160 | 380 | 460 | 13 |
| EFXE-5050 | 500 | 500 | 160 | | 460 | 14,5 |

* For complete push button stations is necessary to ask to the Sales Office.

Maximum number of entries on sides and cover

| TYPE | EFXE-2727 | | EFXE-3535 | | EFXE-1320 | | EFXE-2027 | | EFXE-2735 | | EFXE-3550 | | EFXE-5050 | |
|---------------|-----------|----|-----------|----|-----------|----|-----------|----|-----------|----|-----------|----|-----------|----|
| | A | B | A | B | A | B | A | B | A | B | A | B | A | B |
| M20/1/2" | 12 | 12 | 24 | 24 | 6 | 10 | 10 | 12 | 12 | 16 | 24 | 36 | 36 | 36 |
| M25/3/4" | 10 | 10 | 14 | 14 | 4 | 8 | 8 | 10 | 10 | 14 | 14 | 20 | 20 | 20 |
| M32/1" | 4 | 4 | 12 | 12 | 2 | 3 | 3 | 4 | 4 | 6 | 12 | 18 | 18 | 18 |
| M40/1" 1/4 | 4 | 4 | 5 | 5 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 7 | 7 | 7 |
| M50/1" 1/2 | 3 | 3 | 4 | 4 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 6 | 6 | 6 |
| M63/2" | 3 | 3 | 3 | 3 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 5 | 5 | 5 |
| M75/2" 1/2 | - | - | 3 | 3 | - | - | - | - | - | - | 3 | 4 | 4 | 2 |
| M80/3" | - | - | 2 | 2 | - | - | - | - | - | - | 4 | 4 | 4 | 4 |
| COVER ENTRIES | 16 | | 25 | | 6 | | 12 | | 20 | | 40 | | 64 | |

INCREASED SAFETY

EFXE Series - Copper free aluminium low thickness



Push button stations EFXE Series, made of aluminium with low content of copper, are manufactured by using aluminium enclosures AQ../AR.. Series.

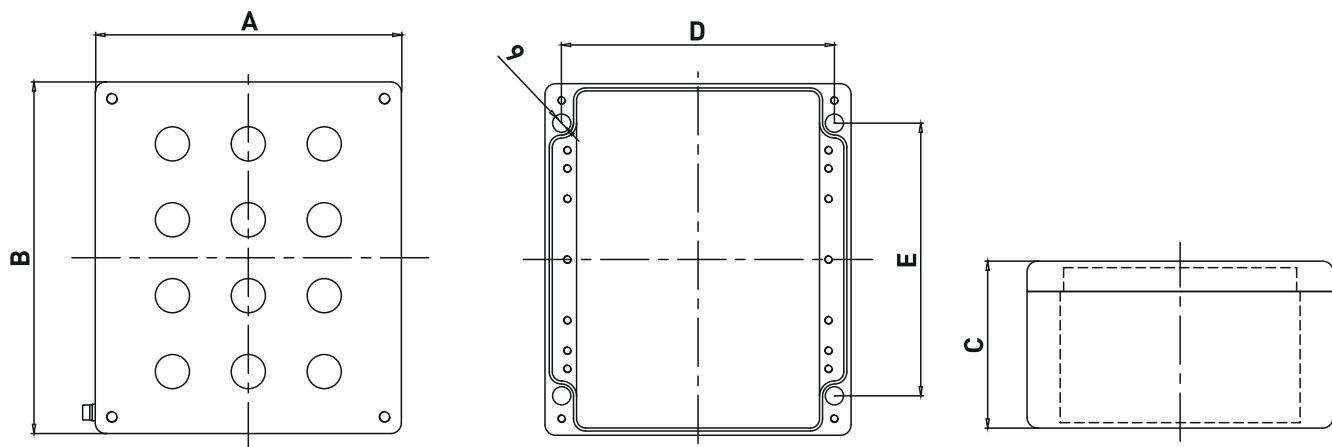
They are designed to meet the requirements for use ON and OFF-SHORE, in petrochemical and marine applications and for any other industry where an explosive atmosphere may be present.

They can be equipped with following Ex de certified components:

- Standard and emergency push buttons;
- Rotating switches;
- Signalling lamps;
- Measurement instruments.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Aluminium with low content of copper |
| IP rating | IP65/IP66 |
| Ambient temperature range | -50°C to +60°C (ATEX) -50°C to +95°C (IECEx) |
| Approvals | IMQ 08 ATEX 028X IECEx IMQ 15.0002X TR CU |
| Marking | II 2 GD Ex de IIC T(**) Gb/Ex mb IIC T(**) Gb Ex tb IIIC T(**) Db IP65/66 ** T6/T85°C, T5/T100°C, T4/T135°C |
| Surface treatment | Standard with polyester powder coating RAL 7001 |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Hinges Drain/breather valve Traffolyte/Stainless steel certificate label Internal mounting plate Passing through earth bolt |

Dimensions EFXE**EFXE Series - Aluminium push button stations**

| TYPE | DIMENSIONS [mm] | | | | | WEIGHT [Kg] |
|-----------|-----------------|-----|-----|-----|-----|-------------|
| | A | B | C | E | F | |
| EFXE-0818 | 80 | 175 | 80 | 52 | 162 | |
| EFXE-0825 | 80 | 250 | 80 | 51 | 237 | |
| EFXE-1015 | 100 | 150 | 80 | 64 | 134 | |
| EFXE-1010 | 100 | 100 | 81 | 66 | 86 | 0,62 |
| EFXE-1212 | 120 | 122 | 81 | 83 | 106 | 0,94 |
| EFXE-1222 | 120 | 220 | 90 | 82 | 204 | 1,43 |
| EFXE-1616 | 160 | 160 | 90 | 110 | 140 | 1,5 |
| EFXE-1624 | 160 | 240 | 100 | 123 | 225 | |
| EFXE-1636 | 160 | 360 | 91 | 110 | 340 | |
| EFXE-2023 | 202 | 232 | 110 | 180 | 180 | 2,44 |
| EFXE-2328 | 230 | 280 | 110 | 181 | 261 | 2,99 |
| EFXE-2333 | 231 | 331 | 120 | 177 | 311 | |

For complete push button stations is necessary to ask to the Sales Office.

INCREASED SAFETY

EFE Series - GRP



Push button stations EFE Series, made of GRP, are manufactured by using enclosure AQ../AR.. Series.

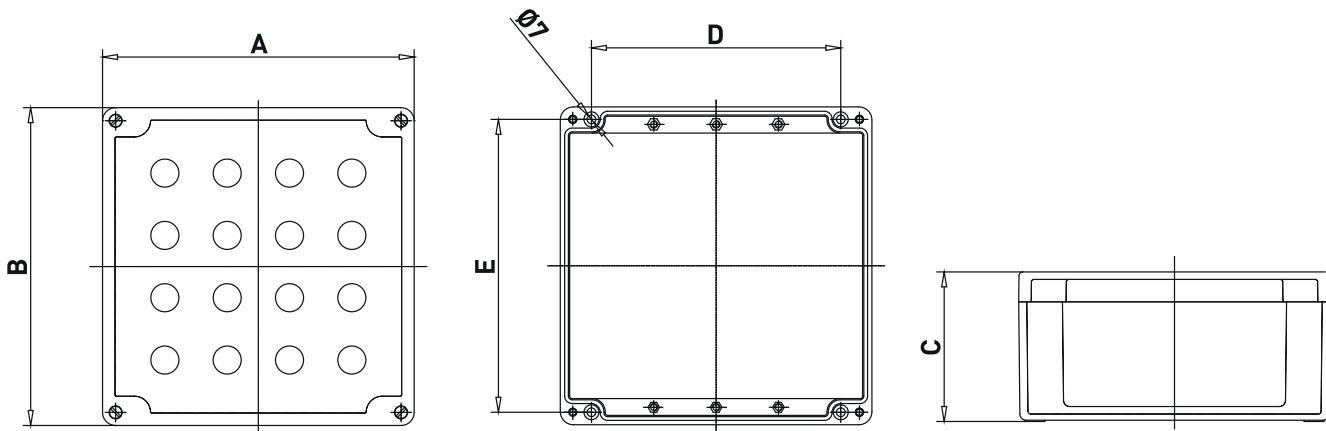
They are designed to meet the requirements for use ON and OFF-SHORE, in petrochemical and marine applications and for any other industry where an explosive atmosphere may be present.

They can be equipped with following Ex de certified components:

- Standard and emergency push buttons;
- Rotating switches;
- Signalling lamps;
- Measurement instruments.

TECHNICAL FEATURES

| | |
|---|--|
| Material | GRP (Glassfiber reinforced polyester) |
| IP rating | IP65/IP66 |
| Ambient temperature range | -50°C to +60°C (ATEX) -50°C to +95°C (IECEx) |
| Approvals | IMQ 08 ATEX 028X IECEx IMQ 15.0002X TR CU |
| Marking | II 2 GD Ex de IIC T(**) Gb/Ex mb IIC T(**) Gb Ex tb IIIC T(**) Db IP65/66 ** T6/T85°C, T5/T100°C, T4/T135°C |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Hinges Drain/breather valve Traffolyte/Stainless steel certificate label Internal mounting plate Earth continuity plates Passing through earth bolt |

Dimensions EFE**EFE Series - GRP push button stations**

| TYPE | DIMENSIONS [mm] | | | | | WEIGHT [Kg] |
|----------|-----------------|-----|-----|-----|-----|-------------|
| | A | B | C | D | E | |
| EFE-1212 | 120 | 122 | 90 | 82 | 106 | 0.75 |
| EFE-1222 | 120 | 220 | 90 | 82 | 204 | 1,06 |
| EFE-1616 | 160 | 160 | 90 | 110 | 140 | 1,29 |
| EFE-1626 | 160 | 260 | 90 | 110 | 240 | 1.71 |
| EFE-1636 | 160 | 360 | 90 | 110 | 340 | 2.15 |
| EFE-2526 | 250 | 255 | 120 | 200 | 235 | 2.65 |
| EFE-2540 | 250 | 400 | 120 | 200 | 380 | 3,65 |
| EFE-2560 | 250 | 600 | 120 | 200 | 580 | 5,235 |
| EFE-4140 | 405 | 400 | 120 | 355 | 380 | 5.58 |

* For complete push button stations is necessary to ask to the Sales Office.

Maximum number of entries on sides and cover

| TYPE | M20/1/2" | | M25/3/4" | | M32/1" | | M40/1" 1/4 | | M50/1" 1/2 | | M63/2" | | COVER ENTRIES |
|----------|----------|----|----------|----|--------|----|------------|---|------------|---|--------|---|------------------|
| | A | B | A | B | A | B | A | B | A | B | A | B | |
| EFE-1212 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | - | - | - | - | 2 |
| EFE-1222 | 2 | 5 | 1 | 4 | 1 | 3 | 1 | 3 | - | - | - | - | 6 |
| EFE-1616 | 3 | 3 | 2 | 3 | 1 | 2 | 1 | 1 | - | - | - | - | 4 |
| EFE-1626 | 3 | 5 | 2 | 5 | 1 | 4 | 1 | 3 | - | 3 | - | - | 8 |
| EFE-1636 | 3 | 8 | 2 | 7 | 1 | 6 | 1 | 5 | - | 4 | - | - | 10 |
| EFE-2526 | 8 | 10 | 8 | 10 | 3 | 7 | 3 | 4 | 2 | 3 | 2 | 2 | 16 |
| EFE-2540 | 8 | 18 | 8 | 16 | 3 | 5 | 3 | 5 | 3 | 5 | 2 | 4 | 24 |
| EFE-2560 | 8 | 25 | 8 | 24 | 3 | 10 | 3 | 8 | 2 | 6 | 2 | 6 | 40 |
| EFE-4140 | 16 | 18 | 6 | 14 | 5 | 6 | 5 | 5 | 4 | 5 | 3 | 6 | 42 |

INCREASED SAFETY

The Harmatex components range features large push button selection, with a choice of momentary or push-push actuation modes; pilot lamps and selector switches, with plastic or metal bezel.

Harmatex range offers unrivalled flexibility with a modular design accommodating up to 6 contacts per operator head.

SPARES & ACCESSORIES

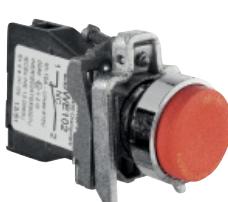
| | |
|----------------------------------|--|
| Material | Metal and plastic |
| IP rating | IP65/IP66 |
| Ambient temperature range | -20°C TO 65°C -20°C TO 75°C |
| Approvals | Certified 02ATEX9007U (contact blocks) Certified 04ATEX9003U (pilot lamps) |
| Marking | IECEx INE 13.0063U II 2 GD Ex d e IIC Gb (contact blocks) Ex e mb IIC Gb (pilot lamps) Ex tb IIIC Db |

Flush push buttons

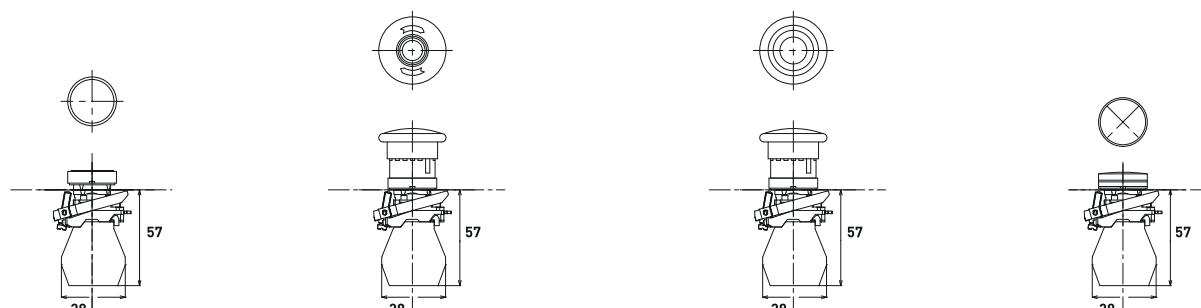
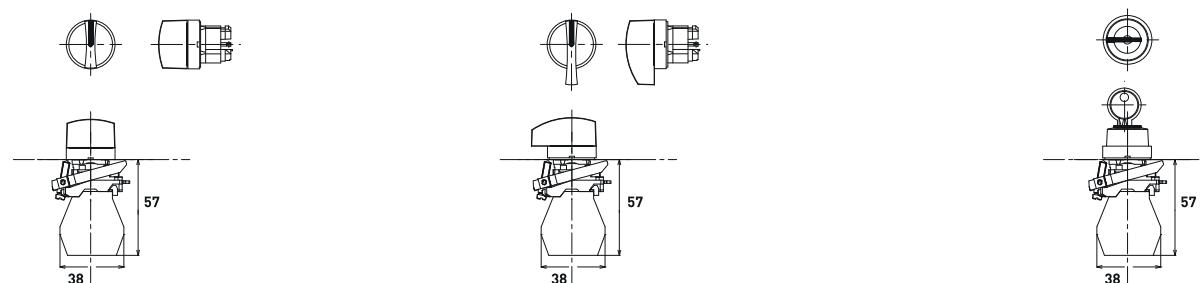


| CODE | TYPE | BEZEL | COLOUR | CONTACT |
|---------------|----------------------------------|-------|--------|---------|
| B1301A0009000 | XBW4BA11 - MOMENTARY PUSH BUTTON | METAL | WHITE | 1NO |
| B1301A0010000 | XBW4BA21 - MOMENTARY PUSH BUTTON | METAL | BLACK | 1NO |
| B1301A0015000 | XBW4BA22 - MOMENTARY PUSH BUTTON | METAL | BLACK | 1NC |
| B1301A0011000 | XBW4BA31 - MOMENTARY PUSH BUTTON | METAL | GREEN | 1NO |
| B1301A0016000 | XBW4BA41 - MOMENTARY PUSH BUTTON | METAL | RED | 1NO |
| B1301A0012000 | XBW4BA42 - MOMENTARY PUSH BUTTON | METAL | RED | 1NC |
| B1301A0013000 | XBW4BA51 - MOMENTARY PUSH BUTTON | METAL | YELLOW | 1NO |
| B1301A0014000 | XBW4BA61 - MOMENTARY PUSH BUTTON | METAL | BLUE | 1NO |

Projecting push buttons



| CODE | TYPE | BEZEL | COLOUR | CONTACT |
|---------------|----------------------------------|-------|--------|---------|
| B1301A0056000 | XBW4BL11 - MOMENTARY PUSH BUTTON | METAL | WHITE | 1NO |
| B1301A0057000 | XBW4BL21 - MOMENTARY PUSH BUTTON | METAL | BLACK | 1NO |
| B1301A0058000 | XBW4BL31 - MOMENTARY PUSH BUTTON | METAL | GREEN | 1NO |
| B1301A0059000 | XBW4BL42 - MOMENTARY PUSH BUTTON | METAL | RED | 1NC |
| B1301A0060000 | XBW4BL51 - MOMENTARY PUSH BUTTON | METAL | YELLOW | 1NO |
| B1301A0061000 | XBW4BL61 - MOMENTARY PUSH BUTTON | METAL | BLUE | 1NO |

Dimensions HARMATEX**Pushbutton****Mushroom Pushbutton
Twist to release****Emergency Stop
Mushroom Pushbutton****Pilot light****Selector switches
with standard handle****Selector switches
with long handle****Key selector switches****Push buttons with silicone boot**

| CODE | TYPE | BEZEL | COLOUR | CONTACT |
|---------------|-----------------------------------|-------|--------|---------|
| B1301A0062000 | XBW4BP11S - MOMENTARY PUSH BUTTON | METAL | WHITE | 1NO |
| B1301A0063000 | XBW4BP21S - MOMENTARY PUSH BUTTON | METAL | BLACK | 1NO |
| B1301A0064000 | XBW4BP31S - MOMENTARY PUSH BUTTON | METAL | GREEN | 1NO |
| B1301A0001000 | XBW4BP42S - MOMENTARY PUSH BUTTON | METAL | RED | 1NC |
| B1301A0065000 | XBW4BP51S - MOMENTARY PUSH BUTTON | METAL | YELLOW | 1NO |
| B1301A0066000 | XBW4BP61S - MOMENTARY PUSH BUTTON | METAL | BLUE | 1NO |



| CODE | TYPE | BEZEL | COLOUR | CONTACT |
|---------------|-----------------------------------|---------|--------|---------|
| B1301A0067000 | XBW5AP11S - MOMENTARY PUSH BUTTON | PLASTIC | WHITE | 1NO |
| B1301A0068000 | XBW5AP21S - MOMENTARY PUSH BUTTON | PLASTIC | BLACK | 1NO |
| B1301A0069000 | XBW5AP31S - MOMENTARY PUSH BUTTON | PLASTIC | GREEN | 1NO |
| B1301A0071000 | XBW5AP42S - MOMENTARY PUSH BUTTON | PLASTIC | RED | 1NC |
| B1301A0073000 | XBW5AP51S - MOMENTARY PUSH BUTTON | PLASTIC | YELLOW | 1NO |
| B1301A0072000 | XBW5AP61S - MOMENTARY PUSH BUTTON | PLASTIC | BLUE | 1NO |

Stop mushroom push button

| CODE | TYPE | BEZEL | COLOUR | CONTACT |
|---------------|-------------------------------|-------|--------|---------|
| B1301A0020000 | XBW4BC21 - MOMENTARY MUSHROOM | METAL | BLACK | 1NO |
| B1301A0021000 | XBW4BC31 - MOMENTARY MUSHROOM | METAL | GREEN | 1NO |
| B1301A0022000 | XBW4BC42 - MOMENTARY MUSHROOM | METAL | RED | 1NC |
| B1301A0023000 | XBW4BC51 - MOMENTARY MUSHROOM | METAL | YELLOW | 1NO |
| B1301A0101000 | XBW4BC61 - MOMENTARY MUSHROOM | METAL | BLUE | 1NO |

| CODE | TYPE | BEZEL | COLOUR | CONTACT |
|---------------|-------------------------------|---------|--------|---------|
| B130152202000 | XBW5AC21 - MOMENTARY MUSHROOM | PLASTIC | BLACK | 1NO |
| B130152203000 | XBW5AC31 - MOMENTARY MUSHROOM | PLASTIC | GREEN | 1NO |
| B130152204000 | XBW5AC42 - MOMENTARY MUSHROOM | PLASTIC | RED | 1NC |
| B130152205000 | XBW5AC51 - MOMENTARY MUSHROOM | PLASTIC | YELLOW | 1NO |
| B130152206000 | XBW5AC61 - MOMENTARY MUSHROOM | PLASTIC | BLUE | 1NO |



Emergency stop mushroom push buttons

| CODE | TYPE | BEZEL | CONTACT |
|---------------|--|-------|---------|
| B1301A0075000 | XBW4BS142 - MUSHROOM TWIST T.R. WITH KEY | METAL | 1NC |
| B1301A0076000 | XBW4BS542 - MUSHROOM TWIST T.R. | METAL | 1NC |



| | | | |
|---------------|--|---------|-----|
| B1301A0078000 | XBW5AS142 - MUSHROOM TWIST T.R. WITH KEY | PLASTIC | 1NC |
| B1301A0079000 | XBW5AS542 - MUSHROOM TWIST T.R. | PLASTIC | 1NC |

Pilot lights 24V to 254V AC/DC (current from 2 to 10mA)



| CODE | TYPE | BEZEL | COLOUR |
|---------------|-------------------------|-------|--------|
| B1301A0081000 | XLW4BV013 - PILOT LIGHT | METAL | WHITE |
| B1301A0082000 | XLW4BV033 - PILOT LIGHT | METAL | GREEN |
| B1301A0083000 | XLW4BV043 - PILOT LIGHT | METAL | RED |
| B1301A0084000 | XLW4BV053 - PILOT LIGHT | METAL | YELLOW |
| B1301A0085000 | XLW4BV063 - PILOT LIGHT | METAL | BLUE |



| | | | |
|---------------|-------------------------|---------|--------|
| B1301A0086000 | XLW5AV013 - PILOT LIGHT | PLASTIC | WHITE |
| B1301A0087000 | XLW5AV033 - PILOT LIGHT | PLASTIC | GREEN |
| B1301A0088000 | XLW5AV043 - PILOT LIGHT | PLASTIC | RED |
| B1301A0089000 | XLW5AV053 - PILOT LIGHT | PLASTIC | YELLOW |
| B1301A0105000 | XLW5AV063 - PILOT LIGHT | PLASTIC | BLUE |

Selector switches with standard handle



| CODE | TYPE | BEZEL | POSITIONS | CONTACT |
|---------------|-------------------------------------|-------|-----------|---------|
| B1301A0024000 | XBW4BD21 - STAY PUT | METAL | 2 | 1NO |
| B1301A0029000 | XBW4BD41 - SPRING RETURN | METAL | 2 | 1NO |
| B1301A0028000 | XBW4BD33 - STAY PUT | METAL | 3 | 1NO+1NO |
| B1301A0031000 | XBW4BD53 - SPRING RETURN TO CENTER | METAL | 3 | 1NO+1NO |
| B1301A0032000 | XBW4BD73 - SPRING RETURN FROM LEFT | METAL | 3 | 1NO+1NO |
| B1301A0034000 | XBW4BD83 - SPRING RETURN FROM RIGHT | METAL | 3 | 1NO+1NO |

| | | | | |
|---------------|-------------------------------------|---------|---|---------|
| B1301A0051000 | XBW5AD21 - STAY PUT | PLASTIC | 2 | 1NO |
| B1301A0103000 | XBW5AD41 - SPRING RETURN | PLASTIC | 2 | 1NO |
| B1301A0017000 | XBW5AD33 - STAY PUT | PLASTIC | 3 | 1NO+1NO |
| B1301A0052000 | XBW5AD53 - SPRING RETURN TO CENTER | PLASTIC | 3 | 1NO+1NO |
| B1301A0053000 | XBW5AD73 - SPRING RETURN FROM LEFT | PLASTIC | 3 | 1NO+1NO |
| B1301A0104000 | XBW5AD83 - SPRING RETURN FROM RIGHT | PLASTIC | 3 | 1NO+1NO |

Selector switches with long handle



| CODE | TYPE | BEZEL | POSITIONS | CONTACT |
|---------------|-------------------------------------|-------|-----------|---------|
| B1301A0046000 | XBW4BJ21 - STAY PUT | METAL | 2 | 1NO |
| B1301A0048000 | XBW4BJ41 - SPRING RETURN | METAL | 2 | 1NO |
| B1301A0047000 | XBW4BJ33 - STAY PUT | METAL | 3 | 1NO+1NO |
| B1301A0049000 | XBW4BJ53 - SPRING RETURN TO CENTER | METAL | 3 | 1NO+1NO |
| B1301A0050000 | XBW4BJ73 - SPRING RETURN FROM LEFT | METAL | 3 | 1NO+1NO |
| B1301A0102000 | XBW4BJ83 - SPRING RETURN FROM RIGHT | METAL | 3 | 1NO+1NO |

Key selector switches

| CODE | TYPE | BEZEL | POSITIONS | KEY WITHDRAWAL | CONTACT |
|---------------|--------------------------------------|-------|-----------|------------------|---------|
| B1301A0039000 | XBW4BG21 - STAY PUT | METAL | 2 | LEFT | 1NO |
| B1301A0041000 | XBW4BG41 - STAY PUT | METAL | 2 | LEFT - RIGHT | 1NO |
| B1301A0044000 | XBW4BG61 - SPRING RETURN FROM RIGHT | METAL | 2 | LEFT | 1NO |
| B1301A0036000 | XBW4BG03 - STAY PUT | METAL | 3 | LEFT - 0 - RIGHT | 1NO+1NO |
| B1301A0040000 | XBW4BG33 - STAY PUT | METAL | 3 | 0 | 1NO+1NO |
| UPON REQUEST | XBW4BG53 - STAY PUT | METAL | 3 | LEFT - RIGHT | 1NO+1NO |
| UPON REQUEST | XBW4BG93 - STAY PUT | METAL | 3 | LEFT | 1NO+1NO |
| UPON REQUEST | XBW4BG093 - STAY PUT | METAL | 3 | RIGHT | 1NO+1NO |
| B1301A0038000 | XBW4BG13 - SPRING RETURN FROM LEFT | METAL | 3 | 0 | 1NO+1NO |
| B1301A0042000 | XBW4BG73 - SPRING RETURN TO CENTER | METAL | 3 | 0 | 1NO+1NO |
| B1301A0043000 | XBW4BG83 - SPRING RETURN FROM RIGHT | METAL | 3 | 0 | 1NO+1NO |
| B1301A0037000 | XBW4BG083 - SPRING RETURN FROM RIGHT | METAL | 3 | LEFT | 1NO+1NO |

Contacts

| CODE | TYPE | CONTACT |
|---------------|----------------------------------|---------|
| B130700369000 | ZBWE101 - NORMALLY OPEN CONTACT | NO |
| B130700366000 | ZBWE102 - NORMALLY CLOSE CONTACT | NC |

**Rated operational characteristics**

| ITH MAX. 10A | AC-15 | | DC-13 | | Ui max. (V) |
|--------------|--------|-------------|--------|-------------|-------------|
| | Ue (V) | Ie max. (A) | Ue (V) | Ie max. (A) | |
| | 120 | 6 | 24 | 2,87 | 415 |
| | 240 | 3 | 125 | 0,55 | |
| | 380 | 1,9 | 250 | 0,27 | |

Lamps

| CODE | TYPE |
|---------------|---|
| B130700244000 | ZBWV1 SPARE PILOT LIGHT BODY WHITE, RED, YELLOW, BLUE |
| B130700245000 | ZBWV3 SPARE PILOT LIGHT BODY FOR GREEN |



FLAMEPROOF

CP../EFDCN.. Series - Copper free aluminium



The CP../EFDCN.. range of control stations are based on the features of our CP../CPS.. enclosures, offer an Ex d IIC mode of protection and they can be equipped with different components (push button, selector switches, potentiometers, signal lamps, rotary handles, ammeters, voltmeters, etc.) Boxes are manufactured in aluminium with low content of copper and complete with threaded hubs suitable for cable glands or conduit, connection does not affect the internal void, which remains available for terminals wiring. Internal and external screws are made of AISI316 stainless steel.

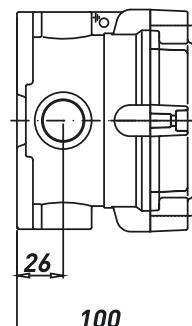
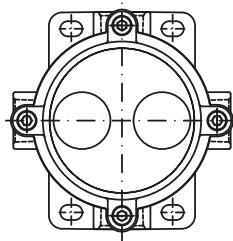
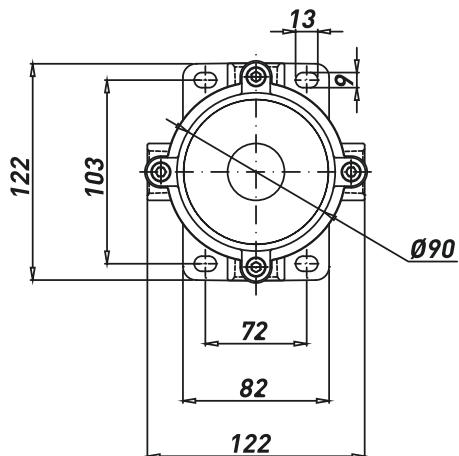
This series is taylor made on the base of customer specification, including quantity and type of operators.

Based on the customer's needs and certificate requirements, our technical department will advise and select the most suitable combination.

These boxes are suitable for hazardous areas of industrial plants for indoor and outdoor applications.

TECHNICAL FEATURES

| | |
|---|--|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -50°C to +60°C (ATEX) -60°C to +60°C (IECEx) |
| Approvals | Certified 03ATEX0009 IECEx BKI 15.0002 TR CU |
| Marking | II 2 GD Ex d IIC T(*) Gb Ex t IIIC T(*) Db IP66 * T6/T85°C, T5/T100°C, T4/T135°C |
| Surface treatment | Painted by green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Thread | Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125 |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Internal anticondensate painting Traffolyte/Stainless steel certificate label Hot deep galvanized steel or Stainless Steel AISI316 stand/canopy. |

Dimensions CP../EFDCN

**CPC/CPT/CPX
EFDCN-2**

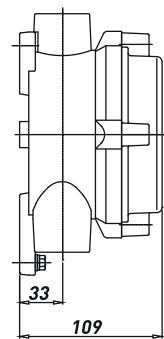
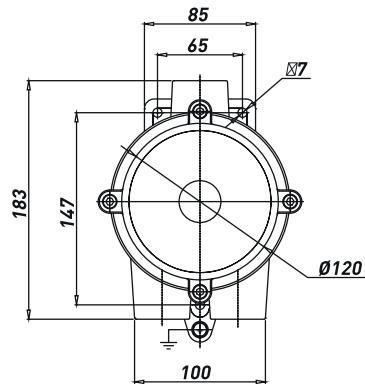
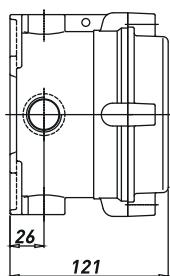
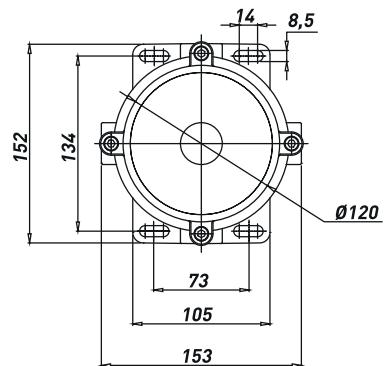
**CPC/CPT/CPX
EFDCN-1**

CP../EFDCN Series push button stations (Selection table - empty boxes)

| Nº OF ENTRIES | TYPE |
|---------------|------------------|
| 2 | CPC-26 2XM25 |
| | CPC-26 2X3/4"GK |
| | CPC-26 2X3/4"NPT |
| 3 | CPT-26 3XM25 |
| | CPT-26 3X3/4"GK |
| | CPT-26 3X3/4"NPT |
| 4 | CPX-26 4XM25 |
| | CPX-26 4X3/4"GK |
| | CPX-26 4X3/4"NPT |

* For complete push button stations is necessary to ask to the Sales Office.

Dimensions CPS../EFDCN



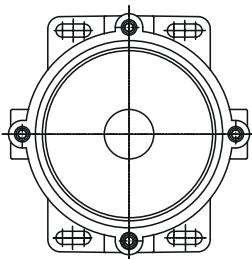
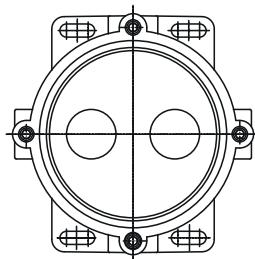
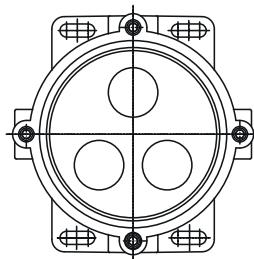
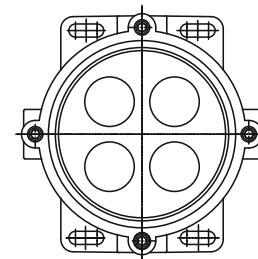
CPSG

CPSC/CPST/CPSX

CPS../EFDCN Series push button stations (Selection table - empty boxes)

| Nº OF ENTRIES | TYPE |
|---------------|--|
| 2 | CPSC 2XM25 CPSC 2XM32 CPSC 2X3/4" GK CPSC 2X3/4" NPT CPSC 2X1" GK CPSC 2X1" NPT |
| 3 | CPST 3XM25 CPST 3XM32 CPST 3X3/4" GK CPST 3X3/4" NPT CPST 3X1" GK CPST 3X1" NPT |
| 3 | CPSG 3XM25 CPSG 3XM32 CPSG 3X3/4" GK CPSG 3X3/4" NPT CPSG 3X1" GK CPSG 3X1" NPT |
| 4 | CPSX 4XM25 CPSX 4XM32 CPSX 4X3/4" GK CPSX 4X3/4" NPT CPSX 4X1" GK CPSX 4X1" NPT |

* For complete push button stations is necessary to ask to the Sales Office.

Dimensions CP../CPS.. EFDCN**EFDCN-1****EFDCN-2****EFDCN-3****EFDCN-4****CP../CPS.. EFDCN Series complete push button stations**

| TYPE | CODE | ENTRIES | WEIGHT [Kg] | AMBIENT TEMPERATURE | COLOUR | DIAGRAM |
|--|---------------|---------------|-------------|---------------------|----------|--|
| CPC-26/EFDCN-PE(1NO/1NC) - FOOT SWITCH | B08H317211112 | M25X1,5 | 3.20 | (-20 °C;+40 °C) | RAL-6003 | <pre> graph LR 1 --- 2 3 --- 4 1 --- 3 </pre> |
| CPC-26/EFDCN-PE(1NO/1NC) - FOOT SWITCH | B08H317211122 | 3/4" NPT | 3.20 | (-20 °C;+40 °C) | RAL-6003 | |
| CPC-26/EFDCN-PE(1NO/1NC) - FOOT SWITCH | B08H317211132 | 3/4" UNI-6125 | 3.20 | (-20 °C;+40 °C) | RAL-6003 | |
| CPC-26/EFDCN-PP - BLACK P.B. 1NO/RED P.B. 1NC | B08H32A1B3112 | M25X1,5 | 1.22 | (-20 °C;+40 °C) | RAL-6003 | <pre> graph LR 1 --- 2 3 --- 4 1 --- 3 </pre> |
| CPC-26/EFDCN-PP - BLACK P.B. 1NO/RED P.B. 1NC | B08H32A1B3122 | 3/4" NPT | 1.22 | (-20 °C;+40 °C) | RAL-6003 | |
| CPC-26/EFDCN-PP - BLACK P.B. 1NO/RED P.B. 1NC | B08H32A1B3132 | 3/4" UNI-6125 | 1.22 | (-20 °C;+40 °C) | RAL-6003 | |
| CPC-26/EFDCN-P - BLACK P.B. 1NO/1NC | B08H310111112 | M25X1,5 | 1.10 | (-20 °C;+40 °C) | RAL-6003 | <pre> graph LR 1 --- 2 3 --- 4 1 --- 3 </pre> |
| CPC-26/EFDCN-P - BLACK P.B. 1NO/1NC | B08H310111122 | 3/4" NPT | 1.10 | (-20 °C;+40 °C) | RAL-6003 | |
| CPC-26/EFDCN-P - BLACK P.B. 1NO/1NC | B08H310111132 | 3/4" UNI-6125 | 1.10 | (-20 °C;+40 °C) | RAL-6003 | |
| CPSC-26/EFDCN-PPL - BLACK P.B. 1NO/RED P.B. 1NC/RED P.L. | B08K33ABS0112 | M25X1,5 | 1.70 | (-20 °C;+40 °C) | RAL-6003 | <pre> graph LR 5((Pilot Light)) --- 6(() 1 --- 2 3 --- 4 1 --- 3 </pre> |
| CPSC-26/EFDCN-PPL - BLACK P.B. 1NO/RED P.B. 1NC/RED P.L. | B08K33ABS0122 | 3/4" NPT | 1.70 | (-20 °C;+40 °C) | RAL-6003 | |
| CPSC-26/EFDCN-PPL - BLACK P.B. 1NO/RED P.B. 1NC/RED P.L. | B08K33ABS0132 | 3/4" UNI-6125 | 1.70 | (-20 °C;+40 °C) | RAL-6003 | |
| CPC-26/EFDCN-EM - BLACK P.B. 1NO/1NC | B08H316211112 | M25X1,5 | 1.20 | (-20 °C;+40 °C) | RAL-6003 | <pre> graph LR 1 --- 2 3 --- 4 1 --- 3 </pre> |
| CPC-26/EFDCN-EM - BLACK P.B. 1NO/1NC | B08H316211122 | 3/4" NPT | 1.20 | (-20 °C;+40 °C) | RAL-6003 | |
| CPC-26/EFDCN-EM - BLACK P.B. 1NO/1NC | B08H316211132 | 3/4" UNI-6125 | 1.20 | (-20 °C;+40 °C) | RAL-6003 | |
| CPC-26/EFDCN-EM - BLACK P.B. 1NO/1NC PRESSED | B08H316111112 | M25X1,5 | 1.20 | (-20 °C;+40 °C) | RAL-6003 | |
| CPC-26/EFDCN-EM - RED P.B. 1NO/1NC | B08H316411112 | M25X1,5 | 1.20 | (-20 °C;+40 °C) | RAL-6003 | |

FLAMEPROOF

CP../EFSRC.. Series - Copper free aluminium



The CP../EFSRC.. range of control stations are based on the features of our CP../CPS.. enclosures, offer an Ex d IIC mode of protection and they can be equipped with different components (push button, selector switches, potentiometers, signal lamps, rotary handles, ammeters, voltmeters, etc.)

Boxes are manufactured in aluminium with low content of copper and complete with threaded hubs suitable for cable glands or conduit, connection does not affect the internal void, which remains available for terminals wiring.

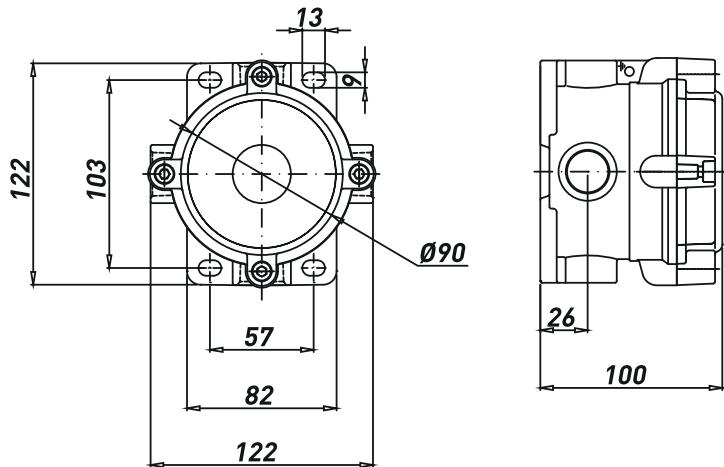
Internal and external screws are made of AISI316 stainless steel.

This series is taylor made on the base of customer specification, including quantity and type of operators. Based on the customer's needs and certificate requirements, our technical department will advise and select the most suitable combination.

These boxes are suitable for hazardous areas of industrial plants for indoor and outdoor applications.

TECHNICAL FEATURES

| | |
|---|--|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -50°C to +60°C (ATEX) -60°C to +60°C (IECEx) |
| Approvals | Certified 03ATEX0009 IECEx BKI 15.0002 TR CU |
| Marking | II 2 GD Ex d IIC T(*) Gb Ex t IIIC T(*) Db IP66 * T6/T85°C, T5/T100°C, T4/T135°C |
| Surface treatment | Painted by green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Thread | Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125 |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Internal anticondensate painting Traffolyte/Stainless steel certificate label Hot deep galvanized steel or Stainless Steel AISI316 stand/canopy. |

Dimensions CP../EFSRC

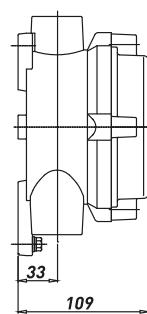
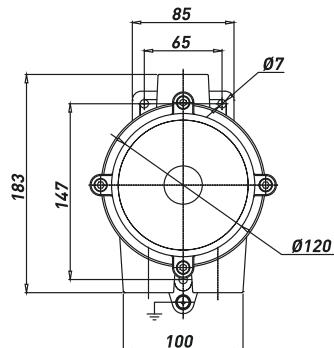
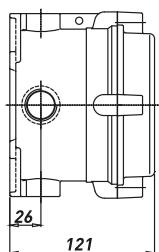
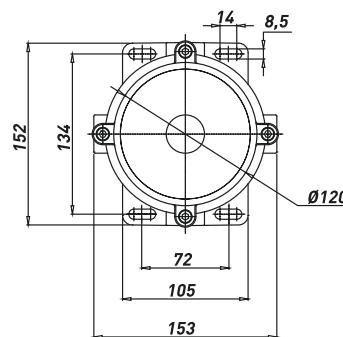
CPC/CPT/CPX
EFSRC-1

CP../EFSRC Series push button stations (Selection table - empty boxes)

| N° OF ENTRIES | TYPE |
|---------------|------------------|
| 2 | CPC-26 2XM25 |
| | CPC-26 2X3/4"GK |
| | CPC-26 2X3/4"NPT |
| 3 | CPT-26 3XM25 |
| | CPT-26 3X3/4"GK |
| | CPT-26 3X3/4"NPT |
| 4 | CPX-26 4XM25 |
| | CPX-26 4X3/4"GK |
| | CPX-26 4X3/4"NPT |

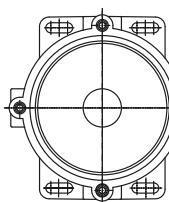
* For complete push button stations is necessary to ask to the Sales Office.

Dimensions CPS../EFSRC

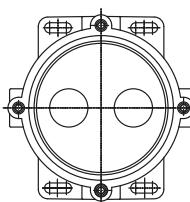


CPSG

CPSC/CPST/CPSX



EFSRC-1



EFSRC-2

CPS../EFSRC Series push button stations (Selection table - empty boxes)

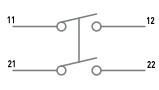
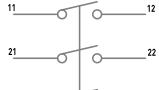
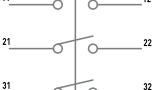
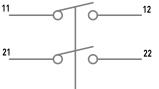
| N° OF ENTRIES | TYPE |
|---------------|--|
| 2 | CPSC 2XM25 CPSC 2XM32 CPSC 2X3/4" GK CPSC 2X3/4" NPT CPSC 2X1" GK CPSC 2X1" NPT |
| 3 | CPST 3XM25 CPST 3XM32 CPST 3X3/4" GK CPST 3X3/4" NPT CPST 3X1" GK CPST 3X1" NPT |
| 3 | CPSG 3XM25 CPSG 3XM32 CPSG 3X3/4" GK CPSG 3X3/4" NPT CPSG 3X1" GK CPSG 3X1" NPT |
| 4 | CPSX 4XM25 CPSX 4XM32 CPSX 4X3/4" GK CPSX 4X3/4" NPT CPSX 4X1" GK CPSX 4X1" NPT |

* For complete push button stations is necessary to ask to the Sales Office.

Boxes takes following suffix:

- EFDCN; if assembled with push buttons, pilot lamps, potentiometer, etc.
- EFSRC; if assembled with step, change-over or selector switches.

CP../CPS.. EFSRC Series complete selector switches

| TYPE | CODE | DIAGRAM | ENTRIES | WEIGHT [Kg] | AMBIENT TEMPERATURE |
|---------------------|---------------|---|---------------|-------------|---------------------|
| CPC-26/EFSRC-220 | B08H315121112 |  | M25X1,5 | 1.10 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-220 | B08H315121122 | | 3/4" NPT | 1.10 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-220 | B08H315121132 | | 3/4" UNI-6125 | 1.10 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-320 | B08H315131112 |  | M25X1,5 | 1.15 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-320 | B08H315131122 | | 3/4" NPT | 1.15 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-320 | B08H315131132 | | 3/4" UNI-6125 | 1.15 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-420 | B08H315141112 |  | M25X1,5 | 1.15 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-420 | B08H315141122 | | 3/4" NPT | 1.15 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-420 | B08H315141132 | | 3/4" UNI-6125 | 1.15 | (-20 °C;+40 °C) |
| CPSC-26/EFSRC-432 | B08K315142112 |  | M25X1,5 | 1.30 | (-20 °C;+40 °C) |
| CPSC-26/EFSRC-432 | B08K315142122 | | 3/4" NPT | 1.30 | (-20 °C;+40 °C) |
| CPSC-26/EFSRC-432 | B08K315142132 | | 3/4" UNI-6125 | 1.30 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-D-220 | B08H315221112 |  | M25X1,5 | 1.15 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-D-220 | B08H315221122 | | 3/4" NPT | 1.15 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-D-220 | B08H315221132 | | 3/4" UNI-6125 | 1.15 | (-20 °C;+40 °C) |
| CPSC-26/EFSRC-D-320 | B08K315231112 |  | M25X1,5 | 1.20 | (-20 °C;+40 °C) |
| CPSC-26/EFSRC-D-320 | B08K315231122 | | 3/4" NPT | 1.20 | (-20 °C;+40 °C) |
| CPSC-26/EFSRC-D-320 | B08K315231132 | | 3/4" UNI-6125 | 1.20 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-C-220 | B08H315321112 |  | M25X1,5 | 1.15 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-C-220 | B08H315321122 | | 3/4" NPT | 1.15 | (-20 °C;+40 °C) |
| CPC-26/EFSRC-C-220 | B08H315321132 | | 3/4" UNI-6125 | 1.15 | (-20 °C;+40 °C) |
| CPSC-26/EFSRC-C-320 | B08K315331112 |  | M25X1,5 | 1.30 | (-20 °C;+40 °C) |
| CPSC-26/EFSRC-C-320 | B08K315331122 | | 3/4" NPT | 1.30 | (-20 °C;+40 °C) |
| CPSC-26/EFSRC-C-320 | B08K315331132 | | 3/4" UNI-6125 | 1.30 | (-20 °C;+40 °C) |

FLAMEPROOF

EPKZM Series - Circuit breaker enclosure - Copper free aluminium

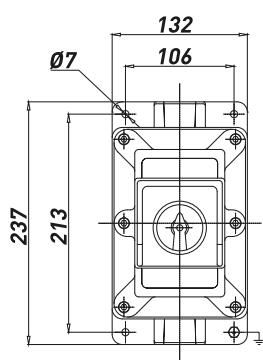
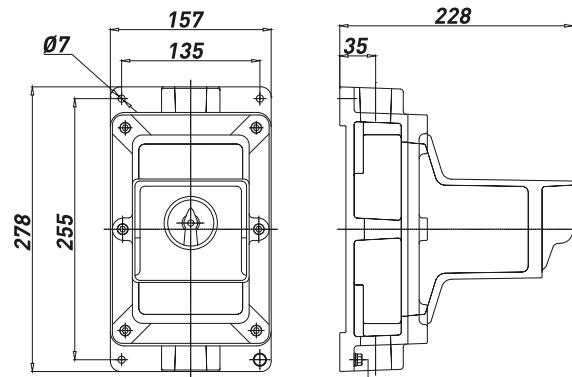
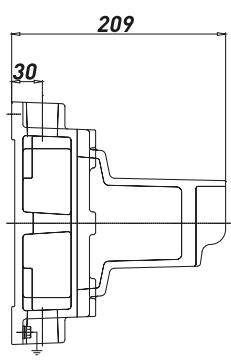


EPKZM Series enclosures, made of aluminium with low content of copper RAL6003 painted, are used to house motor protector circuit breakers up to 63A.

These boxes are suitable for hazardous areas of industrial plants for indoor and outdoor applications.

TECHNICAL FEATURES

| | |
|---|--|
| Material | Aluminium with low content of copper |
| IP rating | IP66/IP67 |
| Ambient temperature range | -30°C to +55°C |
| Approvals | Certified 02ATEX0027X TR CU |
| Marking | II 2 GD Ex d IIB T6 Gb Ex tb IIIC T85°C Db IP66/67 |
| Surface treatment | Painted by green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Thread | N° 2 entries Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125 |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Internal anticondensate painting Traffolyte/Stainless steel certificate label Hot deep galvanized steel or Stainless Steel AISI316 stand/canopy. |

Dimensions EPKZM**EPKZM-3****EPKZM-4****EPKZM Series enclosures**

| TYPE | CODE | ENTRIES | WEIGHT [Kg] |
|-----------------------------------|---------------|-------------|-------------|
| EPKZM-3 - RED/YELLOW HANDLE 55X55 | B010332100023 | 1" UNI-6125 | 3.25 |
| EPKZM-3 - BLACK HANDLE | B010331100023 | 1" UNI-6125 | 3.25 |
| EPKZM-3 - RED/YELLOW HANDLE 55X55 | B010332100022 | 1" NPT | 3.25 |
| EPKZM-3 - BLACK HANDLE | B010331100022 | 1" NPT | 3.25 |
| EPKZM-3 - RED/YELLOW HANDLE 55X55 | B010332100021 | M32X1,5 | 3.25 |
| EPKZM-3 - BLACK HANDLE | B010331100021 | M32X1,5 | 3.25 |
| EPKZM-4 - RED/YELLOW HANDLE 72X72 | B010343100023 | 1" UNI-6125 | 4.60 |
| EPKZM-4 - BLACK HANDLE | B010341100023 | 1" UNI-6125 | 4.60 |
| EPKZM-4 - RED/YELLOW HANDLE 72X72 | B010343100022 | 1" NPT | 4.60 |
| EPKZM-4 - BLACK HANDLE | B010341100022 | 1" NPT | 4.60 |
| EPKZM-4 - RED/YELLOW HANDLE 72X72 | B010343100021 | M32X1,5 | 4.60 |
| EPKZM-4 - BLACK HANDLE | B010341100021 | M32X1,5 | 4.60 |

Above codes refer to standard empty boxes. For complete motor protector circuit breakers is necessary to ask to the Sales Office.

FLAMEPROOF

Ex d components are available in a wide range of operators/pilot lights PL series and selectors PSRC series; allow numerous combinations with our CP./CPS.. EFDCN/EFSRC series.

PL.. series includes standard push buttons, emergency push buttons, key selector switches, pilot lights; mechanical operators allow the assembling of a maximum of four contacts.

PSRC.. series includes on-load switches, change over switches, step switches and selector customized upon request on the base of customer specification.

SPARES & ACCESSORIES

| | |
|----------------------------------|---|
| IP rating | IP66/IP67 |
| Ambient temperature range | -50°C to +60°C |
| Approvals | IMQ 09ATEX0019U |
| Marking | II 2 GD Ex d IIC Ex td A21 IP66/IP67 |
| Barrel thread | Metric M32x1,5 |
| Option | Version with AISI 316 L external hexagonal ring |

PL.. Series momentary push buttons



| CODE SPARE PART | CODE COMPONENT CERTIFICATE | TYPE | COLOUR | WEIGHT (Kg) |
|-----------------|----------------------------|--------------------|--------|-------------|
| B130210100021 | B131210100020 | PLA-10 PUSH BUTTON | BLACK | 0.15 |
| B130210200021 | B131210B00020 | PLA-20 PUSH BUTTON | RED | 0.15 |
| B130210300021 | B131210300020 | PLA-30 PUSH BUTTON | GREEN | 0.15 |
| B130210400021 | B131210400020 | PLA-40 PUSH BUTTON | BLUE | 0.15 |
| B130210500021 | B131210500020 | PLA-50 PUSH BUTTON | YELLOW | 0.15 |
| B130210600021 | B131210600020 | PLA-60 PUSH BUTTON | WHITE | 0.15 |

Contacts are not included

PL.. Series lockable momentary push buttons



| CODE SPARE PART | CODE COMPONENT CERTIFICATE | TYPE | COLOUR | WEIGHT (Kg) |
|-----------------|----------------------------|---------------------------------|--------|-------------|
| B130220100021 | B131220100020 | PLB-10 PIN-LOCKABLE PUSH BUTTON | BLACK | 0.18 |
| B130220200021 | B131220200020 | PLB-20 PIN-LOCKABLE PUSH BUTTON | RED | 0.18 |
| B130220300021 | B131220300020 | PLB-30 PIN-LOCKABLE PUSH BUTTON | GREEN | 0.18 |

Contacts are not included

PL.. Series Mushroom push buttons

| CODE SPARE PART | CODE COMPONENT CERTIFICATE | TYPE | COLOUR | WEIGHT (Kg) |
|-----------------|----------------------------|---|--------|-------------|
| B130230200021 | B131230200020 | PLC-S NC/NO MUSHROOM PUSH BUTTON TWIST TO RELEASE | RED | 0.21 |
| B130231200021 | B131231200020 | PLC-S NO/NO MUSHROOM PUSH BUTTON TWIST TO RELEASE | RED | 0.21 |
| B130232200021 | B131232200020 | PLC-S NC/NC MUSHROOM PUSH BUTTON TWIST TO RELEASE | RED | 0.21 |
| B130240200021 | B131240200020 | PLC-S-F NC/NO MUSHROOM PUSH BUTTON WITH KEY | RED | 0.15 |
| B130241200021 | B131241200020 | PLC-S-F NC/NC MUSHROOM PUSH BUTTON WITH KEY | RED | 0.15 |
| B130242200021 | B131242200020 | PLC-S-F NO/NO MUSHROOM PUSH BUTTON WITH KEY | RED | 0.15 |
| B130250200021 | B131250200020 | PLC-I MOMENTARY MUSHROOM PUSH BUTTON | RED | 0.15 |

Contacts are not included

PL.. Series Key selector switches

| CODE SPARE PART | CODE COMPONENT CERTIFICATE | TYPE | KEY WITHDRAWAL | WEIGHT (Kg) |
|-----------------|----------------------------|------------------------------------|----------------|-------------|
| B130270100021 | B131270100020 | PLF-10 NO/NC - KEY SELECTOR SWITCH | 0 | 0.20 |
| B130271100021 | B131271100020 | PLF-10 NO/NO - KEY SELECTOR SWITCH | 0 | 0.20 |
| B130272100021 | B131272100020 | PLF-10 NC/NC - KEY SELECTOR SWITCH | 0 | 0.20 |
| B130270200021 | B131270200020 | PLF-10 NO/NC - KEY SELECTOR SWITCH | 0-1 | 0.20 |
| B130271200021 | B131271200020 | PLF-10 NO/NO - KEY SELECTOR SWITCH | 0-1 | 0.20 |
| B130272200021 | B131272200020 | PLF-10 NC/NC - KEY SELECTOR SWITCH | 0-1 | 0.20 |

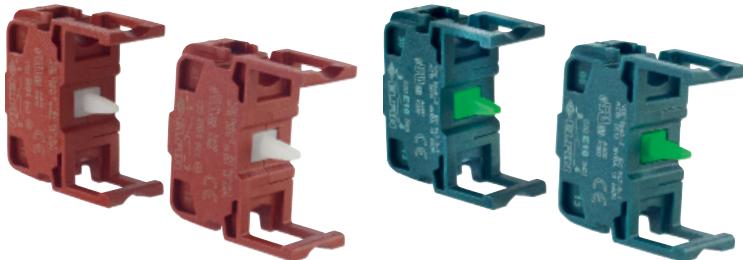
Contacts are not included

PL.. Series mechanical operators

| CODE SPARE PART | CODE COMPONENT CERTIFICATE | TYPE | COLOUR | WEIGHT (Kg) |
|-----------------|----------------------------|------------------------------|--------|-------------|
| B130280210021 | B131280210020 | PLC-RIP - RESTORE PB M32X1,5 | BLACK | 0.10 |
| B130280220021 | B131280220020 | PLC-RIP - RESTORE PB M32X1,5 | RED | 0.10 |
| B130280230021 | B131280230020 | PLC-RIP - RESTORE PB M32X1,5 | GREEN | 0.10 |
| B130280100021 | B131280100020 | PLC-R - RESET PB M12X1,75 | - | 0.10 |

PL.. Series Contacts

| CODE | TYPE | WEIGHT (Kg) |
|---------------|--------------------------|-------------|
| B130700099000 | NC CONTACT - PL.. SERIES | 0.006 |
| B130700100000 | NO CONTACT - PL.. SERIES | 0.006 |



Rated insulated voltage: 660 V AC/DC

Rated thermal current (ith): 6 A

Rated output power:

| CAT AC15 | V | 24 | 48 | 60 | 110 | 220 | 380 | 400 | 500 | 600 | CAT DC13 | V | 24 | 48 | 60 | 110 | 220 |
|------------|---|----|----|----|-----|-----|-----|-----|-----|-----|------------|---|-----|-----|----|-----|-----|
| Tension Ue | V | 24 | 48 | 60 | 110 | 220 | 380 | 400 | 500 | 600 | Tension Ue | V | 24 | 48 | 60 | 110 | 220 |
| Current le | A | 10 | 8 | 6 | 6 | 3 | 2 | 1,5 | 1,5 | 1,2 | Current le | A | 2,5 | 1,4 | 1 | 0,6 | 0,3 |

PL.. Series Pilot lights



| CODE SPARE PART | CODE COMPONENT CERTIFICATE | TYPE | COLOUR |
|--------------------|----------------------------------|--------------------|--------|
| B130260100021 | B131260A00020 | PLD-10 PILOT LIGHT | WHITE |
| B130260200021 | B131260200020 | PLD-20 PILOT LIGHT | RED |
| B130260300021 | B131260300020 | PLD-30 PILOT LIGHT | GREEN |
| B130260400021 | B131260400020 | PLD-40 PILOT LIGHT | YELLOW |
| B130260500021 | B131260500020 | PLD-50 PILOT LIGHT | BLUE |

Suitable for LED lamp 3W max. or incandescent lamp 5W max., Vmax.DC 220V, Vmax.AC 380V

PL.. series Lamps



| CODE | TYPE | VOLTAGE | COLOUR |
|----------------|------------------|---------|--------|
| B130700025000 | LED LAMP 12V-R | 12V | RED |
| B130700026000 | LED LAMP 12V-V | | GREEN |
| B130700027000 | LED LAMP 12V-G | | YELLOW |
| B130700028000 | LED LAMP 12V-B | | WHITE |
| B130700030000 | LED LAMP 24V-R | 24V | RED |
| B130700029000 | LED LAMP 24V-V | | GREEN |
| B130700031000 | LED LAMP 24V-G | | YELLOW |
| B130700032000 | LED LAMP 24V-B | | WHITE |
| B1307000291000 | LED LAMP 24V-BL | 48V | BLUE |
| B130700043000 | LED LAMP 48V-R | | RED |
| B130700042000 | LED LAMP 48V-V | | GREEN |
| B130700044000 | LED LAMP 48V-G | | YELLOW |
| B130700041000 | LED LAMP 48V-B | | WHITE |
| B130700033000 | LED LAMP 110V-R | 110V | RED |
| B130700034000 | LED LAMP 110V-V | | GREEN |
| B130700035000 | LED LAMP 110V-G | | YELLOW |
| B130700036000 | LED LAMP 110V-B | | WHITE |
| B130700045000 | LED LAMP 110V-BL | 220V | BLUE |
| B130700037000 | LED LAMP 220V-R | | RED |
| B130700038000 | LED LAMP 220V-V | | GREEN |
| B130700039000 | LED LAMP 220V-G | | YELLOW |
| B130700040000 | LED LAMP 220V-B | | WHITE |
| B1307000333000 | LED LAMP 220V-BL | 400V | BLUE |
| B1307000359000 | LED LAMP 400V-R | | RED |
| B1307000358000 | LED LAMP 400V-V | | GREEN |
| B1307000360000 | LED LAMP 400V-G | | YELLOW |
| B1307000350000 | LED LAMP 400V-B | | WHITE |
| B1307000361000 | LED LAMP 400V-BL | | BLUE |

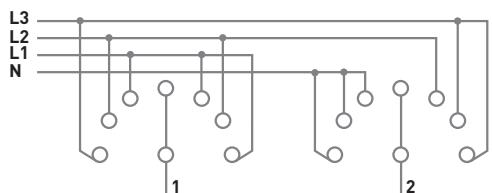

PSRC.. Series On-load switches

| CODE SPARE PART | CODE COMPONENT CERTIFICATE | TYPE | Nº OF POLES | AMPERE A | WEIGHT (Kg) | DIAGRAM |
|-----------------|----------------------------|---------------------------|-------------|----------|-------------|---------|
| B130311200001 | B131311200001 | PSRC-120 - ON LOAD SWITCH | 1 | 20 | 0.13 | |
| B130312200001 | B131312200001 | PSRC-220 - ON LOAD SWITCH | 2 | 20 | 0.16 | |
| B130313200001 | B131313200001 | PSRC-320 - ON LOAD SWITCH | 3 | 20 | 0.20 | |
| B130314200001 | B131314200001 | PSRC-420 - ON LOAD SWITCH | 4 | 20 | 0.20 | |
| B130311320001 | B131311320001 | PSRC-132 - ON LOAD SWITCH | 1 | 32 | 0.20 | |
| B130312320001 | B131312320001 | PSRC-232 - ON LOAD SWITCH | 2 | 32 | 0.20 | |
| B130313320001 | B131313320001 | PSRC-332 - ON LOAD SWITCH | 3 | 32 | 0.25 | |
| B130314320001 | B131314320001 | PSRC-432 - ON LOAD SWITCH | 4 | 32 | 0.25 | |

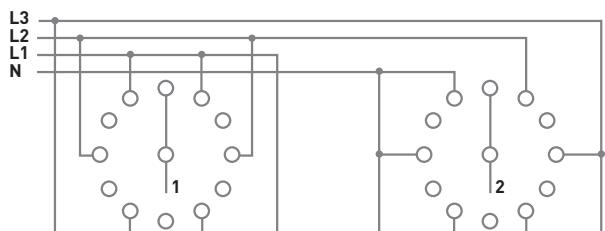
PSRC.. Series Step switch

| CODE SPARE PART | CODE COMPONENT CERTIFICATE | TYPE | Nº OF POLES | AMPERE A | WEIGHT (Kg) | DIAGRAM |
|-----------------|----------------------------|--------------------------|-------------|----------|-------------|-----------|
| B130321200001 | B131321200001 | PSRC-C 120 - STEP SWITCH | 1 | 20 | 0.13 | |
| B130322200001 | B131322200001 | PSRC-C 220 - STEP SWITCH | 2 | 20 | 0.20 | |
| B130323200001 | B131323200001 | PSRC-C 320 - STEP SWITCH | 3 | 20 | 0.25 | |
| B130324200001 | B131324200001 | PSRC-C 420 - STEP SWITCH | 4 | 20 | 0.30 | |
| B13035B000001 | B13135B000001 | PSRC-C VOLTMETER 7 POS. | - | - | | SEE BELOW |
| B13035C000001 | B13135C000001 | PSRC-C VOLTMETER 12 POS. | - | - | | SEE BELOW |
| B13034A000001 | B13134A000001 | PSRC-C AMPERMETER 4 POS. | - | - | | SEE BELOW |

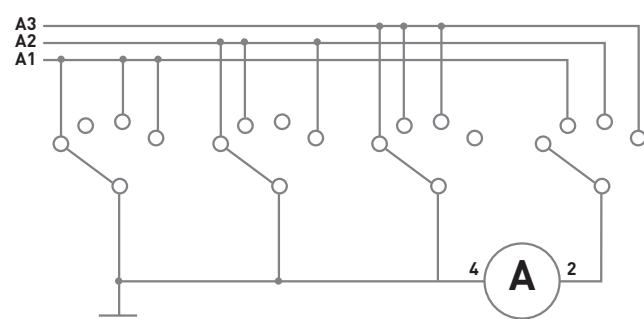
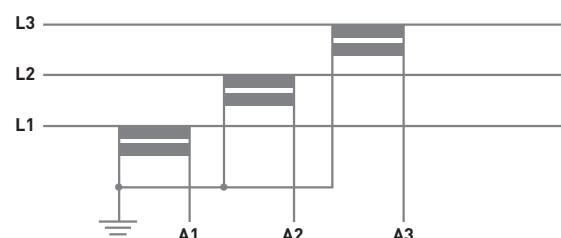
Voltmeter selector switch 7 pos.



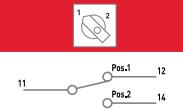
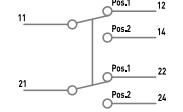
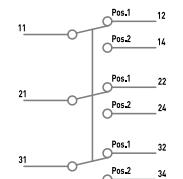
Voltmeter selector switch 12 pos.



Ammeter selector switch 4 pos.



PSRC.. Series Change-over switch

| CODE SPARE PART | CODE COMPONENT CERTIFICATE | TYPE | Nº OF POLES | AMPERE A | WEIGHT (Kg) | DIAGRAM |
|-----------------|----------------------------|---------------------------------|-------------|----------|-------------|---|
| B130331200001 | B131331200001 | PSRC-D 120 - CHANGE OVER SWITCH | 1 | 20 | 0.13 |  |
| B130332200001 | B131332200001 | PSRC-D 220 - CHANGE OVER SWITCH | 2 | 20 | 0.20 |  |
| B130333200001 | B131333200001 | PSRC-D 320 - CHANGE OVER SWITCH | 3 | 20 | 0.25 |  |

PSRC Series Rated operational characteristic

| AMPERE A | AC-1 ie MAX. (A) | AC-3 ie MAX. (A) | AC-11 ie MAX. (A) | Ui max. (V) |
|----------|------------------|------------------|-------------------|-------------|
| 20 | 25 | 12 | 9 | 690 |
| 32 | 36 | 22 | 16 | 690 |

Special versions can be manufactured upon request. For further information contact our Sales Office.



JUNCTION BOXES



JUNCTION
BOXES

P.112

Increased safety

- AQ../AR.. Series -
Glassfiber reinforced polyester 112
- AQ../AR.. Series - Copper free aluminium
low thickness 114
- AQ../AR.. Series - Copper free aluminium
high thickness 116
- SB Series - AISI 316 L Stainless steel 118
- B2X Series - Glassfiber reinforced
polyester 120

P.122

Flameproof

- CP../CPS.. Series - Copper free aluminium 122
- ECR-3 - Drain valve 124

INCREASED SAFETY

AQ../AR.. Series - Glassfiber reinforced polyester

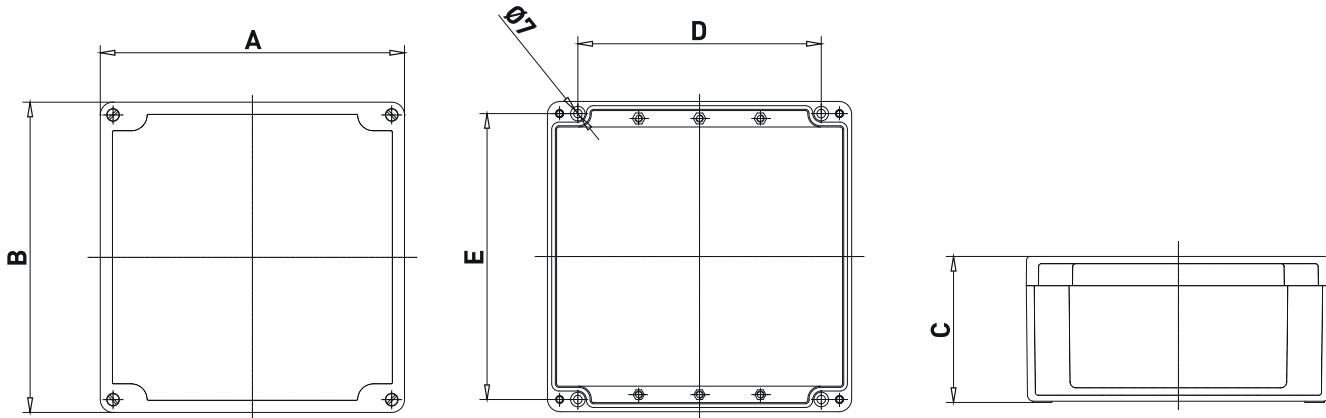


AQ../AR.. Series are used to house Ex e and Ex i terminals. Maximum number of terminals changes on the base of terminals section, enclosure operating temperature and required temperature class. They are ideally suited for chemical agents environments. Sea water corrosion resistance and extremes of low and high temperatures.

TECHNICAL FEATURES

| | |
|---|--|
| Material | GRP (Glassfiber reinforced polyester) |
| IP rating | IP66 |
| Ambient temperature range | -50°C to +60°C (ATEX) -50°C to +60°C (IECEx - up to +95°C for some "special" models) |
| Approvals | IMQ 08 ATEX 028X IMQ 16 ATEX 004U IECEx IMQ 15.0002X IECEx IMQ 15.0010U TR CU |
| Marking | II 2 GD Ex e IIC Gb/Ex ia Ga IIC T(**) Ex tb IIIC T(**) Db IP66 ** T6/T85°C, T5/T100°C, T4/T135°C |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Hinges Drain/breather valve Traffolyte/Stainless steel certificate label Internal mounting plate Earth continuity plates Passing through earth bolt |

Dimensions AQ../AR..



AQ../AR.. Series junction boxes

| CODE | TYPE | DIMENSIONS [mm] | | | | | WEIGHT [Kg] |
|---------------|--------------|-----------------|-----|-----|-----|-----|-------------|
| | | A | B | C | D | E | |
| B030200001000 | AQ-080806P | 75 | 80 | 55 | 45 | 48 | 0,23 |
| B030200002000 | AR-081106P | 75 | 110 | 55 | 45 | 98 | 0,295 |
| B030200003000 | AQ-121209P | 120 | 122 | 90 | 82 | 106 | 0,75 |
| B030200004000 | AR-122209P | 120 | 220 | 90 | 82 | 204 | 1,06 |
| B030200005000 | AQ-161609P | 160 | 160 | 90 | 110 | 140 | 1,29 |
| B030200006000 | AR-162609P | 160 | 260 | 90 | 110 | 240 | 1,71 |
| B030200007000 | AR-163609P | 160 | 360 | 90 | 110 | 340 | 2,15 |
| B030200009000 | AQ-252612P | 250 | 255 | 120 | 200 | 235 | 2,65 |
| B030200010000 | AR-254012P | 250 | 400 | 120 | 200 | 380 | 3,65 |
| B030200013000 | AR-256012P | 250 | 600 | 120 | 200 | 580 | 5,235 |
| B030200014000 | AQ-414012P | 405 | 400 | 120 | 355 | 380 | 5,58 |
| | AQ-414020P | 405 | 400 | 200 | 355 | 380 | |
| | AR-406025P * | 400 | 600 | 250 | | | |

*The standard enclosure is complete with hinges on the long side.

The codes refer to the empty and undrilled enclosures, sold under component certificate.

For complete junction boxes is necessary to ask to the Sales Office.

Maximum number of entries on sides

| TYPE | M20/1/2" | | M25/3/4" | | M32/1" | | M40/1" 1/4 | | M50/1" 1/2 | | M63/2" | |
|------------|----------|----|----------|----|--------|----|------------|---|------------|---|--------|---|
| | A | B | A | B | A | B | A | B | A | B | A | B |
| AQ-080806P | 1 | 1 | - | 1 | - | - | - | - | - | - | - | - |
| AR-081106P | 1 | 2 | - | 2 | - | - | - | - | - | - | - | - |
| AQ-121209P | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | - | - | - | - |
| AR-122209P | 2 | 5 | 1 | 4 | 1 | 3 | 1 | 3 | - | - | - | - |
| AQ-161609P | 3 | 3 | 2 | 3 | 1 | 2 | 1 | 1 | - | - | - | - |
| AR-162609P | 3 | 5 | 2 | 5 | 1 | 4 | 1 | 3 | - | 3 | - | - |
| AR-163609P | 3 | 8 | 2 | 7 | 1 | 6 | 1 | 5 | - | 4 | - | - |
| AQ-252612P | 8 | 10 | 8 | 10 | 3 | 7 | 3 | 4 | 2 | 3 | 2 | 2 |
| AR-254012P | 8 | 18 | 8 | 16 | 3 | 5 | 3 | 5 | 3 | 5 | 2 | 4 |
| AR-256012P | 8 | 25 | 8 | 24 | 3 | 10 | 3 | 8 | 2 | 6 | 2 | 6 |
| AQ-414012P | 16 | 18 | 6 | 14 | 5 | 6 | 5 | 5 | 4 | 5 | 3 | 6 |

INCREASED SAFETY

AQ../AR.. Series - Copper free aluminium low thickness

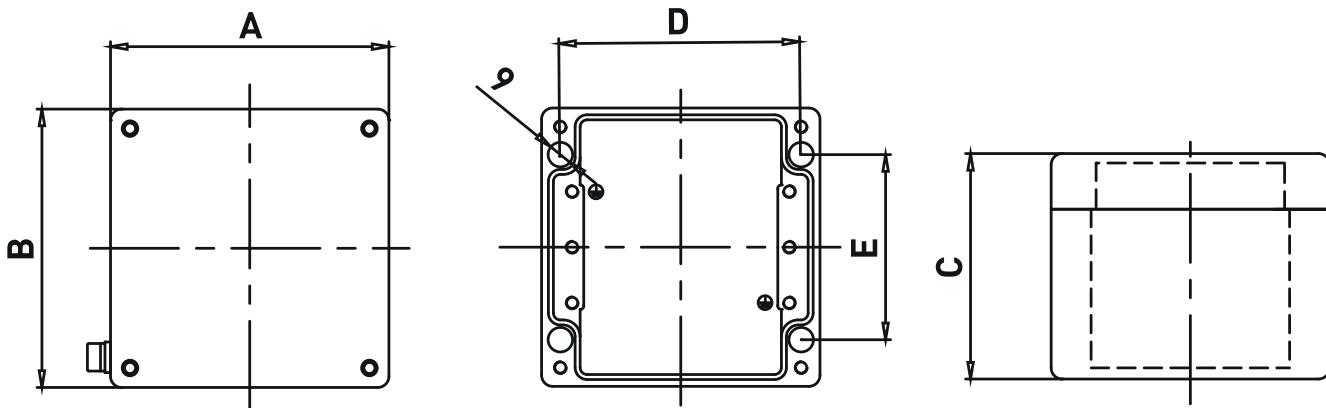


AQ../AR.. Series are used to house Ex e and Ex i terminals. Maximum number of terminals changes on the base of terminals section, enclosure operating temperature and required temperature class. They are ideally suited for chemical agents environments. Sea water corrosion resistance and extremes of low and high temperatures.

TECHNICAL FEATURES

| | |
|---|--|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -50°C to +60°C (ATEX) -50°C to +60°C (IECEx - up to +95°C for some "special" models) |
| Approvals | IMQ 08 ATEX 028X IMQ 16 ATEX 004U IECEx IMQ 15.0002X IECEx IMQ 15.0010U TR CU |
| Marking | II 2 GD Ex e IIC Gb/Ex ia Ga IIC T(**) Ex tb IIIC T(**) Db IP66 ** T6/T85°C, T5/T100°C, T4/T135°C |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Surface treatment | Standard with polyester powder coating RAL 7001 |
| Accessories available upon request | Hinges Drain/breather valve Traffolyte/Stainless steel certificate label Internal mounting plate Earth continuity plates Passing through earth bolt |

Dimensions AQ../AR..



AQ../AR.. Series junction boxes

| CODE | TYPE | DIMENSIONS [mm] | | | | | WEIGHT [Kg] |
|---------------|-------------|-----------------|-----|-----|-----|-----|-------------|
| | | A | B | C | E | F | |
| B020200001000 | AQ-080806AL | 80 | 75 | 57 | 52 | 63 | 0,3 |
| B020200002000 | AR-081306AL | 80 | 125 | 57 | 51 | 112 | 0,375 |
| B020200003000 | AR-081806AL | 80 | 175 | 57 | 52 | 162 | 0,55 |
| B020200004000 | AR-081808AL | 80 | 175 | 80 | 52 | 162 | |
| B020200005000 | AR-082508AL | 80 | 250 | 80 | 51 | 237 | |
| B020200007000 | AR-101508AL | 100 | 150 | 80 | 64 | 134 | |
| B020200006000 | AQ-101008AL | 100 | 100 | 81 | 66 | 86 | 0,62 |
| B020200008000 | AQ-121208AL | 120 | 122 | 81 | 83 | 106 | 0,94 |
| B020200011000 | AR-122209AL | 120 | 220 | 90 | 82 | 204 | 1,43 |
| B020200014000 | AQ-161609AL | 160 | 160 | 90 | 110 | 140 | 1,5 |
| B020200017000 | AR-162410AL | 160 | 240 | 100 | 123 | 225 | |
| B020200016000 | AR-163609AL | 160 | 360 | 91 | 110 | 340 | |
| B020200021000 | AR-202311AL | 202 | 232 | 110 | 180 | 180 | 2,44 |
| B020200022000 | AR-232811AL | 230 | 280 | 110 | 181 | 261 | 2,99 |
| | AR-233312AL | 231 | 331 | 120 | 178 | 311 | |

The codes refer to the empty and undrilled enclosures, sold under component certificate.

For complete junction boxes is necessary to ask to the Sales Office.

Other sizes are available upon request.

INCREASED SAFETY

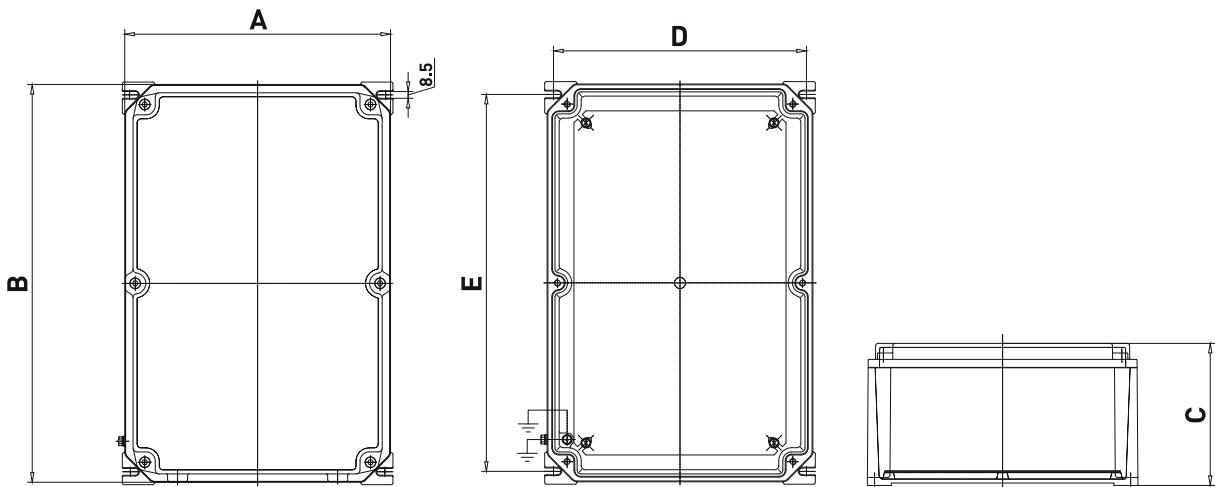
AQ../AR.. Series - Copper free aluminium high thickness



AQ../AR.. Series are used to house Ex e and Ex i terminals. Maximum number of terminals changes on the base of terminals section, enclosure operating temperature and required temperature class. They are ideally suited for chemical agents environments. Sea water corrosion resistance and extremes of low and high temperatures.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Aluminium with low content of copper |
| IP rating | IP65 |
| Ambient temperature range | -50°C to +60°C |
| Approvals | IMQ 08 ATEX 028X TR CU |
| Marking | II 2 GD Ex e IIC Gb/Ex ia Ga IIC T(**) Ex tb IIIC T(**) Db IP65 ** T6/T85°C, T5/T100°C, T4/T135°C |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125 |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Accessories available upon request | Hinges Drain/breather valve Traffolyte/Stainless steel certificate label Internal mounting plate Passing through earth bolt |

Dimensions AQ../AR..**AQ../AR.. Series junction boxes**

| TYPE | DIMENSIONS [mm] | | | | | WEIGHT [Kg] |
|-----------------|-----------------|-----|-----|-----|-----|-------------|
| | A | B | C | D | E | |
| AR-8A AL S | 330 | 660 | 177 | 305 | 635 | 16,7 |
| AR-8A AL L | 580 | 840 | 205 | 560 | 810 | 36 |
| AR-8A AL (HTH) | 495 | 495 | 171 | 470 | 470 | 17,3 |
| AR-8 AL (HTH) | 330 | 495 | 171 | 320 | 470 | 12,4 |
| AQ-8 AL A (HTH) | 332 | 332 | 178 | 310 | 315 | 8 |

For complete junction boxes is necessary to ask to the Sales Office.

Maximum number of entries on sides

| TYPE | M20/1/2" | | M25/3/4" | | M32/1" | | M40/1" 1/4 | | M50/1" 1/2 | | M63/2" | |
|----------------|----------|----|----------|----|--------|----|------------|----|------------|----|--------|---|
| | A | B | A | B | A | B | A | B | A | B | A | B |
| AR-8A AL S | 34 | 50 | 20 | 28 | 17 | 25 | 7 | 10 | 6 | 8 | 4 | 7 |
| AR-8A AL L | 48 | 76 | 30 | 48 | 24 | 39 | 14 | 22 | 12 | 20 | 5 | 8 |
| AR-8A AL (HTH) | 36 | 36 | 20 | 20 | 18 | 18 | 7 | 7 | 6 | 6 | 5 | 5 |
| AR-8 AL (HTH) | 24 | 36 | 14 | 20 | 12 | 18 | 5 | 7 | 4 | 6 | 3 | 5 |
| AQ-8 AL (HTH) | 31 | 31 | 18 | 18 | 16 | 16 | 7 | 7 | 5 | 5 | 4 | 4 |

INCREASED SAFETY

SB Series - AISI 316 L Stainless steel

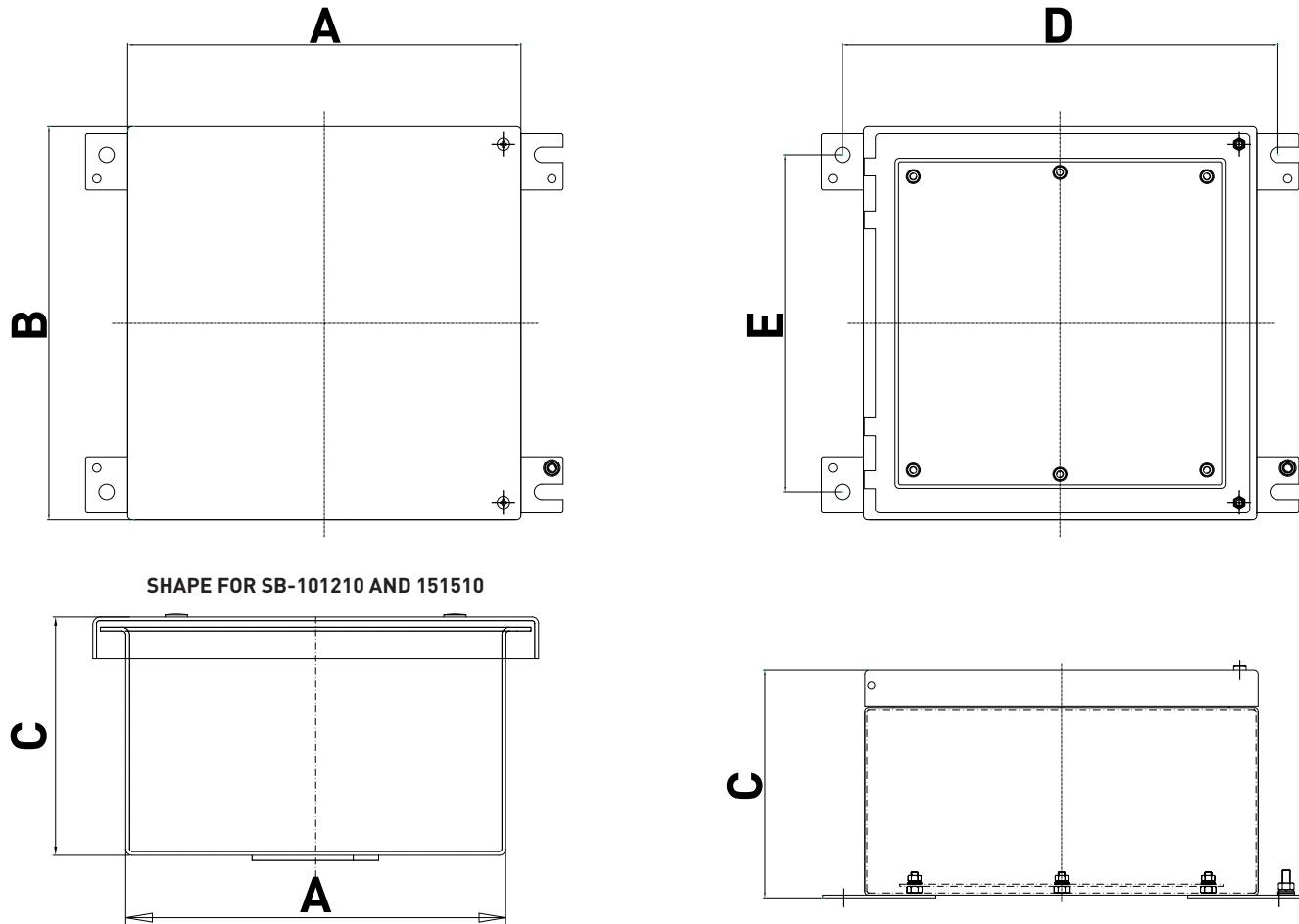


- SB are used to house Ex e and Ex i terminals, breather/drain device and pass-trough earth terminal, standard enclosure mounts hinges on the vertical side.
- Maximum numbers of terminals changes on the base of the terminals section and current, enclosure operating temperature and required temperature class.
- They are ideally suited for chemical agents environments, ON and OFF-SHORE applications and any other industries where an explosive atmosphere may be present.
- The only range full custom size from 100x120x100 mm to 910x1140x500 mm.
- Off shelf sizes: the best lead time on the market at competitive pricing.
- Our internal workshop allows flexibility in meeting any customer requirements.
- Optional polycarbonate windows to display indoor devices.
- Max ambient temperature up to +95 °C (IECEx).

TECHNICAL FEATURES

| | | | | | |
|---|--|---|--|--|--|
| Material | Stainless steel AISI 316 L with thickness 1,5 mm | | | | |
| IP rating | IP66/IP67 | | | | |
| Shock resistance | IK10 | | | | |
| Ambient temperature range | From -50°C to +60°C (ATEX) and up to +150°C (high temperature version) From -50°C to +95°C (IECEx) and up to +150°C (high temperature version) | | | | |
| Approvals | IMQ 08 ATEX 028X | IMQ 16 ATEX 004U (empty enclosure) | TUV CY 18 ATEX 0206009 (for high temperature version) | | |
| | IECEx IMQ 15.0002X | IECEx IMQ 15.0010U (empty enclosure) | IECEx EXA 18.0001 (for high temperature version) | | |
| | TR CU | | | | |
| | UL listed: NEMA TYPE 1, 4, 4X, 12 - UL 508A - CSA C22.2 No. 14-13 | | | | |
| Marking | II 2 GD | High temperature version: II 2 G | | | |
| | Ex e IIC T(**) Gb/Ex ia IIC T(**) Gb/Ex ib IIC T(**) Gb | Ex eb IIC T6...T3 Gb or Ex eb ia(*) IIC T6...T3 Gb or Ex ia(*) IIC T6...T3 Gb | | | |
| | Ex tb IIIC T(**) Db IP66/67 | IP55 | | | |
| | ** T6/T85°C, T5/T100°C, T4/T135°C | *: or ib | | | |
| Compliance | IECEx/Atex: IEC/EN : 60079-0/60079-1/60079-7/60079-11/60079-18/60079-31 | | | | |
| Gaskets | Silicon rubber (suitable for use between -70°C/+200°C) | | | | |
| Surface treatment | Acid treatment (pickling) | | | | |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester. | | | | |
| Entries | From M20x1.5mm to M80x1.5mm | | | | |
| Hardware and screws | Screws and accessories in stainless steel AISI 316 L | | | | |
| Accessories available upon request | Electropolish treatment/Side gland plate/Without hinges/Drain/Breather valve/Traffolyte/stainless steel certificate label/Internal mounting plate/Locking facility/Passing trough earth bolt/Other material thickness starting from 1,2 mm | | | | |

Dimensions SB



SB Series - AISI 316 L Stainless steel

| TYPE | DIMENSIONS [mm] | | | | | CABLE ENTRIES W/O FLANGES | | CABLE ENTRIES W. FLANGES | | MAX N° TERMINALS | | WEIGHT [Kg] |
|-------------|-----------------|-----|-----|-----|-----|---------------------------|--------|--------------------------|--------|---------------------|-------------------|-------------|
| | A | B | C | D | E | SIDE A | SIDE B | SIDE A | SIDE B | 2,5 mm ² | 4 mm ² | |
| SB-101210* | 100 | 120 | 100 | 150 | - | 4 | 4 | - | - | 7 | 6 | 1,5 |
| SB-151510** | 150 | 150 | 100 | 180 | - | 6 | 6 | - | - | 13 | 11 | 2,5 |
| SB-202010 | 200 | 200 | 100 | 230 | 160 | 9 | 9 | - | - | 22 | 19 | 3,0 |
| SB-202016 | 200 | 200 | 160 | 230 | 160 | 15 | 15 | 8 | 8 | 22 | 19 | 3,5 |
| SB-204016 | 200 | 400 | 160 | 230 | 360 | 15 | 30 | 8 | 18 | 66 | 57 | 4,8 |
| SB-282816 | 280 | 280 | 160 | 310 | 240 | 21 | 21 | 12 | 12 | 76 | 64 | 5,2 |
| SB-282827 | 280 | 280 | 270 | 310 | 240 | 46 | 46 | 33 | 33 | 76 | 64 | 7,5 |
| SB-302016 | 300 | 200 | 160 | 330 | 160 | 21 | 15 | 12 | 8 | 44 | 38 | 5,0 |
| SB-383816 | 380 | 380 | 160 | 410 | 340 | 30 | 30 | 18 | 18 | 114 | 96 | 8,1 |
| SB-383827 | 380 | 380 | 270 | 410 | 340 | 67 | 67 | 51 | 51 | 114 | 96 | 10,1 |
| SB-384516 | 380 | 450 | 160 | 410 | 410 | 30 | 36 | 18 | 20 | 171 | 144 | 10,7 |
| SB-385716 | 380 | 570 | 160 | 410 | 530 | 30 | 45 | 18 | 28 | 228 | 192 | 16,4 |
| SB-575716 | 570 | 570 | 160 | 600 | 530 | 45 | 45 | 28 | 28 | 372 | 312 | 16,4 |
| SB-575730 | 570 | 570 | 300 | 600 | 530 | 116 | 116 | 95 | 95 | 372 | 312 | 21,4 |
| SB-577620 | 570 | 760 | 200 | 600 | 720 | 73 | 98 | 54 | 74 | 558 | 468 | 21,7 |
| SB-769520 | 760 | 950 | 200 | 790 | 910 | 98 | 125 | 74 | 94 | 990 | 834 | 32,9 |
| SB-272713 | 270 | 270 | 130 | 300 | 230 | 14 | 14 | 6 | 6 | 36 | 30 | 4,5 |
| SB-353516 | 350 | 350 | 160 | 380 | 310 | 27 | 27 | 16 | 16 | 102 | 86 | 5,6 |
| SB-142013 | 140 | 200 | 130 | 170 | | 6 | 10 | 2 | 4 | 11 | 9 | 4,0 |
| SB-202713 | 200 | 270 | 130 | 230 | 230 | 10 | 14 | 4 | 6 | 36 | 30 | 7,0 |
| SB-273513 | 270 | 350 | 130 | 300 | 310 | 14 | 18 | 6 | 8 | 72 | 60 | 9,5 |
| SB-355016 | 350 | 500 | 160 | 380 | 460 | 27 | 39 | 16 | 24 | 160 | 134 | 13,0 |
| SB-505016 | 500 | 500 | 160 | 530 | 460 | 39 | 39 | 24 | 24 | 240 | 201 | 14,5 |

Upon request, any dimension between 100x120x100 and 910x1140x500 can be manufactured.

*The enclosure is without hinges and complete with TS15x5 Omega rail welded on a removable mounting plate.

** The enclosure is without hinges and complete with TS35x7,5 Omega rail welded on the back.

INCREASED SAFETY

B2X Series - Glassfiber reinforced polyester

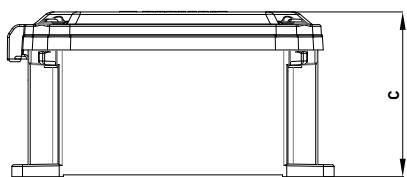


- New High resistance GRP Enclosures, developed and specially designed to host wide range of terminals, multiple power sockets and disconnectors. Tested and certified to be installed and used in extreme site conditions, offshore applications and hazardous areas (Zones 1, 2, 21 & 22 under ATEX and IECEx).
- Their smart and compact design make them easy to install and use in small and hard access spaces.
- B2X certification offers different kind of protection modes in order to satisfy wide range of application (increased safety Ex e, intrinsically safe Ex ia , Explosion proof Ex de in case of Socket junction box combination).

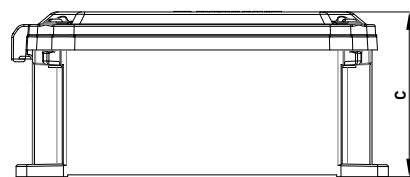
TECHNICAL FEATURES

| | |
|-----------------------------------|--|
| Material | GRP (Glassfiber reinforced polyester) |
| IP rating | IP66/IP67 |
| Ambient temperature range | -55°C to +60°C |
| Approvals | LCIE 16 ATEX 3057 X IECEx LCIE 16.0046X |
| Marking | II 2 GD Ex e/Ex ia or ib/Ex e ia or e ib IIC T(**) Gb Ex tb IIIC T** °C Db IP66/67 ** T6/T80°C, T5/T95°C, T4/T105°C Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory |
| Standard certificate label | Moulded hinges |
| Accessories in standard | |

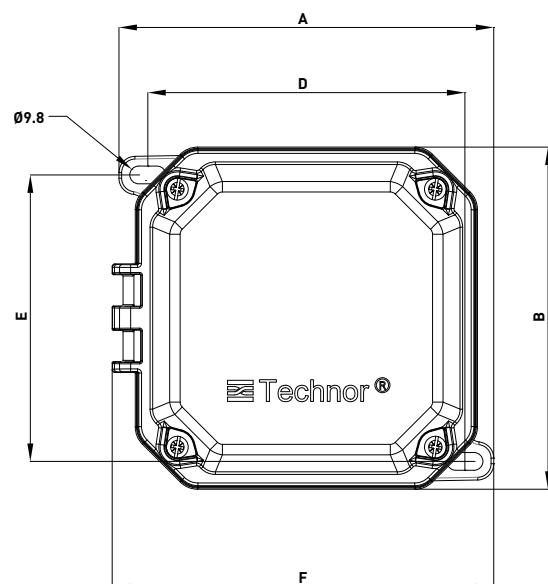
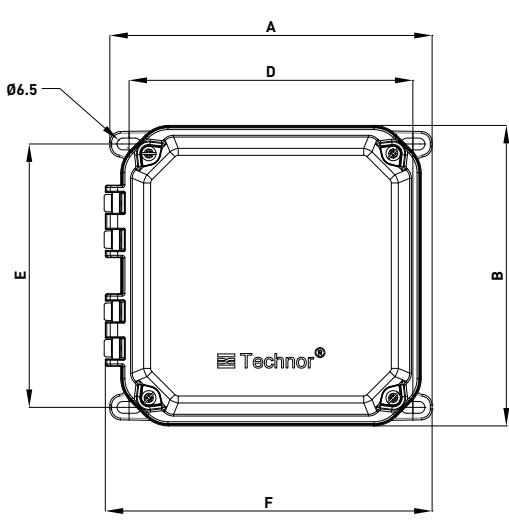
Dimensions B2X



DRAWING A



DRAWING B



| TYPE | DIMENSIONS [mm] | | | | | | DRAWING |
|-------|-----------------|-----|----|-----|-------|-----|---------|
| | A | B | C | D | E | F | |
| B2X1J | 138 | 126 | 91 | 117 | 105,5 | 141 | A |
| B2X2J | 178 | 166 | 91 | 157 | 145,5 | 181 | B |

FLAMEPROOF

CP../CPS.. Series - Copper free aluminium



The CP../CPS.. range of enclosures, used for terminals wiring, grants Ex d or Ex e mode of protection.

Boxes are manufactured in aluminium with low content of copper and complete with threaded hubs suitable for cable glands or conduit, connection does not affect the internal void, which remains available for terminals wiring.

Internal and external screws are made of AISI316 stainless steel.

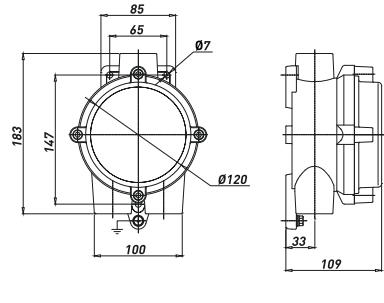
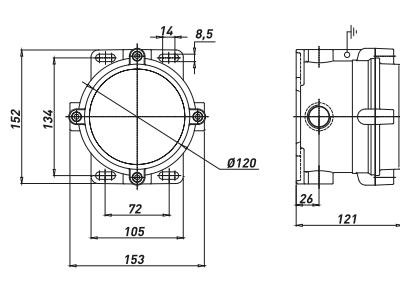
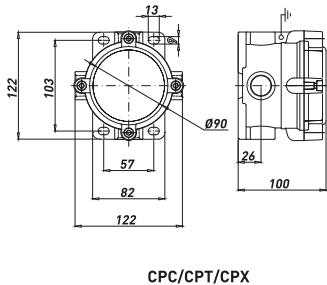
This series is taylor made on the base of customer specification, including quantity and type of operators.

Based on the customer's needs and certificate requirements, our technical department will advise and select the most suitable combination.

These boxes are suitable for hazardous areas of industrial plants for indoor and outdoor applications.

TECHNICAL FEATURES

| | |
|---|--|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -50°C to +60°C (ATEX) -60°C to +60°C (IECEx) |
| Approvals | Certified 03ATEX0009 IECEx BKI 15.0002 TR CU |
| Marking | STANDARD II 2 GD Ex d IIC T(*) Gb Ex tb IIIC T(*) Db IP66 * T6/T85°C, T5/T100°C, T4/T135°C |
| Surface treatment | Painted by green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Thread | Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125 |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Internal anticondensate painting Traffolyte/Stainless steel certificate label Terminals |
| Maximum number of terminals | (15 x 2,5 mm ² /12 x 4 mm ² /8 x 6 mm ²) |

Dimensions CP../CPS..**CP.. Series (Selection table)**

| Nº OF ENTRIES | TYPE |
|---------------|---|
| 2 | CPC-26 2XM25 CPC-26 2X3/4"GK CPC-26 2X3/4"NPT |
| 3 | CPT-26 3XM25 CPT-26 3X3/4"GK CPT-26 3X3/4"NPT |
| 4 | CPX-26 4XM25 CPX-26 4X3/4"GK CPX-26 4X3/4"NPT |

For complete junction boxes is necessary to ask to the Sales Office.

CPS.. Series (Selection table)

| Nº OF ENTRIES | TYPE |
|---------------|--|
| 2 | CPSC 2XM25 CPSC 2XM32 CPSC 2X3/4" GK CPSC 2X3/4" NPT CPSC 2X1" GK CPSC 2X1" NPT |
| 3 | CPST 3XM25 CPST 3XM32 CPST 3X3/4" GK CPST 3X3/4" NPT CPST 3X1" GK CPST 3X1" NPT |
| 3 | CPSG 3XM25 CPSG 3XM32 CPSG 3X3/4" GK CPSG 3X3/4" NPT CPSG 3X1" GK CPSG 3X1" NPT |
| 4 | CPSX 4XM25 CPSX 4XM32 CPSX 4X3/4" GK CPSX 4X3/4" NPT CPSX 4X1" GK CPSX 4X1" NPT |

For complete junction boxes is necessary to ask to the Sales Office.

FLAMEPROOF

ECR-3 - Drain valve

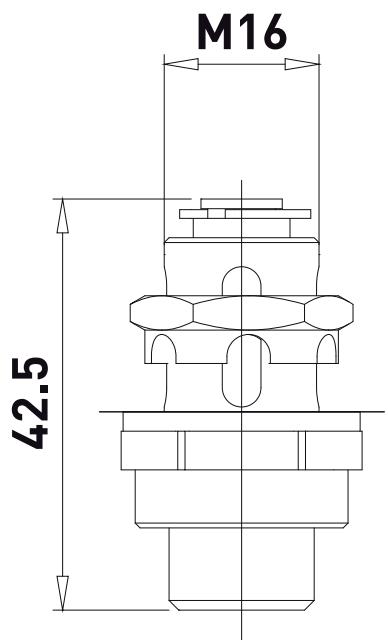
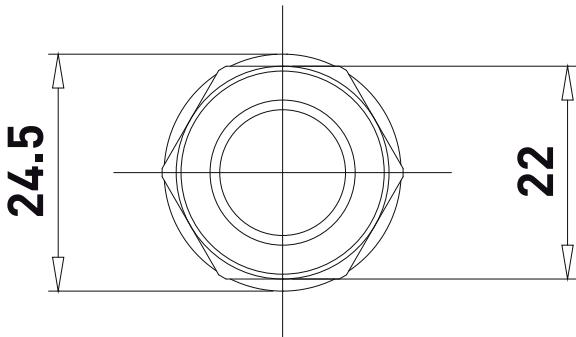


- Drain valve ECR3 is a device intended for use to evacuate the water generated due to condensation inside the enclosure.
 - Drain valve is assembled in the lowest part or side part of the enclosure because the water is accumulated in bottom part of enclosure.
 - Water will come out with the presence of drain valve device.
 - Made of stainless steel or galvanized steel.
 - Gasket is in aluminium.
 - O-ring is in silicon rubber.
 - IP66/IP67 in closed position (IP44 when installed on the bottom or on the side of enclosure*)
- *for detail see instruction note

TECHNICAL FEATURES

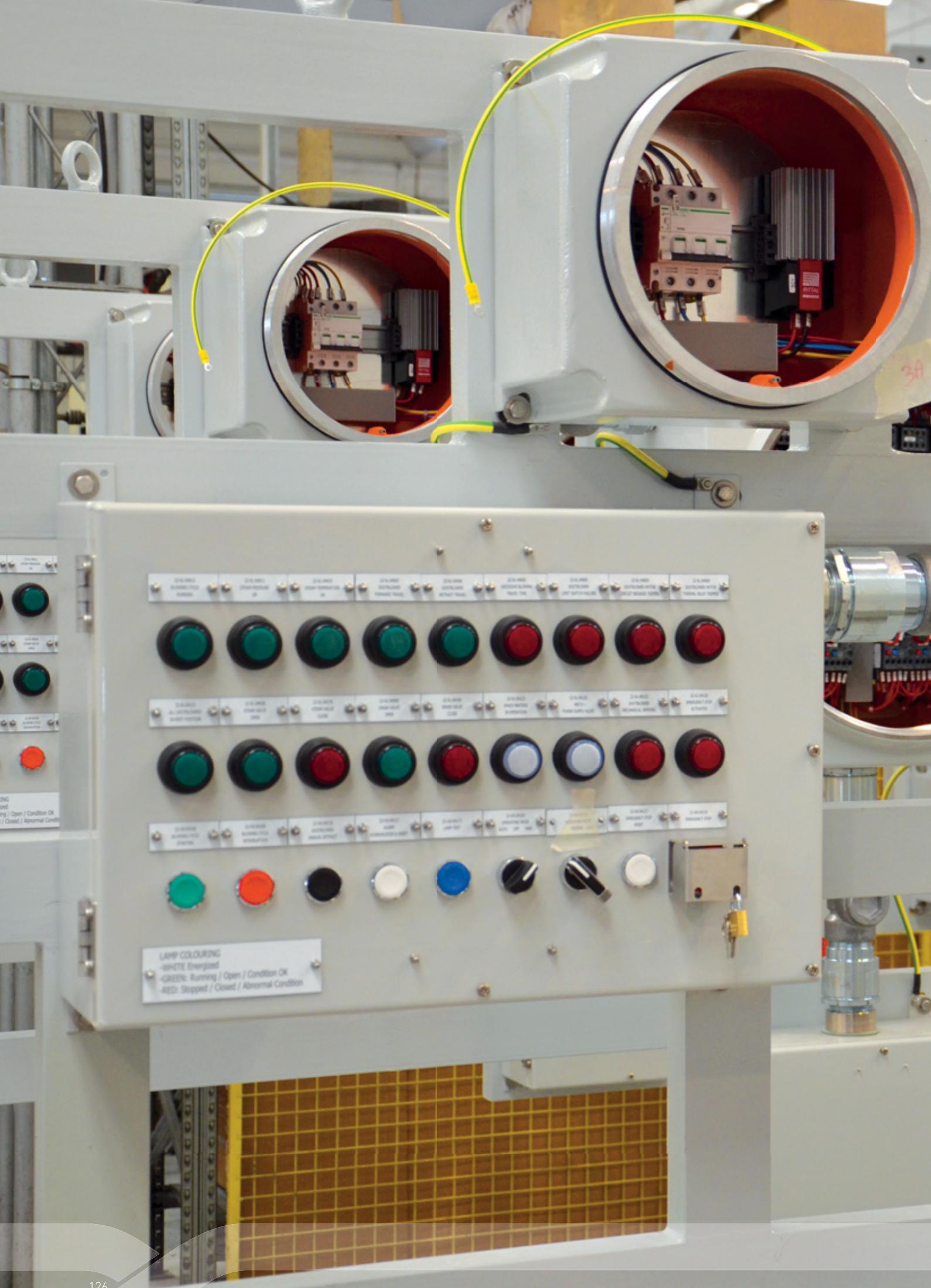
| | |
|----------------------------------|--|
| Material | Stainless steel AISI 316 L |
| IP rating | IP66/IP67 in closed position and IP44 in open position. |
| Ambient temperature range | -50°C +105°C |
| Approvals | IMQ 14 ATEX 019U – IECEx IMQ 14.0008U |
| Marking | Ex II 2GD – Ex e IIC Gb – Ex tb IIIC IP66/67 |
| Standard compliance | EN60079-0:2012; EN60079-7:2007; EN60079-31:2009 IEC60079-0:2011; IEC60079-7:2006-07; IEC60079-31:2008 |
| Zones | 1; 21 |
| Gaskets | Silicone gasket (continuous use temperature -60 ° C + 220 ° C) |
| Entries | Need to hole M16 x 1.5 6H or diameter from 16 mm to 16.5 mm and seal metal aluminum EN-AW 1050. |

Dimensions ECR-3



Drain valve ECR-3

| CODE | TYPE |
|---------------|-------------------|
| C010212005000 | ECR 3 DRAIN VALVE |



FLAMEPROOF ENCLOSURES



FLAMEPROOF
ENCLOSURES

P.128

Pressurized cabinets

- QPREX Series -
Stainless steel AISI 316 L..... 128

P.130

Gas Group IIB + H₂

- EJB.. Series -
Copper free aluminium..... 130
- EJB.. Series -
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Galvanized carbon steel..... 134

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Gas Group IIC

- GUB.. Series - Copper free aluminium or
Stainless steel AISI 316 L..... 138
- GUB./QL Series - Copper free aluminium
or Stainless Steel AISI 316 L..... 140
- GUB/EMH.. Series with window - Copper free
aluminium or Stainless Steel AISI 316 L 142
- CPS./EMH.. Series with window -
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PRESSURIZED CABINETS

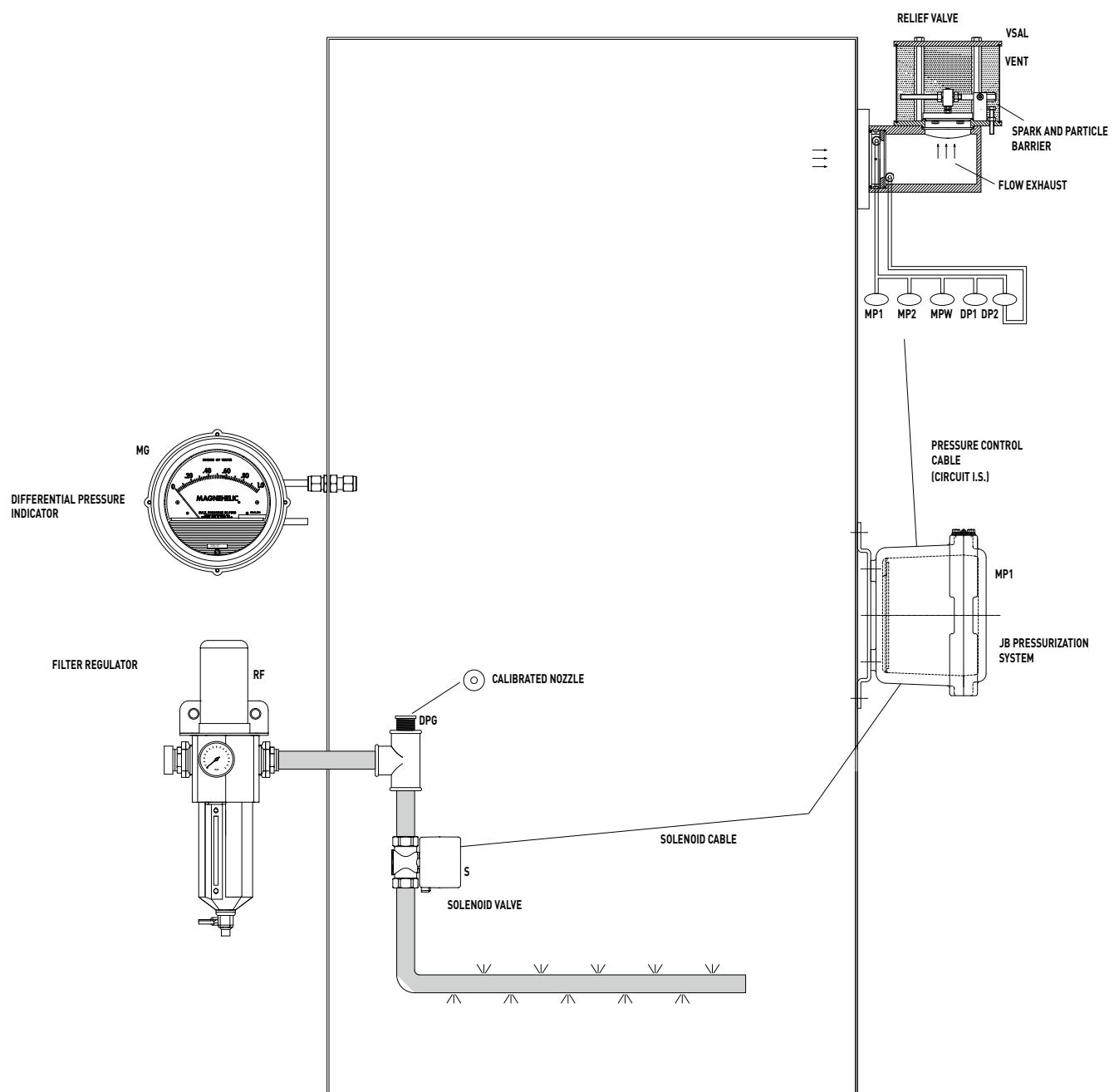
QPREX Series - Stainless steel AISI 316 L



- Modular building system allows to realize customized volume up to 10m³. One of the system that offers the widest possibilities on the market. A single system of pressurization and washing can manage multiple modules in series.
- New gasket technology minimizes the dispersion of inactive gas, increasing efficiency of pressurized system and reduce operating costs
- QPREX pressurized panels, because of the continuous influx of purging gas, prevents the build up of heat and moisture and provide a greater life cycle of the equipment.
- Quick access: easy opening and maintenance, when the doors open the system disconnects; when the doors are closed again, after the washing cycle, the system will start again automatically.
- In QPREX can be mounted non Ex components.
- Logic TEX1 first company with SIL2 (Safety Integrity Level).

TECHNICAL FEATURES

| | |
|----------------------------------|---|
| Material | AISI 316 L, AISI 304 or painted sendzimir steel |
| IP rating | IP65 |
| Ambient temperature range | From -50°C to +60°C |
| Approvals | TÜV 15 ATEX 158015 (pxb type of protection) TÜV 15 ATEX 158016 (pzc type of protection) IECEx TUN 15.0019 (pxb and pzc types of protection) |
| Marking | ATEX : Ex px/pz [ia Ga] IIC T6 or T5 or T4 Gb/Gc Ex px/pz [ia Ga] IIIC T85°C or T135°C Db/Dc IECEx Ex pxb/pzc [ia Ga] IIC T6 or T5 or T4 Gb/Gc Ex pxb/pzc [ia Ga] IIIC T85°C or T100°C or T135°C Db/Dc |
| Gaskets | EPDM or SILICONE |
| Dimensions | From 0,6 m ³ to 10 m ³ |
| Tension | Up to 24 kVac/1500 Vdc |
| Frequency | Up to 1000Hz |
| Power | Up to 1250kva |
| Pressurisation system | Technor Italsmea TEX1 (zone 1- SIL2 *) or TEX 2 (Zone 2) . Available with component certificate |
| Climatization | Vortex, Air conditioner, Cooling/heating water systems, Anticondensate heater. |
| Note | * SIL: Safety Integrity Level |



GAS GROUP IIB + H₂

EJB.. Series - Copper free aluminium



EJB.. series enclosures offers Ex d IIB or IIB+H2 mode of protection.
They are suitable for hazardous areas of industrial plants for indoor and outdoor applications

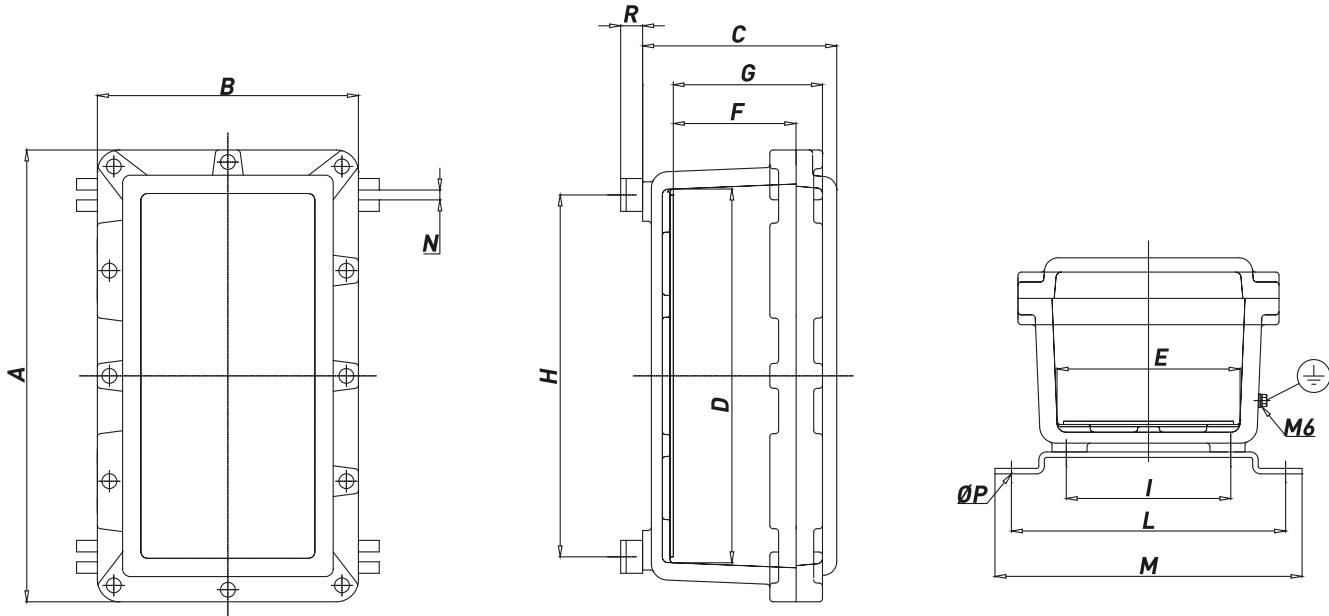
They can be equipped with following components:

- Push buttons and mechanical operators PL.. Series;
- Rotating switches PSRC Series;
- Signalling lamps PL.. Series;
- Potentiometers;
- Rotating handles SRC-1 or SRC-10;
- Measurement instruments;
- Electric and electronic equipment;
- Windows made of tempered glass.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Aluminium with low content of copper |
| IP rating | IP65, IP66, IP67 with flanged joint coated with silicone grease |
| Ambient temperature range | -50 °C up to +60 °C |
| Approvals | Certified INERIS 00ATEX0021X TR CU IECEx INE 10.0015X INMETRO PESO |
| Marking | II 2 GD Ex d IIB T(**) Gb or Ex d IIB+H2 T(**) Gb Ex tb IIIC T(**) Db IP65 or 66 or 67 ** T6/T85°C, T5/T100°C, T4/T135°C, T3/T200°C II 2(1) GD Ex d [ia Ga] IIB T6 Gb or Ex d [ia Ga] IIB+H2 T6 Gb Ex tb [ia Da] IIIC T85°C Db IP65 or 66 or 67 II 2(2) GD Ex d [ib] IIB T6 Gb or Ex d [ib] IIB+H2 T6 Gb Ex tb [ib] IIIC T85°C Db IP65 or 66 or 67 |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125 |
| Hardware and screws | AISI316 Stainless steel external screws |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Mounting brackets Drain/breather valve Hinges Door handle Internal anticondensate painting Traffolyte/Stainless steel certificate label |

Dimensions EJB Aluminium



EJB.. Series enclosures c/w internal mounting plate - ALUMINIUM

| TYPE | DIMENSIONS [mm] | | | | | | | | | | | | | WEIGHT [Kg] | COVER ENTRIES | MOUNTING PLATE | |
|---------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-------------|---------------|----------------|-----------|
| | A | B | C | D | E | F | G | H | I | L | M | N | ØP | R | | | |
| EJB-2 | 298 | 238 | 174 | 230 | 168 | 95 | 135 | 205 | 140 | 250 | 280 | 9 | M6 | 20 | 10.07 | 12 | 160 X 220 |
| EJB-3 | 412 | 238 | 177 | 340 | 167 | 85 | 136 | 330 | 150 | 250 | 280 | 9 | M8 | 20 | 13.40 | 18 | 155 X 330 |
| EJB-3A | 412 | 238 | 199 | 340 | 167 | 85 | 158 | 330 | 150 | 250 | 280 | 9 | M8 | 20 | 13.50 | 9 | 155 X 330 |
| EJB-4 | 418 | 302 | 175 | 335 | 220 | 90 | 132 | 300 | 190 | 300 | 320 | 9 | M8 | 20 | 17.50 | 20 | 210 X 325 |
| EJB-5 | 480 | 300 | 232 | 392 | 209 | 125 | 182 | 350 | 185 | 300 | 320 | 9 | M8 | 20 | 20.50 | 22 | 200 X 385 |
| EJB-6 | 483 | 408 | 238 | 387 | 310 | 130 | 186 | 355 | 280 | 390 | 420 | 9 | M8 | 20 | 33.00 | 28 | 300 X 380 |
| EJB-8 | 634 | 365 | 254 | 530 | 262 | 140 | 204 | 495 | 225 | 340 | 370 | 9 | M8 | 20 | 36.05 | 36 | 250 X 520 |
| EJB-9 | 535 | 468 | 257 | 426 | 363 | 140 | 204 | 410 | 340 | 440 | 470 | 12 | M10 | 20 | 40.00 | 34 | 350 X 420 |
| EJB-10 | 750 | 366 | 292 | 630 | 250 | 185 | 234 | 580 | 205 | 330 | 360 | 12 | M10 | 20 | 48.50 | 34 | 240 X 620 |
| EJB-11 | 596 | 505 | 267 | 483 | 394 | 130 | 204 | 445 | 360 | 480 | 510 | 12 | M10 | 20 | 53.30 | 44 | 380 X 470 |
| EJB-12 | 805 | 455 | 310 | 690 | 335 | 170 | 243 | 640 | 285 | 425 | 450 | 14 | M12 | 20 | 73.00 | 54 | 325 X 625 |
| EJB-13 | 832 | 607 | 314 | 723 | 500 | 115 | 236 | 630 | 405 | 580 | 620 | 14 | M12 | 20 | 106.00 | 76 | 463 X 683 |
| EJB-13A | 832 | 607 | 400 | 723 | 500 | 205 | 322 | 630 | 405 | 580 | 620 | 14 | M12 | 20 | 124.00 | 76 | 463 X 683 |

For complete junction boxes is necessary to ask to the Sales Office.

Note: For installations in either Zone 1 or volume up to 2dm³, barrier glands are required. Please refer to EN-60079-14.

Maximum number of entries on sides A/B

| TYPE | EJB-2 | EJB-3 | EJB-3A | EJB-4 | EJB-5 | EJB-6 | EJB-8 | EJB-9 | EJB-10 | EJB-11 | EJB-12 | EJB-13 | EJB-13A |
|------------|-------|-------|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|---------|
| M20/1/2" | 9/7 | 14/7 | 14/7 | 14/9 | 27/13 | 24/18 | 35/16 | 27/24 | 57/21 | 32/27 | 61/28 | 48/32 | 81/54 |
| M25/3/4" | 9/5 | 7/3 | 7/3 | 7/4 | 14/7 | 14/10 | 29/13 | 24/18 | 46/18 | 21/27 | 40/18 | 27/18 | 54/36 |
| M32/1" | 4/3 | 6/3 | 6/3 | 6/4 | 12/5 | 12/9 | 18/8 | 12/10 | 29/10 | 14/12 | 32/16 | 23/16 | 35/24 |
| M50/1" 1/2 | 3/2 | 4/2 | 4/2 | 4/3 | 5/2 | 5/4 | 7/3 | 9/9 | 14/5 | 6/5 | 16/7 | 9/6 | 18/10 |
| M63/2" | 2/1 | 3/1 | 3/1 | 3/2 | 4/2 | 4/3 | 6/2 | 4/4 | 12/4 | 5/4 | 12/5 | 8/5 | 14/9 |
| M75/2" 1/2 | - | - | - | - | 3/1 | 3/2 | 4/2 | 3/3 | 5/2 | 4/3 | 6/3 | 6/4 | 6/4 |
| M80/3" | - | - | - | - | 2/1 | 2/2 | 3/1 | 2/2 | 4/1 | 3/2 | 4/2 | 5/3 | 5/3 |

GAS GROUP IIB + H₂

EJB.. Series - Stainless steel AISI 316 L



EJB.. series enclosures offers Ex d IIB or IIB+H2 mode of protection. They are suitable for hazardous areas of industrial plants for indoor and outdoor applications. They can be equipped with following components:

- Push buttons and mechanical operators PL.. Series;
- Rotating switches PSRC Series;
- Signalling lamps PL.. Series;
- Potentiometers;
- Rotating handles SRC-1 or SRC-10;
- Measurement instruments;
- Electric and electronic equipment;
- Windows made of tempered glass.

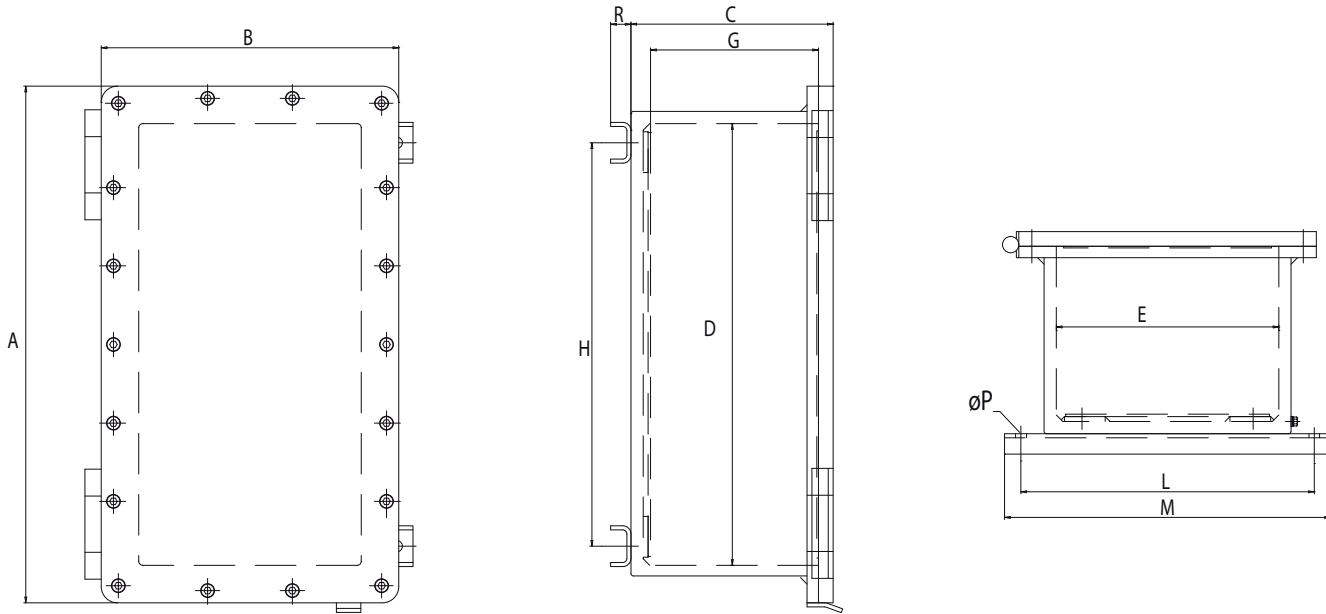
They can be used in different applications such as push button stations, instrument housing, lighting distribution panels, power distribution panels, heat tracing panels, motor protection, etc.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Stainless steel AISI 316 L |
| IP rating | IP65, IP66, IP67 with flanged joint coated with silicone grease |
| Ambient temperature range | -50 °C up to +60 °C |
| Approvals | Certified INERIS 00ATEX0021X TR CU IECEx INE 10.0015X INMETRO PESO |
| Marking | II 2 GD Ex d IIB T(**) Gb or Ex d IIB+H2 T(**) Gb Ex tb IIIC T(**) Db IP65 or 66 or 67 ** T6/T85°C, T5/T100°C, T4/T135°C, T3/T200°C II 2(1) GD Ex d [ia Ga] IIB T6 Gb or Ex d [ia Ga] IIB+H2 T6 Gb Ex tb [ia Da] IIIC T85°C Db IP65 or 66 or 67 II 2(2) GD Ex d [ib] IIB T6 Gb or Ex d [ib] IIB+H2 T6 Gb Ex tb [ib] IIIC T85°C Db IP65 or 66 or 67 |
| Surface treatment | Unpainted |
| Entries | Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125 |
| Hardware and screws | AISI316 Stainless steel external screws |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Drain/breather valve Door handle External polyurethane painting cycle Internal anticondensate painting Taffolyte/Stainless steel certificate label |

Dimensions EJB Stainless steel

The sides A, B & C of our EJB enclosures can be increased/decrease of 15% covering the dimensions from 298 x 238 x 175mm up to 950 x 690 x 440mm



EJB.. Series enclosures c/w internal mounting plate, mounting brackets, hinges - AISI 316 L

| TYPE | DIMENSIONS [mm] | | | | | | | | | | | WEIGHT [Kg] | COVER ENTRIES | INT. MOUNTING PLATE |
|---------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|----|----|-------------|---------------|---------------------|
| | A | B | C | D | E | G | H | L | M | ØP | R | | | |
| EJB-2 | 298 | 238 | 175 | 238 | 178 | 136 | 205 | 250 | 280 | 10 | 20 | 35 | 12 | 160 X 220 |
| EJB-3 | 412 | 238 | 175 | 350 | 176 | 136 | 330 | 250 | 280 | 10 | 20 | 45 | 18 | 155 X 330 |
| EJB-4 | 418 | 302 | 175 | 345 | 230 | 136 | 300 | 305 | 340 | 12 | 20 | 55 | 20 | 210 X 325 |
| EJB-5 | 480 | 300 | 222 | 405 | 225 | 183 | 350 | 295 | 330 | 12 | 20 | 70 | 22 | 200 X 385 |
| EJB-6 | 483 | 408 | 229 | 399 | 324 | 166 | 355 | 410 | 450 | 14 | 25 | 93 | 28 | 300 X 380 |
| EJB-8 | 634 | 365 | 248 | 542 | 273 | 204 | 495 | 360 | 400 | 14 | 25 | 114 | 36 | 250 X 520 |
| EJB-9 | 535 | 468 | 248 | 443 | 376 | 204 | 400 | 460 | 500 | 14 | 25 | 118 | 34 | 350 X 420 |
| EJB-11 | 596 | 505 | 247 | 496 | 405 | 203 | 445 | 490 | 530 | 14 | 25 | 139 | 44 | 380 X 470 |
| EJB-12 | 805 | 455 | 300 | 705 | 355 | 252 | 640 | 440 | 480 | 16 | 30 | 181 | 54 | 325 X 675 |
| EJB-13 | 832 | 608 | 300 | 732 | 508 | 252 | 667 | 605 | 650 | 18 | 30 | 235 | 76 | 463 X 683 |
| EJB-13A | 832 | 608 | 390 | 732 | 508 | 342 | 667 | 605 | 650 | 18 | 30 | 262 | 76 | 463 X 683 |

Maximum number of entries on sides A/B

| TYPE | EJB-2 | EJB-3 | EJB-3A | EJB-4 | EJB-5 | EJB-6 | EJB-8 | EJB-9 | EJB-10 | EJB-11 | EJB-12 | EJB-13 | EJB-13A |
|------------|-------|-------|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|---------|
| M20/1/2" | 9/7 | 14/7 | 14/7 | 14/9 | 27/13 | 24/18 | 35/16 | 27/24 | 57/21 | 32/27 | 61/28 | 48/32 | 81/54 |
| M25/3/4" | 9/5 | 7/3 | 7/3 | 7/4 | 14/7 | 14/10 | 29/13 | 24/18 | 46/18 | 21/27 | 40/18 | 27/18 | 54/36 |
| M32/1" | 4/3 | 6/3 | 6/3 | 6/4 | 12/5 | 12/9 | 18/8 | 12/10 | 29/10 | 14/12 | 32/16 | 23/16 | 35/24 |
| M50/1" 1/2 | 3/2 | 4/2 | 4/2 | 4/3 | 5/2 | 5/4 | 7/3 | 9/9 | 14/5 | 6/5 | 16/7 | 9/6 | 18/10 |
| M63/2" | 2/1 | 3/1 | 3/1 | 3/2 | 4/2 | 4/3 | 6/2 | 4/4 | 12/4 | 5/4 | 12/5 | 8/5 | 14/9 |
| M75/2" 1/2 | - | - | - | - | 3/1 | 3/2 | 4/2 | 3/3 | 5/2 | 4/3 | 6/3 | 6/4 | 6/4 |
| M80/3" | - | - | - | - | 2/1 | 2/2 | 3/1 | 2/2 | 4/1 | 3/2 | 4/2 | 5/3 | 5/3 |

GAS GROUP IIB + H₂

EJB.. Series – Galvanized carbon steel



EJB.. series enclosures offers Ex d IIB or IIB+H2 mode of protection. They are suitable for hazardous areas of industrial plants for indoor and outdoor applications. They can be equipped with following components:

- Push buttons and mechanical operators PL.. Series;
- Rotating switches PSRC Series;
- Signalling lamps PL.. Series;
- Potentiometers;
- Rotating handles SRC-1 or SRC-10;
- Measurement instruments;
- Electric and electronic equipment;
- Windows made of tempered glass.

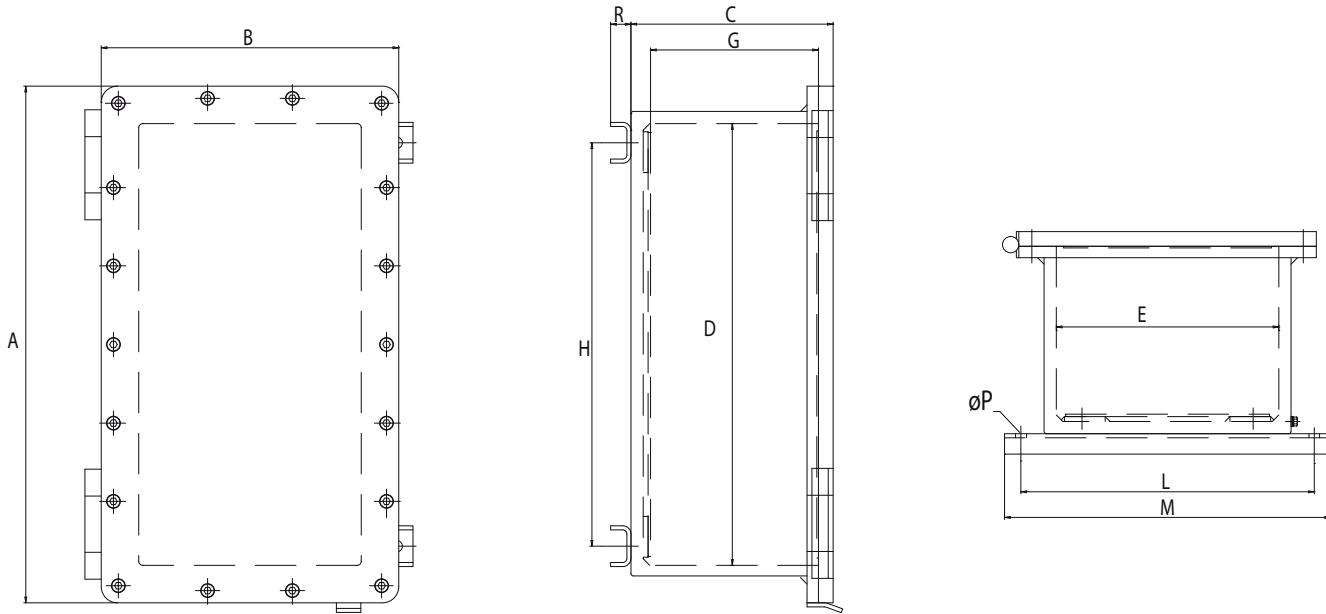
They can be used in different applications such as push button stations, instrument housing, lighting distribution panels, power distribution panels, heat tracing panels, motor protection, etc.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Galvanized carbon steel |
| IP rating | IP65, IP66, IP67 with flanged joint coated with silicone grease |
| Ambient temperature range | -50 °C up to +60 °C |
| Approvals | Certified INERIS 00ATEX0021X TR CU IECEx INE 10.0015X INMETRO PESO |
| Marking | II 2 GD Ex d IIB T(**) Gb or Ex d IIB+H2 T(**) Gb Ex tb IIIC T(**) Db IP65 or 66 or 67 ** T6/T85°C, T5/T100°C, T4/T135°C, T3/T200°C II 2(1) GD Ex d [ia Ga] IIB T6 Gb or Ex d [ia Ga] IIB+H2 T6 Gb Ex tb [ia Da] IIIC T85°C Db IP65 or 66 or 67 II 2(2) GD Ex d [ib] IIB T6 Gb or Ex d [ib] IIB+H2 T6 Gb Ex tb [ib] IIIC T85°C Db IP65 or 66 or 67 |
| Surface treatment | Hot dip galvanization |
| Entries | Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125 |
| Hardware and screws | AISI316 Stainless steel external screws |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Drain/breather valve Door handle External polyurethane painting cycle Internal anticondensate painting Taffolyte/Stainless steel certificate label |

Dimensions EJB Galvanized carbon steel

The sides A, B & C of our EJB enclosures can be increased/decrease of 15% covering the dimensions from 298 x 238 x 175mm up to 950 x 690 x 440mm



EJB.. Series enclosures c/w internal mounting plate, mounting brackets, hinges – Galvanized carbon steel

| TYPE | DIMENSIONS [mm] | | | | | | | | | | | WEIGHT [Kg] | COVER ENTRIES | INT. MOUNTING PLATE |
|---------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|----|----|-------------|---------------|---------------------|
| | A | B | C | D | E | G | H | L | M | ØP | R | | | |
| EJB-2 | 298 | 238 | 175 | 238 | 178 | 136 | 205 | 250 | 280 | 10 | 20 | 35 | 12 | 160 X 220 |
| EJB-3 | 412 | 238 | 175 | 350 | 176 | 136 | 330 | 250 | 280 | 10 | 20 | 45 | 18 | 155 X 330 |
| EJB-4 | 418 | 302 | 175 | 345 | 230 | 136 | 300 | 305 | 340 | 12 | 20 | 55 | 20 | 210 X 325 |
| EJB-5 | 480 | 300 | 222 | 405 | 225 | 183 | 350 | 295 | 330 | 12 | 20 | 70 | 22 | 200 X 385 |
| EJB-6 | 483 | 408 | 229 | 399 | 324 | 166 | 355 | 410 | 450 | 14 | 25 | 93 | 28 | 300 X 380 |
| EJB-8 | 634 | 365 | 248 | 542 | 273 | 204 | 495 | 360 | 400 | 14 | 25 | 114 | 36 | 250 X 520 |
| EJB-9 | 535 | 468 | 248 | 443 | 376 | 204 | 400 | 460 | 500 | 14 | 25 | 118 | 34 | 350 X 420 |
| EJB-11 | 596 | 505 | 247 | 496 | 405 | 203 | 445 | 490 | 530 | 14 | 25 | 139 | 44 | 380 X 470 |
| EJB-12 | 805 | 455 | 300 | 705 | 355 | 252 | 640 | 440 | 480 | 16 | 30 | 181 | 54 | 325 X 675 |
| EJB-13 | 832 | 608 | 300 | 732 | 508 | 250 | 667 | 605 | 650 | 18 | 30 | 235 | 76 | 463 X 683 |
| EJB-13A | 832 | 608 | 390 | 732 | 508 | 342 | 667 | 605 | 650 | 18 | 30 | 262 | 76 | 463 X 683 |

Maximum number of entries on sides A/B

| TYPE | EJB-2 | EJB-3 | EJB-3A | EJB-4 | EJB-5 | EJB-6 | EJB-8 | EJB-9 | EJB-10 | EJB-11 | EJB-12 | EJB-13 | EJB-13A |
|------------|-------|-------|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|---------|
| M20/1/2" | 9/7 | 14/7 | 14/7 | 14/9 | 27/13 | 24/18 | 35/16 | 27/24 | 57/21 | 32/27 | 61/28 | 48/32 | 81/54 |
| M25/3/4" | 9/5 | 7/3 | 7/3 | 7/4 | 14/7 | 14/10 | 29/13 | 24/18 | 46/18 | 21/27 | 40/18 | 27/18 | 54/36 |
| M32/1" | 4/3 | 6/3 | 6/3 | 6/4 | 12/5 | 12/9 | 18/8 | 12/10 | 29/10 | 14/12 | 32/16 | 23/16 | 35/24 |
| M50/1" 1/2 | 3/2 | 4/2 | 4/2 | 4/3 | 5/2 | 5/4 | 7/3 | 9/9 | 14/5 | 6/5 | 16/7 | 9/6 | 18/10 |
| M63/2" | 2/1 | 3/1 | 3/1 | 3/2 | 4/2 | 4/3 | 6/2 | 4/4 | 12/4 | 5/4 | 12/5 | 8/5 | 14/9 |
| M75/2" 1/2 | - | - | - | - | 3/1 | 3/2 | 4/2 | 3/3 | 5/2 | 4/3 | 6/3 | 6/4 | 6/4 |
| M80/3" | - | - | - | - | 2/1 | 2/2 | 3/1 | 2/2 | 4/1 | 3/2 | 4/2 | 5/3 | 5/3 |

GAS GROUP IIB + H2

EJB.. Series

SPARES & ACCESSORIES

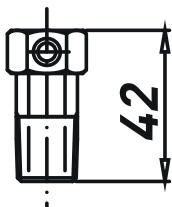
Wall mounting brackets

| CODE | TYPE |
|---------------|--|
| B0A0100020000 | MOUNTING BRACKETS FOR EJB-2 + SCREWS (STF-2) |
| B0A0100021000 | MOUNTING BRACKETS FOR EJB-3 + SCREWS (STF-3) |
| B0A0100022000 | MOUNTING BRACKETS FOR EJB-4/5 + SCREWS (STF-4/5) |
| B0A0100023000 | MOUNTING BRACKETS FOR EJB-6 + SCREWS (STF-6) |
| B0A0100024000 | MOUNTING BRACKETS FOR EJB-8 + SCREWS (STF-8) |
| B0A0100025000 | MOUNTING BRACKETS FOR EJB-9 + SCREWS (STF-9) |
| B0A0100026000 | MOUNTING BRACKETS FOR EJB-10 + SCREWS (STF-10) |
| B0A0100027000 | MOUNTING BRACKETS FOR EJB-11 + SCREWS (STF-11) |
| B0A0100028000 | MOUNTING BRACKETS FOR EJB-12 + SCREWS (STF-12) |
| B0A0100029000 | MOUNTING BRACKETS FOR EJB-13 + SCREWS (STF-13) |

Available upon request AISI 316 L made version

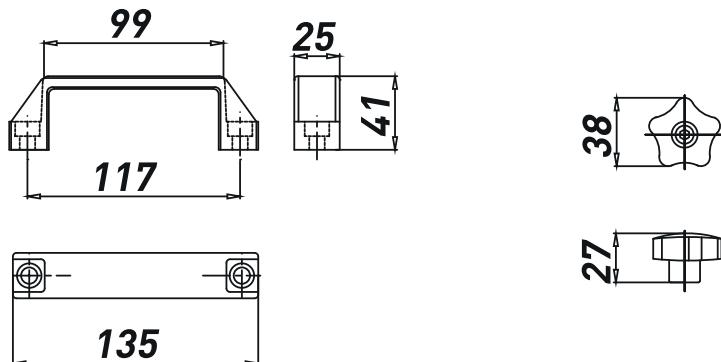
Drain/Breather valve

| CODE | TYPE |
|---------------|-------------|
| C010200051000 | ECR 1 VALVE |



Door handles

| CODE | TYPE |
|---------------|---|
| B0A0100049000 | HANDLE FOR EJB (FROM 7 TO 13A) + SCREWS |
| B0A0100048000 | KNOB FOR EJB (UP TO 6) + SCREWS |

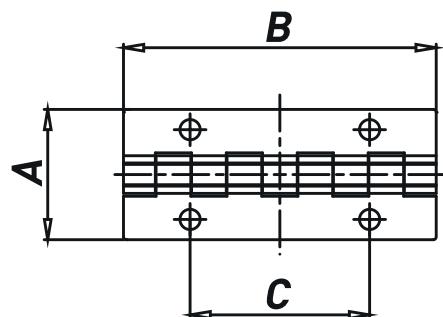


Hinges (for aluminium EJB Series)

| CODE | TYPE |
|---------------|-------------------------------------|
| B0A0100081000 | AISI 316 L HINGES 56X38MM + SCREWS |
| B0A0100043000 | AISI 316 L HINGES 60X45MM + SCREWS |
| B0A0100045000 | AISI 316 L HINGES 108X45MM + SCREWS |

Selection table

| HINGES L=56X38MM | HINGES L=60X45MM | HINGES L=108X45MM |
|------------------|------------------|-------------------|
| EJB-2 | EJB-6 | EJB-12 |
| EJB-3 | EJB-8 | EJB-13 |
| EJB-3A | EJB-9 | EJB-13A |
| EJB-4 | EJB-10 | |
| EJB-5 | EJB-11 | |



Windows

The windows may have square, rectangular, circular shape with following dimensions:

- Square shape: side dimension from 40 to 400mm
- Rectangular shape: long side dimension from 70 to 400mm; short side dimension from 40 to 200mm
- Circular shape: diameter from 70 to 250mm

As standard sizes we propose:

- Rectangular shape type B; 40mm x 70mm
- Rectangular shape type C; 40mm x 200mm
- Rectangular shape type D; 100mm x 270mm
- Rectangular shape type E; 175mm x 380mm
- Circular shape Ø 70mm, 85mm, 100mm, 120mm, 150mm, 170mm, 190mm, 230mm

Under IECEx certification, only some windows are available.

Please contact our Sales Office for more information.

GAS GROUP IIC

GUB.. Series - Copper free aluminium or Stainless steel AISI 316 L



GUB.. series enclosures offers Ex d IIC mode of protection.

They are suitable for hazardous areas of industrial plants for indoor and outdoor applications.

GUB.. QL version can be equipped with following components:

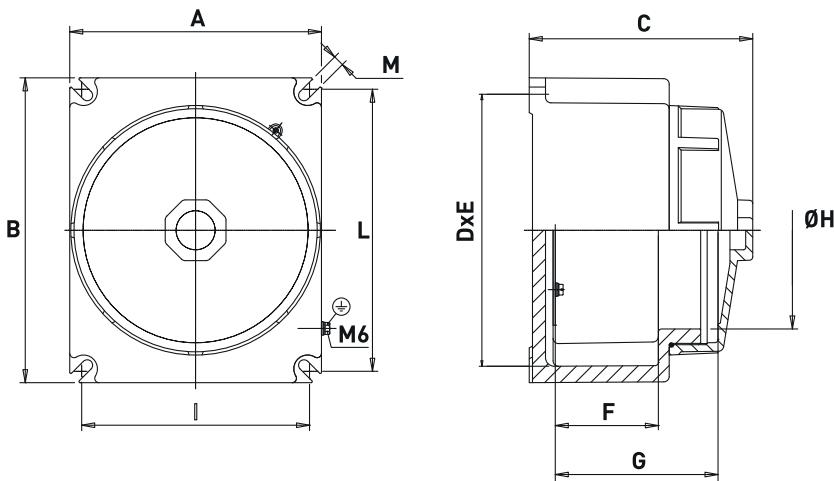
- Push buttons and mechanical operators PL.. Series;
- Rotating switches PSRC Series;
- Signalling lamps PL.. Series;
- Potentiometers;
- Rotating handles SRC-1 or SRC-10;
- Measurement instruments;
- Electric and electronic equipment;
- Windows made of tempered glass (EMH version).

They can be used in different applications such as push button stations, instrument housing, lighting distribution panels, power distribution panels, heat tracing panels, motor protection, etc.

TECHNICAL FEATURES

| | |
|---|--|
| Material | Aluminium with low content of copper Stainless steel AISI 316 L (upon request) The sides A,B & C can be increased/decrease of 10% |
| IP rating | IP66 |
| Ambient temperature range | -50°C to +55°C (ATEX) -60°C to +60°C (IECEx) |
| Approvals | Certified 00ATEX0033X IECEx BKI 15.0003 TR CU |
| Marking | II 2 GD Ex d IIC T(*) Gb Ex tb IIIC T(*) Db IP66 * T6/T85°C, T5/T100°C, T4/T135°C II 2(1) GD Ex d [ia Ga] IIC T6 Gb Ex tb [ia Da] IIIC T85°C Db IP66 II 2(2) GD Ex d [ib] IIC T6 Gb Ex tb [ib] IIIC T85°C Db IP66 |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125 |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Drain/breather valve Internal anticondensate painting Traffolyte/Stainless steel certificate label Stainless steel construction |

Dimensions GUB..



GUB Series enclosures c/w internal mounting plate - Aluminium

| TYPE | DIMENSIONS [mm] | | | | | | | | | | | WEIGHT [Kg] |
|--------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------------|
| | A | B | C | D | E | F | G | ØH | I | L | M | |
| GUB-01 | 169 | 169 | 152 | 139 | 139 | 62 | 105 | 125 | 150 | 150 | 7 | 3.60 |
| GUB-02 | 190 | 190 | 164 | 160 | 160 | 63 | 113 | 144 | 170 | 170 | 8 | 4.70 |
| GUB-03 | 210 | 210 | 179 | 180 | 180 | 78 | 127 | 167 | 190 | 190 | 8 | 6.00 |
| GUB-04 | 232 | 281 | 206 | 202 | 251 | 97 | 152 | 183 | 210 | 260 | 8 | 8.90 |
| GUB-05 | 257 | 298 | 222 | 227 | 268 | 106 | 163 | 206 | 235 | 275 | 8 | 11.90 |
| GUB-06 | 295 | 330 | 248 | 259 | 295 | 140 | 203 | 242 | 270 | 305 | 10 | 15.80 |

For complete junction boxes is necessary to ask to the Sales Office.

Note: For installations in either Zone 1 or in the presence of Group IIC gases, barrier glands are required. Please refer to EN-60079-14.

Maximum number of entries on sides A/B

| TYPE | GUB-01 | GUB-02 | GUB-03 | GUB-04 | GUB-05 | GUB-06 |
|------------|--------|--------|--------|--------|--------|--------|
| M20/1/2" | 3/3 | 5/5 | 5/5 | 5/7 | 7/9 | 7/9 |
| M25/3/4" | 3/3 | 5/5 | 5/5 | 5/7 | 7/9 | 7/9 |
| M32/1" | 2/2 | 3/3 | 3/3 | 5/5 | 5/7 | 5/7 |
| M50/1" 1/2 | 1/1 | 1/1 | 2/2 | 2/3 | 2/3 | 3/5 |
| M63/2" | 1/1 | 1/1 | 1/1 | 2/2 | 2/2 | 2/3 |
| M75/2" 1/2 | - | - | - | 1/2 | 1/2 | 2/2 |
| M80/3" | - | - | - | 1/1 | 1/2 | 1/2 |

GAS GROUP IIC

GUB../QL Series - Copper free aluminium or Stainless Steel AISI 316 L



GUB.. series enclosures offers Ex d IIC mode of protection.

They are suitable for hazardous areas of industrial plants for indoor and outdoor applications.

GUB.. QL version can be equipped with following components:

- Push buttons and mechanical operators PL.. Series;
- Rotating switches PSRC Series;
- Signalling lamps PL.. Series;
- Potentiometers;
- Rotating handles SRC-1 or SRC-10;
- Measurement instruments;
- Electric and electronic equipment;
- Windows made of tempered glass (EMH version).

They can be used in different applications such as push button stations, instrument housing, lighting distribution panels, power distribution panels, heat tracing panels, motor protection, etc.

TECHNICAL FEATURES

Material

Aluminium with low content of copper
Stainless steel AISI 316 L (upon request)
The sides A,B & C can be increased/decrease of 10%

IP rating

IP66

Ambient temperature range

-50°C to +55°C (ATEX)
-60°C to +60°C (IECEx)

Approvals

(Complete enclosures)

Certified 00ATEX0033X
IECEx BKI 15.0003
TR CU

Marking

II 2 GD
Ex d IIC T(*) Gb
Ex tb IIIC T(*) Db IP66
* T6/T85°C, T5/T100°C, T4/T135°C

II 2(1) GD
Ex d [ia Ga] IIC T6 Gb
Ex tb [ia Da] IIIC T85°C Db IP66

II 2(2) GD
Ex d [ib] IIC T6 Gb
Ex tb [ib] IIIC T85°C Db IP66

Surface treatment

Green colour polyurethane painting cycle RAL6003 (other colour available upon request)

Entries

Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125

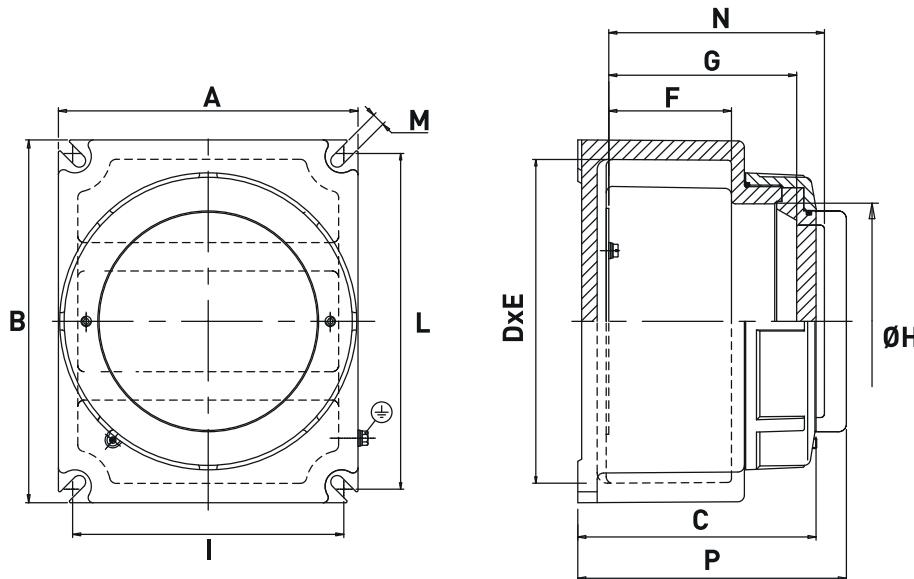
Standard certificate label

Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory.

Accessories available upon request

Drain/breather valve
Internal anticondensate painting
Traffolyte/Stainless steel certificate label
Stainless steel construction

Dimensions GUB../QL



GUB../QL Series enclosures c/w internal mounting plate - Aluminium

| TYPE | DIMENSIONS [mm] | | | | | | | | | | | | | WEIGHT [Kg] | COVER ENTRIES |
|-----------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-------------|---------------|
| | A | B | C | D | E | F | G | ØH | I | L | M | N | P | | |
| GUB-02 QL | 190 | 190 | 139 | 160 | 160 | 63 | 104 | 144 | 170 | 170 | 8 | 143 | 179 | 4.70 | 3 |
| GUB-03 QL | 210 | 210 | 160 | 180 | 180 | 78 | 119 | 167 | 190 | 190 | 8 | 139 | 174 | 6.00 | 4 |
| GUB-06 QL | 295 | 330 | 236 | 259 | 195 | 140 | 186 | 242 | 270 | 305 | 10 | - | - | 15.80 | 10 |

For complete junction boxes is necessary to ask to the Sales Office.

Note: For installations in either Zone 1 or in the presence of Group IIC gases, barrier glands are required. Please refer to EN-60079-14.

Maximum number of entries on sides A/B

| TYPE | GUB-02 | GUB-03 | GUB-06 |
|------------|--------|--------|--------|
| M20/1/2" | 5/5 | 5/5 | 7/9 |
| M25/3/4" | 5/5 | 5/5 | 7/9 |
| M32/1" | 3/3 | 3/3 | 5/7 |
| M50/1" 1/2 | 1/1 | 2/2 | 3/5 |
| M63/2" | 1/1 | 1/1 | 2/3 |
| M75/2" 1/2 | - | - | 2/2 |
| M80/3" | - | - | 1/2 |

GAS GROUP IIC

GUB/EMH.. Series with window - Copper free aluminium or Stainless Steel AISI 316 L



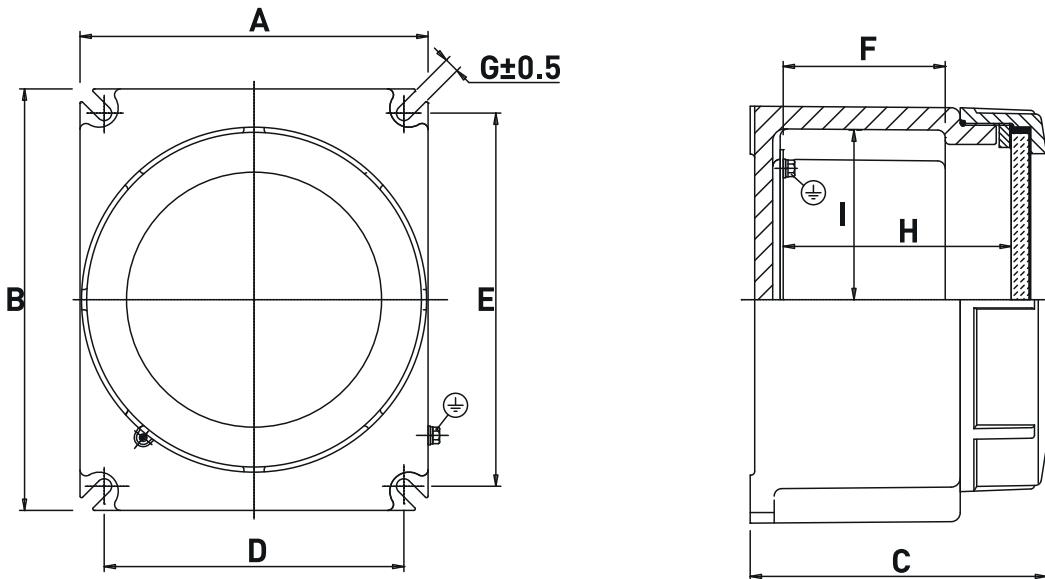
GUB/EMH.. series instrument housings are based on the features of our GUB.. enclosures and offer Ex d IIC mode of protection.

They are suitable for hazardous areas of industrial plants for indoor and outdoor applications.

TECHNICAL FEATURES

| | |
|--|---|
| Material | Aluminium with low content of copper Stainless steel AISI 316 L (upon request) The sides A,B & C can be increased/decrease of 10% |
| IP rating | IP66 |
| Ambient temperature range | -50°C to +55°C (ATEX) -60°C to +60°C (IECEx) |
| Approvals (Complete enclosures) | Certified 00ATEX0033X IECEx BKI 15.0003 TR CU |
| Marking | II 2 GD Ex d IIC T(*) Gb Ex tb IIIC T(*) Db IP66 * T6/T85°C, T5/T100°C, T4/T135°C |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125 |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Drain/breather valve Internal anticondensate painting Traffolyte/Stainless steel certificate label |

Dimensions GUB/EMH..



GUB/EMH.. Series enclosures c/w internal mounting plate - Aluminium

| TYPE | DIMENSIONS [mm] | | | | | | | WINDOW DIAMETER | WEIGHT [Kg] |
|--------------|-----------------|-----|-----|-----|-----|-----|-----|-----------------|-------------|
| | A | B | C | D | E | F | H | | |
| EMH-160 + PS | 210 | 210 | 160 | 180 | 180 | 78 | 115 | 155 | 6.00 |
| EMH-175 + PS | 232 | 281 | 185 | 202 | 251 | 97 | 141 | 170 | 8.90 |
| EMH-200 + PS | 257 | 298 | 200 | 227 | 268 | 106 | 150 | 195 | 11.90 |
| EMH-230 + PS | 295 | 330 | 236 | 259 | 295 | 140 | 189 | 230 | 15.80 |

For complete junction boxes is necessary to ask to the Sales Office.

Maximum number of entries on sides A/B under ATEX directive

| TYPE | EMH-160 | EMH-175 | EMH-200 | EMH-230 |
|------------|---------|---------|---------|---------|
| M20/1/2" | 5/5 | 5/7 | 7/9 | 7/9 |
| M25/3/4" | 5/5 | 5/7 | 7/9 | 7/9 |
| M32/1" | 3/3 | 5/5 | 5/7 | 5/7 |
| M50/1" 1/2 | 2/2 | 2/3 | 2/3 | 3/5 |
| M63/2" | 1/1 | 2/2 | 2/2 | 2/3 |
| M75/2" 1/2 | - | 1/2 | 1/2 | 2/2 |
| M80/3" | - | 1/1 | 1/2 | 1/2 |

GAS GROUP IIC

CPS../EMH.. Series with window - Copper free aluminium



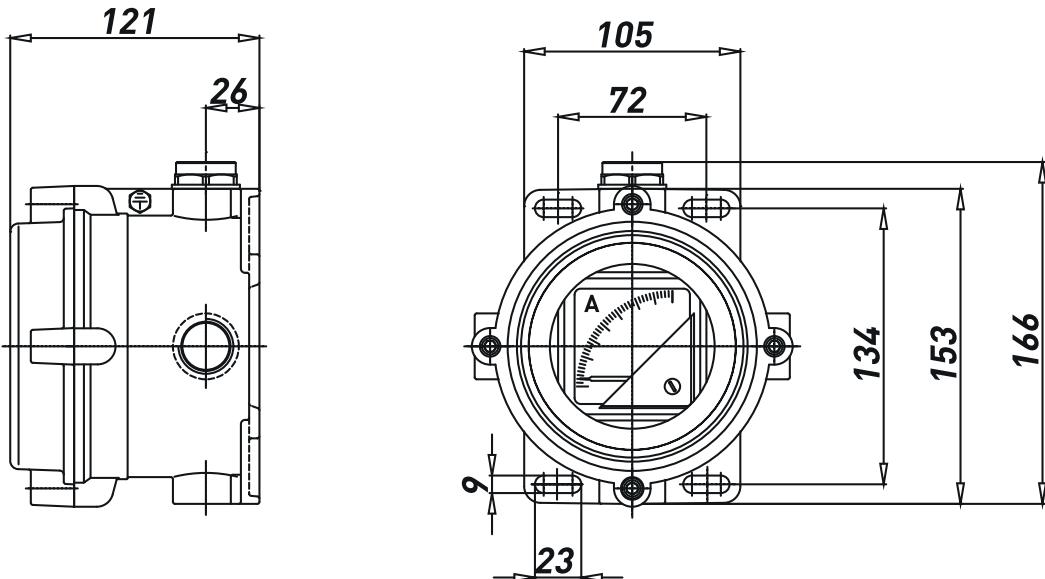
CPS/EMH.. series instrument housings are based on the features of our CPS.. boxes and offer Ex d IIC mode of protection.

They are suitable for hazardous areas of industrial plants for indoor and outdoor applications.

TECHNICAL FEATURES

| | |
|-----------------------------------|--|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -50°C to + 55°C (ATEX) -60°C to +60°C (IECEx) |
| Approvals | Certified 03ATEX0009 IECEx BKI 15.0002 TR CU |
| Marking | II 2 GD Ex d IIC T(*) Gb Ex tb IIIC T(*) Db IP66 Ex db IIC T6/T5/T4 * T6/T85°C, T5/T100°C, T4/T135°C |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | Metric pitch 1.5, ANSI B1.20.1 NPT, UNI-6125 |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |

Dimensions CPS../EMH..



CPS../EMH.. enclosures

| CODE RAL6003 | TYPE | WINDOW DIAMETER | WEIGHT [Kg] |
|-----------------|-----------------|-----------------|-------------|
| B070109010021 | EMH-90 M25X1,5 | 90 | 1.40 |
| B070109011021 | EMH-90 3/4" NPT | 90 | 1.40 |

Ammeter/Voltmeter available on request.



EARTHING SYSTEMS



P.148

Earthing systems

- GUMT - Earthing control system - Copper free aluminium 148
- PTA Earthing clamp 150

EARTHING SYSTEMS

GUMT - Earthing control system - Copper free aluminium

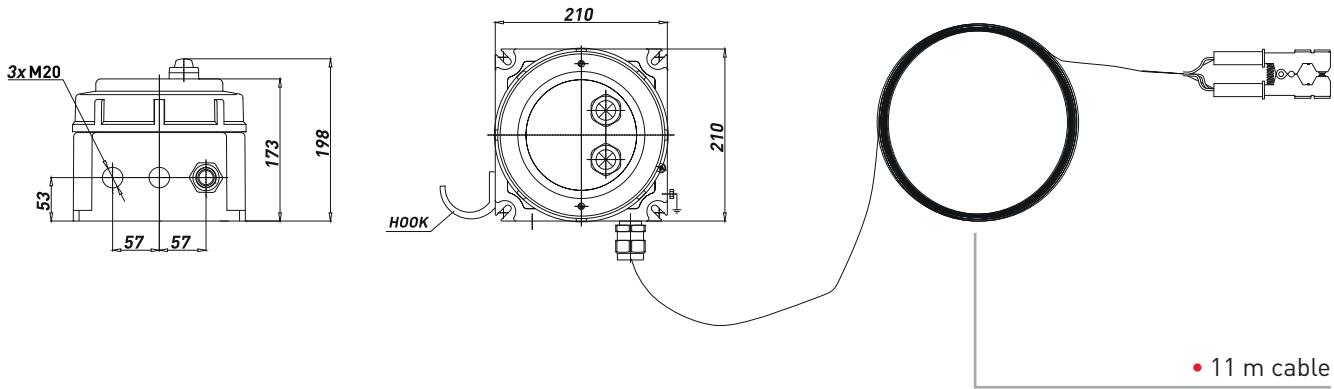


Control and discharge system for electrostatic charges suitable for road tankers, rail tankers and any movable tanker for dangerous items, ready for one/two double circuit clamps PTA ISE0-2. System is complete with arrest/consensus optical warning and changeover contact free from output voltage. The solution to control the discharge of static charges driving it through a dedicated and safe path, safe becauseExplosion proof.

TECHNICAL FEATURES

| | |
|---|--|
| Material | Aluminium with low content of copper |
| IP rating | IP65/IP66 |
| Ambient temperature range | -20°C to +55°C |
| Approvals | GUMT Certified 00ATEX0033X TR CU |
| | PTA CESI 03 ATEX 101 X |
| Marking | GUMT II 2 GD Ex d IIC T5 Gb Ex tb IIIC T100°C Db IP66 |
| | PTA II 2 GD Ex d IIC T6 Ex td A21 IP65 T85°C |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | nº 3 entries M20x1,5, one complete with brass nickel chrome plated plug |
| Rated nominal current (PTA) | 6 mA |
| Rated nominal voltage (PTA) | 0,25 V |
| Changeover contact rating (GUMT) | 5 A |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Cable reel Drain/breather valve Internal anticondensate painting Traffolyte/Stainless steel certificate label |

Dimensions GUMT



GUMT earthing control system

| CODE | TYPE | VOLTAGE |
|---------------|-------------------------|-------------------------|
| B060101000011 | GUMT-325 | 110Vac or 220Vac +/-10% |
| B060301010011 | GUMT-325 + 1 CLAMP PTA | 110Vac or 220Vac +/-10% |
| B060301020011 | GUMT-325 + 2 CLAMPS PTA | 110Vac or 220Vac +/-10% |
| B060102000011 | GUMT-325 | 24Vdc |
| B060302010011 | GUMT-325 + 1 CLAMP PTA | 24Vdc |

EARTHING SYSTEMS

PTA Earthing clamp



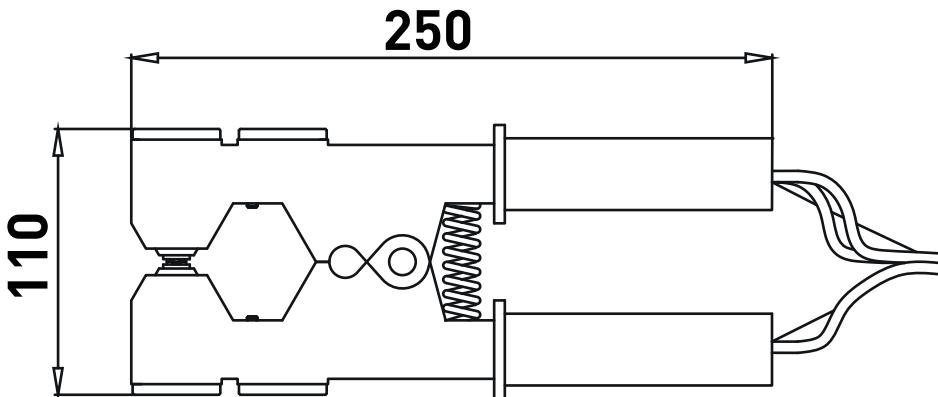
Reliable, robust, handy and easy to use, PTA Series clamps are the ideal tool for tanker loading platform equipped with electronic devices to signal correct grounding. They can be easily connected to any grip, even rusty ones.

They are made of aluminium and the electrical continuity is ensured by the carbonitrided steel contact tips which make a firm connection to any foothold having a thickness between 2 and 20 mm

TECHNICAL FEATURES

| | |
|---|--|
| Material | Aluminium with low content of copper |
| IP rating | IP65 |
| Ambient temperature range | -20°C to +55°C |
| Approvals | CESI 03 ATEX 101 X |
| Marking | II 2 GD Ex d IIC T6 Ex td A21 IP65 T85°C |
| Nominal current In | 10 A |
| Insulation voltage | 3 kV |
| Accessories available upon request | Cable reel |

Dimensions PTA



PTA Series clamps

| TYPE | CODE | DIMENSIONS [mm] | | | WEIGHT [Kg] | CLAMP OPENING [mm] | CABLE TYPE | CABLE LENGTH [mt] |
|------------|---------------|-----------------|-------|--------|-------------|--------------------|------------------------|-------------------|
| | | LENGTH | WIDTH | HEIGHT | | | | |
| PTA ISEO-1 | B060201000000 | 250 | 110 | 35 | 1.56 | 3-20 | 1x6mm ² PUR | 11 |
| PTA ISEO-2 | B060202000000 | 250 | 110 | 35 | 3.36 | 3-20 | 3x3mm ² PUR | 11 |

PTA ISEO-1: Simply Earth clamp with yellow/green cable.

PTA ISEO-2: Double circuit Earth clamp, suitable to be combined with our Earth control system GUMT-325.



VISUAL SIGNALS



P.154

Visual signal

- EV../ROT Series - Rotating lights - Copper free aluminium.....154
- EV../XN-MXN Series - Flashing lights - Copper free aluminium.....156
- EV../WA.. series - LIOL (Low intensity obstruction lighting) - Copper free aluminium158
- EVCC.. series - MIOL (Medium intensity obstruction lighting) - Copper free aluminium ..160
- EVCC-TRAFFIC LIGHT.....164
- Spares & Accessories166

VISUAL
SIGNALS

P.167

Lamps/spare parts

- Visual signal section167

VISUAL SIGNAL

EV../ROT Series - Rotating lights - Copper free aluminium



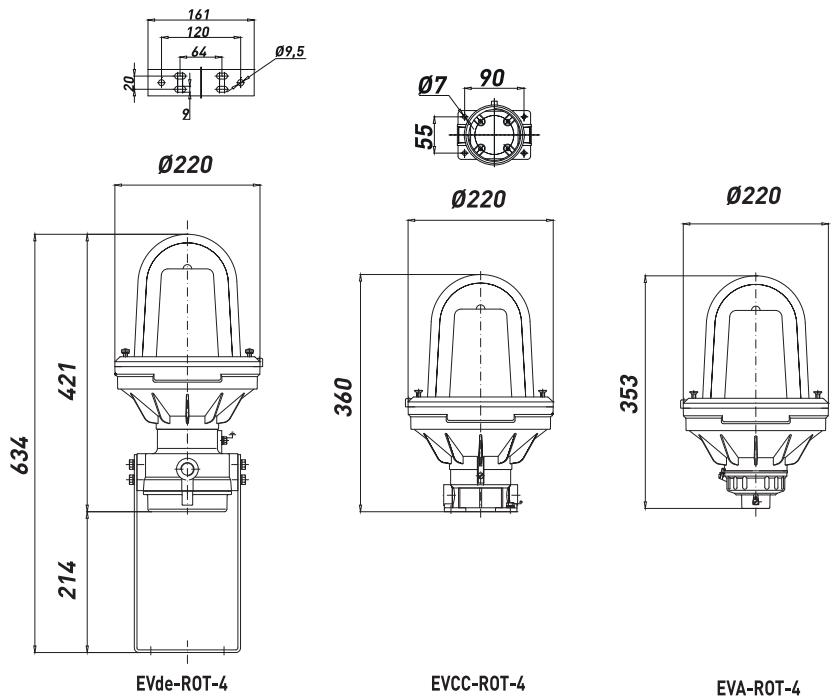
Range of rotating lamp visual signals, available in two versions, 25W and 45W. They have an excellent corrosion resistance due to the body made of aluminium with low content of copper and tempered glass of lamp compartment.

EVCC and EVA version available upon request.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -52°C to +60°C |
| Approvals | Certified 01ATEX0019X TR CU (marking upon request) IECEx INE 15.0031X |
| Marking | II 2 GD Ex d IIC T(**) Gb for all EV.. Ex de IIC T(**) Gb for all Evde.. Ex tb IIIC T(**) Db IP66 ** T5/T100°C, T4/T135°C |
| Gaskets | O-ring made of Nitrile Rubber (NBR) |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | N° 2 entries M25x1,5 (EVde and EVCC version) N° 1 entry M25x1,5 (EVA version) (plugs and cable glands excluded) |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | Included |
| Colour | Red (other colours available upon request) |
| Rated operation voltage (UE) | 240Vac, 12Vdc, 24Vdc 12Vac, 24Vac, 48Vac, 48Vdc, 110Vac (available upon request) |
| Frequency (AC version) | 50/60Hz |
| Accessories available upon request | Protection guard |

Dimensions EV../ROT



EV../ROT Visual signals

| TYPE | CODE | LAMP [W] | WEIGHT [Kg] | TEMP. CLASS | VOLTAGE |
|------------|---------------|----------|-------------|-------------|----------------|
| EVde-4/ROT | A04B111C51B1D | 25 | 8.50 | T4* | 48Vac 50/60Hz |
| EVde-4/ROT | A04B111C51C1D | 25 | 8.50 | T4* | 240Vac 50/60Hz |
| EVde-4/ROT | A04B111C51D1D | 25 | 8.50 | T4* | 24Vac 50/60Hz |
| EVde-4/ROT | A04B111C51E1D | 25 | 8.50 | T4* | 110Vac 50/60Hz |
| EVde-4/ROT | A04B111E51A1D | 45 | 8.50 | T4* | 12Vdc |
| EVde-4/ROT | A04B111E5191D | 45 | 8.50 | T4* | 24Vdc |

*In case of maximum ambient temperature reaches +40°C, temperature class changes into T5 (ordering code to be required)

VISUAL SIGNAL

EV../XN-MXN Series - Flashing lights - Copper free aluminium



Range of xenoflash visual signals complete with Fresnel lens, available in different luminous intensities, 2J , 6J and 15J.

They have an excellent corrosion resistance due to the body made of aluminium with low content of copper and tempered glass of lamp compartment.

EVde version, with integrated Ex e junction box, allows end users and contractors the possibility to save one junction box, two cable glands and a minimum of 30 minutes of labour during installation process.

This version is supplied complete with an adjustable AISI304 stainless steel mounting bracket suitable for ceiling, wall and suspension installation.

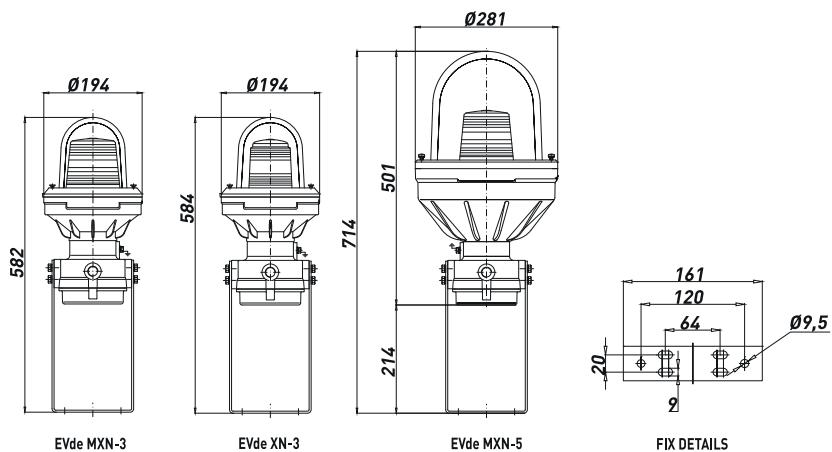
EVCC version, without integrated Ex e junction box, allows standard ceiling installation (available upon request).

EVA version, without integrated Ex e junction box, allows standard suspension installation by conduit system and pastoral pole (available upon request).

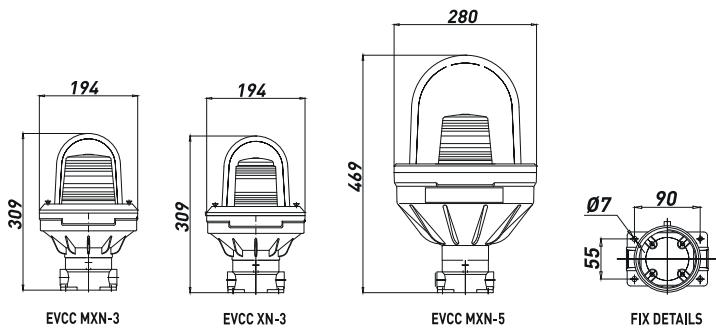
TECHNICAL FEATURES

| | |
|---|---|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -52°C to +60°C |
| Approvals | Certified 01ATEX0019X TR CU (marking upon request) IECEx INE 15.0031X |
| Marking | II 2 GD Ex d IIC T(**) Gb for all EV.. Ex de IIC T(**) Gb for all Evde.. Ex tb IIIC T(**) Db IP66 ** T5/T100°C, T4/T135°C |
| Gaskets | O-ring made of Nitrile Rubber (NBR) |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | N° 2 entries M25x1,5 (EVde and EVCC version) N° 1 entry M25x1,5 (EVA version) (plugs and cable glands excluded) |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | Included |
| Colour | Red (other colours available upon request) |
| Rated operation voltage (UE) | 240Vac, 12/24Vac/dc 110Vac (available upon request) |
| Frequency (AC version) | 50/60Hz |
| Accessories available upon request | Protection guard |

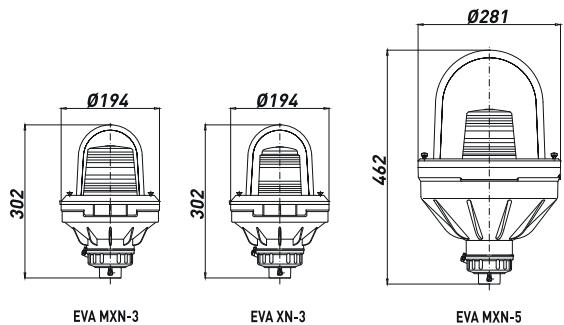
Dimensions EVde..../XN-MXN



Dimensions EVCC..../XN-MXN)



Dimensions EVA..../XN-MXN)



EV..../XN-MXN Series Visual Signals

| TYPE | CODE | LAMP [W] | LUMINOUS INTENSITY | WEIGHT [Kg] | TEMP. CLASS | VOLTAGE |
|------------|---------------|----------|--------------------|-------------|-------------|--------------|
| EVDE-XN-3 | A04A101B01C1D | 10 | 2J | 4.50 | T4* | 240V 50/60HZ |
| EVDE-MXN-3 | A04A101C51C1D | 25 | 6J | 4.50 | T4* | 240V 50/60HZ |
| EVCC-MXN-5 | A04A201F01C1D | 50 | 15J | 6.00 | T4* | 240V 50/60HZ |
| EVDE-XN-3 | A04A101B01F1D | 10 | 2J | 4.50 | T4* | 12/24V AC/DC |
| EVDE-MXN-3 | A04A101C51F1D | 25 | 6J | 4.50 | T4* | 12/24V AC/DC |
| EVCC-MXN-5 | A04A201F01F1D | 50 | 15J | 6.00 | T4* | 12/24V AC/DC |

*In case of maximum ambient temperature reaches +40°C, temperature class changes into T5 (ordering code to be required)

VISUAL SIGNAL

EV../WA.. series - LIOL (Low intensity obstruction lighting) - Copper free aluminium

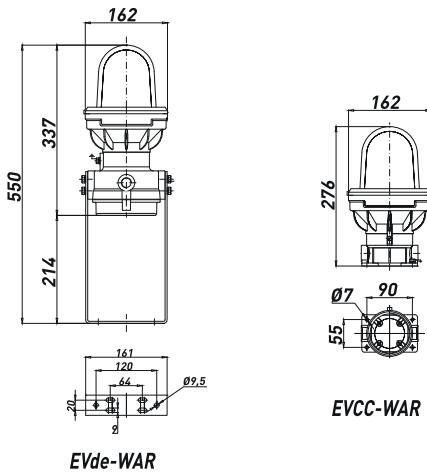


Range of low intensity aircraft warning lights, for structures below 45mt.

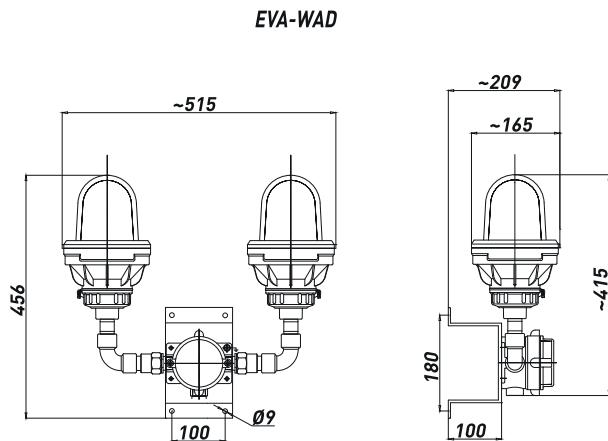
TECHNICAL FEATURES

| | |
|-------------------------------------|---|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -52°C to +60°C |
| Approvals | Certified 01ATEX0019X TR CU (marking upon request) IECEx INE 15.0031X |
| Marking | II 2 GD Ex d IIC T(**) Gb for all EV.. Ex de IIC T(**) Gb for all Evde.. Ex tb IIIC T(**) Db IP66 ** T5/T100°C, T4/T135°C |
| Gaskets | O-ring made of Nitrile Rubber (NBR) |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | N° 2 entries M25x1,5 (EVde and EVCC version) N° 1 entry M25x1,5 (EVA version) (plugs and cable glands excluded) |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | Included |
| Colour | Red (other colours available upon request) |
| Rated operation voltage (UE) | 230V (standard) 24V, 110V, 90-264V (available upon request) |
| Frequency (AC version) | 50/60Hz |

Dimensioni EVde/EVCC (WAR)



Dimensioni EVA (WAD)



EV../WA.. Series Aircraft warning lights

| TYPE | CODE | LAMP [W] | LAMP. TYPE | WEIGHT [Kg] | TEMP. CLASS |
|----------------|---------------|----------|--------------|-------------|-------------|
| EVCC-WAR LED 6 | A04D221A61G1D | 6 | LED - SINGLE | 2.50 | T4* |
| EVDE-WAR LED 6 | A04D121A61G1D | 6 | LED - SINGLE | 3.50 | T4* |
| EVA-WAD LED 6 | A04G321A61G1D | 2X6 | LED - DOUBLE | 5.80 | T4* |

* In case of maximum ambient temperature reaches +40°C, temperature class changes into T5 (ordering code to be required)

VISUAL SIGNAL

EVCC.. series - MIOL (Medium intensity obstruction lighting) - Copper free aluminium



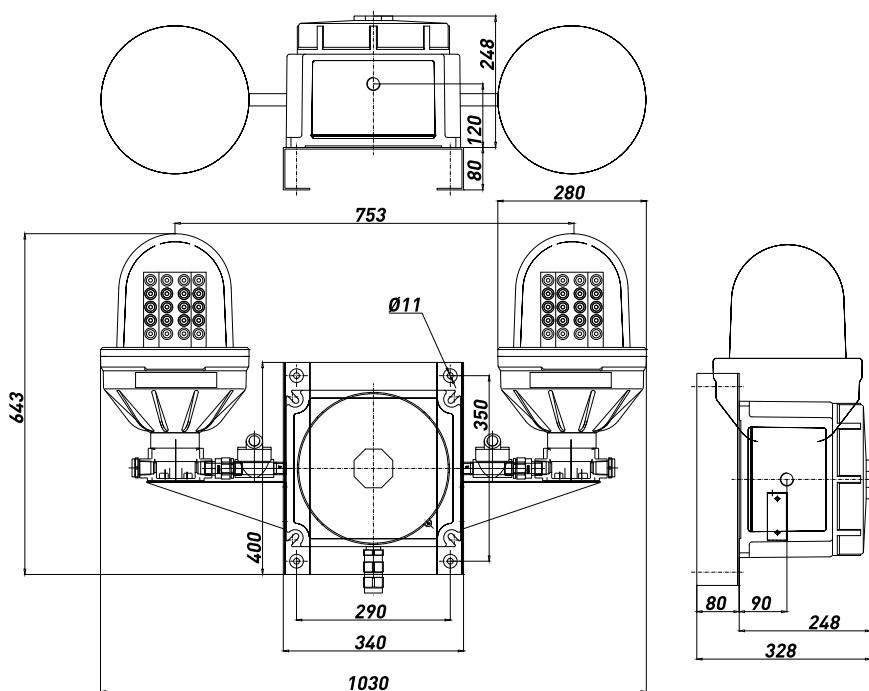
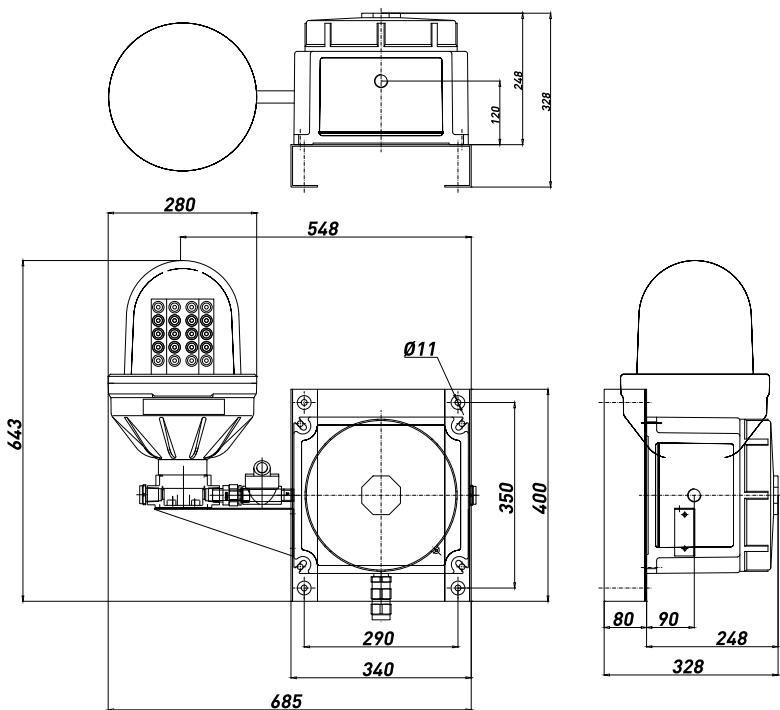
The EVCC-5/...LED range of Medium Intensity Obstruction Lighting products represents the top of technology , utilizes LED technology to deliver low heat dissipation, low watt consumption and up to 100.000/hours maintenance free operation.

Aircraft warning lighting fixtures EVCC-5/...LED are multi-light source utilizing high-power LEDs with wide beam. The product is fully compliant with ICAO Annex 14, which requires that structures over 45m should incorporate medium intensity lighting fixtures light colour RED, WHITE or RED and WHITE.

TECHNICAL FEATURES

| | |
|-------------------------------------|---|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -50°C to +55°C |
| Approvals | Certified 01ATEX0019X TR CU (marking upon request) IECEx INE 15.0031X |
| Marking | II 2 GD Ex d IIC T(**) Gb Ex tb IIIC T(**) Db IP66 ** T4/T135°C |
| | III 3 G Ex nA IIC T3 Gc |
| Compliance | ICAO/FAA (upon request) |
| Gaskets | O-ring made of Nitrile Rubber (NBR) |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | N° 1 entry ¾" UNI-6125 complete with nickel chrome plated brass PAP type (Old version) N° 1 entry M20x1,5 complete with nickel chrome plated brass PAP type (New version Ex d) |
| Hardware and screws | AISI304 Stainless steel external hardware and screws |
| Lamps | LED Included |
| Colour | RED, WHITE or RED and WHITE |
| Rated operation voltage (UE) | 230Vac 220/240Vac 24Vdc |
| Frequency (AC version) | 50/60Hz |

Dimensions EVCC.. (MIOL) - OLD VERSION



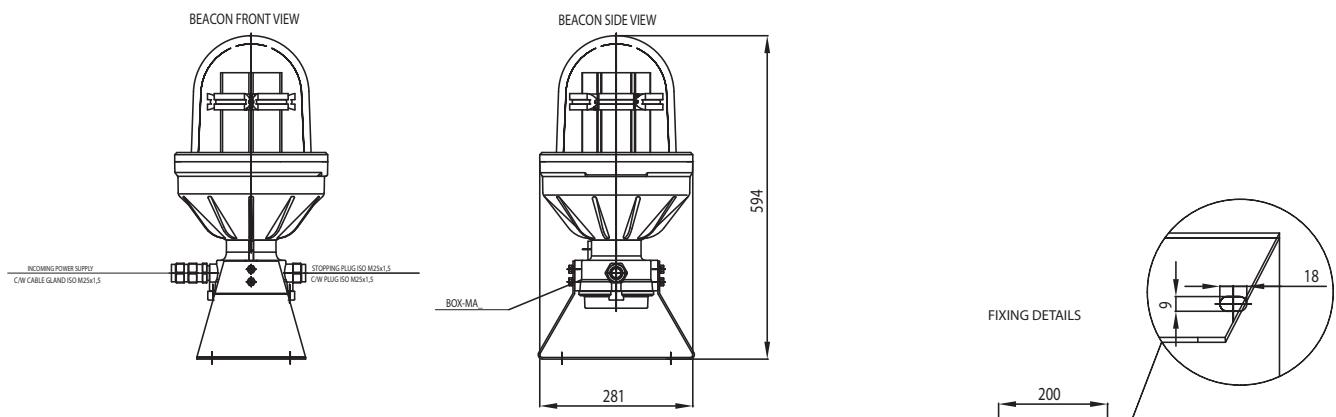
EVCC.. (MIOL) Medium intensity aircraft warning lights (OLD VERSION)

| TYPE | CODE | LAMP [W] | MIOL TYPE | WEIGHT [Kg] | TEMP. CLASS | VOLTAGE |
|------------|---------------|---------------------------|-----------|-------------|-------------|------------------|
| EVCC-5/LED | A04E225G01E1M | 60 (RED) ⁽¹⁾ | B | 25 | T4 | 110V 50/60HZ |
| EVCC-5/LED | A04E225G0171M | 60 (RED) ⁽¹⁾ | B | 25 | T4 | 220/240V 50/60HZ |
| EVCC-5/LED | A04H225G01E1M | 2X60 (RED) ⁽¹⁾ | B | 35 | T4 | 110V 50/60HZ |
| EVCC-5/LED | A04H225G0171M | 2X60 (RED) ⁽¹⁾ | B | 35 | T4 | 220/240V 50/60HZ |

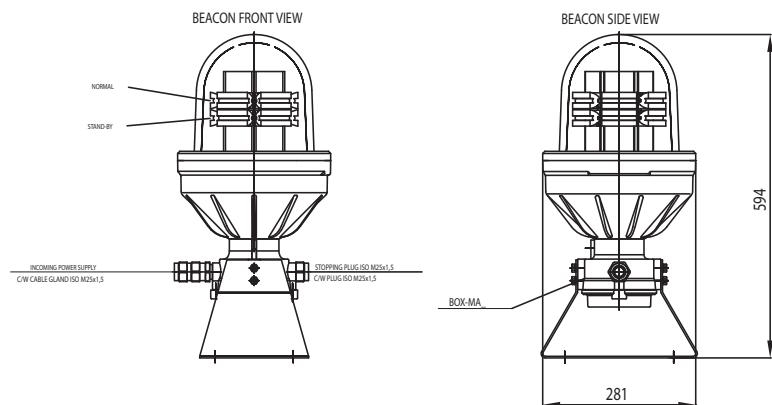
(1) Steady red light (flashing provided by control panel to be ordered separately); 2000cd night mode

Dimensions EVCC.. (MIOL) - Ex de version

SINGLE MIOL



TWIN MIOL



EVCC.. (MIOL) Medium intensity aircraft warning lights (NEW VERSION)

| TYPE | CODE | LAMP [W] | MIOL TYPE | WEIGHT [Kg] | TEMP. CLASS | PROTECTION | VOLTAGE |
|------------|---------------|----------------------------|----------------------------|-------------|-------------|------------|---------------------------------|
| EVDE-5/LED | A04E121AW1K1D | RED ^[1] | B - SINGLE | 11 KG | T4 | EX-DE | BY CONTROL PANEL ^[5] |
| EVDE-5/LED | A04F121AW6K1D | WHITE ^[2] | A - SINGLE | 11 KG | T4 | EX-DE | BY CONTROL PANEL ^[5] |
| EVDE-5/LED | A04H121AW1K1D | RED ^[1] | B - TWIN | 11,5 KG | T4 | EX-DE | BY CONTROL PANEL ^[5] |
| EVDE-5/LED | A04I121AW6K1D | WHITE ^[2] | A - TWIN | 11,5 KG | T4 | EX-DE | BY CONTROL PANEL ^[5] |
| EVDE-5/LED | A04L121AW8K1D | RED & WHITE ^[3] | AB - SINGLE ^[4] | 11,5 KG | T4 | EX-DE | BY CONTROL PANEL ^[5] |

[1] 2.000cd night mode, RED flashing

[2] 20.000cd day mode, WHITE flashing/2.000cd night mode, WHITE flashing

[3] 20.000cd day mode, WHITE flashing/2.000cd night mode, RED flashing

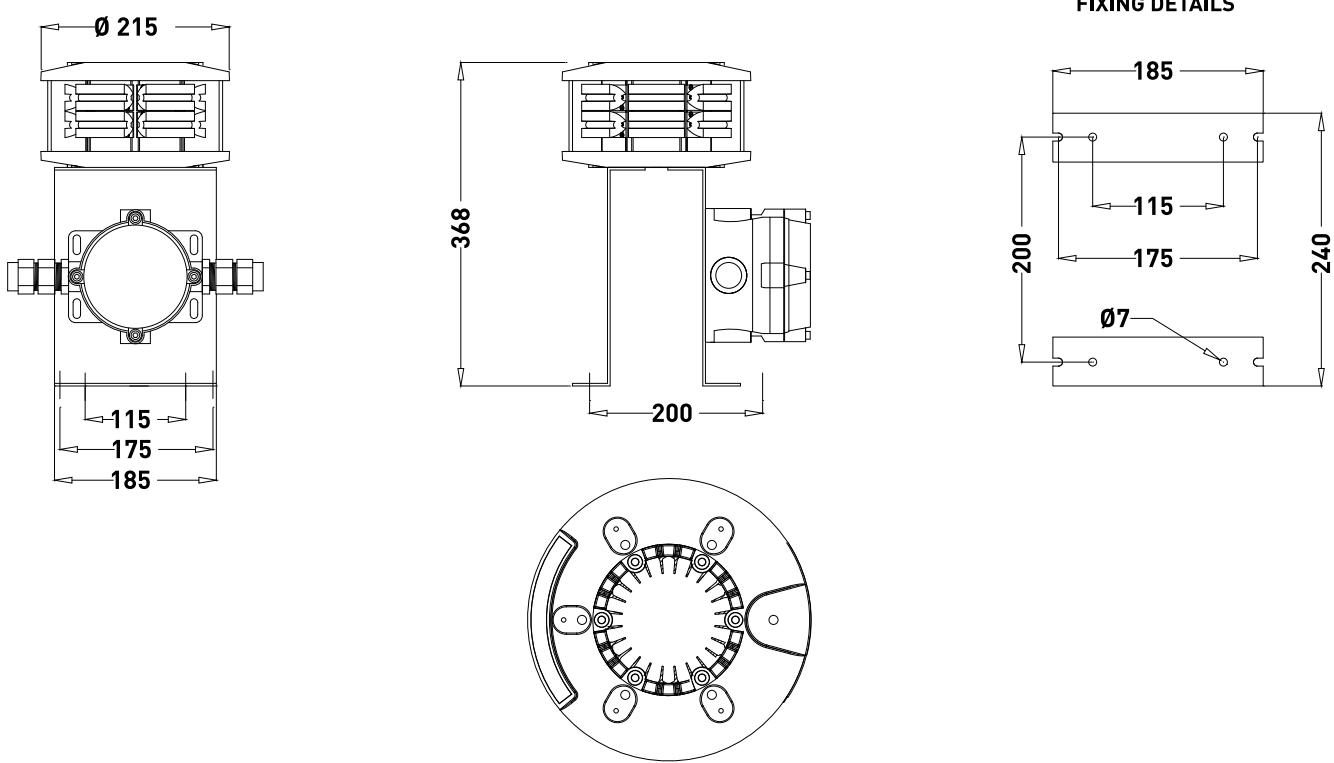
[4] TWIN model available upon request

[5] to be ordered separately

Additional features:

- the AWL system consists of lighting fixtures and respective panel board (custom made on the base of the system design)
- flashing is given by electronic card housed inside the control panel
- heat shield suggested for ambient temperature over +45°C

Dimensions EVCC.. (MIOL) – Ex nA version



EVCC.. (MIOL) Medium intensity aircraft warning lights (NEW VERSION)

| TYPE | CODE | LAMP [W] | MIOL TYPE | WEIGHT [Kg] | TEMP. CLASS | PROTECTION | VOLTAGE |
|------------|------|------------------------------|-----------|-------------|-------------|------------|----------------|
| EVCC-5/LED | | (RED) ^[1] | B | 3 | T3 | Ex-nA | ^[5] |
| EVCC-5/LED | | (RED) ^[2] | B | 3 | T3 | Ex-nA | ^[5] |
| EVCC-5/LED | | (WHITE) ^[3] | A | 3,7 | T3 | Ex-nA | ^[5] |
| EVCC-5/LED | | (RED & WHITE) ^[4] | AB | 4,9 | T3 | Ex-nA | ^[5] |

[1] 9,3W (@20fpm)/12,9 (@20fpm); 2000cd

[2] 3,1W (@20fpm)/5,7 (@20fpm); 2000cd

[3] 51W Day mode/12,9W Nigh mode (@20fpm)/90W Day mode/23W Nigh mode (@40fpm)/20.000cd Day mode/2.000cd Nigh mode

[4] 57W Day mode/21W Nigh mode (@20fpm)/96W Day mode/24W Nigh mode (@40fpm)/20.000cd Day mode/2.000cd Nigh mode

[5] By control panel to be ordered separately

VISUAL SIGNAL EVCC-TRAFFIC LIGHT

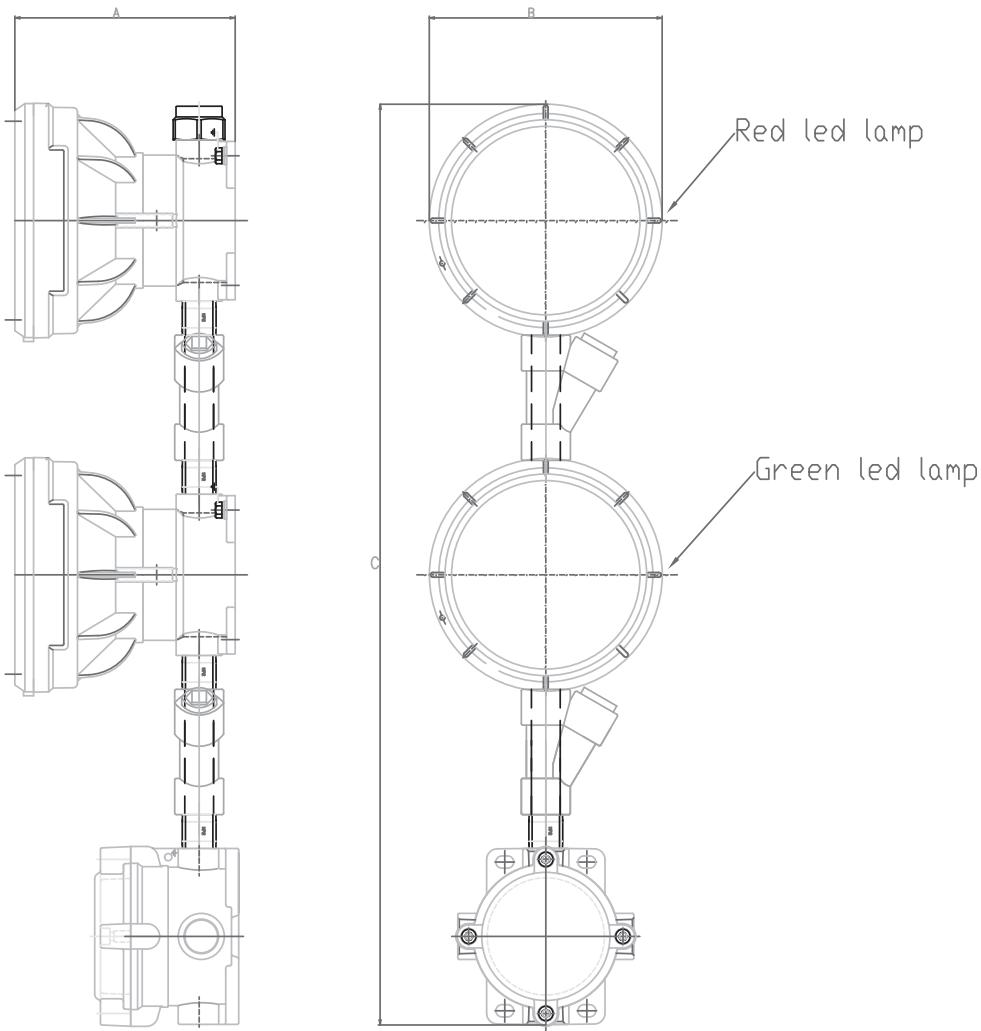


- Traffic light with red and green lamps (customized configurations available upon request)
- LED technology
- Zero maintenance

TECHNICAL FEATURES

| | |
|-------------------------------------|--|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -20°C to +60°C (lower temperatures available upon request) |
| Approvals | INERIS 01ATEX0019X (standard) IEC Ex INE 15.0031X TR CU (marking upon request, ordering code to be required) |
| Marking | II 2GD Ex-d IIC T3 Gb EX-tb IIIC T200°C Db IP66 |
| Gaskets | O-ring made of nitrile rubber (NBR) |
| Surface treatment | Green colour polyurethane painting cycle RAL6003 (other colour available upon request) |
| Entries | N° 1 entry M25x1,5 |
| Screws | AISI304 Stainless steel external screws |
| Lamps | Included |
| Rated operation voltage (UE) | 110/230V AC 24V AC/DC |
| Frequency | 50/60 Hz |
| Power factor | > 0,95 |

Dimensions EVCC-PR/LED



EVCC-PR/LED Traffic light

| TYPE | CODE | LAMP [W] | LAMP. TYPE | TEMP. CLASS | VOLTAGE | DIMENSIONS [mm] | | | AMBIENT TEMPERATURE |
|--------------------------------|---------------|-------------------|------------|-------------|-------------|-----------------|-----|-----|---------------------|
| | | | | | | A | B | C | |
| TRAFFIC LIGHT 2XEVCC-PR/LED | A04K221A57H12 | 5 (RED/ GREEN) | LED | T3 | 110/230V AC | 153 | 162 | 640 | (-20°C;+60°C) |
| TRAFFIC LIGHT 2XEVCC-PR/LED | A04K221A57I12 | 5 (RED/ GREEN) | LED | T3 | 24V AC/DC | 153 | 162 | 640 | (-20°C;+60°C) |

VISUAL SIGNAL

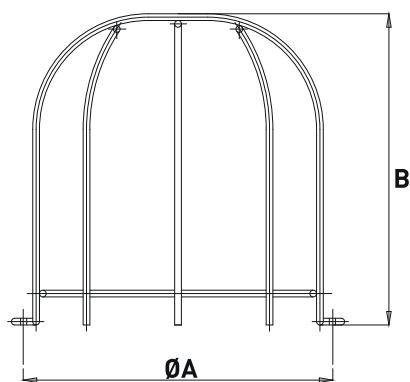
Serie EV../ROT/EV../XN-MXN Series/EV../
WA.. series/EVCC.. series

SPARES & ACCESSORIES

Protection guard (Stainless Steel AISI316 L version available upon request)

| CODE | TYPE | DIMENSIONS AxB (mm) | WEIGHT [Kg] |
|---------------|--|---------------------|-------------|
| A0A0400017000 | GEV-1 PROTECTION GUARD FOR EV..-1 - AISI 304 | 123X103 | 0.160 |
| A0A0400018000 | GEV-2 PROTECTION GUARD FOR EV..-2 - AISI 304 | 138X139 | 0.230 |
| A0A0400046000 | GEV-3 PROTECTION GUARD FOR EV..-3 - AISI 304 | 151X152 | 0.240 |
| A0A0400016000 | GEV-4 PROTECTION GUARD FOR EV..-4 - AISI 304 | 178X200 | 0.370 |
| A0A0400047000 | GEV-5 PROTECTION GUARD FOR EV..-5 - AISI 304 | 252X233 | 0.400 |

Dimensions GEV



LAMPS/SPARE PARTS

Visual signal section

| PRODUCT NAME | SHAPE | POWER [W] | CAP | VOLTAGE | FLUX [lm] | CODE | WHERE IT IS USED |
|-------------------|---|-----------|-----|---------------|-----------|----------------|---|
| XENOFETCH (RED) |  | 10 (2J) | E27 | 220/240 VAC | / | A500400011000 | EVDE-XN-3 |
| | | 10 (2J) | E27 | 12/24 VAC/VDC | / | A500400013000 | EVDE-XN-3/12/24 VAC/VDC |
| XENOFETCH (RED) |  | 25 (6J) | E27 | 220/240 VAC | / | A500400012000 | EVDE-MXN-3 |
| | | 25 (6J) | E27 | 12/24 VAC/VDC | / | A500400016000 | EVDE-MXN-3/12/24 VAC/VDC |
| STROBOFLASH (RED) |  | 50 (15J) | / | 220/240 VAC | / | A500400009000 | EVCC-MXN-5 1X50/EVCC-MXN-5 2X50 |
| | | 50 (15J) | / | 12/24 VAC/VDC | / | A5004000098000 | EVCC-MXN-5 1X50/EVCC-MXN-5 2X50/12/24 VAC/VDC |
| ROTOALARM |  | 45 | / | 12 VDC | / | A500400007000 | EVDE-ROT-4 |
| | | 45 | / | 24 VDC | / | A500400004000 | EVDE-ROT-4 |
| | | 25 | / | 240 VAC | / | A500400001000 | EVDE-ROT-4 |
| LED (RED) |  | 6 | E27 | 230 VAC | / | A500400090000 | EVDE-WAR 1X6W/EVCC-WAR 6W |



CABLE GLANDS & FITTINGS



P.192

Fittings

- BMF/BFF/BMM Series -
Three pieces unions 192
- BMF/BFF/BMM Series -
Three pieces unions 194
- BMF/BFF/BMM Series -
Three pieces unions 196
- EYS Series - Sealing fittings 198
- EZS Series - Sealing fittings 200
- NP Series - Nipples 202
- EM Series - Unions 204
- ELF Series - Elbows 206
- LBH Series - Open elbows 208
- DB Series - Aluminium bushings 210
- PLG Series - Recessed exagonal plugs 212
- PLG Series - Resin exagonal plugs 214
- T Series - Exagonal plugs 216
- RE/REB Series -
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Reductions and adaptors 222

P.170

Metallic cable glands

- Single seal 170
- Double seal 174
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- PSF (Male-Female) 182

P.186

Plastic cable glands

- Polyamide 186
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METALLIC CABLE GLANDS

Single seal



A large range of single seal cable glands

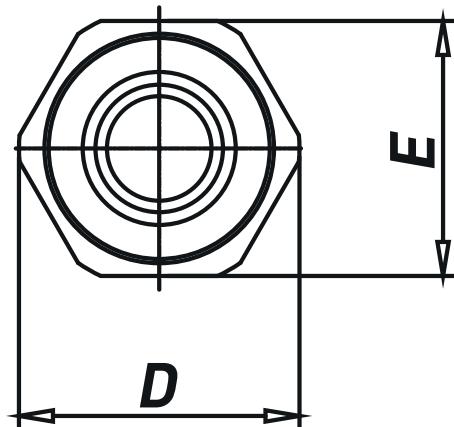
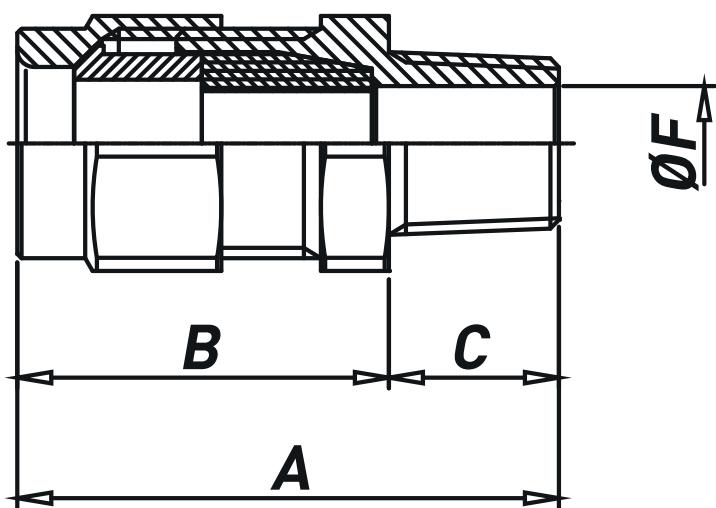
- Armoured & unarmoured cable
- Lead sheathed cable
- Barrier type

Suitable for Zone 1/2 and Zone 21/22.

CODIFICATION TABLE

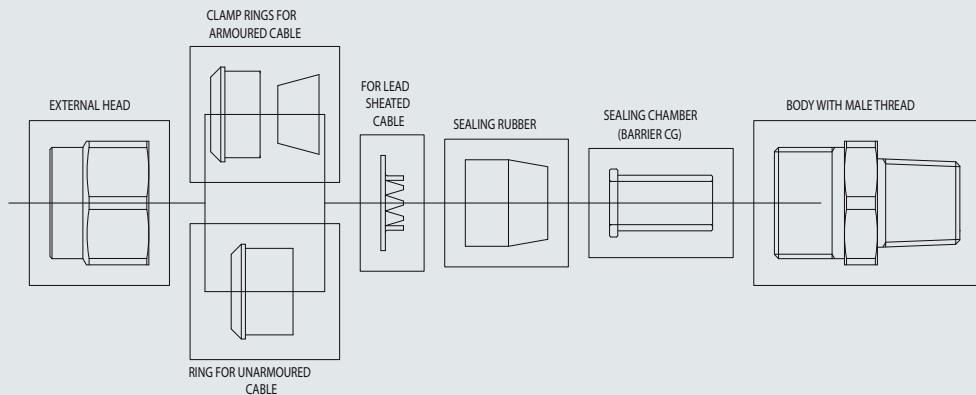
| | |
|---|---|
| Material | Nickel chrome plated brass AISI 316 L Stainless steel (other materials upon request) |
| IP rating | IP66 |
| Operating temperature range | -52°C to +110°C |
| Approvals | Certified 02ATEX0084 (standard) TR CU (marking upon request, ordering code to be required) IECEx INE 14.0046X |
| Marking* | II 2 GD Ex db/eb IIC Ex db/eb I Ex tb IIIC IP66 |
| | I M2 Ex db/eb I |
| | * For group I certification is up to size 6. |
| Internal seals | EPDM |
| Threads | Metric, NPT, UNI-6125 (other thread upon request) |
| Accessories available upon request | Locknut, sealing gasket, earthing ring, star washer, protective shroud |
| Note | <ol style="list-style-type: none">1. Armouring rings are usually supplied made of nickel chrome plated brass. Other materials are available upon request.2. Our standard cable gland are suitable for armour clamping up to 1,25 mm thickness. In case of higher armour thickness please revert to our Sales department. |

Dimensions



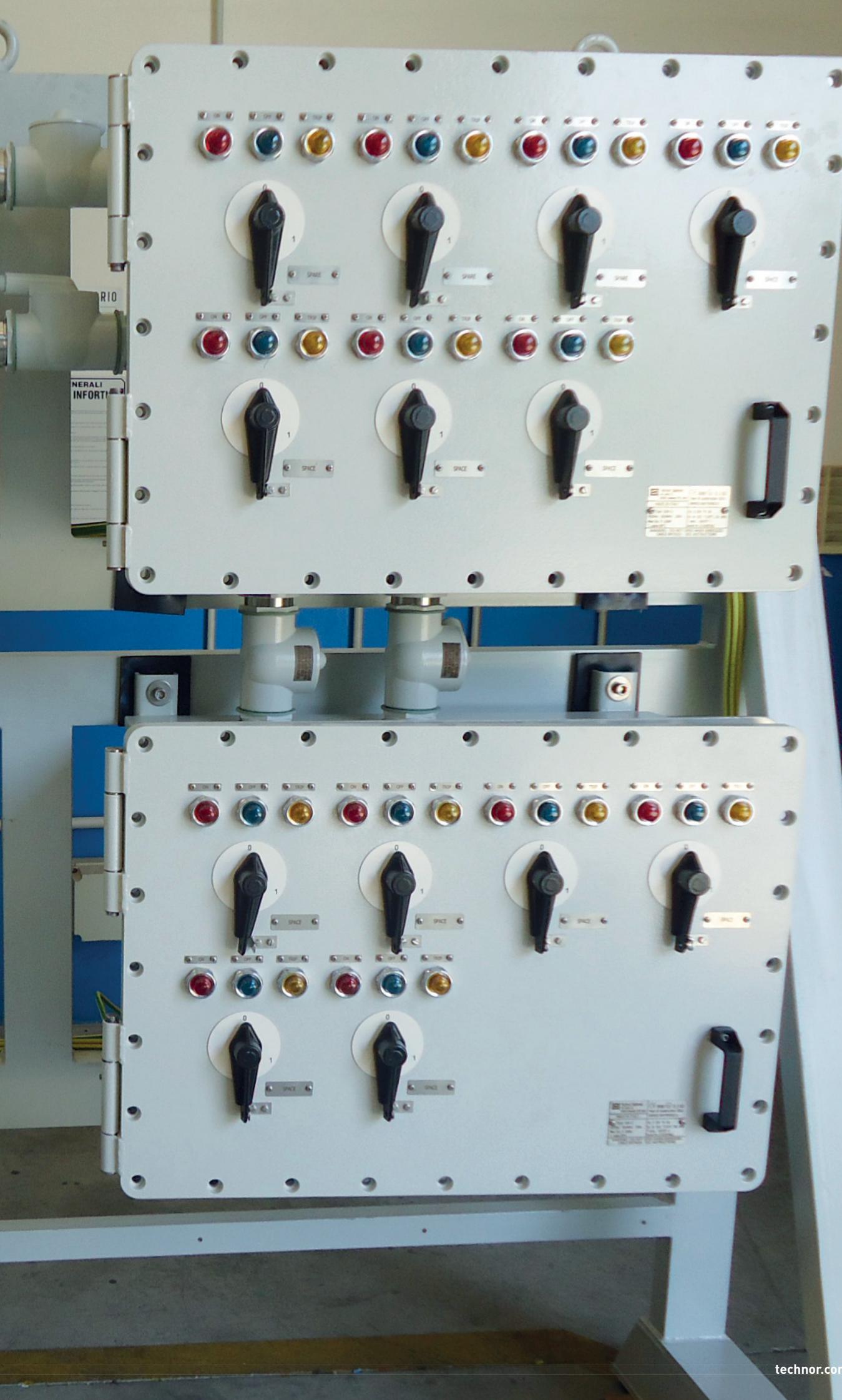
| | METRIC | NPT UNI-6125 | SEAL | CABLE RANGE (mm) | \emptyset EXTERNAL CABLE (mm) | DIMENSIONS (mm) | | | | | |
|---------|---------|-----------------|------|------------------------|--|-----------------|----|----|-----|----|---|
| | | | | | | F | A | B | C | D | E |
| SIZE 1 | M20X1,5 | 1/2" | 1A1 | 6 - 9 | 18 | 62 | 42 | 20 | 33 | 30 | |
| | | | 1A2 | 9 - 12 | | | | | | | |
| SIZE 2 | M25X1,5 | 3/4" | 2A1 | 6 - 9 | 24 | 62 | 42 | 25 | 40 | 36 | |
| | | | 2A2 | 9 - 12 | | | | | | | |
| | | | 2A3 | 11 - 14 | | | | | | | |
| | | | 2A4 | 14 - 17 | | | | | | | |
| SIZE 3 | M32X1,5 | 1" | 3A1 | 14 - 17 | 30 | 70 | 45 | 25 | 49 | 44 | |
| | | | 3A2 | 17 - 20 | | | | | | | |
| | | | 3A3 | 20 - 23 | | | | | | | |
| SIZE 5S | M40X1,5 | 1" 1/4 | 5A2 | 23 - 26 | 43 | 70 | 45 | 25 | 62 | 56 | |
| | | | 5A3 | 26 - 29 | | | | | | | |
| | | | 5A4 | 29 - 32 | | | | | | | |
| | | | 5A5 | 32 - 36 | | | | | | | |
| SIZE 5 | M50X1,5 | 1" 1/2 | 5A2 | 23 - 26 | 43 | 70 | 45 | 25 | 62 | 56 | |
| | | | 5A3 | 26 - 29 | | | | | | | |
| | | | 5A4 | 29 - 32 | | | | | | | |
| | | | 5A5 | 32 - 36 | | | | | | | |
| SIZE 6 | M63X1,5 | 2" | 6A2 | 36 - 39 | 57 | 72 | 46 | 25 | 78 | 70 | |
| | | | 6A3 | 39 - 42 | | | | | | | |
| | | | 6A4 | 42 - 46 | | | | | | | |
| SIZE 7 | M75X1,5 | 2" 1/2 | 7A2 | 44 - 48 | 69 | 78 | 46 | 32 | 92 | 83 | |
| | | | 7A3 | 48 - 52 | | | | | | | |
| | | | 7A4 | 52 - 56 | | | | | | | |
| | | | 7A5 | 56 - 60 | | | | | | | |
| SIZE 8 | M80X1,5 | 3" | 8A4 | 56 - 60 | 79 | 78 | 46 | 32 | 103 | 93 | |
| | | | 8A5 | 59 - 63 | | | | | | | |
| | | | 8A6 | 63 - 67 | | | | | | | |
| | | | 8A7 | 67 - 71 | | | | | | | |

Assembly diagram



CODIFICATION TABLE

| | | | | | | | | |
|-----|---|---|---|---|---|---|--|--|
| B14 | # | # | # | # | # | # | N | |
| | | | | | | | N - WITHOUT SEAL S - WITH SET SEALS 1 - SEALING RUBBER A1 2 - SEALING RUBBER A2 3 - SEALING RUBBER A3 4 - SEALING RUBBER A4 5 - SEALING RUBBER A5 6 - SEALING RUBBER A6 7 - SEALING RUBBER A7 | |
| | | | | | | | 1 - ATEX/IECEx - GROUP II 2 - ATEX/IECEx- GROUP I 5 - TR CU - GROUP II 6 - TR CU - GROUP I | |
| | | | | | | | 1 - METRIC 2 - NPT 3 - UNI-6125 | |
| | | | | | | | 0 - STANDARD 1 - EXTENDED BODY (IN CASE OF ARMOUR THICKNESS HIGHER THAN 1,25MM) | |
| | | | | | | | 1 - SIZE 1 2 - SIZE 2 3 - SIZE 3 4 - SIZE 5S 5 - SIZE 5 6 - SIZE 6 7 - SIZE 7 8 - SIZE 8 | |
| | | | | | | | 02 - PNA _ SINGLE SEAL, ARMoured CABLE 04 - PB AX _ SINGLE SEAL, ARMoured CABLE, BARRIER TYPE 12 - PBS _ SINGLE SEAL, UNARMoured CABLE, LEAD SHEATED CABLE 14 - PSB _ SINGLE SEAL, ARMoured CABLE, LEAD SHEATED CABLE 16 - PNS _ SINGLE SEAL, UNARMoured CABLE 17 - PMS _ SINGLE SEAL, UNARMoured CABLE, BARRIER TYPE | |
| | | | | | | | 01 - BNK BRASS NICKEL CHROME PLATED 03 - STAINLESS STEEL AISI316 | |



METALLIC CABLE GLANDS

Double seal



A large range of double seal cable glands

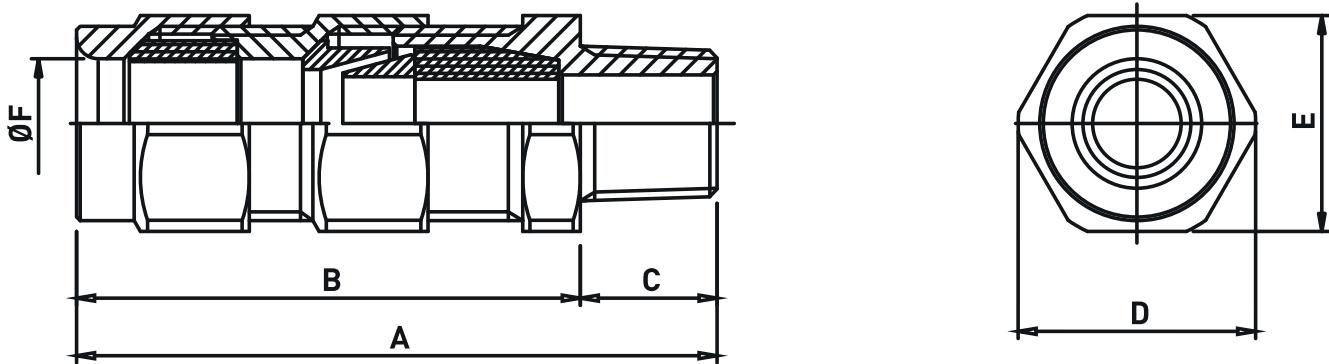
- Armoured & unarmoured cable
- Lead sheathed cable
- Barrier type

Suitable for Zone 1/2 and Zone 21/22.

TECHNICAL FEATURES

| | |
|---|--|
| Material | Nickel chrome plated brass AISI 316 L Stainless steel (other materials upon request) |
| IP rating | IP66 |
| Operating temperature range | -52°C to +110°C |
| Approvals | Certified 02ATEX0084 (standard) TR CU (marking upon request, ordering code to be required) IECEx INE 14.0046X |
| Marking* | II 2 GD Ex db/eb IIC Ex db/eb I Ex tb IIIC IP66 |
| | I M2 Ex db/eb I |
| | * For group I certification is up to size 6. |
| Internal seals | EPDM |
| Threads | Metric, NPT, UNI-6125 (other thread upon request) |
| Accessories available upon request | Locknut, sealing gasket, earthing ring, star washer, protective shroud |
| Note | <p>1. Armouring rings are usually supplied made of nickel chrome plated brass. Other materials are available upon request.</p> <p>2. Our standard cable gland are suitable for armour clamping up to 1,25mm thickness. In case of higher armour thickness please revert to our Sales department.</p> |

Dimensions



| | METRIC | NPT UNI-6125 | INNER SEAL | CABLE RANGE (mm) | OUTER SEAL | CABLE RANGE (mm) | Ø EXTERNAL CABLE (mm) | | EXTDIMENSIONS (mm) | | | | |
|---------|---------|--------------|------------|------------------|------------|------------------|-----------------------|-----|--------------------|----|-----|----|--|
| | | | | | | | F | A | B | C | D | E | |
| SIZE 1 | M20X1,5 | 1/2" | 1A1 | 6 - 9 | 1B1 | 8 - 11 | 18 | 85 | 65 | 20 | 33 | 30 | |
| | | | 1A2 | 9 - 12 | 1B2 | 11 - 14 | | | | | | | |
| | | | | | 1B3 | 14 - 17 | | | | | | | |
| SIZE 2 | M25X1,5 | 3/4" | 2A1 | 6 - 9 | 2B1 | 14 - 17 | 24 | 85 | 65 | 20 | 40 | 36 | |
| | | | 2A2 | 9 - 12 | 2B2 | 17 - 20 | | | | | | | |
| | | | 2A3 | 11 - 14 | 2B3 | 20 - 23 | | | | | | | |
| | | | 2A4 | 14 - 17 | | | | | | | | | |
| SIZE 3 | M32X1,5 | 1" | 3A1 | 14 - 17 | 3B1 | 20 - 23 | 30 | 93 | 68 | 25 | 49 | 44 | |
| | | | 3A2 | 17 - 20 | 3B2 | 23 - 26 | | | | | | | |
| | | | 3A3 | 20 - 23 | 3B3 | 26 - 29 | | | | | | | |
| SIZE 5S | M40X1,5 | 1" 1/4 | 5A2 | 23 - 26 | 5B2 | 29 - 32 | 43 | 93 | 68 | 25 | 62 | 56 | |
| | | | 5A3 | 26 - 29 | 5B3 | 32 - 36 | | | | | | | |
| | | | 5A4 | 29 - 32 | 5B4 | 36 - 39 | | | | | | | |
| | | | 5A5 | 32 - 36 | 5B5 | 39 - 42 | | | | | | | |
| | | | 5A2 | 23 - 26 | 5B2 | 29 - 32 | | | | | | | |
| SIZE 5 | M50X1,5 | 1" 1/2 | 5A3 | 26 - 29 | 5B3 | 32 - 36 | 43 | 93 | 68 | 25 | 62 | 56 | |
| | | | 5A4 | 29 - 32 | 5B4 | 36 - 39 | | | | | | | |
| | | | 5A5 | 32 - 36 | 5B5 | 39 - 42 | | | | | | | |
| | | | 6A2 | 36 - 39 | 6B2 | 44 - 48 | 57 | 95 | 71 | 25 | 78 | 70 | |
| SIZE 6 | M63X1,5 | 2" | 6A3 | 39 - 42 | 6B3 | 48 - 52 | | | | | | | |
| | | | 6A4 | 42 - 46 | 6B4 | 52 - 56 | | | | | | | |
| | | | 7A2 | 44 - 48 | 7B2 | 55 - 59 | 69 | 100 | 71 | 32 | 92 | 83 | |
| SIZE 7 | M75X1,5 | 2" 1/2 | 7A3 | 48 - 52 | 7B3 | 59 - 63 | | | | | | | |
| | | | 7A4 | 52 - 56 | 7B4 | 63 - 67 | | | | | | | |
| | | | 7A5 | 56 - 60 | | | | | | | | | |
| | | | 8A4 | 56 - 60 | 8B4 | 63 - 67 | 79 | 100 | 71 | 32 | 103 | 93 | |
| SIZE 8 | M80X1,5 | 3" | 8A5 | 59 - 63 | 8B5 | 67 - 69 | | | | | | | |
| | | | 8A6 | 63 - 67 | 8B6 | 69 - 73 | | | | | | | |
| | | | 8A7 | 67 - 71 | 8B7 | 73 - 77 | | | | | | | |

Assembly diagram

| CLAMP RINGS FOR ARMoured CABLE | | | | | | | | | | | | | | | | | |
|---|--|--------------------------------|--|------------------------|--|------------------------|--|------------------------------|--|--|--|--|--|--|--|--|--|
| EXTERNAL HEAD | | OUTER SEAL RUBBER | | EXTERNAL HEAD | | FOR LEAD SHEATED CABLE | | INNER SEAL RUBBER | | | | | | | | | |
| RING FOR UNARMoured CABLE | | CLAMP RINGS FOR ARMoured CABLE | | FOR LEAD SHEATED CABLE | | INNER SEAL RUBBER | | SEALING CHAMBER (BARRIER CG) | | | | | | | | | |
| BODY WITH MALE THREAD | | CLAMP RINGS FOR ARMoured CABLE | | FOR LEAD SHEATED CABLE | | INNER SEAL RUBBER | | SEALING CHAMBER (BARRIER CG) | | | | | | | | | |
| RING FOR UNARMoured CABLE | | CLAMP RINGS FOR ARMoured CABLE | | FOR LEAD SHEATED CABLE | | INNER SEAL RUBBER | | SEALING CHAMBER (BARRIER CG) | | | | | | | | | |
| B14 # # # # # # # # # | | | | | | | | | | | | | | | | | |
| N - WITHOUT SEAL S - WITH SET SEALS 1 - OUTER SEAL RUBBER B1 2 - OUTER SEAL RUBBER B2 3 - OUTER SEAL RUBBER B3 4 - OUTER SEAL RUBBER B4 5 - OUTER SEAL RUBBER B5 6 - OUTER SEAL RUBBER B6 7 - OUTER SEAL RUBBER B7 | | | | | | | | | | | | | | | | | |
| OUTER SEALS | | | | | | | | | | | | | | | | | |
| N - WITHOUT SEAL S - WITH SET SEALS 1 - INNER SEAL RUBBER A1 2 - INNER SEAL RUBBER A2 3 - INNER SEAL RUBBER A3 4 - INNER SEAL RUBBER A4 5 - INNER SEAL RUBBER A5 6 - INNER SEAL RUBBER A6 7 - INNER SEAL RUBBER A7 | | | | | | | | | | | | | | | | | |
| INNER SEALS | | | | | | | | | | | | | | | | | |
| CERTIFICATE | | | | | | | | | | | | | | | | | |
| 1 - ATEX/IECEx - GROUP II 2 - ATEX/IECEx- GROUP I 5 - TR CU - GROUP II 6 - TR CU - GROUP I | | | | | | | | | | | | | | | | | |
| THREAD | | | | | | | | | | | | | | | | | |
| 1 - METRIC 2 - NPT 3 - UNI-6125 | | | | | | | | | | | | | | | | | |
| BODY | | | | | | | | | | | | | | | | | |
| 0 - STANDARD 1 - EXTENDED BODY (IN CASE OF ARMOUR THICKNESS HIGHER THAN 1,25mm) | | | | | | | | | | | | | | | | | |
| SIZE | | | | | | | | | | | | | | | | | |
| 1 - SIZE 1 2 - SIZE 2 3 - SIZE 3 4 - SIZE 5S 5 - SIZE 5 6 - SIZE 6 7 - SIZE 7 8 - SIZE 8 | | | | | | | | | | | | | | | | | |
| TYPE | | | | | | | | | | | | | | | | | |
| 01 - PAP _ DOUBLE SEAL, ARMoured CABLE 03 - PAB AX _ DOUBLE SEAL, ARMoured CABLE, BARRIER TYPE 11 - PBD _ DOUBLE SEAL, UNARMoured CABLE, LEAD SHEET 13 - PDB _ DOUBLE SEAL, ARMoured CABLE, LEAD SHEET 15 - PND _ DOUBLE SEAL, UNARMoured CABLE 18 - PMD _ DOUBLE SEAL, UNARMoured CABLE, BARRIER TYPE | | | | | | | | | | | | | | | | | |
| MATERIAL | | | | | | | | | | | | | | | | | |
| 01 - BNK BRASS NICKEL CHROME PLATED 03 - STAINLESS STEEL AISI316 | | | | | | | | | | | | | | | | | |



METALLIC CABLE GLANDS

PSM (Male-Male)

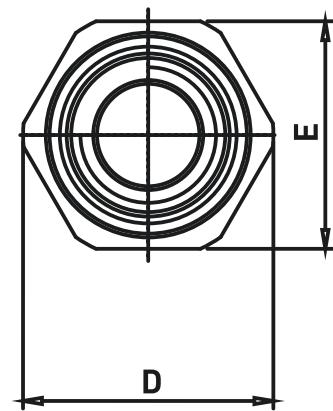
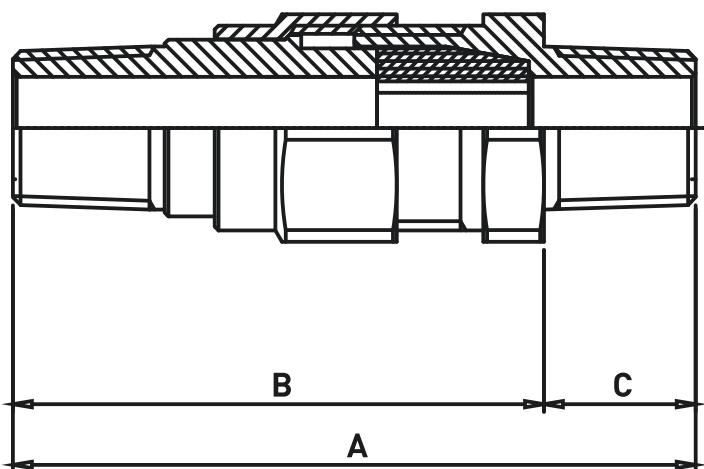


Single seal through "male-male" cable gland suitable for unarmoured cables.
Suitable for Zone 1/2 and Zone 21/22.

TECHNICAL FEATURES

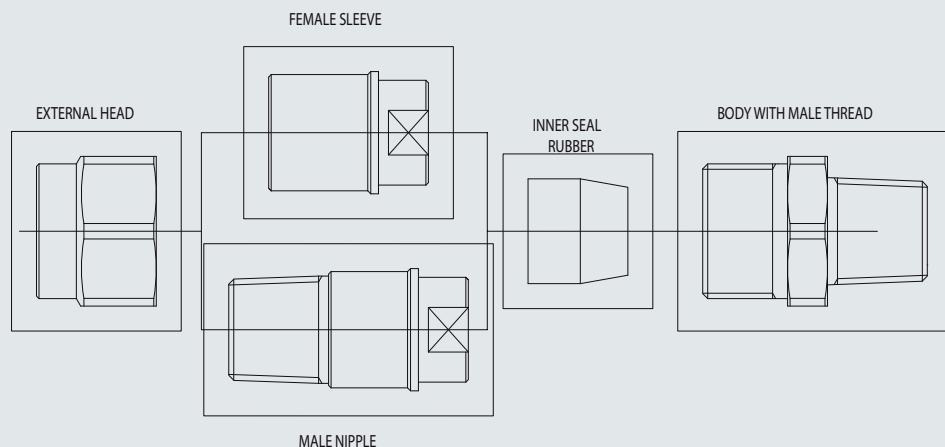
| | |
|---|---|
| Material | Nickel chrome plated brass AISI 316 L Stainless steel (other materials upon request) |
| IP rating | IP66 |
| Operating temperature range | -52°C to +110°C |
| Approvals | Certified 02ATEX0084 (standard) TR CU (marking upon request, ordering code to be required) IECEx INE 14.0046X |
| Marking* | II 2 GD Ex db/eb IIC Ex db/eb I Ex tb IIIC IP66 |
| | I M2 Ex db/eb I |
| | * For group I certification is up to size 6. |
| Internal seals | EPDM |
| Threads | Metric, NPT, UNI-6125 (other thread upon request) |
| Accessories available upon request | Locknut, sealing gasket, earthing ring, star washer, protective shroud |
| Note | The Free Nipple thread can be provided Metric, NPT or UNI-6125 |

Dimensions



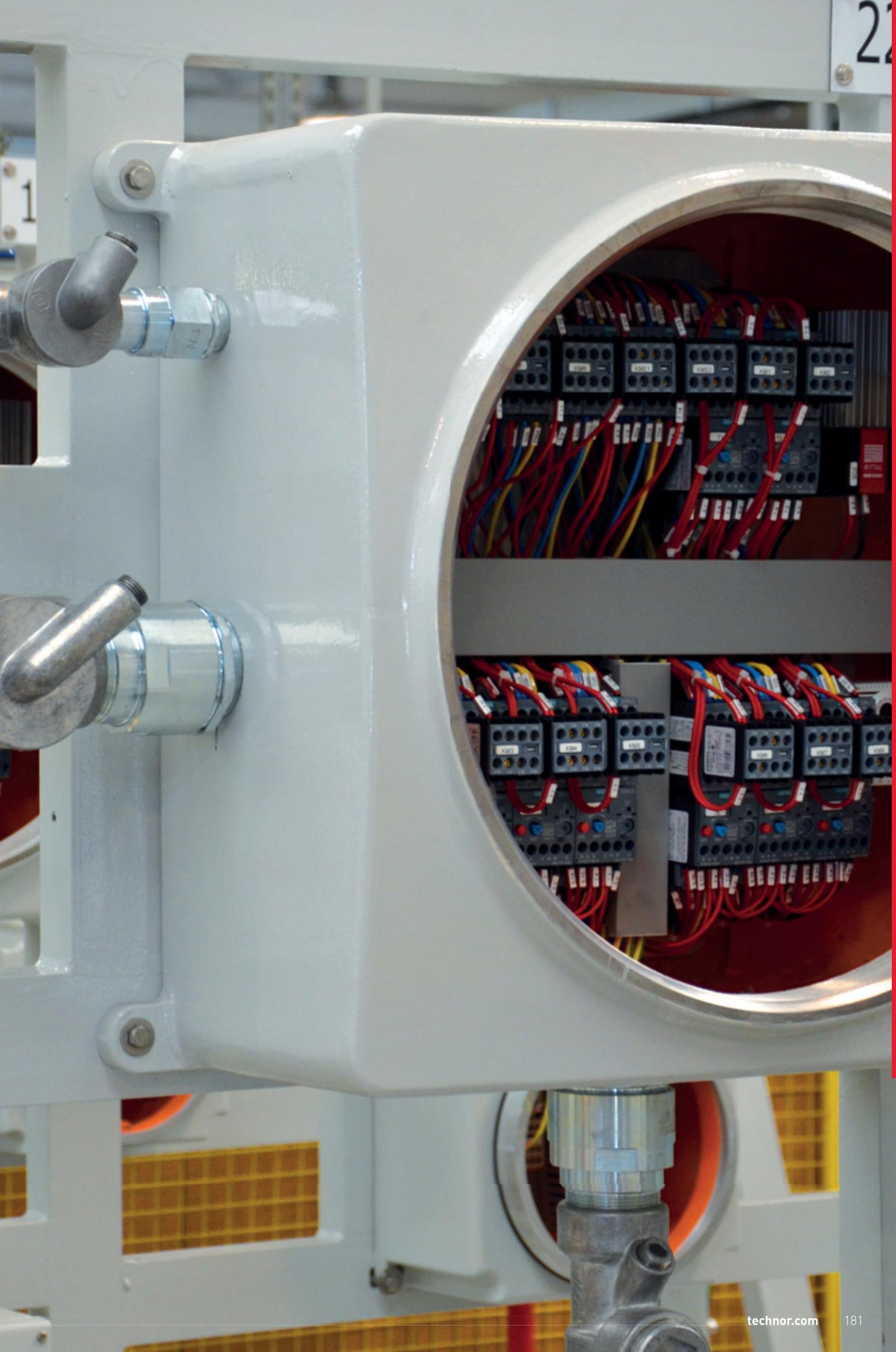
| | METRIC | NPT UNI-6125 | SEAL | CABLE RANGE (mm) | Ø EXTERNAL CABLE (mm) | EXTDIMENSIONS (mm) | | | | | |
|---------|---------|--------------|------|------------------|-----------------------|--------------------|----|----|----|----|---|
| | | | | | | F | A | B | C | D | E |
| SIZE 1 | M20X1,5 | 1/2" | 1A1 | 6 - 9 | 18 | 90 | 70 | 20 | 33 | 30 | |
| | | | 1A2 | 9 - 12 | | | | | | | |
| SIZE 2 | M25X1,5 | 3/4" | 2A1 | 6 - 9 | 24 | 90 | 70 | 20 | 40 | 36 | |
| | | | 2A2 | 9 - 12 | | | | | | | |
| | | | 2A3 | 11 - 14 | | | | | | | |
| | | | 2A4 | 14 - 17 | | | | | | | |
| SIZE 3 | M32X1,5 | 1" | 3A1 | 14 - 17 | 30 | 104 | 79 | 25 | 49 | 44 | |
| | | | 3A2 | 17 - 20 | | | | | | | |
| | | | 3A3 | 20 - 23 | | | | | | | |
| SIZE 5S | M40X1,5 | 1" 1/4 | 5A2 | 23 - 26 | 43 | 104 | 79 | 25 | 65 | 58 | |
| | | | 5A3 | 26 - 29 | | | | | | | |
| | | | 5A4 | 29 - 32 | | | | | | | |
| | | | 5A5 | 32 - 36 | | | | | | | |
| SIZE 5 | M50X1,5 | 1" 1/2 | 5A2 | 23 - 26 | 43 | 104 | 79 | 25 | 65 | 58 | |
| | | | 5A3 | 26 - 29 | | | | | | | |
| | | | 5A4 | 29 - 32 | | | | | | | |
| | | | 5A5 | 32 - 36 | | | | | | | |
| SIZE 6 | M63X1,5 | 2" | 6A2 | 36 - 39 | 57 | 109 | 84 | 25 | 65 | 58 | |
| | | | 6A3 | 39 - 42 | | | | | | | |
| | | | 6A4 | 42 - 46 | | | | | | | |
| SIZE 7 | M75X1,5 | 2" 1/2 | 7A2 | 44 - 48 | - | - | - | - | - | - | |
| | | | 7A3 | 48 - 52 | | | | | | | |
| | | | 7A4 | 52 - 56 | | | | | | | |
| | | | 7A5 | 56 - 60 | | | | | | | |
| SIZE 8 | M80X1,5 | 3" | 8A4 | 56 - 60 | - | - | - | - | - | - | |
| | | | 8A5 | 59 - 63 | | | | | | | |
| | | | 8A6 | 63 - 67 | | | | | | | |
| | | | 8A7 | 67 - 71 | | | | | | | |

Assembly diagram



CODIFICATION TABLE

| | | | | | | | | |
|-----|---|---|---|---|-------------|---|---|--|
| B14 | # | # | # | 0 | # | # | N | |
| | | | | | | | N - WITHOUT SEAL S - WITH SET SEALS 1 - INNER RUBBER SEAL A1 2 - INNER RUBBER SEAL A2 3 - INNER RUBBER SEAL A3 4 - INNER RUBBER SEAL A4 5 - INNER RUBBER SEAL A5 6 - INNER RUBBER SEAL A6 7 - INNER RUBBER SEAL A7 1 - ATEX/IECEx - GROUP II 2 - ATEX/IECEx- GROUP I 5 - TR CU - GROUP II 6 - TR CU - GROUP I | |
| | | | | | CERTIFICATE | | | |
| | | | | | THREAD | | 1 - METRIC 2 - NPT 3 - UNI-6125 | |
| | | | | | SIZE | | 1 - SIZE 1 2 - SIZE 2 3 - SIZE 3 4 - SIZE 4 5 - SIZE 5S 6 - SIZE 6 7 - SIZE 7 8 - SIZE 8 | |
| | | | | | TYPE | | 08 - PSM FREE NIPPLE METRIC 09 - PSM FREE NIPPLE NPT 22 - PSM AX FREE NIPPLE METRIC _ BARRIER TYPE 23 - PSM AX FREE NIPPLE NPT _ BARRIER TYPE | |
| | | | | | MATERIAL | | 01 - BNK BRASS NICKEL CHROME PLATED 03 - STAINLESS STEEL AISI316 | |



METALLIC CABLE GLANDS

PSF (Male-Female)

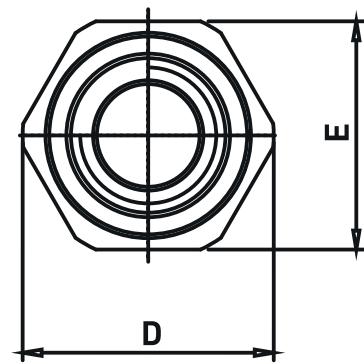
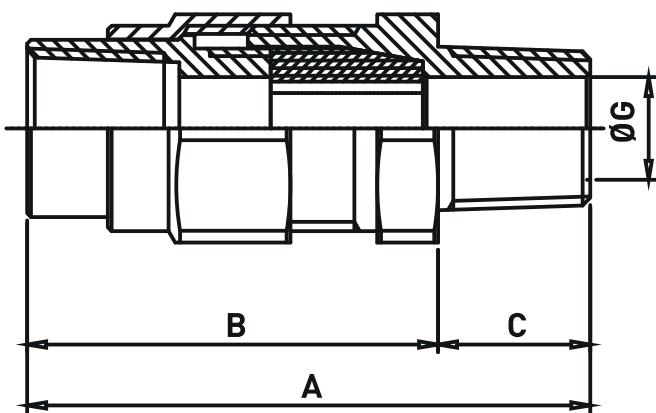


Single seal through "male-female" cable gland suitable for unarmoured cables.
Suitable for Zone 1/2 and Zone 21/22.

TECHNICAL FEATURES

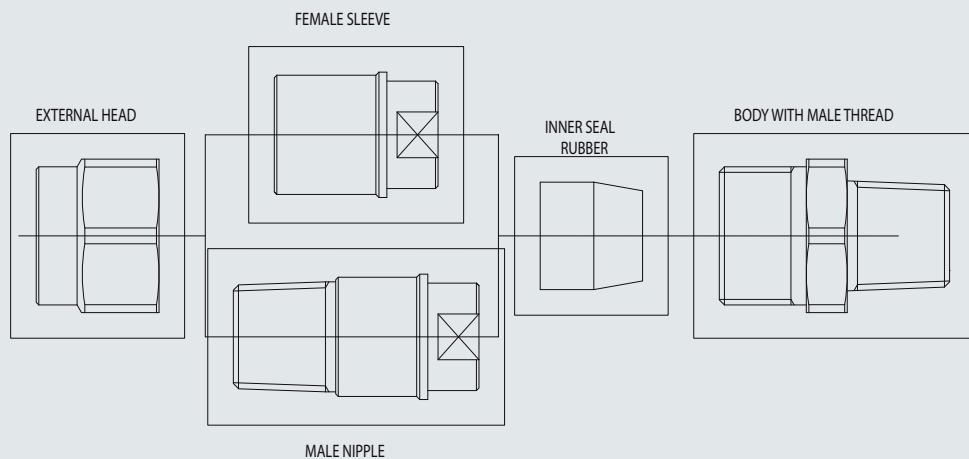
| | |
|---|---|
| Material | Nickel chrome plated brass AISI 316 L Stainless steel (other materials upon request) |
| IP rating | IP66 |
| Operating temperature range | -52°C to +110°C |
| Approvals | Certified 02ATEX0084 (standard) TR CU (marking upon request, ordering code to be required) IECEx INE 14.0046X |
| Marking* | II 2 GD Ex db/eb IIC Ex db/eb I Ex tb IIIC IP66 |
| | I M2 Ex db/eb I |
| | * For group I certification is up to size 6. |
| Internal seals | EPDM |
| Threads | Metric, NPT, UNI-6125 (other thread upon request) |
| Accessories available upon request | Locknut, sealing gasket, earthing ring, star washer, protective shroud |
| Note | The Free Coupling thread can be provided Metric, NPT or UNI-6125 |

Dimensions



| METRIC | NPT UNI-6125 | SEAL | CABLE RANGE (mm) | Ø EXTERNAL CABLE (mm) | EXTDIMENSIONS (mm) | | | | | |
|---------|-----------------|--------|------------------------|--------------------------------|--------------------|----|----|----|----|----|
| | | | | | G | A | B | C | D | E |
| SIZE 1 | M20X1,5 | 1/2" | 1A1 | 6 - 9 | 18 | 73 | 53 | 20 | 33 | 30 |
| | | | 1A2 | 9 - 12 | | | | | | |
| SIZE 2 | M25X1,5 | 3/4" | 2A1 | 6 - 9 | 24 | 73 | 53 | 20 | 40 | 36 |
| | | | 2A2 | 9 - 12 | | | | | | |
| | | | 2A3 | 11 - 14 | | | | | | |
| | | | 2A4 | 14 - 17 | | | | | | |
| SIZE 3 | M32X1,5 | 1" | 3A1 | 14 - 17 | 30 | 88 | 63 | 25 | 49 | 44 |
| | | | 3A2 | 17 - 20 | | | | | | |
| | | | 3A3 | 20 - 23 | | | | | | |
| SIZE 5S | M40X1,5 | 1" 1/4 | 5A2 | 23 - 26 | 43 | 89 | 64 | 25 | 65 | 58 |
| | | | 5A3 | 26 - 29 | | | | | | |
| | | | 5A4 | 29 - 32 | | | | | | |
| | | | 5A5 | 32 - 36 | | | | | | |
| | | | 5A2 | 23 - 26 | | | | | | |
| SIZE 5 | M50X1,5 | 1" 1/2 | 5A3 | 26 - 29 | 43 | 89 | 64 | 25 | 65 | 58 |
| | | | 5A4 | 29 - 32 | | | | | | |
| | | | 5A5 | 32 - 36 | | | | | | |
| | | | 6A2 | 36 - 39 | 57 | 92 | 67 | 25 | 65 | 58 |
| SIZE 6 | M63X1,5 | 2" | 6A3 | 39 - 42 | | | | | | |
| | | | 6A4 | 42 - 46 | | | | | | |
| | | | 7A2 | 44 - 48 | - | - | - | - | - | - |
| SIZE 7 | M75X1,5 | 2" 1/2 | 7A3 | 48 - 52 | | | | | | |
| | | | 7A4 | 52 - 56 | | | | | | |
| | | | 7A5 | 56 - 60 | | | | | | |
| | | | 8A4 | 56 - 60 | | | | | | |
| SIZE 8 | M80X1,5 | 3" | 8A5 | 59 - 63 | - | - | - | - | - | - |
| | | | 8A6 | 63 - 67 | | | | | | |
| | | | 8A7 | 67 - 71 | | | | | | |

Assembly diagram



CODIFICATION TABLE

| | | | | | | | | | |
|-----|---|---|---|---|---|---|---|-------------|--|
| B14 | # | # | # | 0 | # | # | # | N | |
| | | | | | | | | | N - WITHOUT SEAL S - WITH SET SEALS 1 - INNER RUBBER SEAL A1 2 - INNER RUBBER SEAL A2 3 - INNER RUBBER SEAL A3 4 - INNER RUBBER SEAL A4 5 - INNER RUBBER SEAL A5 6 - INNER RUBBER SEAL A6 7 - INNER RUBBER SEAL A7 |
| | | | | | | | | SEALS | |
| | | | | | | | | CERTIFICATE | 1 - ATEX/IECEx - GROUP II 2 - ATEX/IECEx - GROUP I 5 - TR CU - GROUP II 6 - TR CU - GROUP I |
| | | | | | | | | THREAD | 1 - METRIC 2 - NPT 3 - UNI-6125 |
| | | | | | | | | SIZE | 1 - SIZE 1 2 - SIZE 2 3 - SIZE 3 4 - SIZE 5S 5 - SIZE 5 6 - SIZE 6 7 - SIZE 7 8 - SIZE 8 |
| | | | | | | | | TYPE | 05 - PSF FREE COUPLING METRIC 06 - PSF FREE COUPLING NPT 19 - PSF AX FREE COUPLING METRIC _ BARRIER TYPE 20 - PSF AX FREE COUPLING NPT _ BARRIER TYPE |
| | | | | | | | | MATERIAL | 01 - BNK BRASS NICKEL CHROME PLATED 03 - STAINLESS STEEL AISI316 |



PLASTIC CABLE GLANDS

Polyamide

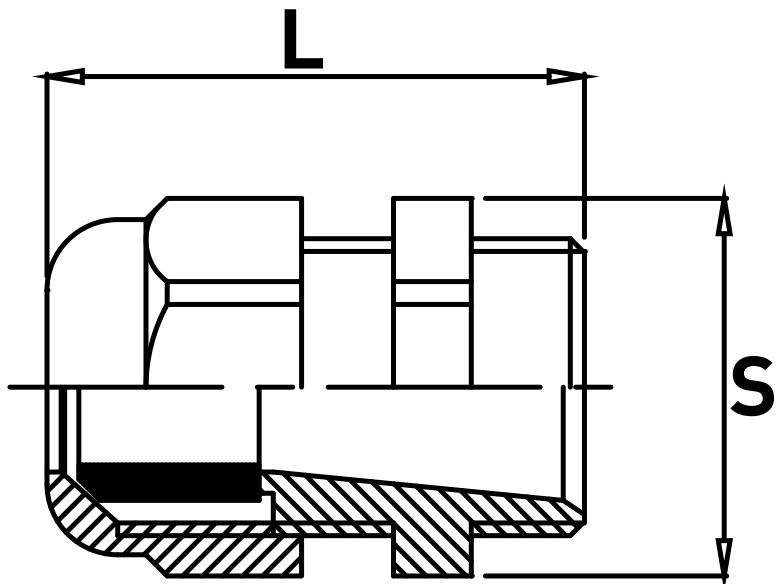


Single seal cable gland suitable for unarmoured
Suitable for Zone 1/2 and Zone 21/22.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Polyamide |
| IP rating | IP66/IP68 |
| Ambient temperature range | -20°C to +80°C |
| Approvals | CESI 03 ATEX 305X |
| Marking | II 2 GD Ex e II/Ex i II Ex td A21 IP66/68 |
| Gasket | Neoprene |
| Threads | Metric, PG |
| Accessories available upon request | Locknut, Gasket |

Dimensions



UN.. polyamide cable glands

| CODE | TYPE | THREAD | COLOUR | Ø CABLE (mm) |
|---------------|---------------------------------|---------|--------|--------------|
| B141001001000 | UNI01XE - POLYAMIDE CABLE GLAND | M16X1,5 | BLACK | 6 - 10 |
| B141001011000 | UNI1XE - POLYAMIDE CABLE GLAND | M20X1,5 | BLACK | 7 - 12 |
| B141001021000 | UNI2XE - POLYAMIDE CABLE GLAND | M25X1,5 | BLACK | 13 - 18 |
| B141001031000 | UNI3XE - POLYAMIDE CABLE GLAND | M32X1,5 | BLACK | 18 - 25 |
| B141001041000 | UNI4XE - POLYAMIDE CABLE GLAND | M40X1,5 | BLACK | 22 - 32 |
| B141001051000 | UNI5XE - POLYAMIDE CABLE GLAND | M50X1,5 | BLACK | 30 - 38 |
| B141001061000 | UNI6XE - POLYAMIDE CABLE GLAND | M63X1,5 | BLACK | 34 - 44 |
| B141002001000 | UNI01XI - POLYAMIDE CABLE GLAND | M16X1,5 | BLUE | 6 - 10 |
| B141002011000 | UNI1XI - POLYAMIDE CABLE GLAND | M20X1,5 | BLUE | 7 - 12 |
| B141002021000 | UNI2XI - POLYAMIDE CABLE GLAND | M25X1,5 | BLUE | 13 - 18 |
| B141002031000 | UNI3XI - POLYAMIDE CABLE GLAND | M32X1,5 | BLUE | 18 - 25 |
| B141002041000 | UNI4XI - POLYAMIDE CABLE GLAND | M40X1,5 | BLUE | 22 - 32 |
| B141002051000 | UNI5XI - POLYAMIDE CABLE GLAND | M50X1,5 | BLUE | 30 - 38 |
| B141002061000 | UNI6XI - POLYAMIDE CABLE GLAND | M63X1,5 | BLUE | 34 - 44 |

CABLE GLANDS

SPARES & ACCESSORIES



Set of inner seals (under armour)

| CODE | TYPE | Ø CABLE (mm) |
|---------------|----------------------------------|--------------|
| B14071AS00000 | SET OF INNER SEALS - C.G. SIZE 1 | 6-12 |
| B14072AS00000 | SET OF INNER SEALS - C.G. SIZE 2 | 6-17 |
| B14073AS00000 | SET OF INNER SEALS - C.G. SIZE 3 | 14-23 |
| B14075AS00000 | SET OF INNER SEALS - C.G. SIZE 5 | 23-36 |
| B14076AS00000 | SET OF INNER SEALS - C.G. SIZE 6 | 36-46 |
| B14077AS00000 | SET OF INNER SEALS - C.G. SIZE 7 | 44-60 |
| B14078AS00000 | SET OF INNER SEALS - C.G. SIZE 8 | 56-71 |



Set outer seals (external)

| CODE | TYPE | Ø CABLE (mm) |
|---------------|----------------------------------|--------------|
| B14071BS00000 | SET OF OUTER SEALS - C.G. SIZE 1 | 8-17 |
| B14072BS00000 | SET OF OUTER SEALS - C.G. SIZE 2 | 14-23 |
| B14073BS00000 | SET OF OUTER SEALS - C.G. SIZE 3 | 20-29 |
| B14075BS00000 | SET OF OUTER SEALS - C.G. SIZE 5 | 29-42 |
| B14076BS00000 | SET OF OUTER SEALS - C.G. SIZE 6 | 44-56 |
| B14077BS00000 | SET OF OUTER SEALS - C.G. SIZE 7 | 55-67 |
| B14078BS00000 | SET OF OUTER SEALS - C.G. SIZE 8 | 63-77 |

Inner seals

| CABLE GLAND SIZE | CODE | TYPE | Ø CABLE (mm) |
|------------------|---------------|-----------------|--------------|
| SIZE 1 | B14071A100000 | 1A1 RUBBER SEAL | 6 - 9 |
| | B14071A200000 | 1A2 RUBBER SEAL | 9 - 12 |
| SIZE 2 | B14072A100000 | 2A1 RUBBER SEAL | 6 - 9 |
| | B14072A200000 | 2A2 RUBBER SEAL | 9 - 12 |
| | B14072A300000 | 2A3 RUBBER SEAL | 11 - 14 |
| | B14072A400000 | 2A4 RUBBER SEAL | 14 - 17 |
| SIZE 3 | B14073A100000 | 3A1 RUBBER SEAL | 14 - 17 |
| | B14073A200000 | 3A2 RUBBER SEAL | 17 - 20 |
| SIZE 5/5S | B14075A200000 | 5A2 RUBBER SEAL | 23 - 26 |
| | B14075A300000 | 5A3 RUBBER SEAL | 26 - 29 |
| | B14075A400000 | 5A4 RUBBER SEAL | 29 - 32 |
| | B14075A500000 | 5A5 RUBBER SEAL | 32 - 36 |
| SIZE 6 | B14076A200000 | 6A2 RUBBER SEAL | 36 - 39 |
| | B14076A300000 | 6A3 RUBBER SEAL | 39 - 42 |
| | B14076A400000 | 6A4 RUBBER SEAL | 42 - 46 |
| SIZE 7 | B14077A200000 | 7A2 RUBBER SEAL | 44 - 48 |
| | B14077A300000 | 7A3 RUBBER SEAL | 48 - 52 |
| | B14077A400000 | 7A4 RUBBER SEAL | 52 - 56 |
| | B14077A500000 | 7A5 RUBBER SEAL | 56 - 60 |
| SIZE 8 | B14078A400000 | 8A4 RUBBER SEAL | 56 - 60 |
| | B14078A500000 | 8A5 RUBBER SEAL | 59 - 63 |
| | B14078A600000 | 8A6 RUBBER SEAL | 63 - 67 |
| | B14078A700000 | 8A7 RUBBER SEAL | 67 - 71 |

Inner seals

| CABLE GLAND SIZE | CODE | TYPE | Ø CABLE (mm) |
|------------------|---------------|-----------------|--------------|
| SIZE 1 | B14071B100000 | 1B1 RUBBER SEAL | 8 - 11 |
| | B14071B200000 | 1B2 RUBBER SEAL | 11 - 14 |
| | B14071B300000 | 1B3 RUBBER SEAL | 14 - 17 |
| SIZE 2 | B14072B100000 | 2B1 RUBBER SEAL | 14 - 17 |
| | B14072B200000 | 2B2 RUBBER SEAL | 17 - 20 |
| | B14072B300000 | 2B3 RUBBER SEAL | 20 - 23 |
| SIZE 3 | B14073B100000 | 3B1 RUBBER SEAL | 20 - 23 |
| | B14073B200000 | 3B2 RUBBER SEAL | 23 - 26 |
| | B14073B300000 | 3B3 RUBBER SEAL | 26 - 29 |
| SIZE 5/5S | B14075B200000 | 5B2 RUBBER SEAL | 29 - 32 |
| | B14075B300000 | 5B3 RUBBER SEAL | 32 - 36 |
| | B14075B400000 | 5B4 RUBBER SEAL | 36 - 39 |
| | B14075B500000 | 5B5 RUBBER SEAL | 39 - 42 |
| SIZE 6 | B14076B200000 | 6B2 RUBBER SEAL | 44 - 48 |
| | B14076B300000 | 6B3 RUBBER SEAL | 48 - 52 |
| | B14076B400000 | 6B4 RUBBER SEAL | 52 - 56 |
| SIZE 7 | B14077B200000 | 7B2 RUBBER SEAL | 55 - 59 |
| | B14077B300000 | 7B3 RUBBER SEAL | 59 - 63 |
| | B14077B400000 | 7B4 RUBBER SEAL | 63 - 67 |
| SIZE 8 | B14078B400000 | 8B4 RUBBER SEAL | 63 - 67 |
| | B14078B500000 | 8B5 RUBBER SEAL | 65 - 69 |
| | B14078B600000 | 8B6 RUBBER SEAL | 69 - 73 |
| | B14078B700000 | 8B7 RUBBER SEAL | 73 - 77 |

CABLE GLANDS

SPARES & ACCESSORIES

Protective shroud EPDM-55

| CODE | TYPE | CABLE GLAND SIZE |
|---------------|------------------|------------------|
| B140901010000 | PGA-1 PVC SHROUD | SIZE 1 |
| B140901020000 | PGA-2 PVC SHROUD | SIZE 2 |
| B140901030000 | PGA-3 PVC SHROUD | SIZE 3 |
| B140901050000 | PGA-5 PVC SHROUD | SIZE 5/5S |
| B140901060000 | PGA-6 PVC SHROUD | SIZE 6 |
| B140901070000 | PGA-7 PVC SHROUD | SIZE 7 |
| B140901080000 | PGA-8 PVC SHROUD | SIZE 8 |

Sealants for barrier type cable glands

| CODE | TYPE |
|---------------|---|
| B141301002000 | MANUAL APPLICATOR FOR 200ML CARTRIDGE, TYPE 2012/1 |
| B141302003000 | 200ML CARTRIDGE WITH MIXING NOOZLE, TYPE 2012 |
| B141302004000 | PACKAGE OF N. 6 200ML CARTRIDGE WITH MIXING NOOZLE, TYPE 2012 |
| B160110030000 | MANUAL APPLICATOR FOR 310ML CARTRIDGE, TYPE 7091 |
| B16011003000 | SINGLE 310ML CARTRIDGE WITH NOOZLE, TYPE 7091 |

| CODE | TYPE | THREAD |
|---------------|--------------------|---------------|
| B141101000000 | GK-16 - AMF GASKET | METRIC M16 |
| B141101010000 | GK-20 - AMF GASKET | METRIC M20 |
| B141101020000 | GK-25 - AMF GASKET | METRIC M25 |
| B141101030000 | GK-32 - AMF GASKET | METRIC M32 |
| B141101040000 | GK-40 - AMF GASKET | METRIC M40 |
| B141101050000 | GK-50 - AMF GASKET | METRIC M50 |
| B141101060000 | GK-63 - AMF GASKET | METRIC M63 |
| B141101070000 | GK-75 - AMF GASKET | METRIC M75 |
| B141101081000 | GK-80 - AMF GASKET | METRIC M80 |
| B141102010000 | GK-1 - AMF GASKET | INCHES 1/2" |
| B141102020000 | GK-2 - AMF GASKET | INCHES 3/4" |
| B141102030000 | GK-3 - AMF GASKET | INCHES 1" |
| B141102040000 | GK-5 - AMF GASKET | INCHES 1" 1/4 |
| B141102050000 | GK-5 - AMF GASKET | INCHES 1" 1/2 |
| B141102060000 | GK-6 - AMF GASKET | INCHES 2" |
| B141102070000 | GK-7 - AMF GASKET | INCHES 2" 1/2 |
| B141102080000 | GK-8 - AMF GASKET | INCHES 3" |

| CODE | | TYPE | THREAD | |
|---------------|--------------------|------------------|---------|----------|
| BRASS | AISI 316 L | | M20X1,5 | M25X1,5 |
| B171411100000 | B171421100000 | DL-1 - LOCKNUT | | M20X1,5 |
| B171412100000 | B171422100000 | DL-2 - LOCKNUT | | M25X1,5 |
| B171413100000 | B171423100000 | DL-3 - LOCKNUT | | M32X1,5 |
| B171414100000 | B171424100000 | DL-4 - LOCKNUT | | M40X1,5 |
| B171415100000 | B171425100000 | DL-5 - LOCKNUT | | M50X1,5 |
| B171416100000 | B171426100000 | DL-6 - LOCKNUT | | M63X1,5 |
| B171417100000 | B171427100000 | DL-7 - LOCKNUT | | M75X1,5 |
| B171418100000 | B171428100000 | DL-8 - LOCKNUT | | M80X1,5 |
| <hr/> | | | | |
| B171411200000 | B171421200000 | DL-1 - LOCKNUT | 1/2" | NPT |
| B171412200000 | B171422200000 | DL-2 - LOCKNUT | 3/4" | NPT |
| B171413200000 | B171423200000 | DL-3 - LOCKNUT | 1" | NPT |
| B171414200000 | B171424200000 | DL-4 - LOCKNUT | 1" 1/4 | NPT |
| B171415200000 | B171425200000 | DL-5 - LOCKNUT | 1" 1/2 | NPT |
| B171416200000 | B171426200000 | DL-6 - LOCKNUT | 2" | NPT |
| B171417200000 | B171427200000 | DL-7 - LOCKNUT | 2" 1/2 | NPT |
| B171418200000 | B171428200000 | DL-8 - LOCKNUT | 3" | NPT |
| <hr/> | | | | |
| B171411500000 | B171421500000 | DL-1 - LOCKNUT | 1/2" | UNI-6125 |
| B171412500000 | B171422500000 | DL-2 - LOCKNUT | 3/4" | UNI-6125 |
| B171413500000 | B171423500000 | DL-3 - LOCKNUT | 1" | UNI-6125 |
| B171414500000 | B171424500000 | DL-4 - LOCKNUT | 1" 1/4 | UNI-6125 |
| B171415500000 | B171425500000 | DL-5 - LOCKNUT | 1" 1/2 | UNI-6125 |
| B171416500000 | B171426500000 | DL-6 - LOCKNUT | 2" | UNI-6125 |
| B171417500000 | B171427500000 | DL-7 - LOCKNUT | 2" 1/2 | UNI-6125 |
| B171418500000 | B171428500000 | DL-8 - LOCKNUT | 3" | UNI-6125 |
| <hr/> | | | | |
| CODE | TYPE | CABLE GLAND SIZE | | |
| B140801010000 | PT-1 EARTHING RING | SIZE 1 | | |
| B140801020000 | PT-2 EARTHING RING | SIZE 2 | | |
| B140801030000 | PT-3 EARTHING RING | SIZE 3 | | |
| B140801040000 | PT-4 EARTHING RING | SIZE 4/5S | | |
| B140801050000 | PT-5 EARTHING RING | SIZE 5 | | |
| B140801060000 | PT-6 EARTHING RING | SIZE 6 | | |
| B140801070000 | PT-7 EARTHING RING | SIZE 7 | | |
| B140801080000 | PT-8 EARTHING RING | SIZE 8 | | |
| <hr/> | | | | |
| CODE | TYPE | THREAD SIZE | | |
| B171820220 | STAR WASHER Ø22 | M20 | | |
| B171820270 | STAR WASHER Ø27 | M25 | | |
| B171820330 | STAR WASHER Ø33 | M32 | | |
| B171820420 | STAR WASHER Ø52 | M50 | | |
| B171820520 | STAR WASHER Ø65 | M63 | | |
| B171820650 | STAR WASHER Ø77 | M75 | | |
| B171820770 | STAR WASHER Ø82 | M80 | | |

FITTINGS

BMF/BFF/BMM Series - Three pieces unions



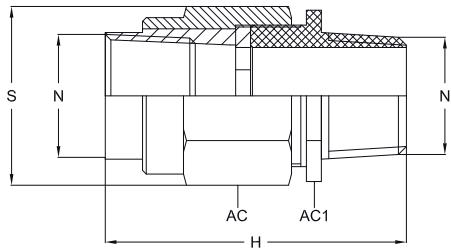
Three pieces unions for gas group IIB enable an independent rotation and the connection between pipes of an electrical equipment and enclosures or different devices of an explosion-proof equipment.

- BFF series (female/female)
- BMF series (male/female)
- BMM series (male/male)

TECHNICAL FEATURES

| | |
|----------------------------------|---|
| Material | Galvanised steel (other materials upon request) |
| IP rating | IP66/IP67 |
| Ambient temperature range | ATEX Galvanised steel: -20°C to +60°C with EPDM gasket Stainless Steel: -55°C to +60°C with SI/50 gasket (upon request) |
| | IEC Ex Galvanised steel: -20°C to +60°C with SILICON gasket (upon request) Stainless Steel: -50°C to +60°C with SILICON gasket (upon request) |
| | Special version suitable for high temperature +150°C is available upon request (the suffix become RBMF...) |
| Approvals | CESI 99 ATEX 034U IECEx CES 10.0002U TR CU |
| Marking | II 2GD Ex d IIB Gb Ex tb IIIC Db IP66/67 |
| | Special version suitable for IIC group of gases is available upon request |
| Thread | NPT, UNI-6125 (other thread upon request) |

Dimensions BMF



BMF - Male/Female three pieces unions

| TYPE | CODE | SIZE | THREAD | DIMENSIONS [mm] | | | | WEIGHT [Kg] |
|-------|---------------|--------|----------|-----------------|-----|-----|-----|-------------|
| | | | | H | S | AC | AC1 | |
| BMF-1 | B170623131020 | 1/2" | UNI-6125 | 58 | 35 | 30 | 27 | 0,150 |
| BMF-2 | B170623231020 | 3/4" | UNI-6125 | 58 | 40 | 35 | 32 | 0,185 |
| BMF-3 | B170623331020 | 1" | UNI-6125 | 70 | 48 | 42 | 40 | 0,300 |
| BMF-4 | B170623431020 | 1" 1/4 | UNI-6125 | 87 | 60 | 55 | 59 | 0,760 |
| BMF-5 | B170623531020 | 1" 1/2 | UNI-6125 | 87 | 75 | 70 | 67 | 1,000 |
| BMF-6 | B170623631020 | 2" | UNI-6125 | 87 | 90 | 84 | 77 | 1,400 |
| BMF-7 | B170623731020 | 2" 1/2 | UNI-6125 | 98 | 117 | 108 | 99 | 2,350 |
| BMF-8 | B170623831020 | 3" | UNI-6125 | 98 | 132 | 121 | 108 | 2,800 |
| BMF-1 | B170623121020 | 1/2" | NPT | 58 | 35 | 30 | 27 | 0,150 |
| BMF-2 | B170623221020 | 3/4" | NPT | 58 | 40 | 35 | 32 | 0,185 |
| BMF-3 | B170623321020 | 1" | NPT | 70 | 48 | 42 | 40 | 0,300 |
| BMF-4 | B170623421020 | 1" 1/4 | NPT | 87 | 60 | 55 | 59 | 0,760 |
| BMF-5 | B170623521020 | 1" 1/2 | NPT | 87 | 75 | 70 | 67 | 1,000 |
| BMF-6 | B170623621020 | 2" | NPT | 87 | 90 | 84 | 77 | 1,400 |
| BMF-7 | B170623721020 | 2" 1/2 | NPT | 98 | 117 | 108 | 99 | 2,350 |
| BMF-8 | B170623821020 | 3" | NPT | 98 | 132 | 121 | 108 | 2,800 |

FITTINGS

BMF/BFF/BMM Series - Three pieces unions



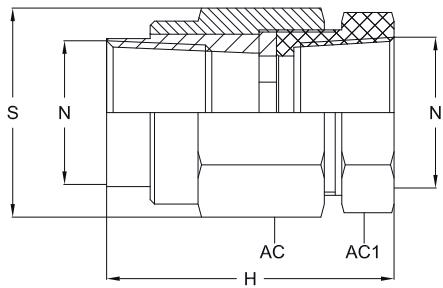
Three pieces unions for gas group IIB enable an independent rotation and the connection between pipes of an electrical equipment and enclosures or different devices of an explosion-proof equipment.

- BFF series (female/female)
- BMF series (male/female)
- BMM series (male/male)

TECHNICAL FEATURES

| | |
|----------------------------------|---|
| Material | Galvanised steel (other materials upon request) |
| IP rating | IP66/IP67 |
| Ambient temperature range | ATEX Galvanised steel: -20°C to +60°C with EPDM gasket Stainless Steel: -55°C to +60°C with SI/50 gasket (upon request) |
| | IEC Ex Galvanised steel: -20°C to +60°C with SILICON gasket (upon request) Stainless Steel: -50°C to +60°C with SILICON gasket (upon request) |
| | Special version suitable for high temperature +150°C is available upon request (the suffix become RBFF...) |
| Approvals | CESI 99 ATEX 034U IECEx CES 10.0002U TR CU |
| Marking | II 2GD Ex d IIB Gb Ex tb IIIC Db IP66/67 |
| | Special version suitable for IIC group of gases is available upon request |
| Thread | NPT, UNI-6125 (other thread upon request) |

Dimensions BFF



BFF - Female/Female three pieces unions

| TYPE | CODE | SIZE | THREAD | DIMENSIONS [mm] | | | | WEIGHT [Kg] |
|-------|---------------|--------|----------|-----------------|-----|-----|-----|-------------|
| | | | | H | S | AC | AC1 | |
| BFF-1 | B170633130020 | 1/2" | UNI-6125 | 46 | 35 | 30 | 27 | 0,125 |
| BFF-2 | B170633230020 | 3/4" | UNI-6125 | 46 | 40 | 35 | 32 | 0,150 |
| BFF-3 | B170633330020 | 1" | UNI-6125 | 56 | 48 | 42 | 40 | 0,235 |
| BFF-4 | B170633430020 | 1" 1/4 | UNI-6125 | 63 | 60 | 55 | 59 | 0,640 |
| BFF-5 | B170633530020 | 1" 1/2 | UNI-6125 | 66 | 75 | 70 | 67 | 0,960 |
| BFF-6 | B170633630020 | 2" | UNI-6125 | 66 | 90 | 84 | 77 | 1,220 |
| BFF-7 | B170633730020 | 2" 1/2 | UNI-6125 | 71 | 117 | 108 | 99 | 2,240 |
| BFF-8 | B170633830020 | 3" | UNI-6125 | 71 | 132 | 121 | 108 | 2,600 |
| BFF-1 | B170633120020 | 1/2" | NPT | 46 | 35 | 30 | 27 | 0,125 |
| BFF-2 | B170633220020 | 3/4" | NPT | 46 | 40 | 35 | 32 | 0,150 |
| BFF-3 | B170633320020 | 1" | NPT | 56 | 48 | 42 | 40 | 0,235 |
| BFF-4 | B170633420020 | 1" 1/4 | NPT | 63 | 60 | 55 | 59 | 0,640 |
| BFF-5 | B170633520020 | 1" 1/2 | NPT | 66 | 75 | 70 | 67 | 0,960 |
| BFF-6 | B170633620020 | 2" | NPT | 66 | 90 | 84 | 77 | 1,220 |
| BFF-7 | B170633720020 | 2" 1/2 | NPT | 71 | 117 | 108 | 99 | 2,240 |
| BFF-8 | B170633820020 | 3" | NPT | 71 | 132 | 121 | 108 | 2,600 |

FITTINGS

BMF/BFF/BMM Series - Three pieces unions



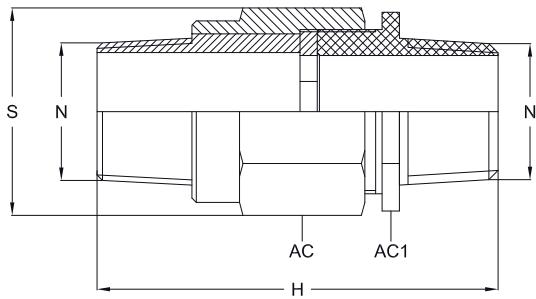
Three pieces unions for gas group IIB enable an independent rotation and the connection between pipes of an electrical equipment and enclosures or different devices of an explosion-proof equipment.

- BFF series (female/female)
- BMF series (male/female)
- BMM series (male/male)

TECHNICAL FEATURES

| | |
|----------------------------------|---|
| Material | Galvanised steel (other materials upon request) |
| IP rating | IP66/IP67 |
| Ambient temperature range | ATEX Galvanised steel: -20°C to +60°C with EPDM gasket Stainless Steel: -55°C to +60°C with SI/50 gasket (upon request) |
| | IEC Ex Galvanised steel: -20°C to +60°C with SILICON gasket (upon request) Stainless Steel: -50°C to +60°C with SILICON gasket (upon request) |
| | Special version suitable for high temperature +150°C is available upon request (the suffix become RBMM...) |
| Approvals | CESI 99 ATEX 034U IECEx CES 10.0002U TR CU |
| Marking | II 2GD Ex d IIB Gb Ex tb IIIC Db IP66/67 |
| | Special version suitable for IIC group of gases is available upon request |
| Thread | NPT, UNI-6125 (other thread upon request) |

Dimensions BMM



BMM - Male/Male three pieces unions

| TYPE | CODE | SIZE | THREAD | DIMENSIONS [mm] | | | | WEIGHT [Kg] |
|-------|---------------|--------|----------|-----------------|-----|-----|-----|-------------|
| | | | | H | S | AC | AC1 | |
| BMM-1 | B170613131020 | 1/2" | UNI-6125 | 86 | 35 | 30 | 27 | 0,175 |
| BMM-2 | B170613231020 | 3/4" | UNI-6125 | 86 | 40 | 35 | 32 | 0,230 |
| BMM-3 | B170613331020 | 1" | UNI-6125 | 99 | 48 | 42 | 40 | 0,350 |
| BMM-4 | B170613431020 | 1" 1/4 | UNI-6125 | 115 | 60 | 55 | 59 | 0,910 |
| BMM-5 | B170613531020 | 1" 1/2 | UNI-6125 | 115 | 75 | 70 | 67 | 1,220 |
| BMM-6 | B170613631020 | 2" | UNI-6125 | 115 | 90 | 84 | 77 | 1,620 |
| BMM-7 | B170613731020 | 2" 1/2 | UNI-6125 | 126 | 117 | 108 | 99 | 2,900 |
| BMM-8 | B170613831020 | 3" | UNI-6125 | 126 | 132 | 121 | 108 | 3,350 |
| BMM-1 | B170613121020 | 1/2" | NPT | 86 | 35 | 30 | 27 | 0,175 |
| BMM-2 | B170613221020 | 3/4" | NPT | 86 | 40 | 35 | 32 | 0,230 |
| BMM-3 | B170613321020 | 1" | NPT | 99 | 48 | 42 | 40 | 0,350 |
| BMM-4 | B170613421020 | 1" 1/4 | NPT | 115 | 60 | 55 | 59 | 0,910 |
| BMM-5 | B170613521020 | 1" 1/2 | NPT | 115 | 75 | 70 | 67 | 1,220 |
| BMM-6 | B170613621020 | 2" | NPT | 115 | 90 | 84 | 77 | 1,620 |
| BMM-7 | B170613721020 | 2" 1/2 | NPT | 126 | 117 | 108 | 99 | 2,900 |
| BMM-8 | B170613821020 | 3" | NPT | 126 | 132 | 121 | 108 | 3,350 |

FITTINGS

EYS Series - Sealing fittings



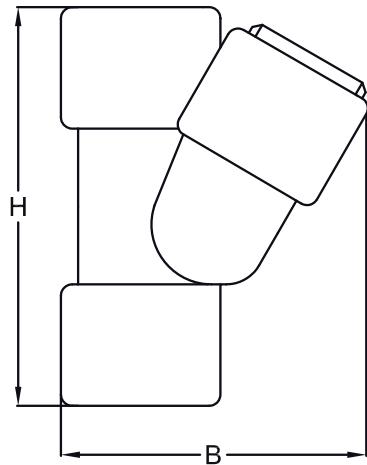
Sealing fittings prevent the passage of gas, vapors or flames through pipes system. EYS series vertical fittings are available in two different dimensions: the first up to 1"; the second up to 3" with an additional lateral opening for easy insertion of glass-fiber. EZS series are used for both vertical and horizontal mounting.

The fittings must be installed as close as possible to the Ex d junction box and must be filled using CRV 420 approved resin. The sealing compound is supplied, in the quantity indicated in the table below, along with the sealing fitting. Other sealing compounds are not allowed.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -20°C to +100°C |
| Approvals | IECEx CES 14.0019X CESI 03 ATEX 085 TR CU |
| Marking | II 2GD Ex db IIC Gb Ex tb IIIC Db IP66 |
| Thread | NPT, UNI-6125 (other threads upon request) |
| Accessories available upon request | CRV420 sealing compound, fiber. |

Dimensions EYS



Vertical sealing fittings EYS

| TYPE | CODE | SIZE | THREAD | DIMENSIONS [mm] | | RESIN QUANTITY | WEIGHT [Kg] |
|-------|---------------|--------|----------|-----------------|-----|----------------|-------------|
| | | | | H | B | | |
| EYS-1 | B170524130020 | 1/2" | UNI-6125 | 77 | 56 | 35 GR. | 0,175 |
| EYS-2 | B170524230020 | 3/4" | UNI-6125 | 87 | 66 | 50 GR. | 0,230 |
| EYS-3 | B170524330020 | 1" | UNI-6125 | 105 | 82 | 100 GR. | 0,350 |
| EYS-4 | B170524430020 | 1" 1/4 | UNI-6125 | 145 | 84 | 240 GR. | 0,910 |
| EYS-5 | B170524530020 | 1" 1/2 | UNI-6125 | 145 | 84 | 240 GR. | 1,220 |
| EYS-6 | B170524630020 | 2" | UNI-6125 | 150 | 95 | 380 GR. | 1,620 |
| EYS-7 | B170524730020 | 2" 1/2 | UNI-6125 | 200 | 134 | 1250 GR. | 2,900 |
| EYS-8 | B170524830020 | 3" | UNI-6125 | 200 | 134 | 1250 GR. | 3,350 |
| EYS-1 | B170524120020 | 1/2" | NPT | 77 | 56 | 35 GR. | 0,175 |
| EYS-2 | B170524220020 | 3/4" | NPT | 87 | 66 | 50 GR. | 0,230 |
| EYS-3 | B170524320020 | 1" | NPT | 105 | 82 | 100 GR. | 0,350 |
| EYS-4 | B170524420020 | 1" 1/4 | NPT | 145 | 84 | 240 GR. | 0,910 |
| EYS-5 | B170524520020 | 1" 1/2 | NPT | 145 | 84 | 240 GR. | 1,220 |
| EYS-6 | B170524620020 | 2" | NPT | 150 | 95 | 380 GR. | 1,620 |
| EYS-7 | B170524720020 | 2" 1/2 | NPT | 200 | 134 | 1250 GR. | 2,900 |
| EYS-8 | B170524820020 | 3" | NPT | 200 | 134 | 1250 GR. | 3,350 |

Sealing fittings accessories

| TYPE | CODE | WEIGHT |
|--|---------------|----------|
| CRV 420/300 SEALING COMPOUND 300 GR. | B170530300000 | 300 GR. |
| CRV 420/400 SEALING COMPOUND 400 GR. | B170530400000 | 400 GR. |
| CRV 420/1000 SEALING COMPOUND 1000 GR. | B170531000000 | 1000 GR. |
| FAB 25 FIBER 25 GR. | B170540025000 | 250 GR. |
| FAB 50 FIBER 50 GR. | B170540050000 | 500 GR. |

FITTINGS

EZS Series - Sealing fittings



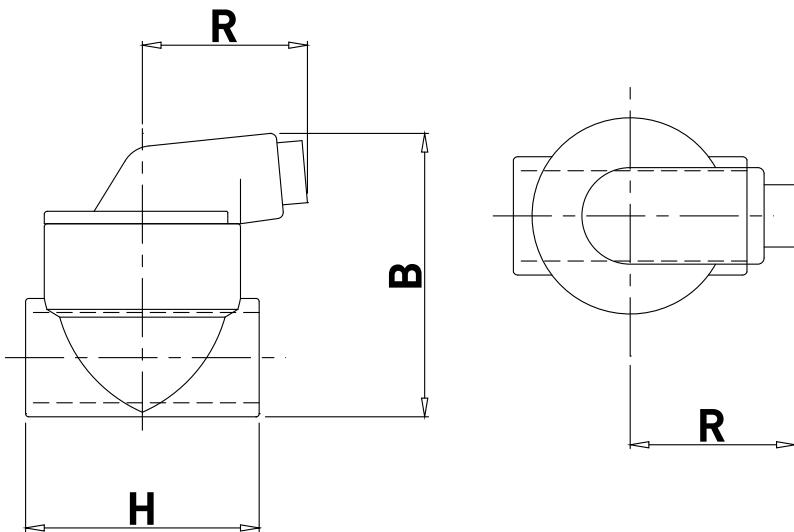
Sealing fittings prevent the passage of gas, vapors or flames through pipes system. EYS series vertical fittings are available in two different dimensions: the first up to 1"; the second up to 3" with an additional lateral opening for easy insertion of glass-fiber. EZS series are used for both vertical and horizontal mounting.

The fittings must be installed as close as possible to the Ex d junction box and must be filled using CRV 420 approved resin. The sealing compound is supplied, in the quantity indicated in the table below, along with the sealing fitting. Other sealing compounds are not allowed.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Aluminium with low content of copper |
| IP rating | IP66 |
| Ambient temperature range | -20°C to +100°C |
| Approvals | IECEx CES 14.0019X CESI 03 ATEX 085 TR CU |
| Marking | II 2GD Ex db IIC Gb Ex tb IIIC Db IP66 |
| Thread | NPT, UNI-6125 (other threads upon request) |
| Accessories available upon request | CRV420 sealing compound, fiber. |

Dimensions EZS



Horizontal sealing fittings EZS

| TYPE | CODE | SIZE | THREAD | DIMENSIONS [mm] | | | RESIN QUANTITY | WEIGHT [Kg] |
|-------|---------------|--------|----------|-----------------|-----|----|----------------|-------------|
| | | | | H | B | R | | |
| EZS-1 | B170514130020 | 1/2" | UNI-6125 | 72 | 83 | 50 | 140 GR. | 0.26 |
| EZS-2 | B170514230020 | 3/4" | UNI-6125 | 72 | 83 | 50 | 140 GR. | 0.25 |
| EZS-3 | B170514330020 | 1" | UNI-6125 | 74 | 92 | 50 | 140 GR. | 0.27 |
| EZS-4 | B170514430020 | 1" 1/4 | UNI-6125 | 98 | 110 | 60 | 390 GR. | 0.52 |
| EZS-5 | B170514530020 | 1" 1/2 | UNI-6125 | 98 | 110 | 60 | 390 GR. | 0.48 |
| EZS-6 | B170514630020 | 2" | UNI-6125 | 130 | 120 | 60 | 570 GR. | 0.70 |
| EZS-7 | B170514730020 | 2" 1/2 | UNI-6125 | 142 | 160 | 90 | 1000 GR. | 1.50 |
| EZS-8 | B170514830020 | 3" | UNI-6125 | 142 | 160 | 90 | 1000 GR. | 1.74 |
| EZS-1 | B170514120020 | 1/2" | NPT | 72 | 83 | 50 | 140 GR. | 0.26 |
| EZS-2 | B170514220020 | 3/4" | NPT | 72 | 83 | 50 | 140 GR. | 0.25 |
| EZS-3 | B170514320020 | 1" | NPT | 74 | 92 | 50 | 140 GR. | 0.27 |
| EZS-4 | B170514420020 | 1" 1/4 | NPT | 98 | 110 | 60 | 390 GR. | 0.52 |
| EZS-5 | B170514520020 | 1" 1/2 | NPT | 98 | 110 | 60 | 390 GR. | 0.48 |
| EZS-6 | B170514620020 | 2" | NPT | 130 | 120 | 60 | 570 GR. | 0.70 |
| EZS-7 | B170514720020 | 2" 1/2 | NPT | 142 | 160 | 90 | 1000 GR. | 1.50 |
| EZS-8 | B170514820020 | 3" | NPT | 142 | 160 | 90 | 1000 GR. | 1.74 |

Sealing fittings accessories

| TYPE | CODE | WEIGHT |
|--|---------------|----------|
| CRV 420/300 SEALING COMPOUND 300 GR. | B170530300000 | 300 GR. |
| CRV 420/400 SEALING COMPOUND 400 GR. | B170530400000 | 400 GR. |
| CRV 420/1000 SEALING COMPOUND 1000 GR. | B170531000000 | 1000 GR. |
| FAB 25 FIBER 25 GR. | B170540025000 | 250 GR. |
| FAB 50 FIBER 50 GR. | B170540050000 | 500 GR. |

FITTINGS

NP Series - Nipples

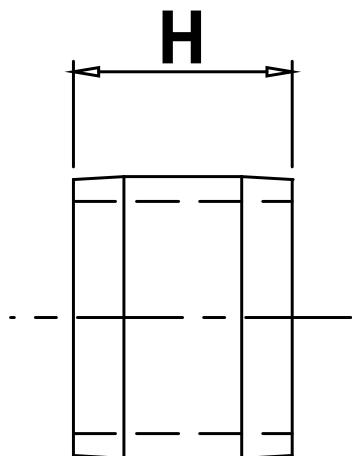


NP series nipples are used to connect equipment or other unions with female hub.

TECHNICAL FEATURES

| | |
|----------------------------------|---|
| Material | Galvanised steel (other materials upon request) |
| IP rating | IP66/IP67 |
| Ambient temperature range | ATEX Galvanised steel: -40°C to +150°C Stainless Steel: -55°C to +150°C (upon request) |
| | IEC Ex Galvanised steel: -40°C to +150°C (upon request) Stainless Steel: -50°C to +150°C (upon request) |
| Approvals | CESI 01 ATEX 104U IECEx CES 15.0005U TR CU |
| Marking | II 2GD Ex d/e IIC Gb Ex tb IIIC Db IP66/67 |
| Thread | NPT, UNI-6125 (other thread upon request) |

Dimensions NP



Nipples - NP

| TYPE | CODE | SIZE | THREAD | LENGTH H | WEIGHT [Kg] |
|------|---------------|--------|----------|----------|-------------|
| NP-1 | B170331300020 | 1/2" | UNI-6125 | 48 | 0,050 |
| NP-2 | B170332300020 | 3/4" | UNI-6125 | 60 | 0,060 |
| NP-3 | B170333300020 | 1" | UNI-6125 | 55 | 0,100 |
| NP-4 | B170334300020 | 1" 1/4 | UNI-6125 | 55 | 0,140 |
| NP-5 | B170335300020 | 1" 1/2 | UNI-6125 | 55 | 0,150 |
| NP-6 | B170336300020 | 2" | UNI-6125 | 55 | 0,200 |
| NP-7 | B170337300020 | 2" 1/2 | UNI-6125 | 68 | 0,450 |
| NP-8 | B170338300020 | 3" | UNI-6125 | 68 | 0,700 |
| NP-1 | B170331200020 | 1/2" | NPT | 48 | 0,050 |
| NP-2 | B170332200020 | 3/4" | NPT | 60 | 0,060 |
| NP-3 | B170333200020 | 1" | NPT | 55 | 0,100 |
| NP-4 | B170334200020 | 1" 1/4 | NPT | 55 | 0,140 |
| NP-5 | B170335200020 | 1" 1/2 | NPT | 55 | 0,150 |
| NP-6 | B170336200020 | 2" | NPT | 55 | 0,200 |
| NP-7 | B170337200020 | 2" 1/2 | NPT | 68 | 0,450 |
| NP-8 | B170338200020 | 3" | NPT | 68 | 0,700 |

FITTINGS

EM Series - Unions

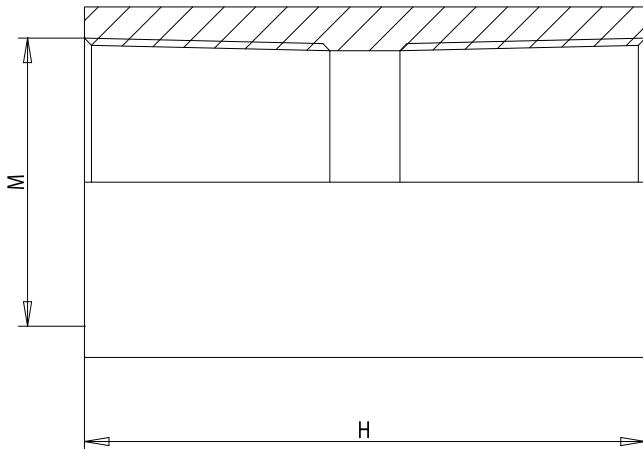


EM series couplings are used for connection of pipes with threaded male ends.

TECHNICAL FEATURES

| | |
|----------------------------------|---|
| Material | Galvanised steel (other materials upon request) |
| IP rating | IP66/IP67 |
| Ambient temperature range | ATEX Galvanised steel: -40°C to +150°C Stainless Steel: -55°C to +150°C (upon request) IEC Ex Galvanised steel: -40°C to +150°C (upon request) Stainless Steel: -50°C to +150°C (upon request) |
| Approvals | CESI 01 ATEX 104U IECEx CES 15.0005U TR CU |
| Marking | II 2GD Ex d/e IIC Gb Ex tb IIIC Db IP66/67 |
| Thread | NPT, UNI-6125 (other thread upon request) |

Dimensions EM



Coupling - EM

| TYPE | CODE | SIZE | THREAD | LENGTH H | WEIGHT [Kg] |
|------|---------------|--------|----------|----------|-------------|
| EM-1 | B170431300020 | 1/2" | UNI-6125 | 39 | 0,090 |
| EM-2 | B170432300020 | 3/4" | UNI-6125 | 39 | 0,080 |
| EM-3 | B170433300020 | 1" | UNI-6125 | 51 | 0,150 |
| EM-4 | B170434300020 | 1" 1/4 | UNI-6125 | 51 | 0,270 |
| EM-5 | B170435300020 | 1" 1/2 | UNI-6125 | 51 | 0,270 |
| EM-6 | B170436300020 | 2" | UNI-6125 | 51 | 0,450 |
| EM-7 | B170437300020 | 2" 1/2 | UNI-6125 | 65 | 0,650 |
| EM-8 | B170438300020 | 3" | UNI-6125 | 65 | 0,800 |
| EM-1 | B170431200020 | 1/2" | NPT | 39 | 0,090 |
| EM-2 | B170432200020 | 3/4" | NPT | 39 | 0,080 |
| EM-3 | B170433200020 | 1" | NPT | 51 | 0,150 |
| EM-4 | B170434200020 | 1" 1/4 | NPT | 51 | 0,270 |
| EM-5 | B170435200020 | 1" 1/2 | NPT | 51 | 0,270 |
| EM-6 | B170436200020 | 2" | NPT | 51 | 0,450 |
| EM-7 | B170437200020 | 2" 1/2 | NPT | 65 | 0,650 |
| EM-8 | B170438200020 | 3" | NPT | 65 | 0,800 |

FITTINGS

ELF Series - Elbows

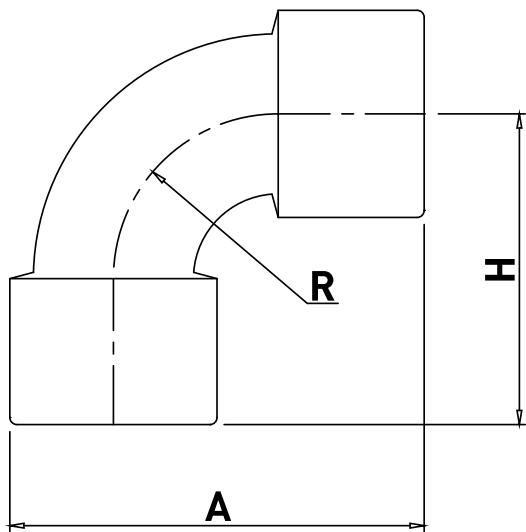


90° non-inspectable elbows are used in conduit system of electrical equipment.

TECHNICAL FEATURES

| | |
|----------------------------------|---|
| Material | Aluminium with low content of copper |
| IP rating | IP66/IP67 |
| Ambient temperature range | ATEX -55°C to +150°C IEC Ex -50°C to +150°C (upon request) |
| Approvals | IECEx CES 15.0005U CESI 01 ATEX 104U TR CU |
| Marking | II 2GD Ex d/e IIC Gb Ex tb IIIC Db IP66/67 |
| Thread | NPT, UNI-6125 (other thread upon request) |

Dimensions ELF



Female-Female elbow - ELF

| TYPE | CODE | SIZE | THREAD | DIMENSIONS [mm] | | | WEIGHT [Kg] |
|-------|---------------|--------|----------|-----------------|-----|----|-------------|
| | | | | A | H | R | |
| ELF-1 | B170734130020 | 1/2" | UNI-6125 | 60 | 45 | 30 | 0.12 |
| ELF-2 | B170734230020 | 3/4" | UNI-6125 | 75 | 55 | 30 | 0.10 |
| ELF-3 | B170734330020 | 1" | UNI-6125 | 85 | 65 | 35 | 0.20 |
| ELF-4 | B170734430020 | 1" 1/4 | UNI-6125 | 100 | 75 | 50 | 0.39 |
| ELF-5 | B170734530020 | 1" 1/2 | UNI-6125 | 110 | 87 | 50 | 0.37 |
| ELF-6 | B170734630020 | 2" | UNI-6125 | 135 | 98 | 60 | 0.62 |
| ELF-7 | B170734730020 | 2" 1/2 | UNI-6125 | 175 | 135 | 65 | 0.88 |
| ELF-8 | B170734830020 | 3" | UNI-6125 | 210 | 160 | 85 | 1.48 |
| ELF-1 | B170734120020 | 1/2" | NPT | 60 | 45 | 30 | 0.12 |
| ELF-2 | B170734220020 | 3/4" | NPT | 75 | 55 | 30 | 0.10 |
| ELF-3 | B170734320020 | 1" | NPT | 85 | 65 | 35 | 0.20 |
| ELF-4 | B170734420020 | 1" 1/4 | NPT | 100 | 75 | 50 | 0.39 |
| ELF-5 | B170734520020 | 1" 1/2 | NPT | 110 | 87 | 50 | 0.37 |
| ELF-6 | B170734620020 | 2" | NPT | 135 | 98 | 60 | 0.62 |
| ELF-7 | B170734720020 | 2" 1/2 | NPT | 175 | 135 | 65 | 0.88 |
| ELF-8 | B170734820020 | 3" | NPT | 210 | 160 | 85 | 1.48 |

FITTINGS

LBH Series - Open elbows



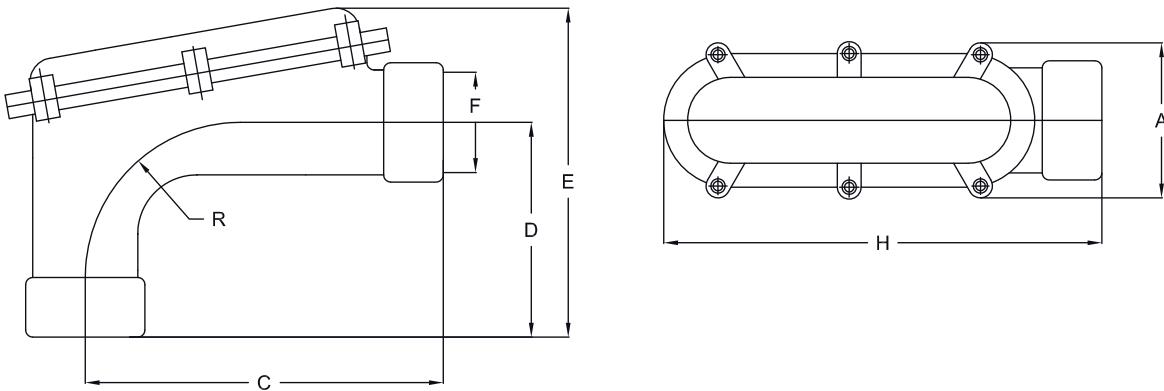
LBH and LBHS series L shaped open elbows are used for the cables run in conduit system of electrical installations.

The flanged opening enables easy inspection and insertion of electrical cables.

TECHNICAL FEATURES

| | |
|----------------------------------|--|
| Material | Aluminium with low content of copper |
| IP rating | |
| Ambient temperature range | ATEX (-20°C,+60°C) |
| Approvals | CESI 03 ATEX 141U TR CU |
| Marking | II 2 G Ex d IIB |
| Thread | NPT, UNI-6125 (other threads upon request) |

Dimensions LBH



Open elbows LBH

| TYPE | CODE | SIZE | THREAD | DIMENSIONS [mm] | | | | | | WEIGHT [Kg] |
|-------|---------------|--------|----------|-----------------|-----|-----|-----|-----|----|----------------|
| | | | | A | H | C | D | E | R | |
| LBH-1 | B170814130020 | 1/2" | UNI-6125 | 70 | 165 | 132 | 45 | 95 | 21 | 0.434 |
| LBH-2 | B170814230020 | 3/4" | UNI-6125 | 70 | 165 | 132 | 45 | 95 | 21 | 0.404 |
| LBH-3 | B170814330020 | 1" | UNI-6125 | 70 | 168 | 132 | 60 | 112 | 30 | 0.455 |
| LBH-4 | B170814430020 | 1" 1/4 | UNI-6125 | 100 | 230 | 175 | 83 | 155 | 50 | 1.277 |
| LBH-5 | B170814530020 | 1" 1/2 | UNI-6125 | 110 | 265 | 220 | 83 | 132 | 70 | 1.142 |
| LBH-6 | B170814630020 | 2" | UNI-6125 | 110 | 265 | 220 | 80 | 132 | 70 | 1.024 |
| LBH-7 | B170814730020 | 2" 1/2 | UNI-6125 | 136 | 363 | 267 | 140 | 250 | 96 | 3.569 |
| LBH-8 | B170814830020 | 3" | UNI-6125 | 136 | 363 | 267 | 140 | 250 | 96 | 3.171 |
| LBH-1 | B170814120020 | 1/2" | NPT | 70 | 165 | 132 | 45 | 95 | 21 | 0.434 |
| LBH-2 | B170814220020 | 3/4" | NPT | 70 | 165 | 132 | 45 | 95 | 21 | 0.404 |
| LBH-3 | B170814320020 | 1" | NPT | 70 | 168 | 132 | 60 | 112 | 30 | 0.455 |
| LBH-4 | B170814420020 | 1" 1/4 | NPT | 100 | 230 | 175 | 83 | 155 | 50 | 1.277 |
| LBH-5 | B170814520020 | 1" 1/2 | NPT | 110 | 265 | 220 | 83 | 132 | 70 | 1.142 |
| LBH-6 | B170814620020 | 2" | NPT | 110 | 265 | 220 | 80 | 132 | 70 | 1.024 |
| LBH-7 | B170814720020 | 2" 1/2 | NPT | 136 | 363 | 267 | 140 | 250 | 96 | 3.569 |
| LBH-8 | B170814820020 | 3" | NPT | 136 | 363 | 267 | 140 | 250 | 96 | 3.171 |

FITTINGS

DB Series - Aluminium bushings



DB...A series bushings are made of aluminium. They are screwed to the pipe and they work as a cable guard. They prevent the cable from rubbing on any pipe burr/edge which could damage its sheath.

TECHNICAL FEATURES

Material

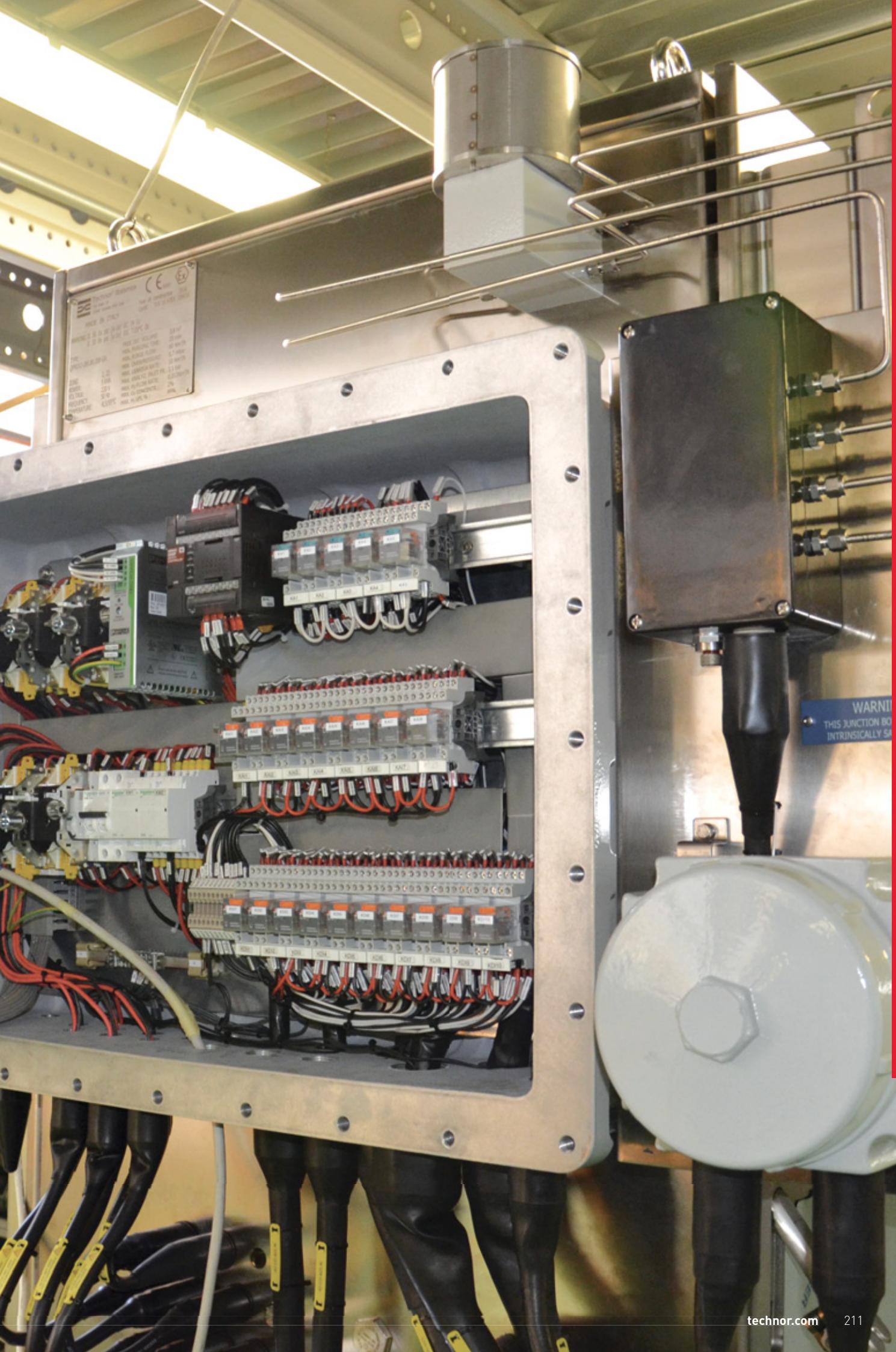
Aluminium with low content of copper

Thread

NPT, UNI-6125 (other thread upon request)

Aluminium bushings - DB

| TYPE | CODE | SIZE | THREAD | WEIGHT [Kg] |
|------|---------------|--------|---------|-------------|
| DB-1 | C010200006000 | 1/2" | ISO-228 | 0.012 |
| DB-2 | C010200007000 | 3/4" | ISO-228 | 0.014 |
| DB-3 | C010200008000 | 1" | ISO-228 | 0.020 |
| DB-4 | C010200009000 | 1" 1/4 | ISO-228 | 0.025 |
| DB-5 | C010200010000 | 1" 1/2 | ISO-228 | 0.032 |
| DB-6 | C010200011000 | 2" | ISO-228 | 0.046 |
| DB-7 | C010200012000 | 2" 1/2 | ISO-228 | 0.062 |
| DB-8 | C010200013000 | 3" | ISO-228 | 0.071 |
| DB-1 | C010200026000 | 1/2" | NPT | 0.012 |
| DB-2 | C010200027000 | 3/4" | NPT | 0.014 |
| DB-3 | C010200028000 | 1" | NPT | 0.020 |
| DB-4 | C010200029000 | 1" 1/4 | NPT | 0.025 |
| DB-5 | C010200030000 | 1" 1/2 | NPT | 0.032 |
| DB-6 | C010200031000 | 2" | NPT | 0.046 |
| DB-7 | C010200032000 | 2" 1/2 | NPT | 0.062 |
| DB-8 | C010200033000 | 3" | NPT | 0.071 |



FITTINGS

PLG Series - Recessed exagonal plugs

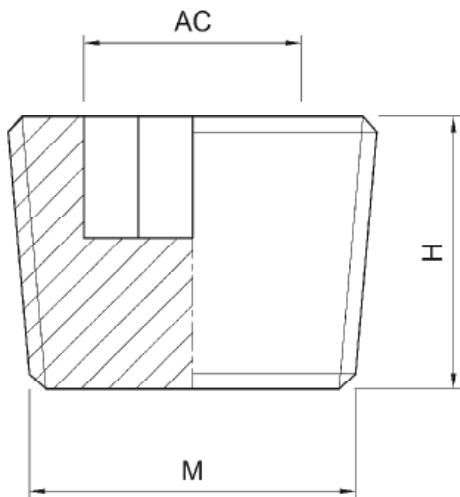


PLG series plugs are used to close the unused entries. They have an hexagonal head so that they can be opened with proper tools only.

TECHNICAL FEATURES

| | |
|----------------------------------|---|
| Material | Galvanized steel , Aluminium with low content of copper |
| IP rating | IP66/IP67 |
| Ambient temperature range | -20°C +80°C - galvanized steel, with Silicone gasket -40°C +150°C - brass nk or aluminum, with Silicone gasket -50°C +150°C - stainless steel, with Silicone gasket |
| Approvals | CESI 02 ATEX 049 X IECEx CES 10.0001X TR CU |
| Marking | II 2GD Ex d IIC Gb/Ex e IIC Gb Ex tb IIIC Db IP66/67 |
| Thread | NPT, UNI-6125 (other threads upon request) |

Dimensions PLG



Recessed hexagonal plugs - PLG

| TYPE | CODE | SIZE | THREAD | MATERIAL | DIMENSIONS [mm] | | WEIGHT [Kg] |
|-------|---------------|--------|----------|-------------|-----------------|----|-------------|
| | | | | | AC | H | |
| PLG-1 | B170123130020 | 1/2" | UNI-6125 | GALV. STEEL | 13 | 18 | 0.034 |
| PLG-2 | B170123230020 | 3/4" | UNI-6125 | GALV. STEEL | 17 | 18 | 0.054 |
| PLG-3 | B170123330020 | 1" | UNI-6125 | GALV. STEEL | 19 | 24 | 0.124 |
| PLG-4 | B170124430020 | 1" 1/4 | UNI-6125 | ALUMINIUM | 24 | 24 | 0.061 |
| PLG-5 | B170124530020 | 1" 1/2 | UNI-6125 | ALUMINIUM | 35 | 24 | 0.063 |
| PLG-6 | B170124630020 | 2" | UNI-6125 | ALUMINIUM | 36 | 24 | 0.109 |
| PLG-7 | B170124730020 | 2" 1/2 | UNI-6125 | ALUMINIUM | 50 | 30 | 0.169 |
| PLG-8 | B170124830020 | 3" | UNI-6125 | ALUMINIUM | 50 | 30 | 0.242 |
| PLG-1 | B170123120020 | 1/2" | NPT | GALV. STEEL | 13 | 18 | 0.034 |
| PLG-2 | B170123220020 | 3/4" | NPT | GALV. STEEL | 17 | 18 | 0.054 |
| PLG-3 | B170123320020 | 1" | NPT | GALV. STEEL | 19 | 24 | 0.124 |
| PLG-4 | B170124420020 | 1" 1/4 | NPT | ALUMINIUM | 24 | 24 | 0.061 |
| PLG-5 | B170124520020 | 1" 1/2 | NPT | ALUMINIUM | 35 | 24 | 0.063 |
| PLG-6 | B170124620020 | 2" | NPT | ALUMINIUM | 36 | 24 | 0.109 |
| PLG-7 | B170124720020 | 2" 1/2 | NPT | ALUMINIUM | 50 | 30 | 0.169 |
| PLG-8 | B170124820020 | 3" | NPT | ALUMINIUM | 50 | 30 | 0.242 |

FITTINGS

PLG Series - Resin exagonal plugs

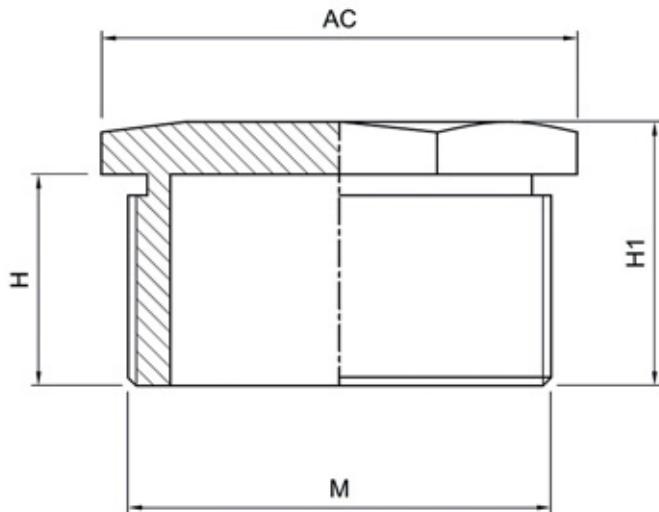


PLG series polyamide plugs are used to close the unused entries in case of Ex e/Ex i certified enclosures (for intrinsically safe circuits, plugs can be supplied blue coloured).

TECHNICAL FEATURES

| | |
|---|---|
| Material | Black polyamide |
| IP rating | IP66/IP68 |
| Ambient temperature range | -20°C to +80°C |
| Approvals | CESI 03 ATEX 305X |
| Marking | II 2 GD Ex e II - Ex i II Ex td A21 IP66/68 |
| Thread | Metric pitch 1,5, PG |
| Accessories available upon request | Locknut, Gasket (for selection please refer to page 178) |

Dimensions PLG



Hexagonal head plugs - PLG

| TYPE | CODE | THREAD | DIMENSIONS [mm] | | |
|-----------|---------------|---------|-----------------|----|----|
| | | | H | H1 | AC |
| PLG-01IXE | B170210010030 | M16X1,5 | 12 | 16 | 19 |
| PLG-1IXE | B170210110030 | M20X1,5 | 15 | 20 | 23 |
| PLG-2IXE | B170210210030 | M25X1,5 | 15 | 20 | 28 |
| PLG-3IXE | B170210310030 | M32X1,5 | 15 | 23 | 36 |
| PLG-4IXE | B170210410030 | M40X1,5 | 18 | 27 | 45 |
| PLG-5IXE | B170210510030 | M50X1,5 | 18 | 27 | 55 |
| PLG-6IXE | B170210610030 | M63X1,5 | 18 | 27 | 69 |
| PLG-2PXE | B170211040030 | PG9 | | | |
| PLG-3PXE | B170211140030 | PG11 | | | |
| PLG-4PXE | B170210040030 | PG13,5 | | | |
| PLG-5PXE | B170210140030 | PG16 | | | |
| PLG-6PXE | B170210240030 | PG21 | | | |
| PLG-7PXE | B170210340030 | PG29 | | | |
| PLG-8PXE | B170210540030 | PG36 | | | |

FITTINGS

T Series - Exagonal plugs

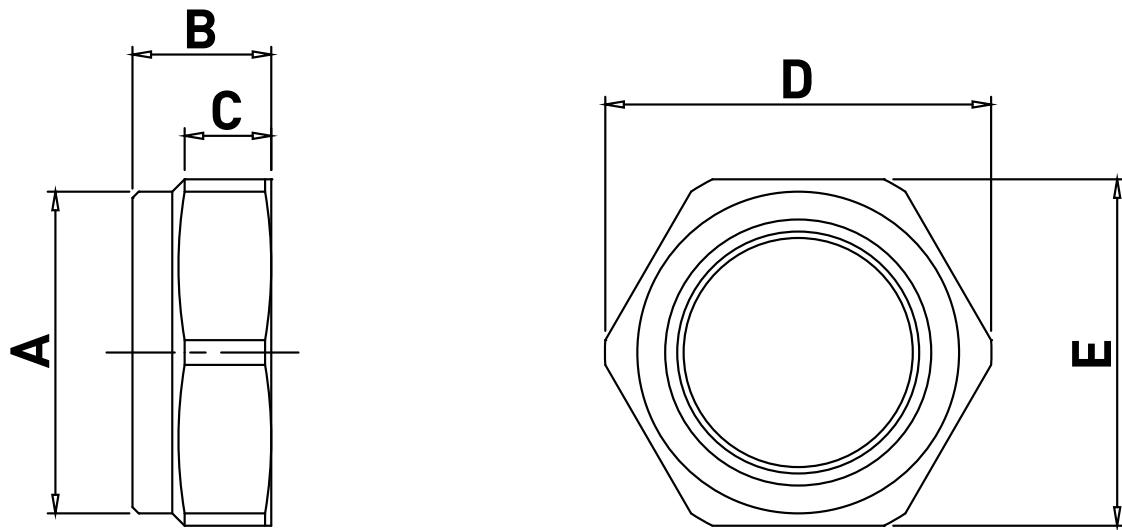


T.. series hexagonal plugs are used to close the unused entries, they have both Ex d and Ex e mode of protection.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Nickel chrome plated brass AISI 316 L Stainless steel (other materials upon request) |
| IP rating | IP66/IP68 |
| Ambient temperature range | -40°C +100°C with EPDM or Nylon gaskets -65°C +220°C with Silicone gaskets -65°C +400°C without gaskets |
| Approvals | Certified 12ATEX 0089X IEC Ex INE 10.0014X TR CU |
| Marking | II 2GD Ex d/e IIC Gb Ex tb IIIC Db IP66/68 |
| Thread | I M2 Ex d/e I Mb |
| Accessories available upon request | Metric pitch 1,5, NPT, UNI-6125 (other threads upon request) Locknut, Gasket (for selection please refer to page 178) |

Dimensions T.. Series



T.. Series Hexagonal head plugs

| TYPE | CODE | | SIZE | THREAD | DIMENSIONS [mm] | | | | |
|------|---------------|---------------|---------|----------|-----------------|----|----|-----|----|
| | BRASS | AISI 316 L | | | A | B | C | D | E |
| T20 | B17011110020 | B170112110020 | M20X1,5 | METRIC | 23 | 27 | 16 | 26 | 24 |
| T25 | B170111210020 | B170112210020 | M25X1,5 | METRIC | 29 | 27 | 16 | 33 | 30 |
| T32 | B170111310020 | B170112310020 | M32X1,5 | METRIC | 35 | 27 | 16 | 40 | 36 |
| T40 | B170111410020 | B170112410020 | M40X1,5 | METRIC | 45 | 30 | 18 | 51 | 46 |
| T50 | B170111510020 | B170112510020 | M50X1,5 | METRIC | 55 | 30 | 18 | 62 | 56 |
| T63 | B170111610020 | B170112610020 | M63X1,5 | METRIC | 69 | 31 | 18 | 77 | 70 |
| T75 | B170111710020 | B170112710020 | M75X1,5 | METRIC | 81 | 32 | 18 | 90 | 82 |
| T80 | B170111810020 | B170112810020 | M80X1,5 | METRIC | 86 | 32 | 18 | 96 | 87 |
| T1 | B170111130020 | B170112130020 | 1/2" | UNI-6125 | 26 | 30 | 19 | 30 | 27 |
| T2 | B170111230020 | B170112230020 | 3/4" | UNI-6125 | 31 | 30 | 19 | 35 | 32 |
| T3 | B170111330020 | B170112330020 | 1" | UNI-6125 | 37 | 36 | 25 | 42 | 38 |
| T4 | B170111430020 | B170112430020 | 1" 1/4 | UNI-6125 | 47 | 37 | 25 | 53 | 48 |
| T5 | B170111530020 | B170112530020 | 1" 1/2 | UNI-6125 | 55 | 37 | 25 | 62 | 56 |
| T6 | B170111630020 | B170112630020 | 2" | UNI-6125 | 66 | 38 | 25 | 74 | 67 |
| T7 | B170111730020 | B170112730020 | 2" 1/2 | UNI-6125 | 81 | 46 | 32 | 90 | 82 |
| T8 | B170111830020 | B170112830020 | 3" | UNI-6125 | 95 | 46 | 32 | 106 | 96 |
| T1N | B170111120020 | B170112120020 | 1/2" | NPT | 26 | 30 | 19 | 30 | 27 |
| T2N | B170111220020 | B170112220020 | 3/4" | NPT | 31 | 30 | 19 | 35 | 32 |
| T3N | B170111320020 | B170112320020 | 1" | NPT | 37 | 36 | 25 | 42 | 38 |
| T4N | B170111420020 | B170112420020 | 1" 1/4 | NPT | 47 | 37 | 25 | 53 | 48 |
| T5N | B170111520020 | B170112520020 | 1" 1/2 | NPT | 55 | 37 | 25 | 62 | 56 |
| T6N | B170111620020 | B170112620020 | 2" | NPT | 66 | 38 | 25 | 74 | 67 |
| T7N | B170111720020 | B170112720020 | 2" 1/2 | NPT | 81 | 46 | 32 | 90 | 82 |
| T8N | B170111820020 | B170112820020 | 3" | NPT | 95 | 46 | 36 | 106 | 96 |

FITTINGS

RE/REB Series - Reductions and adaptors

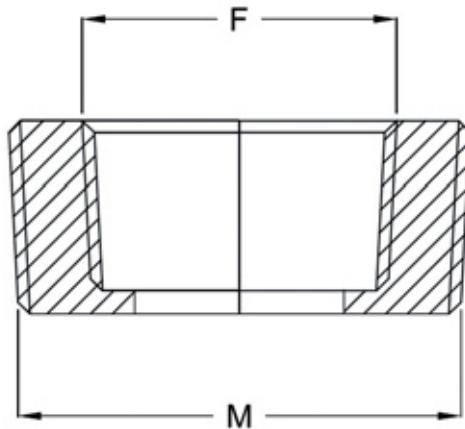


Reductions and adaptors are used to connect pipes of an electrical equipment and enclosures or different devices of an explosion-proof equipment with different entries sizes.

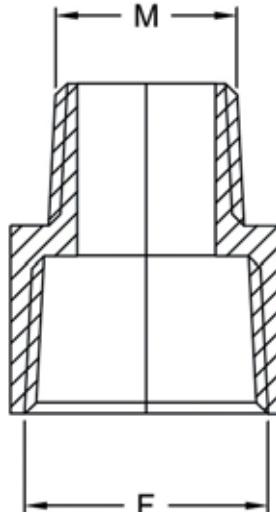
TECHNICAL FEATURES

| | |
|----------------------------------|---|
| Material | Galvanized steel, aluminium with low content of copper |
| IP rating | IP66/IP67 |
| Ambient temperature range | -20°C +80°C - galvanized steel, with Silicone gasket -40°C +150°C - brass nk or aluminum, with Silicone gasket -50°C +150°C - stainless steel, with Silicone gasket |
| Approvals | CESI 02 ATEX 049 X IECEx CES 10.0001X TR CU |
| Marking | II 2GD Ex d IIC Gb/Ex e IIC Gb Ex tb IIIC Db IP66/67 |
| Thread | NPT, UNI-6125 (other threads upon request) |

Dimensions RE



Dimensions REB



Reductions RE

| TYPE | CODE | | MATERIAL | MALE M | FEMALE F | WEIGHT [Kg] |
|-------|---------------|---------------|-------------|--------|----------|-------------|
| | UNI-6125 | NPT | | | | |
| RE-21 | B171213213020 | B171213212020 | GALV. STEEL | 3/4" | 1/2" | 0.038 |
| RE-31 | B171213313020 | B171213312020 | GALV. STEEL | 1" | 1/2" | 0.089 |
| RE-32 | B171213323020 | B171213322020 | GALV. STEEL | 1" | 3/4" | 0.058 |
| RE-41 | B171214413020 | B171214412020 | ALUMINIUM | 1" 1/4 | 1/2" | 0.064 |
| RE-42 | B171214423020 | B171214422020 | ALUMINIUM | 1" 1/4 | 3/4" | 0.053 |
| RE-43 | B171214433020 | B171214432020 | ALUMINIUM | 1" 1/4 | 1" | 0.034 |
| RE-51 | B171214513020 | B171214512020 | ALUMINIUM | 1" 1/2 | 1/2" | 0.092 |
| RE-52 | B171214523020 | B171214522020 | ALUMINIUM | 1" 1/2 | 3/4" | 0.079 |
| RE-53 | B171214533020 | B171214532020 | ALUMINIUM | 1" 1/2 | 1" | 0.061 |
| RE-54 | B171214543020 | B171214542020 | ALUMINIUM | 1" 1/2 | 1" 1/4 | 0.029 |
| RE-61 | B171214613020 | B171214612020 | ALUMINIUM | 2" | 1/2" | 0.153 |
| RE-62 | B171214623020 | B171214622020 | ALUMINIUM | 2" | 3/4" | 0.148 |
| RE-63 | B171214633020 | B171214632020 | ALUMINIUM | 2" | 1" | 0.124 |
| RE-64 | B171214643020 | B171214642020 | ALUMINIUM | 2" | 1" 1/4 | 0.095 |
| RE-65 | B171214653020 | B171214652020 | ALUMINIUM | 2" | 1" 1/2 | 0.068 |
| RE-71 | B171214713020 | B171214712020 | ALUMINIUM | 2" 1/2 | 1/2" | 0.244 |
| RE-72 | B171214723020 | B171214722020 | ALUMINIUM | 2" 1/2 | 3/4" | 0.243 |
| RE-73 | B171214733020 | B171214732020 | ALUMINIUM | 2" 1/2 | 1" | 0.272 |
| RE-74 | B171214743020 | B171214742020 | ALUMINIUM | 2" 1/2 | 1" 1/4 | 0.238 |
| RE-75 | B171214753020 | B171214752020 | ALUMINIUM | 2" 1/2 | 1" 1/2 | 0.198 |
| RE-76 | B171214763020 | B171214762020 | ALUMINIUM | 2" 1/2 | 2" | 0.136 |
| RE-81 | B171214813020 | B171214812020 | ALUMINIUM | 3" | 1/2" | 0.416 |
| RE-82 | B171214823020 | B171214822020 | ALUMINIUM | 3" | 3/4" | 0.355 |
| RE-83 | B171214833020 | B171214832020 | ALUMINIUM | 3" | 1" | 0.323 |
| RE-84 | B171214843020 | B171214842020 | ALUMINIUM | 3" | 1" 1/4 | 0.302 |
| RE-85 | B171214853020 | B171214852020 | ALUMINIUM | 3" | 1" 1/2 | 0.318 |
| RE-86 | B171214863020 | B171214862020 | ALUMINIUM | 3" | 2" | 0.249 |
| RE-87 | B171213873020 | B171213872020 | GALV. STEEL | 3" | 2" 1/2 | 0.578 |

Reductions RE

| TYPE | CODE | THREAD | MATERIAL | MALE M | FEMALE F | WEIGHT [Kg] |
|-------|--------------|--------|-------------|--------|----------|-------------|
| RE-32 | B1709.000038 | NPT | GALV. STEEL | 1" | 3/4" | 0.058 |
| RE-41 | B1709.000039 | NPT | ALUMINIUM | 1" 1/4 | 1/2" | 0.064 |
| RE-42 | B1709.000040 | NPT | ALUMINIUM | 1" 1/4 | 3/4" | 0.053 |
| RE-43 | B1709.000041 | NPT | ALUMINIUM | 1" 1/4 | 1" | 0.034 |
| RE-51 | B1709.000042 | NPT | ALUMINIUM | 1" 1/2 | 1/2" | 0.092 |
| RE-52 | B1709.000043 | NPT | ALUMINIUM | 1" 1/2 | 3/4" | 0.079 |
| RE-53 | B1709.000044 | NPT | ALUMINIUM | 1" 1/2 | 1" | 0.061 |
| RE-54 | B1709.000045 | NPT | ALUMINIUM | 1" 1/2 | 1" 1/4 | 0.029 |
| RE-61 | B1709.000046 | NPT | ALUMINIUM | 2" | 1/2" | 0.153 |
| RE-62 | B1709.000047 | NPT | ALUMINIUM | 2" | 3/4" | 0.148 |
| RE-63 | B1709.000048 | NPT | ALUMINIUM | 2" | 1" | 0.124 |
| RE-64 | B1709.000049 | NPT | ALUMINIUM | 2" | 1" 1/4 | 0.095 |
| RE-65 | B1709.000050 | NPT | ALUMINIUM | 2" | 1" 1/2 | 0.068 |
| RE-73 | B1709.000051 | NPT | ALUMINIUM | 2" 1/2 | 1" | 0.272 |
| RE-75 | B1709.000052 | NPT | ALUMINIUM | 2" 1/2 | 1" 1/2 | 0.198 |
| RE-76 | B1709.000053 | NPT | ALUMINIUM | 2" 1/2 | 2" | 0.136 |
| RE-83 | B1709.000054 | NPT | ALUMINIUM | 3" | 1" | 0.323 |
| RE-85 | B1709.000055 | NPT | ALUMINIUM | 3" | 1" 1/2 | 0.318 |
| RE-86 | B1709.000056 | NPT | ALUMINIUM | 3" | 2" | 0.249 |
| RE-87 | B1709.000057 | NPT | GALV. STEEL | 3" | 2" 1/2 | 0.578 |

Adaptors REB

| TYPE | CODE | | MATERIAL | MALE M | FEMALE F | WEIGHT [Kg] |
|--------|---------------|---------------|-------------|--------|----------|-------------|
| | UNI-6125 | NPT | | | | |
| REB-21 | B171223123020 | B171223122020 | GALV. STEEL | 1/2" | 3/4" | 0.069 |
| REB-31 | B171223133020 | B171223132020 | GALV. STEEL | 1/2" | 1" | 0.108 |
| REB-32 | B171223233020 | B171223232020 | GALV. STEEL | 3/4" | 1" | 0.109 |
| REB-41 | B171223143020 | B171223142020 | ALUMINIUM | 1/2" | 1" 1/4 | 0.187 |
| REB-42 | B171223243020 | B171223242020 | ALUMINIUM | 3/4" | 1" 1/4 | 0.171 |
| REB-43 | B171223343020 | B171223342020 | ALUMINIUM | 1" | 1" 1/4 | 0.209 |
| REB-51 | B171223153020 | B171223152020 | ALUMINIUM | 1/2" | 1" 1/2 | 0.352 |
| REB-52 | B171223253020 | B171223252020 | ALUMINIUM | 3/4" | 1" 1/2 | 0.323 |
| REB-53 | B171223353020 | B171223352020 | ALUMINIUM | 1" | 1" 1/2 | 0.337 |
| REB-54 | B171223453020 | B171223452020 | ALUMINIUM | 1" 1/4 | 1" 1/2 | 0.359 |
| REB-61 | B171223163020 | B171223162020 | ALUMINIUM | 1/2" | 2" | 0.459 |
| REB-62 | B171223263020 | B171223262020 | ALUMINIUM | 3/4" | 2" | 0.417 |
| REB-63 | B171223363020 | B171223362020 | ALUMINIUM | 1" | 2" | 0.489 |
| REB-64 | B171223463020 | B171223462020 | ALUMINIUM | 1" 1/4 | 2" | 0.436 |
| REB-65 | B171223563020 | B171223562020 | ALUMINIUM | 1" 1/2 | 2" | 0.463 |
| REB-71 | B171223173020 | B171223172020 | ALUMINIUM | 1/2" | 2" 1/2 | 0.597 |
| REB-72 | B171223273020 | B171223272020 | ALUMINIUM | 3/4" | 2" 1/2 | 0.611 |
| REB-73 | B171223373020 | B171223372020 | ALUMINIUM | 1" | 2" 1/2 | 0.601 |
| REB-74 | B171223473020 | B171223472020 | ALUMINIUM | 1" 1/4 | 2" 1/2 | 0.663 |
| REB-75 | B171223573020 | B171223572020 | ALUMINIUM | 1" 1/2 | 2" 1/2 | 0.667 |
| REB-76 | B171223673020 | B171223672020 | ALUMINIUM | 2" | 2" 1/2 | 0.531 |
| REB-81 | B171223183020 | B171223182020 | ALUMINIUM | 1/2" | 3" | 0.674 |
| REB-82 | B171223283020 | B171223282020 | ALUMINIUM | 3/4" | 3" | 0.687 |
| REB-83 | B171223383020 | B171223382020 | ALUMINIUM | 1" | 3" | 0.900 |
| REB-84 | B171223483020 | B171223482020 | ALUMINIUM | 1" 1/4 | 3" | 0.864 |
| REB-85 | B171223583020 | B171223582020 | ALUMINIUM | 1" 1/2 | 3" | 0.884 |
| REB-86 | B171223683020 | B171223682020 | ALUMINIUM | 2" | 3" | 0.767 |
| REB-87 | B171223783020 | B171223782020 | GALV. STEEL | 2" 1/2 | 3" | 1.055 |

FITTINGS

A../F../M../R.. Series - Reductions and adaptors



Reductions and adaptors are used to connect pipes of an electrical equipment and enclosures or different devices of an explosion-proof equipment with different entries sizes.

TECHNICAL FEATURES

| | |
|----------------------------------|---|
| Material | Nickel chrome plated brass AISI 316 L Stainless steel |
| IP rating | IP66/IP68 |
| Ambient temperature range | -40°C +100°C with EPDM or Nylon gaskets -65°C +220°C with Silicone gaskets -65°C +400°C without gaskets |
| Approvals | Certified 12ATEX 0089X IEC Ex INE 10.0014X TR CU |
| Marking | II 2GD Ex d/e IIC Gb Ex tb IIIC Db IP66/68 I M2 Ex d/e I Mb |
| Thread | ISO METRIC pitch 1,5, NPT, UNI-6125 (other thread upon request) |

Assembly diagram

| | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|--|
| B17 | 1 | # | # | # | # | # | 0 | # | 0 | |
| - | | | | | | | | | | |
| CERTIFICATE | | | | | | | | | | 2 - ATEX GROUP II 3 - IECEX GROUP II |
| - | | | | | | | | | | - |
| 2ND THREAD | | | | | | | | | | 0 - SIZE 0 (M16) 1 - SIZE 1 (M20, 1/2") 2 - SIZE 2 (M25, 3/4") 3 - SIZE 3 (M32, 1") 4 - SIZE 4 (M40, 1" 1/4) 5 - SIZE 5 (M50, 1" 1/2) 6 - SIZE 6 (M63, 2") 7 - SIZE 7 (M75, 2" 1/2) 8 - SIZE 8 (M80, 3") |
| 2ND THREAD | | | | | | | | | | 1 - UNI 6125 2 - METRIC 3 - NPT 5 - PG |
| 1ST THREAD | | | | | | | | | | 0 - SIZE 0 (M16) 1 - SIZE 1 (M20, 1/2") 2 - SIZE 2 (M25, 3/4") 3 - SIZE 3 (M32, 1") 4 - SIZE 4 (M40, 1" 1/4) 5 - SIZE 5 (M50, 1" 1/2) 6 - SIZE 6 (M63, 2") 7 - SIZE 7 (M75, 2" 1/2) 8 - SIZE 8 (M80, 3") |
| 1ST THREAD | | | | | | | | | | 1 - UNI 6125 2 - METRIC 3 - NPT 5 - PG |
| TYPE | | | | | | | | | | 2 - MALE/MALE 3 - MALE/FEMALE 4 - FEMALE/FEMALE 5 - FEMALE/MALE |
| MATERIAL | | | | | | | | | | 0 - BNK BRASS NICKEL CHROME PLATED 1 - STAINLESS STEEL AISI316 |
| - | | | | | | | | | | |

DANGER
HAZARD
AREA



PLUGS & SOCKET-OUTLETS



P.226

Plugs & socket-outlets

- FSX - Socket-outlet & welding receptacle - Stainless steel AISI 316 L 226
- FSAL - Socket-outlet & welding receptacle - Copper free aluminium 228
- MXBS - Socket outlet combination boxes 230
- FPR - Plugs - GRP 232

PLUGS & SOCKET-OUTLETS

FSX - Socket-outlet & welding receptacle - Stainless steel AISI 316 L



Stainless steel AISI 316 L housing and glass fiber reinforced polyester block contacts.

Thanks to the design of block contact turning on suitable hinges, FS.. socket outlets & welding receptacles allow an easy wiring and maintenance.

When open, all space corresponding to surface O.D. of apparatus is available for wiring operation.

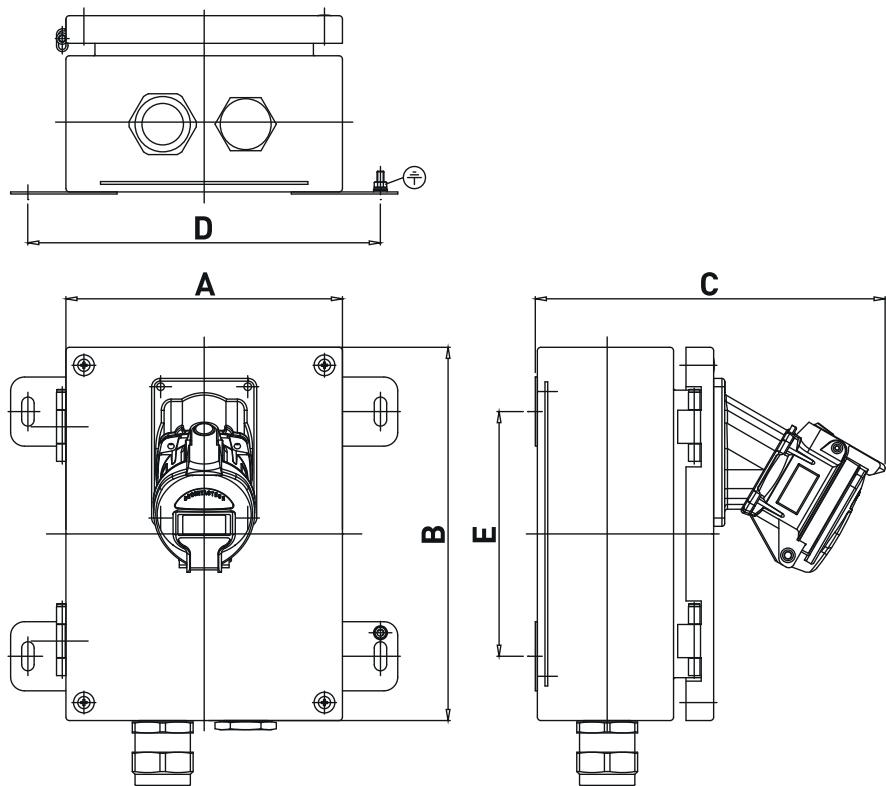
Also, by the twin terminal for each polarity, foreseen it is possible the loop of power cable, saving therefore the costs of one extra junction box, two cable glands and man power cost for wiring in between junction box and socket outlet.

Cross section of looping terminal strip allows use of cable size over the socket full load.

TECHNICAL FEATURES

| | |
|--|---|
| Material | Enclosure: AISI 316 L Stainless steel Socket: GRP |
| IP rating | IP66 |
| Ambient temperature range | -40°C to +60°C |
| Approvals | Certified 06ATEX0015 (standard) TR CU (marking upon request) |
| Marking | II 2 GD EEx ed IIC T(**) EEx tD A21 IP66 T(**) ** T6/T85°C, T5/T100°C |
| Frequency | 50Hz |
| Connection terminals cross section flexible cores/rigid cores | For 20 A = 10/10 sqmm For 32 A = 16/16 sqmm For 63 A = 35/35 sqmm Smaller or bigger terminal sizes available on request. |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Standard accessories | Nº1 AISI 316 L Stainless steel cable gland PNA type Nº1 AISI 316 L Stainless steel plug |
| Accessories available upon request | Drain/breather valve Traffolyte/Stainless steel certificate label Plug |

Dimensions FSX



Receptacles - FSX

| TYPE | CODE | COLOUR CODE | VOLTAGE [V] | CONTACT ARRANGEMENT | CURRENT [A] | ENTRIES | DIMENSIONS ENCLOSURE [mm] | | | | |
|-----------------|---------------|-------------|-------------|---------------------|-------------|---------|---------------------------|-----|-----|-----|-----|
| | | | | | | | A | B | C | D | E |
| FSX-2-20-24-50 | B040111125113 | | 24 | 2P | 20 | 2XM25 | 137 | 200 | 240 | 192 | |
| FSX-3-20-110-50 | B040111335113 | | 110-130 | 1P+N+E | 20 | 2XM25 | 137 | 200 | 240 | 192 | |
| FSX-3-20-230-50 | B040111435113 | | 220-250 | 1P+N+E | 20 | 2XM25 | 137 | 200 | 240 | 192 | |
| FSX-4-20-400-50 | B040121545113 | | 380-440 | 3P+E | 20 | 2XM25 | 200 | 270 | 240 | 255 | 177 |
| FSX-5-20-400-50 | B040121555113 | | 380-440 | 3P+N+E | 20 | 2XM25 | 200 | 270 | 240 | 255 | 177 |
| FSX-2-32-24-50 | B040122125113 | | 24 | 2P | 32 | 2XM32 | 200 | 270 | 255 | 255 | 177 |
| FSX-3-32-110-50 | B040122335113 | | 110-130 | 1P+N+E | 32 | 2XM32 | 200 | 270 | 255 | 255 | 177 |
| FSX-3-32-230-50 | B040122435113 | | 220-250 | 1P+N+E | 32 | 2XM32 | 200 | 270 | 255 | 255 | 177 |
| FSX-4-32-400-50 | B040122545113 | | 380-440 | 3P+E | 32 | 2XM32 | 200 | 270 | 255 | 255 | 177 |
| FSX-5-32-400-50 | B040122555113 | | 380-440 | 3P+N+E | 32 | 2XM32 | 200 | 270 | 255 | 255 | 177 |
| FSX-2-63-24-50 | B040133125113 | | 24 | 2P | 63 | 2XM50 | 270 | 350 | 265 | 325 | 257 |
| FSX-3-63-110-50 | B040133335113 | | 110-130 | 1P+N+E | 63 | 2XM50 | 270 | 350 | 265 | 325 | 257 |
| FSX-3-63-230-50 | B040133435113 | | 220-250 | 1P+N+E | 63 | 2XM50 | 270 | 350 | 265 | 325 | 257 |
| FSX-4-63-400-50 | B040133545113 | | 380-440 | 3P+E | 63 | 2XM50 | 270 | 350 | 265 | 325 | 257 |
| FSX-5-63-400-50 | B040133555113 | | 380-440 | 3P+N+E | 63 | 2XM50 | 270 | 350 | 265 | 325 | 257 |

* In case of maximum ambient temperature reach +40°C, temperature class changes into T6 (ordering code to be required)

PLUGS & SOCKET-OUTLETS

FSAL - Socket-outlet & welding receptacle - Copper free aluminium



Aluminium with low content of copper housing and glass fiber reinforced polyester block contacts.

Thanks to the design of block contact turning on suitable hinges, FS.. socket outlets & welding receptacles allow an easy wiring and maintenance.

When open, all space corresponding to surface O.D. of apparatus is available for wiring operation.

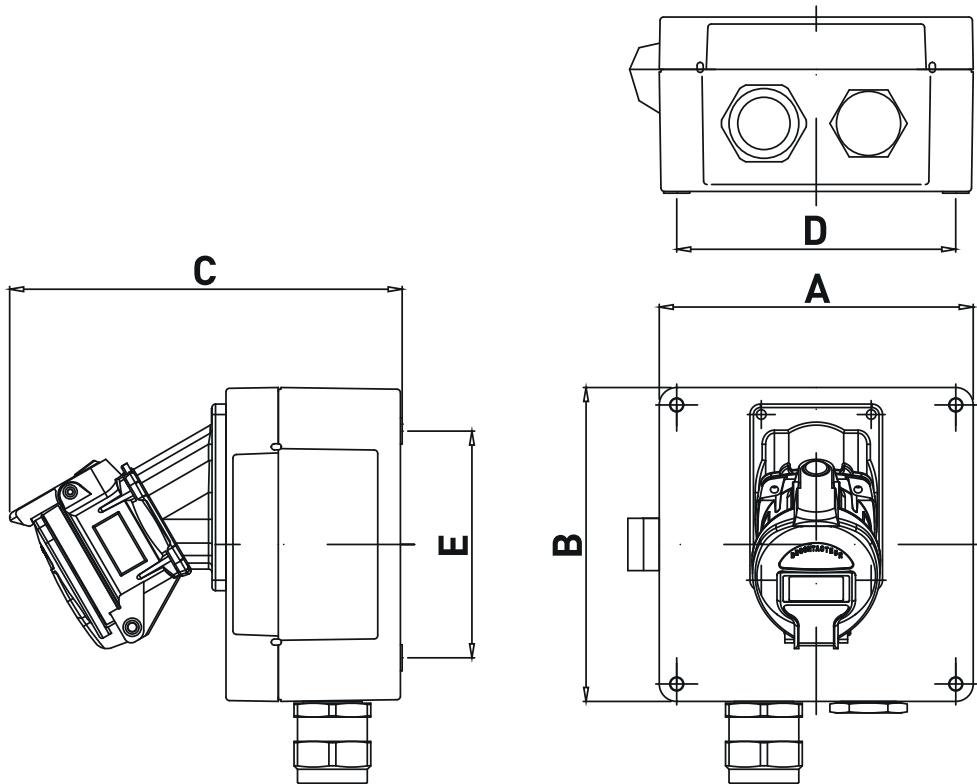
Also, by the twin terminal for each polarity, foreseen it is possible the loop of power cable, saving therefore the costs of one extra junction box, two cable glands and man power cost for wiring in between junction box and socket outlet.

Cross section of looping terminal strip allows use of cable size over the socket full load.

TECHNICAL FEATURES

| | |
|--|---|
| Material | Enclosure: Aluminium with low content of copper Socket: GRP |
| IP rating | IP66 |
| Ambient temperature range | -40°C to +60°C |
| Approvals | Certified 06ATEX0015 (standard) TR CU (marking upon request) |
| Marking | II 2 GD EEx ed IIC T(**) EEx tD A21 IP66 T(**) ** T6/T85°C, T5/T100°C |
| Frequency | 50Hz |
| Connection terminals cross section flexible cores/rigid cores | For 20 A = 10/10 sqmm For 32 A = 16/16 sqmm For 63 A = 35/35 sqmm Smaller or bigger terminal sizes available on request. |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Standard accessories | Nº1 Nickel chrome plated brass cable gland PNA type Nº1 Nickel chrome plated brass plug |
| Accessories available upon request | Drain/breather valve Traffolyte/Stainless steel certificate label Plug |

Dimensions FSAL



Receptacles - FSAL

| TYPE | CODE | COLOUR CODE | VOLTAGE [V] | CONTACT ARRANGEMENT | CURRENT [A] | ENTRIES | DIMENSIONS ENCLOSURE [mm] | | | | |
|------------------|---------------|-------------|-------------|---------------------|-------------|---------|---------------------------|-----|-----|-----|-----|
| | | | | | | | A | B | C | D | E |
| FSAL-2-20-24-50 | B040211125113 | | 24 | 2P | 20 | 2XM25 | 122 | 120 | 200 | 106 | 82 |
| FSAL-3-20-110-50 | B040211335113 | | 110-130 | 1P+N+E | 20 | 2XM25 | 122 | 120 | 200 | 106 | 82 |
| FSAL-3-20-230-50 | B040211435113 | | 220-250 | 1P+N+E | 20 | 2XM25 | 122 | 120 | 200 | 106 | 82 |
| FSAL-4-20-400-50 | B040221545113 | | 380-440 | 3P+E | 20 | 2XM25 | 160 | 160 | 200 | 140 | 110 |
| FSAL-5-20-400-50 | B040221555113 | | 380-440 | 3P+N+E | 20 | 2XM25 | 160 | 160 | 200 | 140 | 110 |
| FSAL-2-32-24-50 | B040232125113 | | 24 | 2P | 32 | 2XM32 | 180 | 180 | 230 | 160 | 130 |
| FSAL-3-32-110-50 | B040232335113 | | 110-130 | 1P+N+E | 32 | 2XM32 | 180 | 180 | 230 | 160 | 130 |
| FSAL-3-32-230-50 | B040232435113 | | 220-250 | 1P+N+E | 32 | 2XM32 | 180 | 180 | 230 | 160 | 130 |
| FSAL-4-32-400-50 | B040242545113 | | 380-440 | 3P+E | 32 | 2XM32 | 202 | 232 | 240 | 180 | 180 |
| FSAL-5-32-400-50 | B040242555113 | | 380-440 | 3P+N+E | 32 | 2XM32 | 202 | 232 | 240 | 180 | 180 |
| FSAL-2-63-24-50 | B040243125113 | | 24 | 2P | 63 | 2XM50 | 202 | 232 | 250 | 180 | 180 |
| FSAL-3-63-110-50 | B040243335113 | | 110-130 | 1P+N+E | 63 | 2XM50 | 202 | 232 | 250 | 180 | 180 |
| FSAL-3-63-230-50 | B040243435113 | | 220-250 | 1P+N+E | 63 | 2XM50 | 202 | 232 | 250 | 180 | 180 |
| FSAL-4-63-400-50 | B040253545113 | | 380-440 | 3P+E | 63 | 2XM50 | 313 | 404 | 250 | 262 | 383 |
| FSAL-5-63-400-50 | B040253555113 | | 380-440 | 3P+N+E | 63 | 2XM50 | 313 | 404 | 250 | 262 | 383 |

* In case of maximum ambient temperature reach +40°C, temperature class changes into T6 (ordering code to be required)

PLUGS & SOCKET-OUTLETS

MXBS - Socket outlet combination boxes



These socket outlet combination boxes, available in different materials and sizes, are designed for making electrical connections in hazardous areas.

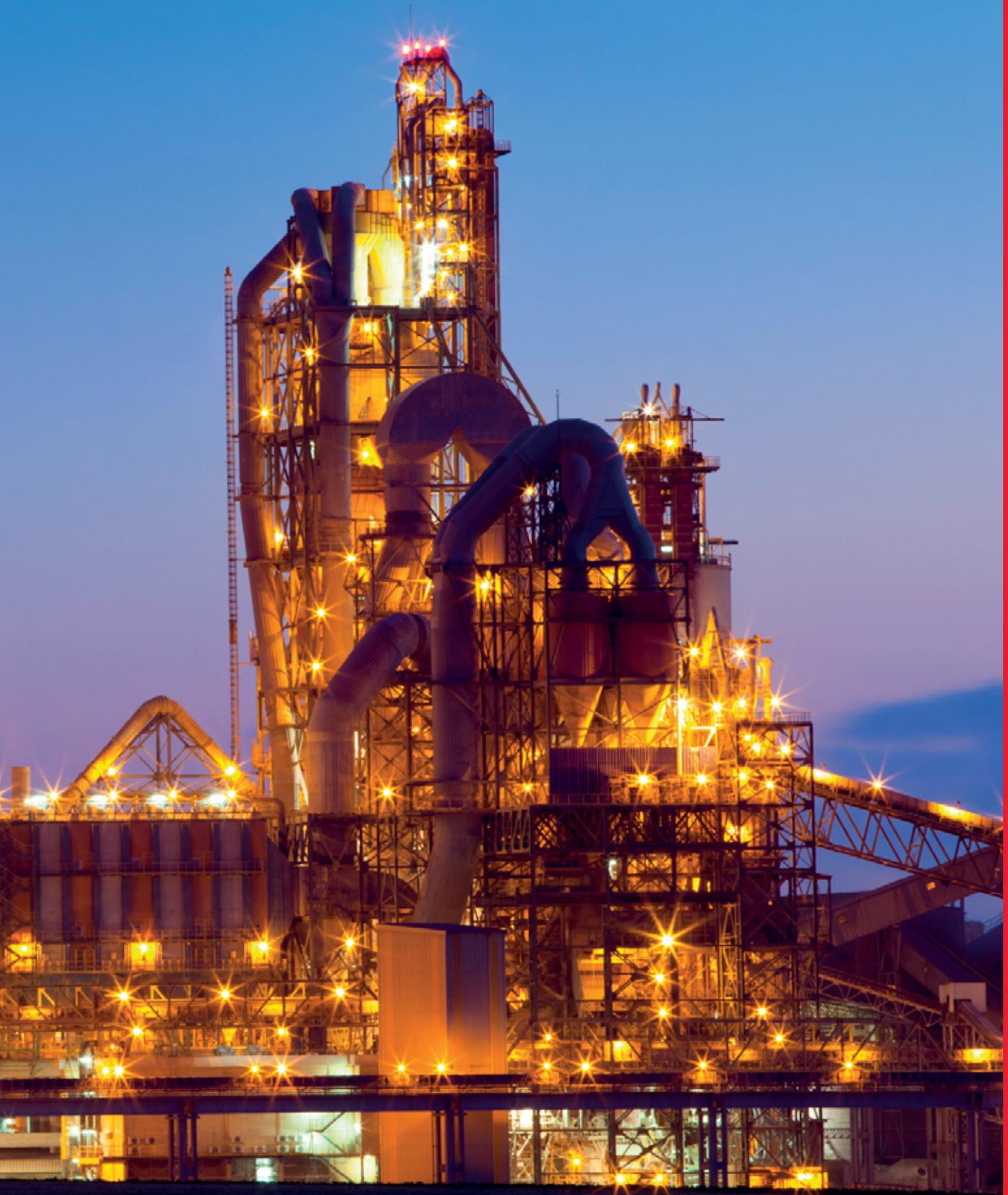
They can be equipped with 5 to 680A Marechal decontactors and/or 10 A Marechal multicontact connectors, offering from 12 to 37 contacts.

They provide increased and intrinsic safety, allowing them to be used in zones 1 & 2 (gas), 21 & 22 (dust).

This comprehensive range is perfect for wet and corrosive environments, such as food and beverage or chemical industries, thanks to its specific and high quality materials. It is possible to mount both socket-outlets and multicontact connectors on the same box: DXN1, DXN3, DXN6, PNX12C, DXN25C, DXN37C, SPeX, DXA1 and PNCX.

TECHNICAL FEATURES

| | |
|---|---|
| Material | Enclosure: Stainless steel AISI316L, GRP or Aluminium Socket: GRP and/or Aluminium |
| IP rating | IP66 |
| Ambient temperature range | -55°C to +60°C |
| Approvals | LCIE 17 ATEX 3005 X (Standard) IECEx LCIE 17.0003X (marking upon request) TR CU (available for certificate INERIS 06 ATEX 0015) |
| Marking | II 2 GD Ex eb IIC T(**) Gb or Ex ia or ib IIC T(**) Gb or Ex eb ia or eb ib IIC T(**) Gb Ex tb IIIC T(**) Db IP66 |
| | ** T6/T80°C, T5/T95°C, T4/T105°C, T127°C, T130°C |
| Frequency | 50 and/or 60Hz in AC |
| Electrical parameters | Ex eb: Umax=1000V AC/DC; Imax=376A* (wiring with terminals); Imax=680A* (direct wiring) Ex ia/Ex ib: Ui<=<<750V; li<=400A* Ex eb ia/Ex eb ib: Ui<=750V; Um<=750V; li<=400A* |
| | * The electrical parameters must be reduced, if relevant, according to the limitations of certified equipments used. |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Accessories available upon request | Drain/breather valve Traffolyte/Stainless steel certificate label Cable glands Terminals Plug |



PLUGS & SOCKET-OUTLETS

FPR - Plugs - GRP



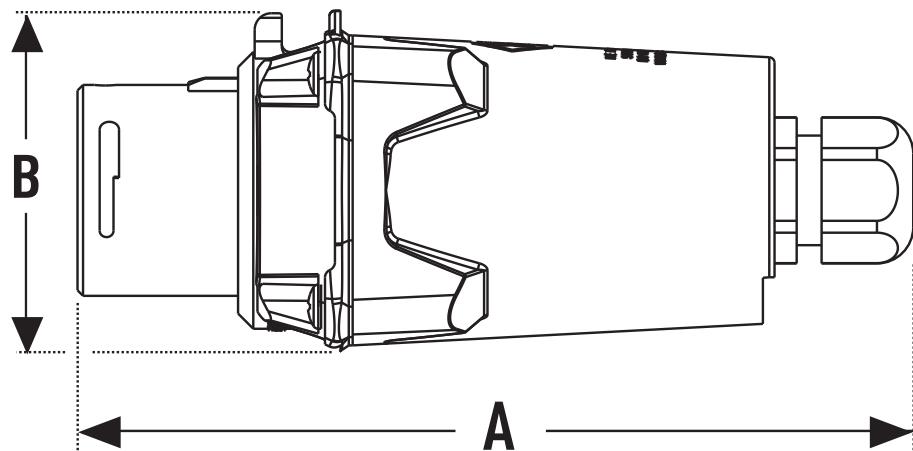
Plugs based on DXN technology, compatible with socket outlet & welding receptacles series: FSR, FSX, FSAL.

Made of self-extinguishing non-static glass reinforced polyester (PBT), DXN DECONTACTOR™ can withstand heavy duty, severe mechanical stress and presence of chemical aggressive products.

TECHNICAL FEATURES

| | |
|--|---|
| Material | GRP |
| IP rating | IP66 |
| Ambient temperature range | -40°C to +60°C |
| Approvals | Certified 06ATEX0015 (standard) TR CU (marking upon request) |
| Marking | II 2 GD EEx ed IIC T(**) EEx tD A21 IP66 T(**) ** T6/T85°C, T5/T100°C |
| Frequency | 50Hz |
| Connection terminals cross section flexible cores/rigid cores | For 20 A = 4/6 sqmm For 32 A = 10/16 sqmm For 63 A = 16/25 sqmm |
| Standard certificate label | Made by self adhesive UV and corrosion resistant polyester, approved by certified Laboratory. |
| Standard accessories | N°1 polyamide cable gland for unarmoured cable |
| Accessories available upon request | Metallic cable gland |

Dimensions FPR



Plugs FPR

| TYPE | CODE | COLOUR CODE | VOLTAGE [V] | CONTACT ARRANGEMENT | CURRENT [A] | CABLE GLAND | DIMENSIONS [mm] | |
|-----------------|---------------|-------------|-------------|---------------------|-------------|-------------|-----------------|----|
| | | | | | | | A | B |
| FPR 2-20-24-50 | B040401125113 | | 24 | 2P | 20 | M20 (8÷13) | 127 | 51 |
| | B040401125123 | | | | | M25 (13÷19) | | |
| FPR 3-20-110-50 | B040401335113 | | 110-130 | 1P+N+E | 20 | M20 (8÷13) | 127 | 51 |
| | B040401335123 | | | | | M25 (13÷19) | | |
| FPR 3-20-230-50 | B040401435113 | | 220-250 | 1P+N+E | 20 | M20 (8÷13) | 127 | 51 |
| | B040401435123 | | | | | M25 (13÷19) | | |
| FPR 4-20-400-50 | B040401545113 | | 380-440 | 3P+E | 20 | M20 (8÷13) | 127 | 51 |
| | B040401545123 | | | | | M25 (13÷19) | | |
| FPR 5-20-400-50 | B040401555113 | | 380-440 | 3P+N+E | 20 | M20 (8÷13) | 127 | 51 |
| | B040401555123 | | | | | M25 (13÷19) | | |
| FPR 2-32-24-50 | B040402125113 | | 24 | 2P | 32 | M20 (8÷13) | 128 | 68 |
| | B040402125123 | | | | | M25 (13÷19) | | |
| | B040402125133 | | | | | M32 (17÷25) | | |
| FPR 3-32-110-50 | B040402335113 | | 110-130 | 1P+N+E | 32 | M20 (8÷13) | 128 | 68 |
| | B040402335123 | | | | | M25 (13÷19) | | |
| | B040402335133 | | | | | M32 (17÷25) | | |
| FPR 3-32-230-50 | B040402435113 | | 220-250 | 1P+N+E | 32 | M20 (8÷13) | 128 | 68 |
| | B040402435123 | | | | | M25 (13÷19) | | |
| | B040402435133 | | | | | M32 (17÷25) | | |
| FPR 4-32-400-50 | B040402545113 | | 380-440 | 3P+E | 32 | M20 (8÷13) | 128 | 68 |
| | B040402545123 | | | | | M25 (13÷19) | | |
| | B040402545133 | | | | | M32 (17÷25) | | |
| FPR 5-32-400-50 | B040402555113 | | 380-440 | 3P+N+E | 32 | M20 (8÷13) | 128 | 68 |
| | B040402555123 | | | | | M25 (13÷19) | | |
| | B040402555133 | | | | | M32 (17÷25) | | |
| FPR 2-63-24-50 | B040403125123 | | 24 | 2P | 63 | M25 (13÷19) | 149 | 83 |
| | B040403125133 | | | | | M32 (17÷25) | | |
| | B040403125143 | | | | | M40 (24÷32) | | |
| FPR 3-63-110-50 | B040403335123 | | 110-130 | 1P+N+E | 63 | M25 (13÷19) | 149 | 83 |
| | B040403335133 | | | | | M32 (17÷25) | | |
| | B040403335143 | | | | | M40 (24÷32) | | |
| FPR 3-63-230-50 | B040403435123 | | 220-250 | 1P+N+E | 63 | M25 (13÷19) | 149 | 83 |
| | B040403435133 | | | | | M32 (17÷25) | | |
| | B040403435143 | | | | | M40 (24÷32) | | |
| FPR 4-63-400-50 | B040403545123 | | 380-440 | 3P+E | 63 | M25 (13÷19) | 149 | 83 |
| | B040403545133 | | | | | M32 (17÷25) | | |
| | B040403545143 | | | | | M40 (24÷32) | | |
| FPR 5-63-400-50 | B040403555123 | | 380-440 | 3P+N+E | 63 | M25 (13÷19) | 149 | 83 |
| | B040403555133 | | | | | M32 (17÷25) | | |
| | B040403555143 | | | | | M40 (24÷32) | | |

Fire point



MARECHAL ELECTRIC PRODUCTS



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Explosion-proof products

- DXN/DX/PNCX/MULTICONTACTS/SPeX 236

P.238

Industrial products

- Industrial power supply/Signal & control/High current/High Temperature/Self-ejecting systems/Boxes 238

EXPLOSION-PROOF PRODUCTS

DXN/DX/PNCX/MULTICONTACTS/SPeX

The plugs and sockets as well as socket-outlet boxes and junction boxes in this range are meant for use in hazardous areas in compliance with the ATEX 2014/34/EU Directive and as per the IECEx in zones 1 and 2 (Gas) and zones 21 and 22 (Dust).

TECHNICAL FEATURES



DXN

DECONTACTOR™ - 20 A/32 A/63 A

II2 G D Ex de IIC Gb

- IP66/IP67 water- and dust-tight
- Integrated load-break switch
- Robust and compact design
- High performance poly casing
- Self-ejecting version available



DX

DECONTACTOR™ - 20 A/32 A/63 A/125 A/200 A

II2 G D Ex de IIC Gb

- IP65 water- and dust-tight
- Integrated load-break switch
- Locking in on/off positions by keying axis





PXN12C/DXN25C/ DXN37C

MULTICONTACTS CONNECTORS - 10 A

II2 G D Ex e IIC

- From 12 to 37 contacts
- Locking in connected or disconnected position
- Corrosion-free metal casing



SPeX

SINGLE POLE POWER CONNECTOR

680 A

II2 G D Ex e IIC

- IP65/IP66 water- and dust-tight
- Electromechanical interlocking system
- Mechanic and visual keying
- High performance poly casing



DXA1

DECONTACTOR™ MÉTAL

Up to 20 A

II2 G D Ex de IIC, Ex tb IIIC

- Integrated load-break switch
- IP66/67 water and dust tight
- Corrosion-free metal casing
- Lockable in connected or disconnected position with optional lockout shaft
- Low temperature rating of -55°C



PNCX

COMPACT CONNECTOR - 5 A

II2 G D Ex e IIC, Ex tb IIIC

- Can be used in zones 1 and 2 (gas), 21 and 22 (dust)
- Compact and easy to use
- Standard IP66/IP67
- Long life, 2000 operations



INDUSTRIAL PRODUCTS

Industrial power supply/Signal & control/ High current/High Temperature/Self-ejecting systems/Boxes

This extensive and comprehensive product range covers all industrial applications. With sizes varying from 5 A to 700 A, it offers a wide range of options.

TECHNICAL FEATURES



INDUSTRIAL POWER SUPPLY

DECONTACTOR™ & CONNECTORS

16 A to 250 A

The DSN, DS and DN DECONTACTORTM ranges cover applications from 20 A to 250 A making them the most versatile for industry. PNC and PN are compact 16 A and 30 A connectors design for all type of environment (humidity, corrosion, pollution ...) found in many industrial sectors. DB disconnectable motor switches combine the function of an AC-3 motor switch with the convenience of a plug and socket.



SIGNAL & CONTROL

MULTICONTACT CONNECTORS

5 to 37 contacts - 5 A to 30 A

Low currents: 4 mA to 20 mA, 16 A

Our multicontact connectors can hook up equipment to a power supply and transmit data. The silver-nickel alloy used for the butt contacts provides exceptional conductivity and longevity (can withstand several thousands of operations). The casing is available in GRP or metal to ensure excellent resistance – even in harsh conditions. And because the contacts are crimped, the connectors can be mounted and demounted quickly and easily.





HIGH CURRENT

PLUGS & SOCKETS AND CONNECTORS

Up to 700 A - 1 000 V

MARECHAL® high-current plugs offer a reliable solution for connections even under the harshest environments.



HIGH TEMPERATURE

DECONTACTOR™ & CONNECTORS

25 A to 90 A

This range of power connectors and signal & control connectors, provides excellent connection quality in high-temperature environments, up to 400 °C.



SELF-EJECTING

DECONTACTOR™ & RETTBOX®/ RETTBOX®-AIR

Mechanical ejection up to 150 A

Electromechanical ejection boxes up to 32 A - 13 bars

Self-ejecting systems avoid the need to disconnect electrical equipment, allowing a mobile device to be moved without unplugging it, or where equipment is located in high-risk areas.



BOXES

SOCKET-OUTLETS WITH

PROTECTION UP TO 63 A

TUNNEL APPLICATIONS BOXES

MARECHAL® offers a wide range of boxes for all industrial applications and a large choice of products designed specifically for power-supply in tunnels.



NOTE

NOTE

NOTE

NON CONTRACTUAL DOCUMENT AND PICTURES

All the indications appearing in this catalogue are indicative and could not constitute a commitment on our part.
we reserve the right to alter specifications of our products without any prior notice in our efforts to continuously improve our products features.
For your information, the most updated version is the one of our website **technor.com**.



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