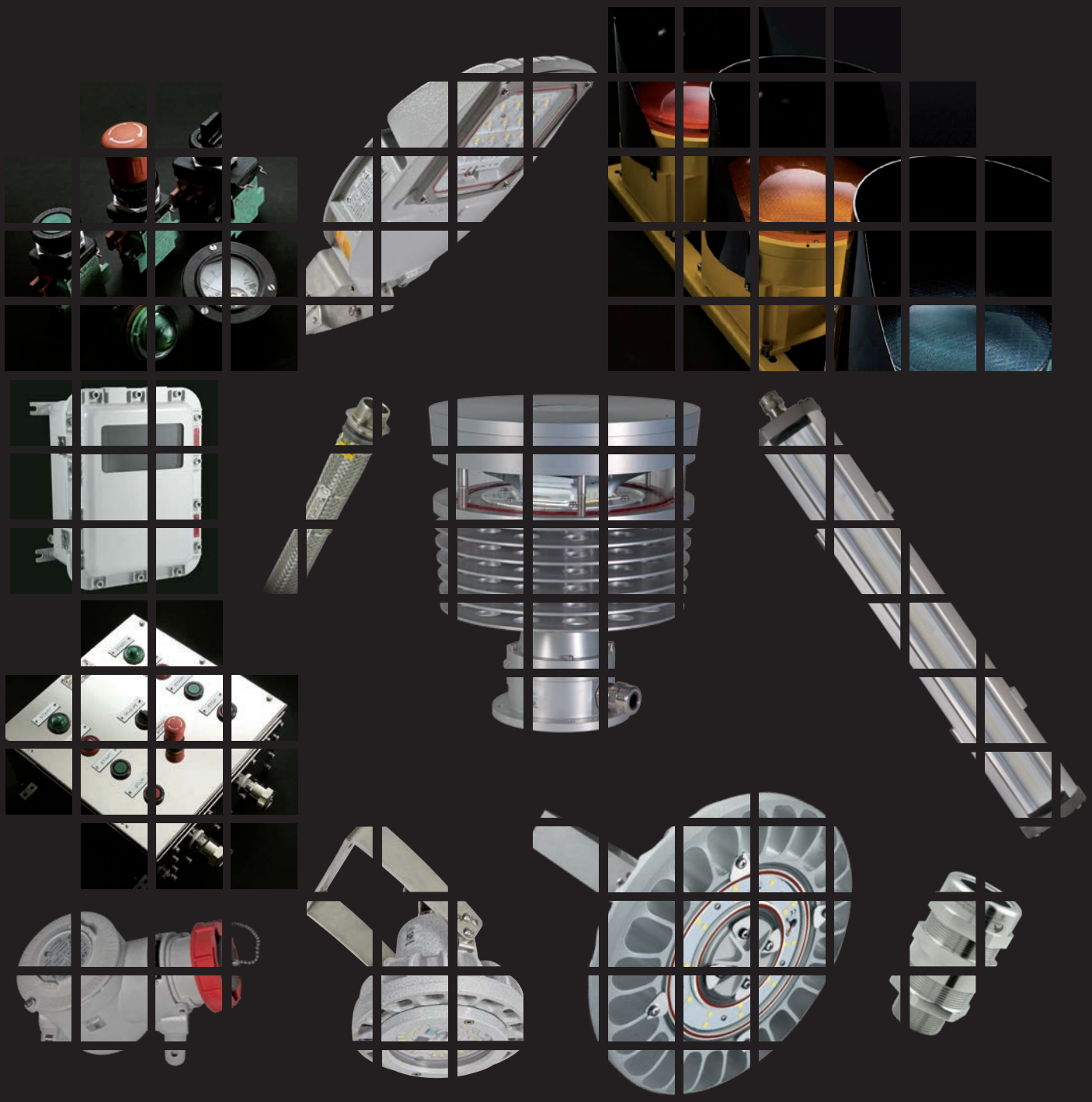

2026

Explosion-protected electrical equipment

QUICK REFERENCE GUIDE

CORTEM GROUP

To be sure to be safe.

CORTEM GROUP
To be sure to be safe.

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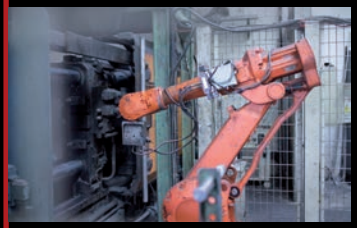
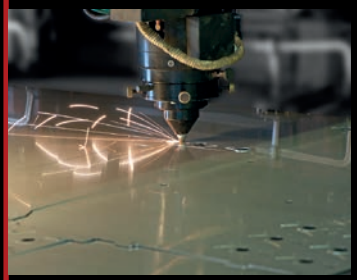




Italian Manufacturer

Since 1968, Cortem S.p.A. has been designing and manufacturing explosion-proof and weather-proof electrical equipment addressed to hazardous areas. Thanks to a continuous effort in technical innovation and improvement, it's today a leader in this field, able to provide a whole range of products, meeting on-shore and off-shore applications.

The peculiarity of the Technology Group Cortem, formed by Cortem, Elfit and Fondisonzo companies, is the experience gained in the Ex field which results not only in the furniture of simple Ex-products, but also in engineered and customized solutions. All our products are designed and manufactured internally according to different methods of protection such as 'Ex db' flameproof, 'Ex eb' increased safety, 'Ex de' mixed and 'Ex nR' restricted breathing, using primary aluminium alloys, stainless steels and plastic materials that assure resistance and duration. The aluminum alloy used by Cortem has passed all tests required by EN 60068-2-30 Standard (hot/humid cycles) and EN 60068-2-11 Standard (salt spray test). All our products in aluminium alloy are protected by an polyester coating RAL 7035. This treatment, only provided by Cortem Group, guarantees a durable protection.

Cortem production range can be summarized as follows:

- Lighting fixtures, obstruction lighting fixtures, floodlights and hand lamps.
- Junction and pulling boxes, control stations.
- Signalling and control equipment, plugs and sockets.
- Cable glands and electrical fittings.
- Special executions: switchgears and panel boards according to customer's specifications.

90% of our production are located in the Oil & Gas sector both off-shore and on-shore, but also in chemical, pharmaceutical plants and in all those manufacturing areas where the presence of explosive atmospheres may occur such as grain silos, woodworks and paper mills. We invest every year some of our resources to develop innovative products that meet the market needs and, for this reason, our R&D department studies the best solution valuating normative and market price issues, plant and security aspects.

With 4 Sister Companies, 10 Distribution Hubs and a wide sales network, Cortem provides a local and qualified presence around the world. For Cortem "displacing" does not mean transferring facilities, resources and know-how in low cost Countries, but replicating a successful model of industrial organization in which environment safety, product quality, compliance with standards, technical and after-sales services are the fundamentals of our corporate mission. The pay-off "to be sure to be safe" represents our pride and passion for what we design and manufacture.

High-efficiency product line with low-consumption LED boards, recyclable aluminum construction, and up to 70% fewer components than previous solutions.

FACTORY SEALED

Upon request, the factory sealed version is also available: the product is sealed directly at the factory so that cable entries or connections are already protected against the propagation of gas or flames, making the product ready for use.

SOME OF OUR MAIN CUSTOMERS

ABB S.p.A.
ABU DHABI COMPANY FOR ONSHORE OIL OP. (ADCO)
ADGAS
ADMA-OPCO
ADNOC
AG&P
AMEC FOSTER WHEELER
ANSALDO
ARCHIRODON
ASIAN ENGINEERING & CONTRACTORS
BASELL POLYOLEFINE
CHINA PETROLEUM ENG & CONSTRUCTION
CHIYODA CORPORATION
DAELIM INDUSTRIAL CO. LTD.
DAEWOO ENGINEERING & CONSTRUCTION
DANGOTE
DUQM REFINERY
ENEL
ENI REFINING & MARKETING
ENNPI
ENOC
ERG RAFFINERIE MEDITERRANEE
EXXON MOBIL CORPORATION
FINCANTIERI
FLUOR CORPORATION
GAZPROM
GE NUOVO PIGNONE
GS ENGINEERING & CONSTRUCTION CORP.
HELLENIC PETROLEUM
HYUNDAY ENGINEERING AND CONSTRUCTION CORP.
HYUNDAY HEAVY INDUSTRIES CO.LTD
INEOS
IRASCO
JGC CORPORATION
KUWAIT NATIONAL PETROLEUM COMPANY
KUWAIT OIL COMPANY
KUWAIT PARAXYLENE PRODUCTION COMPANY
(KPPC)
MARIE
MITSUBISHI HEAVY INDUSTRIES
NATIONAL IRANIAN GAS COMPANY NIGC
NATIONAL IRANIAN OIL COMPANY NIOC
NOVARGI INDUSTRIES
NPCC
NVENT THERMAL EUROPE
ORLEN
ORPIC
PEMEX
PETROBEL
PETROBRAS
PETROCHEMICAL IND. DES. & ENG. CO - PIDEC
PETROCHEMICAL INDUSTRIES COMPANY (PIC)
PETROFAC INTERNATIONAL
PETROLEUM DEVELOPMENT OMAN (PDO)
PETRONAS
QATAR ENERGY
QATAR GAS
QATAR PETROLEUM
RAS GAS
SABIC
SAIPEM
SAIMEXICANA S.A. de C.V.
SAMSUNG ENGINEERING & CONSTRUCTION
SAUDI ARAMCO
SATORP
SINOPEC
SK ENGINEERING & CONSTRUCTION
SONATRACH
STAATSOLIE
TECHINT
TECHNIP
TECNICAS REUNIDAS
TECNIMONT
TOYO ENGINEERING CORPORATION
TOTAL
USTAY
WOOD
YPF

PRODUCTS

LED LIGHTING FIXTURES HIGH BAY

FLOWEX SERIES

The FlowEx series is made up of three lamp body sizes and is the LED alternative for all those areas where it was customary for low and medium power discharge lighting fixtures over 400W to be installed.
The design of the finned body, made of aluminium alloy, acts as an excellent heat sink for the LED board, allowing the heat generated during normal LED operation to dissipate quickly and effectively.
Designed according to the principles of lean manufacturing, this lighting fixture is light and easy to install, while also being robust and durable.

- Maximum overall efficiency 151 lm/W, real and constant.
- Available in two different configurations depending on the installation area.
- Different wattages available for each model with different light output (from 4785 lm to 27961 lm).
- Models are also available with an additional aluminium housing that contains the battery for emergency operation.

Group II, Category 2GD/3G

FLOWEX-ME
II 2GD - Ex eb mb IIC T.. Gb
Ex tb IIIC T..°C Db

FLOWEX-MN
II 3G - Ex nR IIC T.. Gc
Ex tb IIIC T..°C Db

IP66

Zone 1-2-21-22

Aluminium alloy with low copper content

LED LIGHTING FIXTURES LOW BAY

EVML SERIES

EVML lighting fixtures have been conceived to offer a Low Bay lighting fixture that could replace incandescent equivalents at lower costs. They are suitable for the illumination of small areas in which it's necessary to limit the obstruction such as tunnels, passages, corridors, stairways, perimeter walls and command and control cabins. The model with the side entry meets, at last, some specific installation needs, reducing the overall dimensions (code EVML-...L).

- 'Ex e mb' method of protection.
- Models for low supply voltages available.
- EVML-...P hand-held model available.
- Available also EVML-...G series obstruction lighting fixtures with a LED plate and a globe of different colours.

Group II, Category 2GD

Ex eb mb op is IIC T.. Gb
Ex tb op is IIIC T..°C Db

IP66

Zone 1-2-21-22

Low copper content aluminium alloy

LED STREET LIGHTING FIXTURES

STREETEX SERIES

STREETEX series LED lighting fixtures are suitable for outdoor and perimeter street lighting of industrial areas, especially for the chemical and petrochemical, on-shore and off-shore sectors. STREETEX can be supplied in versions with direct horizontal/vertical pole mount or with a mounting bracket and cable gland. Different types of optics can also be installed directly on the LED plate. Optics is a crucial part of street lighting as it determines the direction of light on the road surface according to different requirements: light concentrated in a specific direction or evenly diffused light.

- 'Ex e mb' protection method.
- Available in two sizes.
- Different wattages available with different light output (from 3432 to 24503 lumen)

Group II, Category 2GD/3G

STREETEX-ME
II 2GD - Ex eb mb IIC T.. Gb
Ex tb IIIC T..°C Db

STREETEX-MN
II 3G - Ex nR IIC T.. Gc

IP66

Zone 1-2-21-22

Aluminium alloy with low copper content

TANK AND VESSEL INSPECTION LED LIGHTING FIXTURES

EVML-50/O.. SERIES

EVML-50/O.. series lighting fixtures have been designed to illuminate and monitor hazardous materials contained inside tanks and cisterns thanks to a bracket for the coupling with the porthole flange.

- 'Ex e mb' method of protection.
- Four different size of flange.

Group II, Category 2GD

Ex eb mb op is IIC T.. Gb
Ex tb op is IIIC T..°C Db

IP66

Zone 1-2-21-22

Low copper content aluminium alloy

LIGHTING FIXTURES FOR ENERGY SAVING LAMPS

EV, EVE -5050/-5060 SERIES

EV-5050, EV-5060, EVE-5050, EVE-5060 are lighting fixtures are designed for the petrochemical industry, combining aesthetics with functionality, performance with simplicity in full compliance with the severity of Ex regulations. The aluminium alloy with low copper content, the shock-resistant borosilicate glass and the electro-polished stainless steel make this fixture strong to corrosion agents of salt atmospheres and of industrial pollutions.

- Globe in borosilicate glass with high thermal and mechanical stability.
- EVE fixtures have an 'Ex e' internal terminal junction box which allows the connection with an 'Ex e' cable gland (not barrier).

Group II, Category 2GD

EV series
Ex d IIC T.. Gb - Ex tb IIIC T..°C Db

EVE series
Ex de IIC T.. Gb - Ex tb IIIC T.. °C Db

IP66

Zone 1-2-21-22

Low copper content aluminium alloy

LINEAR LED LIGHTING FIXTURE - ALUMINUM

LIFEX-M SERIES

LifEx-M lighting fixtures feature a high-quality anodised aluminium body and a glass diffuser which is resistant to impact and high temperatures. They have an innovative bracket mechanism, with no fixed interaxis spacing limitations, which makes them easy to install or retrofit and means the lighting fixture can be rotated to -30°/0°/+30°. The LifEx range comes in different lengths with a wide array of voltage and power specifications. The range has been optimally designed and certified according to the installation zone and, in addition to passing all tests required by the regulations, it has passed additional mechanical and electrical tests such as vibration testing, IP66, soft start, surge testing and more.

- Complete with high luminous efficiency LED strip lights.
- Available in two different configurations for different applications.

Group II, Category 2GD/3GD

LifEx-ME
II 2GD - Ex db eb mb IIC T.. Gb
Ex tb IIIC T..°C Db

LifEx-MN
II 3GD - Ex ec IIC T.. Gc
Ex tb IIIC T..°C Db

IP66
Zone 1-2-21-22

Aluminium alloy extrusion and end caps

LIGHTING FIXTURES FOR LEDS TUBES

FLF-L, FLFE-L SERIES

FLF-L and FLFE-L series lighting fixtures are available for LED tubes. They consist of two heads in aluminum alloy with low copper content provided with a G13 lamp holders, a tempered borosilicate glass tube heat resistant and an internal white painted aluminium reflector.

- FLF-L, FLFE-L series: excellent "CX" coefficient, less wind resistance and less accumulation of dust.
- FLFE-L fixtures have an 'Ex e' internal terminal junction box which allows the connection with an 'Ex e' cable gland (not barrier).

Group II, Category 2GD

FLF-L, FLFE-L series
Ex db op is IIC T6 Gb - Ex tb op is IIIC T80°C Db
Ex db eb op is IIC T6 Gb - Ex tb op is IIIC T80°C Db

IP66
Zone 1-2-21-22

Low copper content aluminium alloy

LINEAR LED LIGHTING FIXTURE - PLASTIC MATERIAL

LIFEX-P SERIES

The LifEx-P series lighting fixtures are characterised by an impact (IK09) and UV-resistant polycarbonate and GRP body with a transparent part for light transmission.
An innovative bracket mechanism, with no fixed interaxis spacing limitations, makes them easy to install or retrofit. Versions with emergency operation can be accessorized with battery boxes to facilitate maintenance and/or battery replacement, or with special batteries for applications with ambient temperatures down to -60° C.
The use of high-power LED strips provides lumen output ranging from 1,500 lm to 12,500 lm with high efficiency and guaranteed durability.

Group II, Category 2GD/3GD

LifEx-PE
II 2GD - Ex db eb mb IIC T.. Gb
Ex tb IIIC T..°C Db

LifEx-PN
II 3G - Ex ec IIC T.. Gc
Ex tb IIIC T..°C Db

IP66
Zone 1-2-21-22

Extruded and plastic heads

LED FLOODLIGHTS

EVL SERIES

The LED EVL series floodlights combines a light and compact design with great versatility, ease of installation and high lighting performance thanks to high intensity and efficiency LED plates which may be combined along with lens available with light beam with different shades.
Furthermore, the air particles around the floodlight do not ionize, an intrinsic characteristic of LED technology that limits the attraction of dust and insects thanks to the absence of UV emission. EVL series floodlights can be powered through an electric cable and a simple 'Ex e' cable gland (no barrier).

- Four lighting fixtures sizes:
  EVL-060, EVL-070, EVL-080, EVL-100.
- Different powers available for each model with different lumen output.
- Different optics available for different light beams required.

Group II, Category 2GD

Ex db eb op is IIC T.. Gb
Ex tb op is IIIC T...°C Db

IP66

Zone 1-2-21-22

Low copper content aluminium alloy

LED FLOODLIGHTS

EVNL SERIES

EVNL series floodlights, suitable for plants in zone 2 and 22, keeping cost reductions at the foreground, improving the quality of the product and increasing the lighting solution specifications. The advantage of the EVNL is the implementation of the "Ex nR" version combined with the "Ex op is" which classifies the equipment as a restricted breathing device with certified optical safety. The careful design, together with the meticulous choice of materials to seal the lighting fixture, limits the entry of flammable gases, vapours or mists during normal operation of the floodlight.

- Four sizes: EVNL-060, EVNL-070, EVNL-080, EVNL-100.
- New supply voltages available (from 120-277 Vac).
- Different powers available for each model with different lumen output.
- Different optics available for different light beams required.

Group II, Category 2D/3GD

Ex II 2D Ex tb op is IIIC T.. Db
Ex II 3GD Ex nR IIC T..°C Gc

IP66

Zone 1-2-21-22

Low copper content aluminium alloy

LED FLOODLIGHTS

SLED-ME SERIES

SLED-ME series floodlights with LED technology combine lightweight, compact design and high performance in terms of reliability, safety, efficiency and energy saving. The finned body of the floodlight acts as a heat sink for the LED plate, allowing the installation of greater light output without incurring the deterioration of the LEDs.

- Colour rendering index > 70.
- Galvanized steel adjustable bracket.
- Different powers available for each model with different lumen output.
- Different optics available for different light beams required.

Group II, Category 2GD

Ex db eb IIB+H2 T... Gb
Ex tb IIIC T...°C Db
Zone 1-2-21-22

IP66

Aluminium alloy with low copper content

LED FLOODLIGHTS

SLED-MN SERIES

The SLED-MN series LED floodlights are designed with the 'Ex nR' and 'Ex tb' protection method to be installed in ATEX classified areas "Zone 2" and "Zone 21", where the equipment must guarantee a level of normal protection in the presence of mixtures of gases, vapours, and mists (Zone 2), and a high level of protection against dust and combustible particles (Zone 21).

- Colour rendering index > 70.
- Galvanized steel adjustable bracket.
- Different powers available for each model with different lumen output.
- Maximum overall efficiency 127 l/W, real and constant.

Group II, Category 3GD

Ex nR IIC T.. Gc
Ex tb IIIC T..°C Db
Zone 2-21-22

IP66

Aluminium alloy with low copper content

LED LIGHTING FIXTURES FOR SAFETY WARNINGS

CCA-03EX SERIES

CCA-03EX series LED lighting fixtures for safety warnings are designed for installation in areas with risk of explosion where lighting may be stopped due to abnormal, unusual or accidental situations. The CCA-03EX lighting fixture can be installed in indoor and outdoor environments and it can operate both in normal and emergency service, with a maximum duration of about 2 hours. In case of interruption of the supply voltage, electronics automatically turn on the lighting fixture.

- Simple wiring, two threaded hubs studied for the through-wiring.
- Compact size, two directional LED spotlights.
- LED COB (Chip on Board: high performance in terms of lumens, low maintenance costs and long life.
- Color temperature 3.500°C, 595 lm for each LED.

Group II, Category 2GD

Ex d IIC T6 Gb - Ex tb IIIC T85°C Db IP66

Zone 1-2-21-22

Low copper content aluminium alloy

LED OBSTRUCTION LIGHTING FIXTURES

XLFE-LIB, -MIB, -MIA, -MIC SERIES

XLFE-LIB, XLFE-MIB, XLFE-MIA and XLFE-MIC obstruction lighting fixtures are suitable for installation on towers or high buildings as obstruction signal thanks to light signals emitted by LEDs of high power and luminous efficiency. The use of LED technology provides low power consumption, long life (approx. 50.000 hours) and, consequently, a reduction in maintenance costs.

- Lighting fixtures complies with ICAO Standard (International Civil Aviation Organization).
- Max. 20000 cd for medium intensity type A, 2000 cd for medium intensity type B, 32 cd for low intensity obstruction lighting fixtures.

Group II, Category 2GD

XLFE-MIA, XLFE-MIC
Ex db eb IIC T4 Gb; Ex tb IIIC T110°C Db

XLFE-MIB
Ex db eb op is IIC T4 Gb; Ex tb op is IIIC T110°C Db IP66
XLFE-LIB

Ex de IIC T6 Gb; Ex tb IIIC T.. Db

IP66

Zone 1-2-21-22

Low copper content aluminium alloy

LED WARNING LIGHTING FIXTURES

VSE SERIES

The VSE series warning lighting fixtures with flashing or fixed light are suitable for industrial signalling. The flashing can be adjusted via internal DIP switch with a frequency of 20 to 70 flashes per minute. The VSE lighting fixture, available in different colors, is equipped with LEDs installed on the electronic plate with a single circuit and an internal reflector.

- Power consumption: 6W
- Low intensity
- Different colors available.

Group II, Category 2GD

Ex db eb op is IIC T6 Gb;
Ex tb op is IIIC T75°C Db

IP66
Zone 1-2-21-22

Low copper content aluminium alloy

EMERGENCY SIGNALLING LIGHTING FIXTURES FOR LED STRIPS AND FLUORESCENT TUBES

LFED, LFEE, EXIT-P, EVF-18EX SERIES

Emergency lighting fixtures LFEE, LFED, EXIT-P and EVF-18EX series are designed for the lighting and identification of emergency exits or escape routes in case of danger. LFEE, LFED or EXIT-P series are made of a aluminium or stainless steel AISI 316L or polyester enclosure, a window with a screen-printed pictogram and an LED strip.
EVF-18EX series is equipped with an electronic ballast for 8W fluorescent lamps.

- LFEE, LFED, EXIT-P: 'Ex db' method of protection, models for normal and emergency operation available.
- EVF-18EX: suitable for fluorescent tube up to 1 x 8W, two-color LED (green/red) which monitors batteries.

Group II, Category 2GD

LFED
Ex db op is IIB+H2 T6 Gb
Ex tb op is IIIC Db

LFEE
Ex db eb mb op is IIC T5/T6 Gb
Ex tb op is IIIC T70/T60°C Db

EXIT-P
Ex db eb mb IIC T.. Gb
Ex tb IIIC T..°C Db

EVF-18EX
Ex d IIC T5 - Ex tD A21

IP66
Zone 1-2-21-22

Low copper content aluminium alloy, AISI 316L stainless steel or polyester

LED TRAFFIC LIGHTS

MSU, CCA-02E/S...LD SERIES

MSU and CCA-02E/S...LD series traffic light systems are suitable for the traffic regulation in chemical aggressive industrial environments or potentially hazardous areas, including marine one.

- Two, three, four or five signallers and combinations of colors (for MSU).
- One, two or three signallers and combinations of colors like green, yellow and red (for CCA-02E/S...LD).

Group II, Category 2GD

(CCA-02E/S...LD)
Ex d IIC T6 Gb - Ex tb IIIC T85°C Db

(MSU)
Ex eb mb op is IIC T.. Gb - Ex tb op is IIIC T..°C Db

IP66

Zone 1-2-21-22

Low copper content aluminium alloy

FLUORESCENT AND LED HAND LAMPS

L, LHL-P SERIES

Hand lamps are suitable to be used for inspection, operation and plant maintenance. L-5, L-5R series have a light sensor for saving energy and batteries level information. They can be mounted on fire helmets. L-3000 series has 2 LEDs of 135 lumens each in a double optic with different light beams and Led Engine technology with a step light system. LHL-...P series hand lamps are suitable for LED tubes of 9/17W. Thanks to their special construction, robust and easy to handle, they provide excellent performance in any position and ambient temperature.

- L-3000: swivelling head with 3 positions 0° | 45° | 90°.
- LHL-...P: light color temperature around 5500 K, 72 LEDs, lifespan > 50.000 hours, stainless steel hook and 5m cable.

L-5, L-5R, L-5S SERIES
Group II, Category 1GD
Ex ia IIC T4 Ga - Ex ia IIIC T85° Da
L-3000 SERIES
Group II, Category 1GD/1D
Ex ia IIC T4 Ga | Ex ia IIIC T85° Da
IP67
Zone 0-1-2-21-22
Thermoplastic resin

LHL-P
Group 2, Category 2G
Ex mb IIIC T95°C/T130°C (Db)
Ex mb IIIC T95°C/T130°C (Db)
Polycarbonate and PVC
IP66
Zone 1-2-21-22

JUNCTION BOXES

EJB, EJB...A, EJB...W... SERIES

EJB, EJB...A series junction boxes are used either as junction boxes with/without terminals or for installation of electrical equipment such as circuit breakers, signals, remote control switches, transformers. The cover may be equipped with a borosilicate, rectangular window to visualize instruments mounted inside. EJB...W series instrument housing boxes, with one or two circular windows, are suitable for containing analogical and digital measuring instruments.

- Stainless steel hinges as standard on the long side with predisposition of mounting on the short side.
- Body and cover can be drilled and threaded according to customers' specification.
- Stainless steel screws.

FACTORY SEALED

Group II, Category 2GD

Ex d IIB+H2 Gb - Ex tb IIIC Db
Ex d IIB+H2 T... Gb - Ex tb IIIC T...°C Db
Ex d [ia Ga] IIB+H2 T... Gb - Ex tb [ia Da] IIIC T...°C Db

IP66/67

Zone 1-2-21-22

Low copper content aluminium alloy

JUNCTION BOXES

EJBX... SERIES

EJBX... series junction boxes, made in stainless steel, are used either as junction boxes with/without terminals or for installation of electrical equipment such as circuit breakers, signals, remote control switches, transformers. The cover may be equipped with a borosilicate, rectangular window to visualize instruments mounted inside.

- Stainless steel hinges as standard on the long side with predisposition of mounting on the short side.
- Body and cover can be drilled and threaded according to customers' specification.
- Stainless steel screws.

Group II, Category 2GD/ M2

Ex d IIB+H2 Gb - Ex tb IIIC Db
Ex d IIB+H2 T... Gb - Ex tb IIIC T...°C Db
Ex d [ia Ga] IIB+H2 T... Gb - Ex tb [ia Da] IIIC T...°C Db
Ex d I mb

IP66/67

Zone 1-2-21-22

AISI 316L Stainless steel

JUNCTION BOXES

EJBC SERIES

The EJBC series junction boxes have been carefully designed to allow their installation in areas with danger of explosion and/or fire due to the presence of all Gases of Group IIA - IIB - IIC classified as Zone 1, 2, 21, 22. The peculiar multi-step joint, obtained thanks to the high quality and precision of the machining, has allowed, in fact, the extension of the protection of gases to Group IIC [Acetylene (C2H2), Carbon disulphide, Hydrogen (H2)].

- Zone 1, 2, 21, 22
- Group IIC.
- Aluminium junction boxes.
- IP 66/67.

Group II, Category 2GD

Ex db IIC T4/T5/T6 Gb Ex tb IIIC T85°C/T100°C/T135°C Db
Ex db [ia Ga] IIC T4/T5/T6 Gb Ex tb [ia Da] IIIC T85°C/T100°C/T135°C Db

IP66/67

Zone 1-2-21-22

Low copper content aluminium alloy

JUNCTION BOXES

CCA...E, CCA...EH, CCA...C SERIES

CCA...series junction boxes are used either as junction boxes with/without terminals or for installation of electrical equipment. CCA...C series can be equipped with control devices whereas CCA...EH series instrument housings, supplied with a borosilicate glass round window, are used to contain analogical and digital instruments.

- In CCA...E and CCA...EH series, the internal components can be easily installed thanks to the external flange structure.
- CCA...C series boxes are equipped with a cylindrical coupling joint so that they can be equipped with control devices. Hinged cover.
- Stainless steel screws.
- Zone 1-2-21-22
- Low copper content aluminium alloy

CCA...E and CCA...EH series
Group II, Category 2GD
Ex d IIC Gb - Ex tb IIIC Db
Ex d IIC T6, T5 Gb - Ex tb IIIC T85°C, T100°C Db
Ex d IIC T6/T5 - Ex tb IIIC T85°C/T100°C Db -
Ex d [ia Ga] IIC T...°C, Gb - Ex tb [ia Da] IIIC T...°C Db

CCA...C series
Group II, Category 2GD/2(1) GD
Ex d IIC Gb - Ex tb IIIC Db
Ex d IIC T6, T5 Gb - Ex tb IIIC T85°C, T100°C Db
Ex d IIC T6/T5 - Ex tb IIIC T85°C/T100°C Db
Ex d [ia Ga] IIC T...°C, Gb - Ex tb [ia Da] IIIC T...°C Db
IP66

JUNCTION BOXES

SX7E, SX9GUB SERIES

SX7E and SX9GUB series junction boxes are UL certified. SX7E and SX9GUB may be used either as junction boxes with/without terminals or for installation of electrical equipment. SX9GUB series is suitable for installation along pipe courses as junction boxes and distribution boxes for conductors. They are available in many and different dimensions.

- SX7E and SX9GUB series: cover in low copper content aluminum alloy, stainless steel screws, mounting plate, fixing lugs, epoxy coating.

Class I, Groups C and D; Class II, Groups E, F and G

Directive

NEC, CEC, NFPA

Standards

NEMA 7, NEMA 9, NEMA 4X, NEMA 3, UL 886, UL 1203, NEC Art 500-503

JUNCTION BOXES

CCAI SERIES

CCAI series junction boxes are made of stainless steel. They are used either as junction boxes with/without terminals or for installation of electrical equipment. Their square shape, without external flanges, allows to realise modular panels certified for gases of IIC group. They can be equipped with control devices.

- Wall and cover can be drilled and threaded according to customers' specification.
- Internal and external stainless steel earth screws.
- Fixing lugs.
- Hinged cover.

Group I/II, Category M2/2GD

Ex d I Mb
Ex d IIC Gb - Ex tb IIIC Db
Ex d IIC T6, T5 Gb - Ex tb IIIC T85, T100°C Db
Ex d IIC T6/T5 - Ex tb IIIC T85°C/ T100°C
Ex d [ia Ga] IIC T... Gb - Ex tb [ia Da] IIIC T...°C Db

IP66

Zone 1-2-21-22

AISI 316L Stainless steel.

JUNCTION BOXES
WITH SCREW COVER

CCAIF, CCAIF...H SERIES

CCAIF and CCAIF..H series junction boxes in stainless steel have a screw cover with or without round window. They are used either as junction boxes with/without terminals. The body can be drilled and threaded according to customers' specification.

- AISI 316L stainless steel.
- Stainless steel bolts and screws.
- Internal/external earth screws.

Group II, Category 2 GD

Ex d IIC Gb Ex tb IIIC Db

IP66

Zone 1-2-21-22

AISI 316L Stainless steel

JUNCTION BOXES

CTB...CSTB...CTBE... SERIES

CTB...CSTB...CTBE... series junction boxes, stainless steel made, are suitable for electrical installations as increased safety boxes or intrinsically safety boxes. They can be supplied with multipolar or modular terminal strips and they can be equipped with pilot lights, push buttons and measuring instruments to assemble control and signalling panels with IP66 protection degree.

- Upon request can be supplied with removable gland plates, hinged and lockable lid (no CTBE).
- Stainless steel screws.
- CTBE series now available.

Group II, Category 2GD

Ex eb IIC T.. Gb - Ex tb IIIC T.. Db
Ex eb ia IIC T.. Gb - Ex ia IIIC T.. Db
Ex eb ia IIC T.. Gb - Ex tb ia IIIC T.. Db
Ex de IIC T6/T5 Gb - Ex tb IIIC T85°C/ T100°C Db

IP 66

Zone 1-2-21-22

AISI 316L stainless steel

JUNCTION BOXES

SA...SS SERIES

SA...SS series junction boxes, AISI 316L stainless steel made, are suitable for electrical installations as increased safety boxes or intrinsically safety boxes. They can be supplied with multipolar or modular terminal strips and they can be equipped with pilot lights, push buttons and measuring instruments to assemble control and signalling panels with IP66 protection degree.

- Upon request, they can be supplied with hinged and lockable lid.
- Stainless steel screws.

Group II, Category 1/2(1)/2GD

Ex e II T5/T6 Ex tD A21
Ex e (ia) IIC T5/T6 Ex tD A21
Ex ia IIC T5/T6 Ex tD A21
Ex de IIC T5/T6 Gb Ex tb IIIC T100°C÷T85°C Db

IP66

Zone 1-2-21-22

AISI 316L stainless steel

JUNCTION BOXES

SA, SA/P SERIES

SA and SA/P series junction boxes are suitable for electrical installations as increased safety boxes or intrinsically safety boxes. They can be supplied with multipolar or modular terminal strips and they can be equipped with pilot lights, push buttons and measuring instruments to assemble control and signalling panels.

- SA junction boxes are made in low copper content aluminium alloy whereas SA/P boxes are in glass reinforced resin.
- RAL 7035 (Ex e) or RAL 5015 (Ex i) polyester coating for SA series.
- They can be drilled and threaded according to customers' specification.
- Stainless steel screws.

Group II, Category 2GD

Ex e IIC T.. Gb - Ex tb IIIC T.. Db
Ex ia IIC T.. Gb - Ex ia IIIC T.. Db
Ex e ia IIC T.. Gb - Ex tb ia IIIC T.. Db
Ex de IIC T6/T5 Gb - Ex tb IIIC T85°C/T100°C Db

IP66

Zone 1-2-21-22

Low copper content aluminium alloy, GRP

JUNCTION BOXES

SAG SERIES

SAG series junction boxes, aluminium alloy made, are suitable for electrical installations as increased safety boxes or intrinsically safety boxes. Thanks to the walls thickness (7 mm), they can be directly connected to pipes and conical threaded unions. They can be supplied with multipolar or modular terminal strips and they can be equipped with pilot lights, push buttons and measuring instruments to assemble control and signalling panels.

- Greater walls thickness.
- RAL 7035 (Ex e) o RAL 5015 (Ex i) polyester coating.
- They can be drilled and threaded according to customers' specification.
- Stainless steel screws.

Group II, Category 2GD

Ex e IIC T.. Gb - Ex tb IIIC T.. Db
Ex ia IIC T.. Gb - Ex ia IIIC T.. Db
Ex e ia IIC T.. Gb - Ex tb ia IIIC T.. Db
Ex de IIC T6/T5 Gb - Ex tb IIIC T85°C/T100°C Db

IP66

Zone 1-2-21-22

Low copper content aluminium alloy

CONTROL PANEL 'Ex tb'

SA SAG, SA/P, CTB SERIES

The control, monitoring and signalling units SA, SA/P, CTB include a series of enclosures with "Ex tb" protection available in aluminium, polyester or stainless steel and in different measures.
According to the size and the material chosen, there are three maximum dissipation limits that correspond to each of the three maximum optional ambient temperatures: + 40°C, + 55°C and + 60°C.

- Several IECEx/ATEX certified devices can be mounted on the enclosure faces.
- A glass or polycarbonate window can also be fixed to the lid.
- Various electronic devices can be installed internally such as terminals, analog and digital instruments, control and measurement devices, circuit breakers and IECEx / ATEX certified battery packs.

Group II, Category 2D

Ex tb IIIC T80°C Db

IP 66

Zone 21-22

Low copper content aluminium alloy, stainless steel, GRP

ROUND JUNCTION BOXES

S, SF, SSC SERIES

S, SF, and SSC series junction boxes are suitable for installation along piping as junction boxes and distribution boxes for conductors. Several models are available in relation to size and to holes number. They can be supplied as pulling boxes or as terminal boxes with multipolar or modular terminal strips.

- SF series has a wall mounting bracket whereas SSC series has a ceiling mounting bracket.
- Stainless steel screws.
- Available SF...S and SSC...S series in stainless steel.

Group II, Category 2GD

Ex d IIC Gb - Ex tb IIIC Db
Ex d IIC T... Gb - Ex tb IIIC T... Db
Ex e IIC T... Gb - Ex tb IIIC T... Db
Ex i IIC T... Gb - Ex tb IIIC T... Db

IP 66/67

Zone 1-2-21-22

Low copper content aluminium alloy and stainless steel

ROUND JUNCTION BOXES

SWS SERIES

SWS series junction boxes, are suitable for containing temperature sensors such as thermocouples.

- Stainless steel screws.
- SWS series features a galvanized steel chain which prevents from losing the lid.

Group II, Category 2GD

SWS SERIES
Ex d IIC T... Gb - Ex tb IIIC T... Db
Ex e IIC T... Gb - Ex tb IIIC T... Db
Ex i IIC T... Gb - Ex tb IIIC T... Db
Ex d IIC Gb - Ex tb IIIC Db

IP 66/67

Zone 1-2-21-22

Low copper content aluminium alloy

JUNCTION BOXES FOR EX DE PANEL BOARDS

EJBE, EJBXE SERIES

EJBE, EJBXE series is composed by one 'Ex d' EJB (aluminium) or EJBX (stainless steel) series junction box and one 'Ex e' CTB series connection box through the flange assembly. Viewing windows are available on 'Ex d' enclosure for the visualization of indicators, displays and monitoring devices.

- AISI 316L stainless steel or copper free aluminium alloy.
- Stainless steel bolts and screws.
- Internal/external earth screws.

FACTORY SEALED

Group II, Category 2GD

Ex de IIB+H_2 T5/T6 Gb
Ex tb IIIC T85°C T100°C Db

IP66

Zone 1-2-21-22

AISI 316L stainless steel or copper free aluminium alloy

CONTROL STATIONS

A, I, CMD SERIES

A, I and CMD series control stations are ideal to house on the cover electrical equipment as control and signalling devices. They are suitable for chemical, petrochemical and pharmaceutical industries and they can be installed either on board machine or by remote control.

- A series is in aluminium alloy, I series is in stainless steel while CMD series is in glass reinforced resin.
- A, I, CMD series are supplied with cable gland. Wide range of models and accessories available.
- Stainless steel screws.

Group II, Category 2GD

A, I Series
Ex de IIC T5 Ex tD A21

CMD Series
Ex db eb IIC T.. Gb; Ex tb IIIC T..°C Db

IP66

Zone 1-2-21-22

Low copper content aluminium alloy, stainless steel, GRP

LIMIT SWITCHES

YFC SERIES

YFC series limit switches are used as protection and reset switches, devices for presence recognition or objects count and transit, measurement on / off, position measurement. Easy wiring and quick installation, solidity, reliability in time are the main features. Furthermore, they are provided with a wide range of actuators and contacts combinations which allow offering the best solution for proper functioning of a system in dangerous zone.

- 25 different types of interchangeable 90° step adjustable positionable heads.
- Visibility during operation, able to switch high electrical currents (max.10A), contacts electrically separated, definite and adjustable points of intervention.
- Stainless steel screws.

Group II, Category 2GD

Ex d IIC T6 Ex tD A21 T85°C

IP 66/67

Zone 1-2-21-22

Low copper content aluminium alloy

ROTARY SWITCHES
ROUND INSTRUMENT HOUSINGS

CSC, EFSCO, EMHA-9, CSC-H SERIES

CSC and EFSCO series circuit breakers, switches and change-over switches are rotary type models with a control device on the cover. CSC switches have a range of 16A whereas EFSCO series have ranges of 25, 50 and 63A. CSC switches are supplied with Male 1'' - Female 3/4'' reducer.

- Front aluminium control device.
- Cover fitted with stainless steel closing screw. Fixing lugs.

EMHA-9 and CSC-H series instrument housings are normally used to enclose analogical instruments such as ammeters and voltmeters. CSC-H series control stations may be supplied with a single or a double unit. Measuring instruments upon request.

- Borosilicate front glass.
- Stainless steel screws. Fixing lugs.

Group II, Category 2GD

CSC series
Ex d IIC T6 Ex tD A21
EFSCO series
Ex d IIC T5/T6 Ex tD A21
EMHA-9. CSC-H series
Ex d IIC T5/T6 Ex tD A21

IP 66

Zone 1-2-21-22

Low copper content aluminium alloy

CONTROL STATIONS

CSE, EFDC SERIES

CSE, EFDC series are suitable as control and signalling devices. They are suitable for chemical, petrochemical and pharmaceutical industries and they can be installed either on board machine or by remote control. CSE series control stations are rectangular whereas EFDC series are cylindrical. On EFDC control stations may be installed up to four different control devices.

- Voltage/amperage for standard use.
- Stainless steel bushing and push button shaft.
- Cover fitted with stainless steel closing screw. Lugs for wall mounting.

Group II, Category 2GD

CSE series
Ex d IIB T5/T6 Ex tD A21

EFDC series
Ex d IIC T5/T6 Ex tD A21

IP 66

Zone 1-2-21-22

Low copper content aluminium alloy

BREAKER

EFD3 SERIES

EFD3 series tripolar thermo-magnetic circuit breakers are used for command (start - stop) and protection of three-phase motors. The circuit breaker has an adjustable thermo-magnetic protection and an external control device.

- Stainless steel screws. Fixing lugs.
- Thermal range from 0,16 - 0,25A up to 20,00 – 25,00A.

Group II, Category 2GD

Ex d IIB T5/T6 Ex tD A21

IP 66

Zone 1-2-21-22

Low copper content aluminium alloy

AUDIBLE WARNINGS, LOUDSPEAKER AND ROTATING ELECTROMECHANICAL SIRENS

ETH, ETH20MDLOUD/TR, ETS60 SERIES

ETH series audible warnings are recommended when it's necessary the use of a signalling bell and/or alarm in areas with potentially explosive atmosphere. The explosion-proof loudspeakers ETH20MDLOUD series are suitable for connection to standard amplification system with output 100V, to alarm systems and for public address.
ETS60 series sirens are recommended when it's necessary the use of a signalling bell and/or alarm in areas with potentially explosive atmosphere.

- ETH series: two sizes available and different colors upon request. Five sounds with different intensity and frequency: bi-tone - yelp - wail - intermittent - fixed note.
- ETH20MDLOUD/TR: equipped with a transformer offering the possibility to adapt and select the sound level.
- ETS60 series: ideal for noisy environments, mounting bracket with fixing holes and different power voltages VAC/VDC upon request.

ETH-12
Group II, Category 2GD
Ex d IIC T6 Gb – Ex tb IIIC T85°C IP65

ETH-20
Group II, Category 2G
Ex d IIC - IIB+H_2 T4 Gb IP6x
Zone 1-2-21-22

ETH20MDLOUD/TR
Group II, Category 2GD
Ex d IIB+H_2 T6/T5 Gb - Ex tb IIIC T85°C/T100°C Db

ETS60 series
Group II, Category 2GD
Ex d IIC T6 – Ex tD A21 IP65

Low copper content aluminium alloy

ELECTRONIC EARTHING SYSTEM 'Ex d/tb' e 'Ex eb/tb'

GRD-4200 AND GRDE-4200 SERIES

GRD-4200 and GRDE-4200 electronic equipment ensures tankers are earthed when loading and unloading flammable liquids in environments where there is an explosion hazard. They operate by reading the resistive parameter ensuring earthing and controlling the loading and unloading pump.

- Connection pliers with 8 metres of cable.
- GRD-4200 certified SIL 2.
- GRDE-4200 casing 'Ex eb / tb' and resistant to knocks IK10.
- GRDE-4200 available in aluminium alloy with low copper content or polyester resin.

(GRD-4200)
Group II, Category 2(1)GD
Ex d [ia] ia IIB + H_2 T6 Ex tD [ia D] A21

(GRDE-4200)
Group II, Category 2GD
Ex db eb mb [ia Ga] IIC T.. Gb
Ex tb [ia Da] IIIC T..°C Da
IP66

Zone 1-2-21-22

Low copper content aluminium alloy or GRP

ELECTRONIC CAPACITIVE EARTHING SYSTEM 'Ex eb / tb'

GRDC-4200 SERIES

The GRDC-4200 is a capacitive electronic earthing system. The system analyses the overall capacitance of the vehicle, to provide consent for load activation, only in the case of actual connection. Thanks to the electrical capacitance reading of the connected device, the GRDC-4200 can distinguish whether it has been connected to the tank or to another metal object (pipe, ladder, etc.), thereby increasing the level of reliability and safety.

- Casing Ex eb/tb
- Connection pliers with 8 metres of cable.
- Available in aluminium alloy with low copper content or polyester resin.

Group II, Category 2GD

Ex db eb mb [ia Ga] IIC T... Gb - Ex tb [ia Da] IIIC T...°C Db
IP66
IP66

Zone 1-2-21-22

Low copper content aluminium alloy

SOCKETS AND PLUGS

PYN16/32, SPYN16/32 SERIES

The series of sockets and plugs PYN16, PYN32 and SPYN16, SPYN32 consists of 16 A and 32 A models designed with 'Ex db eb, Ex tb' and 'Ex eb, Ex tb' protection and tested for operation at low temperatures down to -60°C.
The 16A and 32A sockets are equipped with an interlocked disconnect switch with the plug positioned beneath. The rotary movement together with the closing/opening operations which occur inside a special explosion-proof chamber ensure the electrical circuit is only connected after the SPYN series plug has been correctly inserted into its seat and can only be removed once the electrical circuit has been disconnected.

- Rated current 16A to 32A.
- PVC closure cap with safety chain.
- Pins in nickel-plated brass.

Group II, Category 2GD

Ex db eb IIC T... Gb; Ex tb IIIC T...°C Db

Ex eb IIC T... Gb; Ex tb IIIC T...°C Db

IP66

Zone 1-2-21-22

Aluminium alloy with low copper content

SOCKETS AND PLUGS

PYN63/125/160, SPYN63/125/160 SERIES

The PYN63, PYN125 and SPYN63, SPYN125 series of sockets and plugs consists of 63 A and 125 A models designed with 'Ex db eb, Ex tb' and 'Ex eb, Ex tb' protection and tested for operation at low temperatures down to -60°C. The 63A and 125A models are equipped with an automatic circuit breaker as they are designed to withstand high electric loads.

- Rated current from 63A to 125A.
- Socket has a PVC blinding plug with a chain which prevents from losing it.
- Automatic circuit breaker. Brass pins. Fixing lugs.

Group II, Category 2GD

Ex db eb IIC T... Gb; Ex tb IIIC T...°C Db

Ex eb IIC T... Gb; Ex tb IIIC T...°C Db

IP66

Zone 1-2-21-22

Aluminium alloy with low copper content

SOCKETS AND PLUGS

CMBSP07 SERIES

The "GRP" glass fibre reinforced polyester plugs and sockets are available in 16 A, 32 A, 63 A and 125 A models with 3, 4 or 5 poles. Thanks to the interlocked disconnect switch, the plug can only be removed after the power switch has been switched off. The power switch can only be switched on after the plug has been properly inserted. The plug pin, coupled with the socket housing, is equipped with a spring that makes the electrical parts self-cleaning and ensures low contact/insertion resistance. It also minimises the force required for insertion and removal.

- Rated current: 16 A to 125 A.
- Different operating voltages.

Group II, Category 2GD

Ex db eb IIC T... Gb;
Ex tb IIIC T...°C Db

IP66

Zone 1-2-21-22

GRP and NYLON (PA66)

CONTROL DEVICES

M-0... SERIES

M-0... series control devices are normally installed as external operators on "Ex d", "Ex e", "Ex tb" enclosures suitable for all kind of industry where an explosive atmosphere may be present. Push buttons have an axial motion, the handles have a rotating motion to start up electrical or mechanical contacts inside the cases. The body is in aluminium with a black anodized finish, pin and spring are in stainless steel, silicone gaskets.

- High mechanical strength; easy contacts replacement and cables connection.
- Protection class to meet harsh environments with IP66 as standard.
- Indicator lights available for -60°C.

Group II, Category 2GD

Ex d IIC Ex tD A21
Ex e IIC Gb; Ex tb IIIC Db

Ex II 2D Ex tb IIIC Db IP66

IP66

Zone 1-2-21-22

ELECTRICAL CONNECTORS

FASTEX-M SERIES

FastEx-M electrical connectors are used to connect equipment to an electrical circuit or to other equipment quickly and safely, ensuring system modularity. Available in versions with 3 and 5 poles, they are robust and practical to use, meaning circuits can be activated quickly. They are error-proof and protect environments from the risk of explosions and accidental disconnections.

- Standard aluminium alloy. Other materials (nickel-plated brass - stainless steel) on request.
- Anodising surface treatment.
- Acid and hydrocarbon-resistant silicone gasket.
- Max. rated voltage 277 V AC/DC.
- Max. cable cross-section 1.5 mm^2.
- Max. rated current: 15 A.

Group II, Category 2GD

FastEx-ME..
Ex eb IIC Gb; Ex tb IIIC Db

FastEx-MN..
Ex ec IIC Gb; Ex tc IIIC Db

IP66

Zone 1-2-21-22

Low copper content aluminium alloy

CABLE GLANDS FOR ARMORED AND NON-ARMORED CABLES

NAV, NEV, NAVF, NAVN SERIES

NAV and NEV series cable glands are suitable for the direct insertion of non-armoured and armored cables into explosion-proof junction boxes and/or lighting fixtures, plugs and sockets. They have three type of protection 'Ex d', 'Ex e' and 'Ex tb' and they are equipped with one sealing ring on the inner and outer sheath of the cable. NAV series has a single sealing ring which tightens the incoming cable ensuring the 'Ex d' way of protection. NEV series has a second sealing ring that tightens on the outer sheath of the cable to ensure the IP66/68 avoiding the ingress of water, moisture, rain and dust. NAVF (female threaded entry) and NAVN (male threaded entry) series cable glands have the technical features of NAV series.

- Nickel-plated brass standard. Other materials (galvanized steel - stainless steel) upon request.
- High-tech and high mechanical performance compression rings and gaskets with high-temperature resistance.

Group II, Category 2GD

Ex db IIC Gb
Ex eb IIC Gb
Ex tb IIIC Db

IP66/68

Zone 1-2-21-22

Nickel-plated brass standard

BARRIER CABLE GLANDS FOR ARMORED AND NON-ARMORED CABLES

NAVB, NEVB SERIES

NAVB and NEVB series barrier cable glands are used for the direct insertion of cables into 'Ex d' boxes. Every single conductor is locked and 'Ex d' sealed into the bushing using a special sealing compound which prevents the propagation of flames. Therefore, they are used instead of the locking joint in conduit installation. They are supplied with a resin finishing kit. Many accessories are available: shrouds, earthing ring, locknut and gasket for parallel threads.

- Nickel-plated brass. Other materials (galvanized steel - aluminium - stainless steel) upon request.
- Bi-component epoxy resin for extreme temperatures
- Different threads available.

Group II, Category 2GD/3G

Ex db IIC Gb - Ex eb IIC Gb
Ex tb IIIC Db
Ex nR IIC Gc

IP 66/67

Zone 1-2-21-22

Nickel-plated brass standard

POLYAMIDE CABLE GLANDS FOR NON-ARMORED CABLES

NAVP SERIES

NAVP series cable glands in polyamide are used for the direct insertion of non-armored cables into 'Ex e' or 'Ex i' equipment or junction boxes. They can be easily installed and the clamping is obtained on the cable external sheath.

- Polyamide 6, silicone gaskets.
- ISO lead 1,5 thread.
- Ral 9005 black color (Ex e) or Ral 5015 blue color (Ex i).
- 7J impact resistance.

Group II, Category 2GD

Ex eb IIC Gb
Ex tb IIIC Db
IP 66/68

Zone 1-2-21-22

Polyamide

THREE PIECES UNIONS ELBOWS AND OPEN ELBOWS

BFF, BMF, BMM, RFF, RMF, RMM SERIES
ELF, ELM, ELMF, LBH, LBHS SERIES

Three pieces unions for gas group are used to guarantee an independent rotation and the connection between pipes of an electrical equipment, enclosures or different devices of an explosion-proof system.
90° non-inspectable elbows are used in conduit system of electrical equipment.
LBH and LBHS series L shaped open elbows are used for the cables insertion in conduit system of electrical installations. The flanged opening enables an easy inspection and insertion of electrical cables.

- BFF,RFF series (female/female); BMF,RMF series (male/female); BMM,RMM series (male/male).
- ELF 90° elbow series: low copper content aluminium alloy.
- LBH, LBHS series: body and cover in low copper content aluminium alloy. Galvanized screws.

B.. R.. Series
Group II, Category 2GD
Ex db IIB/IIC Gb Ex tb IIIC Db
Galvanized steel or stainless steel.

LBH, LBHS Series
Group II, Category 2G
Ex d IIB

ELF, ELM, ELMF Series
Group II, Category 2GD
Ex db IIC Gb Ex tb IIIC Db
Ex eb IIC Gb Ex tb IIIC Db

IP66/67

Low copper content aluminium alloy

VERTICAL, HORIZONTAL SEALING FITTINGS AND PULLING BOXES

EYS, EYD, EZS, EKC SERIES

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 an easy insertion of glass-fiber and sealing compound resin. 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 supplied in a precise quantity along with the fitting.
EKC pulling boxes are used in conduit system of electrical equipment to facilitate the cables insertion. The flanged opening enables an easy inspection and insertion of electrical cables.

- Other sealing compounds are not allowed.
- Possibility to add an ECD valve to drain the condensation inside the conduit. Code EYD...series.
- Different threads available.

EYD, EYD, EZS series
Group II, Category 2GD
Ex d IIC Ex tD A21
IP66
Zone 1-2-21-22

Serie EKC
Group II, Category 2G
Ex d IIB
Zone 1-2

Low copper content aluminium alloy

REDUCERS AND ADAPTORS

RE, REB, REM, REN SERIES

Reducers and adaptors are used to connect equipment, enclosures, pipes and hubs of different diameters and threads. The series of adaptors is as follows: RE series reduces a female hub or increases a male hub; REB series increases a female hub or reduces a male hub; REM series is used to vary the diameter of a male hub transforming it into a female hub; on the contrary, REN series varies the diameter of a female hub transforming it into a male hub.

- Galvanized steel or low copper content aluminium alloy.
- Different threads available.
- Other materials (brass, stainless steel).

Group II, Category 2GD

Ex d IIC Ex tD A21
Ex e II Ex tD A21

IP 66/67

Zone 1-2-21-22

Galvanized steel or low copper content aluminium alloy

DRAIN AND BREATHER VALVES

ECD, ECDE SERIES

ECD drain or breather valves are used on EYD or EZD series sealing fittings and on any type of ex-proof devices where it's necessary to drain the condensation inside the conduit or to breathe out possible internal vapors.
ECDE series automatic drainage and breather valves facilitate a continuous drainage and breathing of 'Ex e' junction box, avoiding the periodic manual discharge while ensuring a suitable IP degree of protection.

- ECD series: AISI 316 stainless steel or aluminium alloy upon request. Different threads available.

- ECDE series: AISI 316 stainless steel or nickel-plated brass. Silicone gaskets. Internal filter and seeger in stainless steel.

ECD 1... series
Group II, Category 2G
Ex d IIC Gb
Ex d IIB Gb

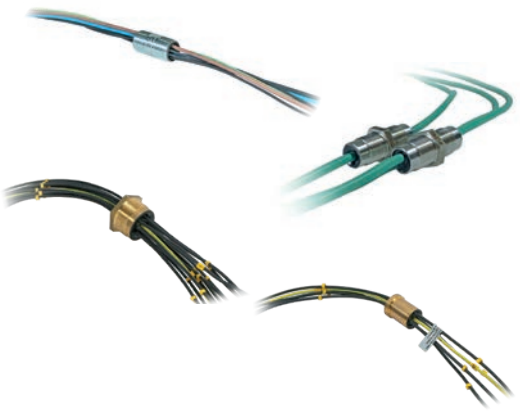
ECD 2... series
Group II, Category 2GD
Ex d IIC Gb/IIB Gb – Ex e IIC Gb/IIB Gb - Ex tb IIIC Db

ECDE-... series
Group II, Category 2GD
Ex eb IIC Gb Ex tb IIIC Db
IP66

Zone 1 -2

Stainless steel or nickel-plated brass

NIPPLES AND SEALED BUSHINGS



NPS, TP, CP SERIES

Sealed bushings and nipples are suitable to interconnect junction boxes, electrical motors, panel boards, switch racks and other electrical devices. The standard sealed bushings are: TP threaded sealed bushings, CP sealed bushing with cylindrical joint, NPS sealed nipple. The cables are sealed using a sealing compound bi-component resin set around each conductor.

- NPS, TP, CP series are made in brass, galvanized steel and stainless steel with bi-component resin.
- NPS series is also available for thermocouples.

NPS, TP, CP series
Group II, Category 2G
Ex d IIC
Zone 1 - 2

Brass and other materials.

NIPPLES, COUPLINGS, BUSHINGS AND PLUGS

NP, EM, DB...A, DB...PVC, DBT, MC, PLG SERIES

NP series nipples are used to connect equipment or other unions with female hub.
EM series couplings are used for the connection of pipes with threaded male ends. DB...A and DBT series bushings are made in aluminium whereas DB...PVC in PVC. 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 it. MC series female plugs and PLG series male plugs are used to close pipes ends and unused entries.
NP series are made in galvanized steel or stainless steel. Other threads upon request

- DBT series are equipped with earth screw for reduction grounding.
- PLG series plugs have a hexagonal head so that they can be opened with proper tools only.

EM, PLG series
Group II, Category 2GD
Ex d IIC Ex tD A21
Ex e II Ex tD A21

NP series
Group II, Category 2GD
Ex d IIC Ex tD A21
Ex e II Ex tD A21

IP 66/67

Zone 1 - 2 - 21 - 22

EM series in galvanized steel. MC and PLG series in galvanized steel or low copper content aluminium alloy.
NP galvanized steel, stainless steel.

SADDLES, CONDUIT CLAMPS AND U-BOLTS

GF, MP, MT, UBD SERIES

GF series saddles are used to fix conduits/rigid pipes (carrying cables) on walls or on flat surfaces. MP and MT series conduit clamps are ideal to mount conduit pipes in parallel or in perpendicular to the support structure. UBD series are used to fix rigid conduit pipes to flat surfaces.

- Galvanized steel standard or aluminium for GF series saddles. Stainless steel upon request for GF and UBD series.
- Galvanized bolts and nuts for MP and MT series.

FLEXIBLE AND RIGID CONDUITS

ESP, SP, BC SERIES

ESP and SP series flexible conduits are used to connect offset equipment or devices subject to vibrations such as electrical motors. Furthermore, they are suitable for installation of lighting fixtures and, in alternative, to rigid conduits when they are difficult to install. BC series rigid conduits are used in hazardous areas to connect electrical equipment setting up a complete explosion-proof system through blocking and connecting unions and sealing fittings.

- ESP flexible pipes have a mechanical assembly without welding.
- SP flexible pipes offer good flexibility and excellent damping against vibrations.
- BC series conduits are drown inside so that all roughness, which could damage the electrical cables, are eliminated.
- BC series standard bar length: 6 meters. Plastic couplings for thread protection.
- ISO7/1 thread. Other threads available.

ESP flexible pipes
Group II, Category 2GD
Ex II 2 GD Ex eb IIC Gb
Ex tb IIIC Db
IP 66

SP flexible conduits
Group II, Category 2GD
Ex d IIB Gb Ex tb IIIC Db
Ex d IIC Gb Ex tb IIIC Db

IP 66/67

Zone 1 - 2 - 21 - 22

Galvanized steel

WATERPROOF JUNCTION BOXES

CS, CSG, CS.../P, CS...SS SERIES

CS series waterproof junction boxes, in aluminium alloy, GRP and stainless steel, are suitable for containing any electrical and electronic equipment. Thanks to their design and features, they are ideal for any industrial environment.

- Stainless steel screws and bolts.
- Silicone gasket.
- Internal/external earth screws.
- Fixing lugs. RAL 7035 polyester coating for aluminium version.

CTBEW SERIES

CTBEW series waterproof junction boxes, in stainless steel, are suitable for containing any electrical and electronic equipment. They feature a wall thickness of 1,5 mm.

IP66

Low copper content aluminium alloy, GRP and stainless steel.

CONDULET

C, LB, LL, LR, LU, T, TB, X SERIES

These boxes are used in conduit installations as pulling boxes to prevent the entry of solids and liquids.

- Cover complete with elastomeric gasket and with galvanized steel fixing screws.
- ISO 228 parallel threaded hubs.
- Coating and other threads upon request.

IP55

Body and cover in low copper content aluminium alloy.

LOCKNUTS, EARTHING RINGS, PVC SHROUDS, GASKETS

DL, DL...EP, DL...A, A, PGA, GRN, RDI SERIES

These materials are used as cable gland accessories. DL, DL...EP and DL...A series are used as locknuts with parallel thread. Earthing rings A series are used inside boxes and their connection is guaranteed by the coupling of cable gland and its locknut. PGA series shrouds, TPV made, are ideal to guarantee a further protection to cable glands against dust and liquids. Furthermore, GNR gaskets in Teflon are used to guarantee, together with the cable gland, the IP protection of enclosures threaded hubs.

- Locknuts threads: DL and DL...A series ISO 228; DL...EP series ISO lead 1,5. Other threads upon request.
- Earthing rings: nickel plated brass. Stainless steel earth screw. Other materials upon request.
- RDI serrated or shake-proof washers act as an anti-vibration device to prevent the cable gland from loosening. It can be also used as an earth enhancing devise on painted enclosures.

Locknuts materials:

DL series galvanized steel or aluminium;

DL...A series carbon steel or aluminium;
DL...EP series polyamide.

PHOTOVOLTAIC MODULES

PFV-EX SERIES

The PFV-Ex Series by Cortem Group is a high-performance photovoltaic solution specifically engineered for hazardous industrial environments. These modules are designed to operate safely in areas at risk of explosion and fire, such as Zone 1, 2, 21, 22.
These panels are the core of the SolarEx standalone energy storage systems. For example, a 2.4 kWp configuration using six 400Wp panels can simultaneously power up to 12 Cortem FLOWEX series lighting fixtures in remote or hazardous locations.

- High efficiency, utilizing monocrystalline cells, these modules achieve an efficiency of up to 20.48%.
- Extreme durability, tested to withstand extreme environments, including snow loads of 5400Pa and hail impact (35mm stones at 97 km/h).
- Thermal resilience, designed to maintain performance in ambient temperatures ranging from −60 C to +60 C.

PFV-Ex series
Group II, Category 2GD
Ex eb mb IIC T.. Gb
Ex tb IIIC T..°C Db
Zone 1 - 2 - 21 - 22

IP66

Aluminium and other materials.

BEX SERIES BATTERY BOXES

BEX SERIES

The BEx series increased safety battery boxes are the premier solution for energy storage and supply in explosive atmospheres (Zones 1, 2). Engineered to house batteries in environments where flammable gases or vapours are present, these enclosures combine robust mechanical protection with advanced electrical safety.

- Maximum durability, constructed with high-quality stainless steel.
- Advanced VRLA Technology.
- AGM or GEL batteries for applications:
  - UPS
  - Telecom
  - Utilities
  - Photovoltaic
  - Universal

BEX series
Group II, Category 2G
Ex mb
Zone 1, 2

Stainless steel and other materials.

STANDALONE LED LIGHTING FIXTURE WITH PHOTOVOLTAIC SYSTEM

SOLAREX SERIES

SolarEx is a standalone energy storage system capable of powering a utility in areas at risk of explosion and fire classified as Zone 1.
The SolarEx prototype is designed to power a STREETEX-M series lighting fixture for at least 8 hours using a photovoltaic panel and an appropriately sized battery pack. It operates in the same way as a standard solar-powered system: the photovoltaic panel captures solar energy that is converted and stored in the battery pack, which in turn powers the light source. The system is equipped with a device that only allows the lighting fixture to switch on at night, making it as efficient as possible.

- Standalone energy storage system capable of powering utilities in isolated areas without a power grid.
- Equipped with a device that only allows the lighting fixture to switch on at night.
- MPPT controller protecting against deep discharge, surge, and overheating.

SOLAREX series
Group II, Category 2GD
Ex db eb mb IIC; Ex tb IIIC
Zone 1 - 2 - 21 - 22

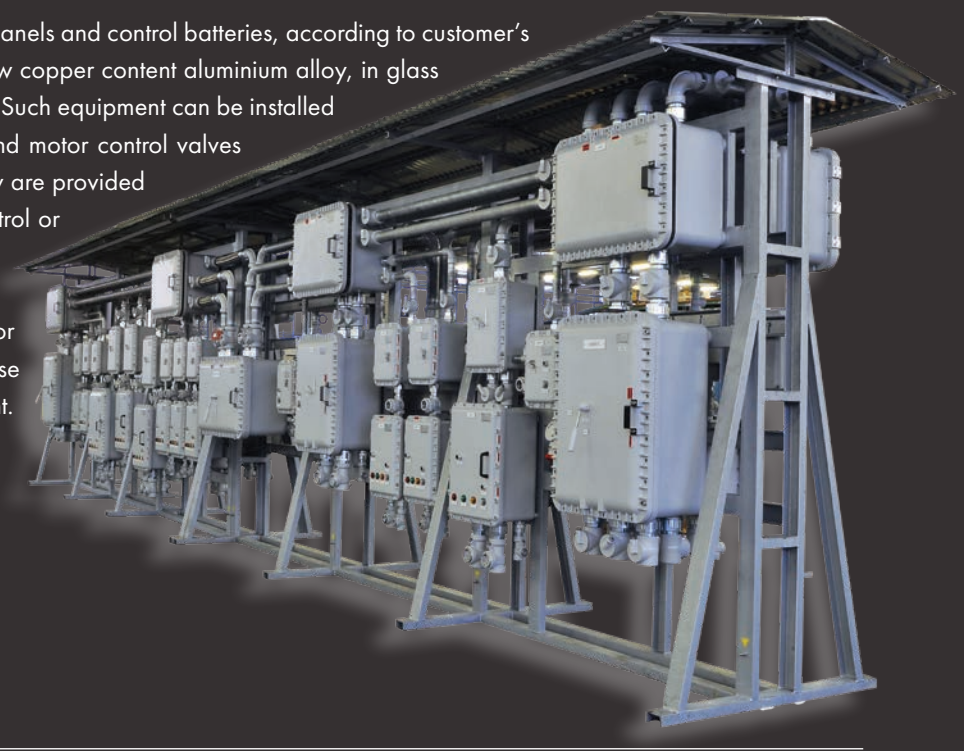
IP66

Aluminium, stainless steel and other materials.

SPECIAL PRODUCTS

SWITCHGEARS AND PANEL BOARDS

Cortem Group manufactures electrical panels and control batteries, according to customer's specification, using junction boxes in low copper content aluminium alloy, in glass reinforced polyester or in stainless steel. Such equipment can be installed in lighting, motive power distribution and motor control valves systems and in panels with sockets. They are provided with various current rated switches, control or signal electrical and electronic devices.
They are made in accordance to the main types of protections suitable for heavy-duty environments, ready-to-use and finished with polyester powder paint.

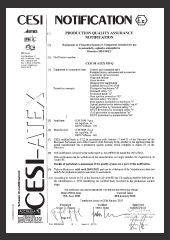


SAFETY AND QUALITY

Example of Cortem Marking Label

MANAGEMENT SYSTEM CERTIFICATIONS

Cortem Group manufactures its products using modern processes, plants and qualified personnel. There's an internal control system of all the productive-cycle which guarantees more efficiency, autonomy and velocity. The Quality Management System conforms to UNI EN ISO 9001:2015 Standard. The Environmental Management System is also a part of the Organization overall management system which promotes activities in order to maintain and improve the environment and territory quality. It conforms to UNI EN ISO 14001:2015 Standard.
Furthermore, Cortem Group has developed an Occupational Safety and Health Management System certified according to UNI EN ISO 45001:2018 Standard.



PRODUCT CERTIFICATIONS

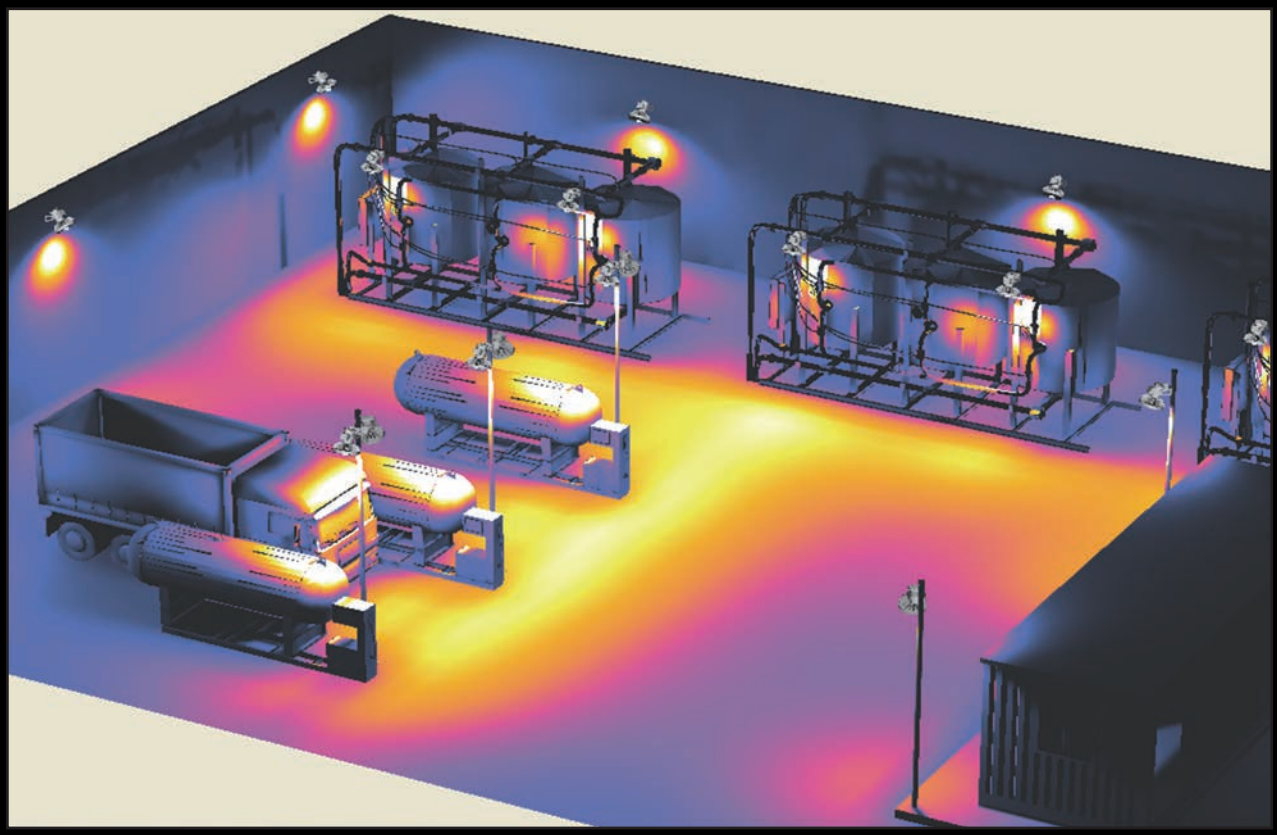
The explosion-proof electrical equipment manufactured by Cortem Group are certified in accordance with the European standard ATEX and the International regulation IEC Ex, also obtained the Brazilian INMETRO, the English UKEX, the Emirati ECASEx, the Indian CCoE, the Chinese CCC and the TR CU certification. Respecting these strict international construction rules, Cortem guarantees the safety of people and environment

"NO FAKE" PROJECT

Cortem Group "No Fake" project tackles the counterfeiting of products. The authenticity of Cortem products is guaranteed by the application of an adhesive label with holographic image, an alphanumeric code and a QR code for smartphone readers. The correctness of the alphanumeric code can be checked on Cortem web site www.cortemgroup.com.
The material is a new tamper-evident metallic base for high refractive index holograms, while the image was originated on Cortem Group graphics with technologies used by current banknote and document of identity applications.

PHOTOMETRIC FILES FOR LIGHTING PROJECTS

On Cortem Group web site you can download .LDT and .IES lighting data files for the design and simulation of lighting levels in 2D and 3D, rendering and ray tracing. These files can be used with LITESTAR and DIALux lighting design software for internal and external able to make simple and effective the job of lighting designers. Entering the photometric files of the selected models along with architectural data, you obtain graphs, curves, installation diagrams and a virtual image with the real lighting effect. These software can be free downloaded from https://www.oxytech.it/en-GB/ and https://www.dialux.com/en-GB/.



FOR FURTHER INFORMATION ON OUR PRODUCTS AND CERTIFICATIONS DOWNLOAD VISIT US AT WWW.CORTEMGROUP.COM.

Cortem Catalogs List

Signal and control equipment, sockets and plugs

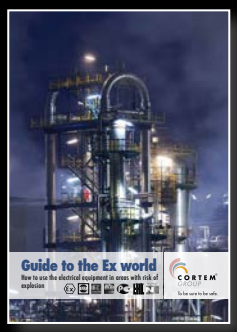
LED Lighting Solutions

Lighting and Signalling

Junction Boxes

Cable glands and elettrical fittings

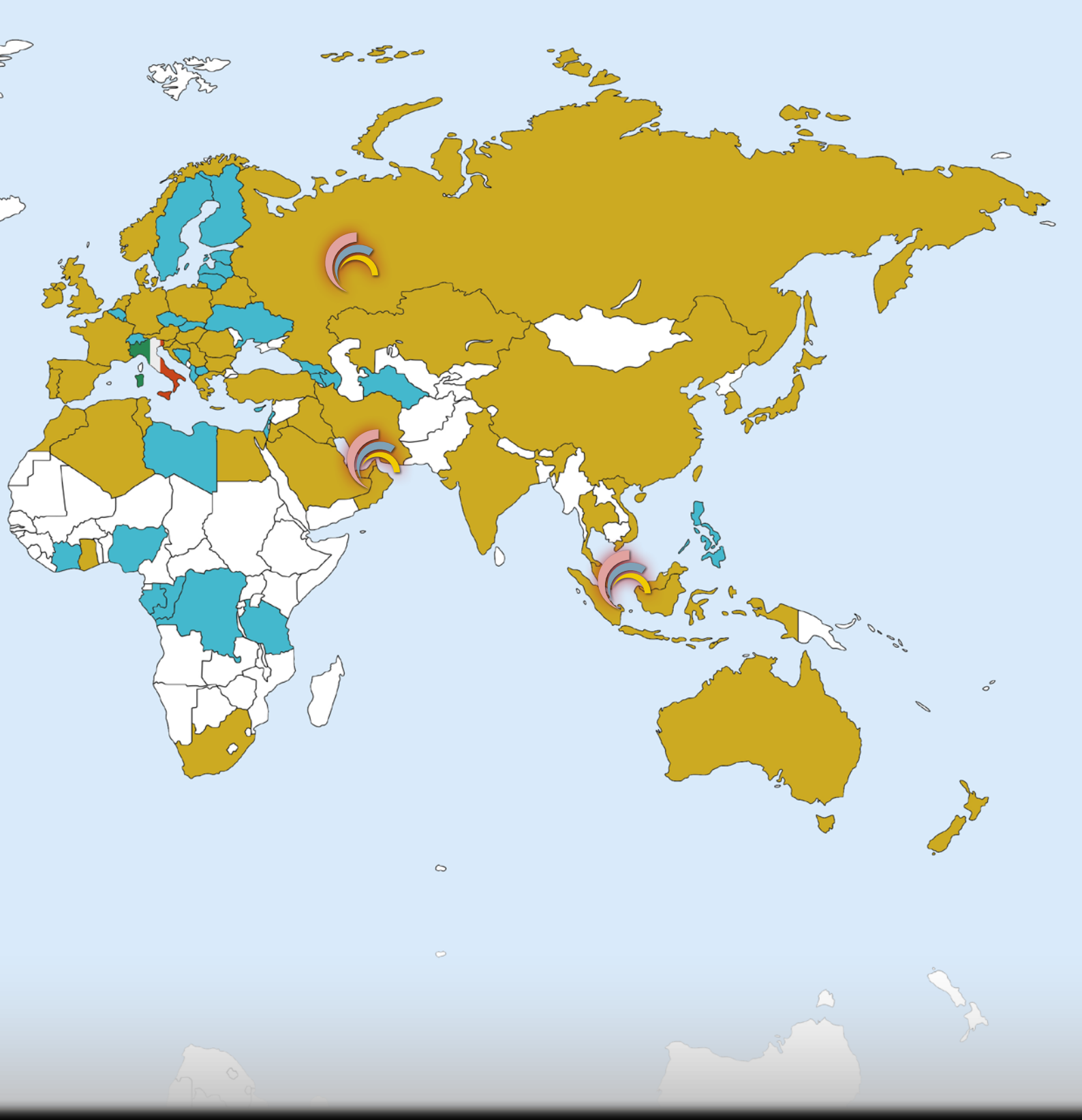
Guide to the Ex world



The IEC and NEC certification system

Market Coverage

To be sure to be safe



Product modifications and warranty

Cortem Group reserves the right, at its sole discretion, to make any modifications (at any time and without notice) in order to improve the functionality and performance of its products or meet technical and manufacturing requirements. The measurements and drawings of the products and their parts are indicative only and not binding, because they can be modified without notice.
The latest updated information, data and certificates of our products are available on www.cortemgroup.com web site.
All Cortem Group products are covered by warranty for a period of twelve months from the delivery date. For more information, refer to the "General Terms and Conditions of Sale" on www.cortemgroup.com web site.

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