Lighting and signalling

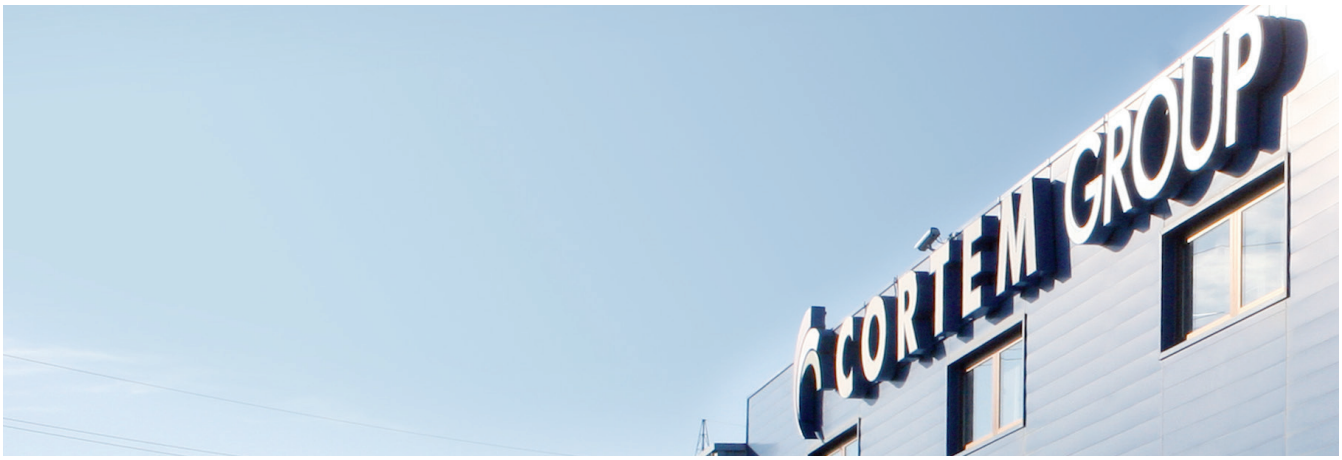
2020

Explosion-protected electrical equipment

CORTEM GROUP

50 YEARS

To be sure to be safe.



The value of experience

The peculiarity of the Cortem Technology Group is the experience gained in more than 40 years of activity in the Ex field which results not only in the supply of simple Ex-products, but also in engineered and customized solutions.

It was established in 1968 with the acronym "Cor.tem" Costruzioni, Rappresentanze tecniche elettromeccaniche and immediately it specialized in the production of electrical equipment for areas with danger of explosion and fire.

During the '70s Italy and ENI agree to increase their specialization in the processing of crude oil into finished products.

In the same years, Elfit company was founded in order to carry out some strategic processes internal to he company and to provide the market with complementary lighting products, such as connectors, cable glands, junction boxes.

Since the '90s, thanks to the acquisition of Fondisonzo, company, a competitor in the same market segment, Cortem became soon the technological point of reference for Italian explosion-protected equipment.

CORTEM GROUP®

To Be Sure To Be Safe



Design, Production and Installation

In addition to the on-going research in order to develop innovative products and the process of complying the products with international standards, great attention is addressed to the engineered and customized solutions. We design and manufacture all products internally, with different security methods such as 'Ex d', 'Ex e' increased safety and 'Ex de' mixed, 'Ex n' no sparkling, using alloys and plastics of primary quality.
Considering our customers' needs, our R&D department studies the best solution valuating normative and market price issues, plant and security aspects.

Cortem production range can be summarized as follows:

1. Lighting fixtures for LED technology, fluorescent lamps, halogen lamps, sodium vapor, high pressure mercury vapor, metal halide, mixed light. Obstruction lighting fixtures, rechargeable hand-held lamps for tank inspection. Zone 1, 2, 21, 22.

2. Junction and pulling boxes, enclosures for power and control panels, grounding security systems for tankers. Zone 1, 2, 21, 22.

3. Control station, command and control operators, signals, electrical circuits and/or motive power switches, limit switches available in ten different models depending on the type of actuator used Zone 1, 2, 21, 22.













4. Plugs and Sockets up to 125A with disconnecting interlock switch. Zone 1, 2, 21, 22.

5. Ex-protected cable glands, fittings, flexible tubes for the realization of complete electrical systems.

6. Ex-protected switchgear and panel board according to customers' specification.

All our products are manufactured using only aluminum alloys with low copper content which assure a better and more secure mechanical strength and a longer life cycle. For the production of 'Ex e' enclosures are also used polyester resins and AISI 316 L stainless steel.

90% of our production are placed 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.

Applications include the use of electricity to control a plant with, for example, electrical distribution panel boards, or to light entire areas of production processes.

We invest every year some of our resources to develop innovative products that meet the market needs in terms of cost savings, security and reliability.



Internal organization and territorial presence

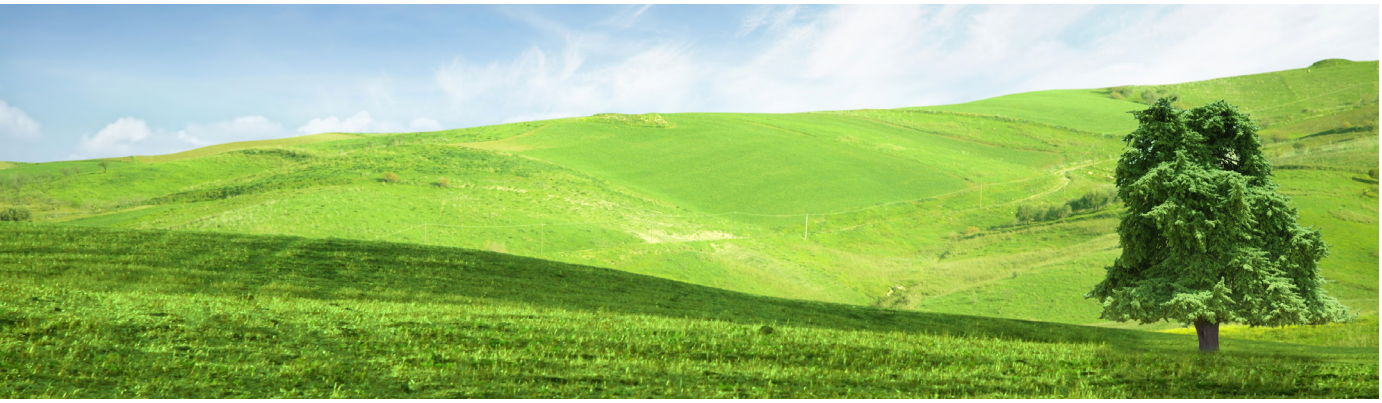
We have specific internal departments to support technically tenders for the supply of projects worldwide.

The Area Managers and Project Managers look after the various stages of a supply such as the initial documentation for approval by customer, the monthly reports on the order progress, the testing and the readying of the final Vendor data book.

With more than 30 agencies, 90 distributors, 7 partners and 3 production centers displaced, Cortem provides a local and qualified presence around the world.

For Cortem "displacing" does not means 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 basics of our corporate mission.





Quality, safety for people and environment

The recognized quality of our products and of our automated control manufacturing systems is one of the principles guiding Cortem Group activities in order to ensure people safety on plants and environment protection.

There's an internal control system of all the productivecycle.

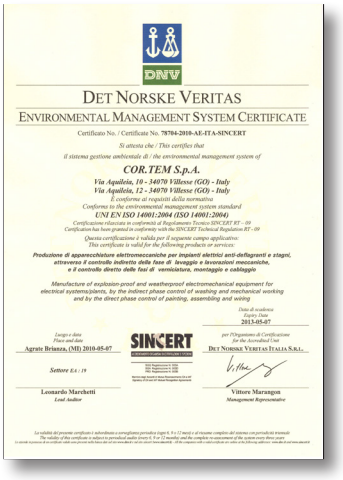
The Quality System conforms to the requirements of UNI EN ISO 9001:2008.

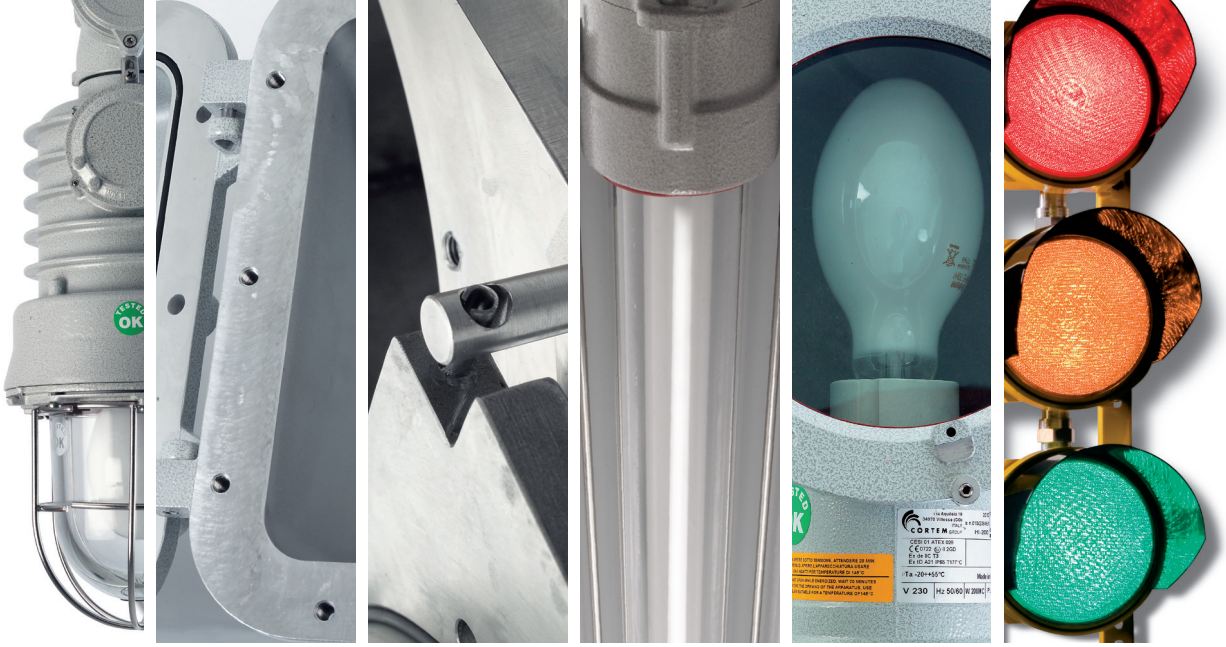
Plant facilities and production procedures meet also the international standard UNI EN ISO 14001:2004 for the Environmental Management System.

All our Ex-protected products are certified in accordance with the European standard ATEX and International regulation IEC Ex. Furthermore, it's ongoing their regulatory compliance to GOST TR CU standards for the Customs Union GOST TR CU.

Respecting these strict international construction rules, guarantees the safety of people and environment.


DET NORSKE VERITAS
QUALITY MANAGEMENT SYSTEM CERTIFICATE
COR.TEM S.p.A.
Via Aquileia, 10 - 34070 Villesse (GO) - Italy
Piazzale Dateo, 2 - 20129 Milano (MI) - Italy
UNI EN ISO 9001:2008 (ISO 9001:2008)
Progettazione e produzione di apparecchiature elettromeccaniche per impianti elettrici anti-deflagranti e stagni
Design and manufacture of explosion-proof and weatherproof electromechanical equipment for electrical systems/plants


DET NORSKE VERITAS
ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE
COR.TEM S.p.A.
Via Aquileia, 10 - 34070 Villesse (GO) - Italy
Via Aquileia, 12 - 34070 Villesse (GO) - Italy
UNI EN ISO 14001:2004 (ISO 14001:2004)
Produzione di apparecchiature elettromeccaniche per impianti elettrici anti-deflagranti e stagni, attraverso il controllo indiretto della fase di lavaggio e lavorazioni meccaniche, e il controllo diretto della fasi di verniciatura, montaggio e cablaggio
Manufacture of explosion-proof and weatherproof electromechanical equipment for electrical systems/plants, by the indirect phase control of washing and mechanical working and by the direct phase control of painting, assembling and wiring



"No Fake" Project

During 2012, Cortem has started the project "No Fake". The guarantee of origin against the falsification of products provides the application of an adhesive sticker with a security hologram of a diameter of 2 cm.

The text "TESTED" and the alphanumeric code guarantee the authenticity of the product. Customers can verify the correctness of the alphanumeric code directly on Cortem web site www.cortemgroup.com.



Corporate Identity

We encourage and help the people enterprise within the value of meritocracy assessing the individual capacity.

We are constantly focused on carrying out an excellent product which meets market requirements allowing the Company to grow up.

The Pay Off "to be sure to be safe" represents our pride and passion for what we design and manufacture.

Alessandro Rossi, President

CORTEM GROUP



A guide to lighting and signalling catalogue

This catalog, dedicated to lighting and signalling, is organized in order to facilitate the search of products and all the related technical and commercial information.

It's divided into two chapters: one chapter dedicated to lighting and one chapter focused on signalling. The catalog shows a colored thumb index which group together products by the type of protection 'Ex d', 'Ex de', 'Ex e', 'Ex i' and 'Ex n'.

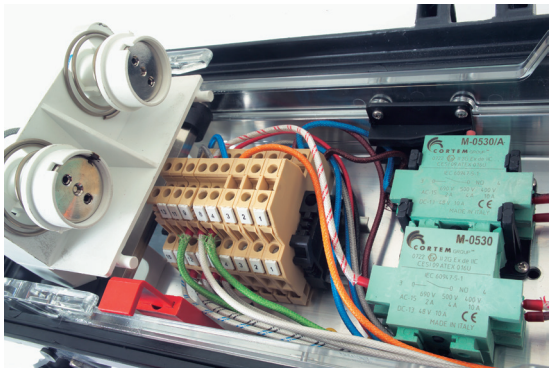
On the first page of each product, you will find the series, an image of the product and some structural and functional features.

On the next page, a more detailed description summarizes the main features and a sequence of icons help you to visualize the main application sectors.

A very important part lists the certification data: classification, zones of installation, marking, certificates available, compliance with standards, temperature and degree of protection.

In the next pages you can read: the mechanical and electrical properties, the selection table with the list of available models, the dimensional drawings, a table dedicated to accessories available upon request and spare parts and, finally, the photometric diagram.







How to order

To order a product without getting lost among the many codes which identify a lighting fixture and all its accessories, in every section you'll find a red box.

When ordering you must always indicate:

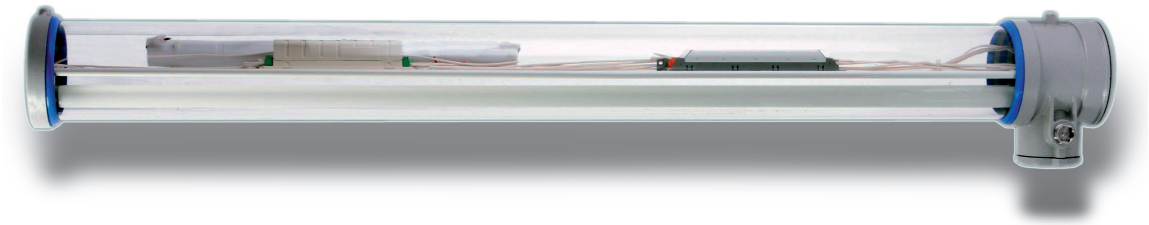
- the type of lighting fixture, for example:

FLFE-236

Series — Size

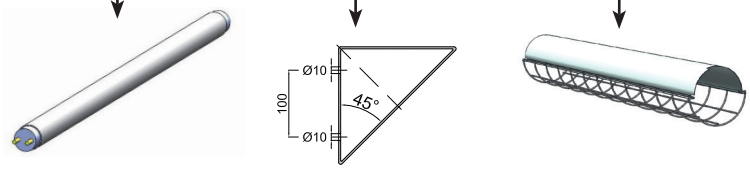
- codes of accessories upon request with which you want complete the product: the bulb, the cable gland, the type of reflector, the protection guard etc. ...

that you will find in the " Accessories and spare parts available on request" section.



DON'T FORGET TO ORDER THE ACCESSORIES

Exemple: Type of lighting fixture FLFE-236 + Fluorescent tubes LAMPL36W21 + Installation bracket G-258 + Guard with external protection G36-0529 + other...





Accessories, spare parts and maintanance operation

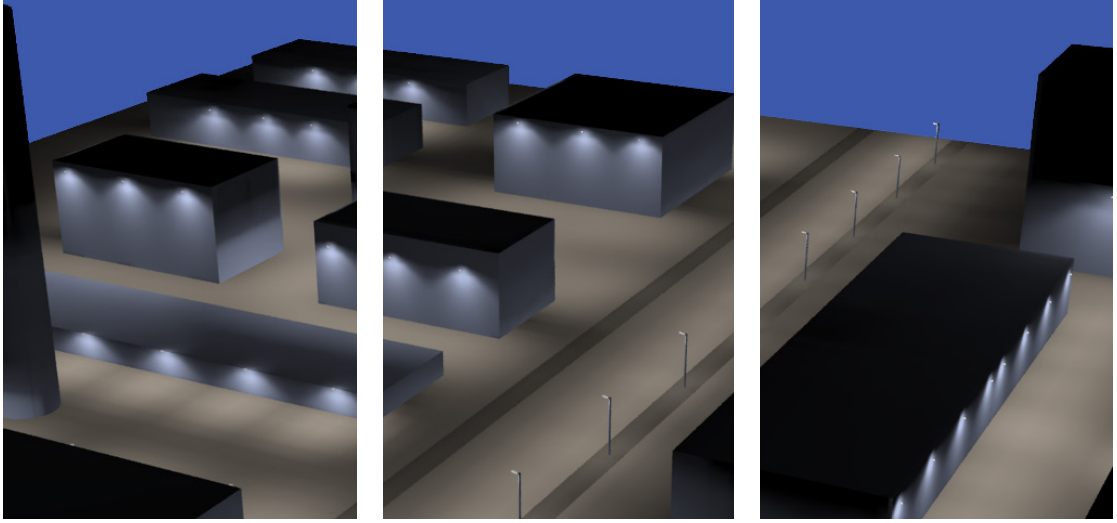
In the section "Accessories and spare parts available on request" are summarized the accessories available in order to complete the product and the spare parts for maintenance operations.
The icons in the "Key" indicate whether the item is an accessory, a spare part or both.



Please note that the maintenance operations of explosion-protected products must be carried out using only original parts of the manufacturer.

In case of use of non-original spare parts, the product certificate is no longer valid and it's possible that the ex-protection is no longer guaranteed.
One of the most important causes of risk of explosion, could be the wrong maintenance operations of ex-protected equipment.
The safety of equipment is granted over time by continuous application of maintenance plans, involving a series of activities that we list here below, and, most of all, by efficient personnel training:

- Familiarizing with the standards regulating the identification and classification of hazardous areas.
- Familiarizing with the standards regulating the protection methods of electrical equipment installed in the plant.
- Familiarizing with the applied protection methods.
- Familiarizing with the particular project stages as far as protection methods concerns.
- Recognizing the protection methods by marking labels.
- Identifying the components and spare parts used by the manufacturer.
- Familiarizing with the electrical and mechanical maintenance methods.
- Familiarizing with the tests prescribed for repaired electrical equipment.



Photometric files for lighting projects

Cortem Group provides, upon request, photometric files of its lighting equipment for lighting designs.

These files can be used with LITESTAR 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.

The software, available in several languages , can be free downloaded from www.oxytech.it with the manual of use.

For more information, contact Cortem Sales Offices.

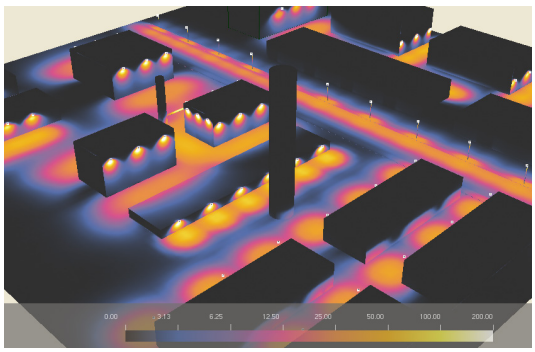
A little more...

For more information about the Ex-protected world and on the basis of lighting engineering please download from www.cortemgroup.com web site, Product section, Catalogs the following reference materials:

- Guide to the EX world - How to use the electrical equipment in areas with risk of explosion
- Basis of lighting engineering.

LITESTAR 4D OxyTech

OxyTech



EV

- Optimal performance at high (+60°C) and low temperatures (-50°C)
- Easy to install, low maintenance costs
- Zone 1, 2, 21, 22

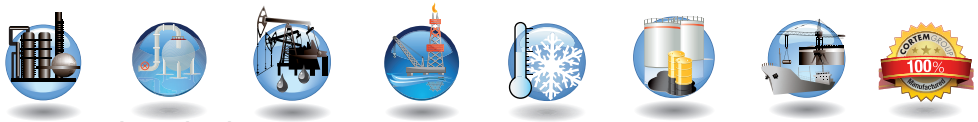




EV series Lighting fixtures for traditional and LED lamps

EV series lighting fixtures have been specially designed for use in the petrochemical and oil refining industries as they combine beauty and functionality along with high performance and simplicity in complete compliance with the technological requirements of the "Ex sector". The low copper content aluminium alloy, shockproof borosilicate glass and electropolished stainless steel components make these lighting fixtures ideal for use in environments with corrosive atmospheric agents, salts and industrial pollution. Mechanical characteristics such as ceramic lamp holders with high heat resistance and insulating properties and acid-proof neoprene gaskets guarantee a long working life with little maintenance. Scheduled maintenance work involves simply cleaning the glass that, thanks to its IP66 protection, can be safely cleaned with a wet cloth. As specified in the appropriate installation standard (EN/IEC 60079-14), the entry to the fixture must be only through an Ex "barrier" cable gland (sealed) or, in the case of a conduit system, with an EYS, EZS sealing fittings.

Application sectors



Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Low temperatures | Fuel depots | Oil loading/ unloading jetties | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD		
Installation:	Zone 1 - Zone 2 (Gas)	Zone 21 - Zone 22 (Dust)		
Marking:	CE 0722 Ex II 2GD Ex d IIC T.. Gb - Ex tb IIIC T..°C Db IP66			
Certification:	ATEX CESI 12 ATEX 006			
	IEC Ex CES 07.0004	All IEC Ex and TR CU certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE			
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2011, IEC 60079-1: 2007, IEC 60079-31: 2008 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	See the selection table			
Ambient temperature::	Standard -20°C +60°C	Special -50°C +60°C not possible for model EV...100		
Degree of protection:	IP66			

EV series Lighting fixtures for traditional and LED lamps



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
Globe:	Shock and temperature resistant borosilicate glass with aluminium shade ring
Gaskets:	Silicone acid/hydrocarbon resistant
Guard:	Electro-polished stainless steel. Can also be supplied on request without a guard as the lighting fixture has passed the glass breakage test (4 Joule EN60079-0 / IEC60079-0)
Mounting:	See "EV series dimensional drawings"
Bolts and screws:	Stainless steel
Entries:	3/4" NPT threads
Coating:	Polyester coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	E27 or E40 ceramic
Rated voltage:	230 V AC
Rated frequency:	50/60 Hz
Connection:	Direct connection to lamp holder L, N. Section 4mm^2

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

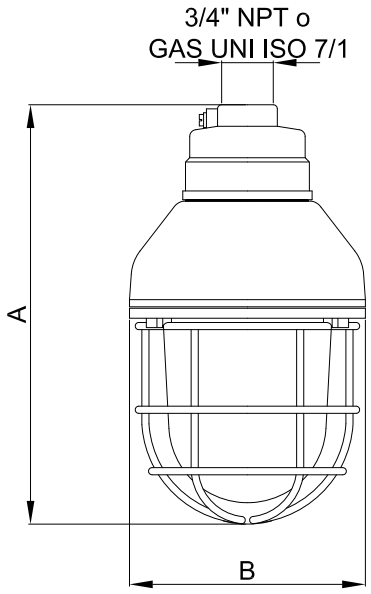
LED lamps
External reflector
Cable gland: FGAB2NBK for armoured cable or FB2NBK for non-armoured cable
Warning signs: G-0513
GAS UNI ISO 7/1 thread
Different rated voltages

EVA series selection chart Pendant mounting

Code	Dimensions mm A	Dimensions mm B	Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max surface temperature °C	Weight kg	mm
EVA-5050	261	150	AL	E 27	70	T4	123	2,0	160x150x330
EVA-5050	261	150	AL	E 27	105	T3	154	2,0	160x150x330
EVA-5050	261	150	AL	E 27	140	T3	154	2,0	160x150x330
EVA-5050	261	150	ELS	E 27	15	T6	84	2,0	160x150x330
EVA-5050	261	150	LED	E 27	8	T6	74	2,0	160x150x330
EVA-5060	323	170	EL	E 27	23	T5	86	2,7	190x170x390
EVA-5060	323	170	ELS	E 27	23	T5	86	2,7	190x170x390
EVA-5060	323	170	LED	E 27	12	T6	74	2,7	190x170x390
EVA-5070	354	200	MIX	E 27	100	T3	152	3,7	210x200x430
EVA-5070	354	200	MIX	E 27	160	T3	152	3,7	210x200x430
EVA-5070	354	200	EL	E 27	33	T6	83	3,7	210x200x430
EVA-5080	430	220	MIX	E 40	250	T3	166	6,0	230x220x510
EVA-5080	430	220	ELS	E 27	42	T5	89	6,0	230x220x510
EVA-50100	489	280	ELS	E 40	75	T5	88	8,7	280x280x850
EVA-50100	489	280	ELS	E 40	105	T5	91	8,7	280x280x850
EVA-50100	489	280	MIX	E 40	500	T3	185	8,7	280x280x850

PHASE OUT

EVA Pendant mounting



Key

EL = Linear tubes (FBT)
AL = Halogen (HSGSA)
MIX = Mixed light (QB)
ELS = Spiral tubes (FB)
LED = With LED (DB)

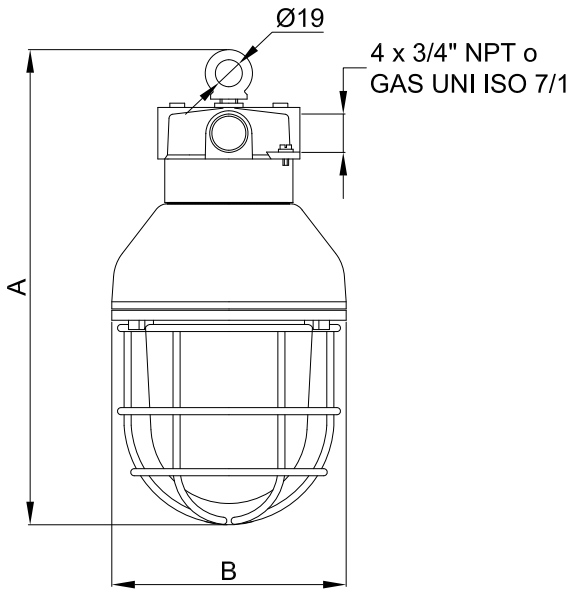
Dimensions in mm

EVGC series selection chart Pendant mounting with eyebolt

Code	Dimension mm A	Dimension mm B	Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max surface temperature °C	Weight kg	mm
EVGC-5050	296	150	AL	E 27	70	T4	123	2,1	160x150x330
EVGC-5050	296	150	AL	E 27	105	T3	154	2,1	160x150x330
EVGC-5050	296	150	AL	E 27	140	T3	154	2,1	160x150x330
EVGC-5050	296	150	ELS	E 27	15	T6	84	2,1	160x150x330
EVGC-5050	296	150	LED	E 27	8	T6	74	2,1	160x150x330
EVGC-5060	358	170	EL	E 27	23	T5	86	2,8	190x170x390
EVGC-5060	358	170	ELS	E 27	23	T5	86	2,8	190x170x390
EVGC-5060	358	170	LED	E 27	12	T6	74	2,8	190x170x390
EVGC-5070	389	200	MIX	E 27	100	T3	152	3,9	210x200x430
EVGC-5070	389	200	MIX	E 27	160	T3	152	3,9	210x200x430
EVGC-5070	389	200	EL	E 27	33	T6	83	3,9	210x200x430
EVGC-5080	465	220	MIX	E 40	250	T3	166	6,2	230x220x510
EVGC-5080	465	220	ELS	E 27	42	T5	89	6,2	230x220x510
EVGC-50100	524	280	ELS	E 40	75	T5	88	9,2	280x280x850
EVGC-50100	524	280	ELS	E 40	105	T5	91	9,2	280x280x850
EVGC-50100	524	280	MIX	E 40	500	T3	185	9,2	280x280x850

PHASE OUT

EVGC Pendant mounting with eyebolt



Key

EL = Linear tubes (FBT)
AL = Halogen (HSGSA)
MIX = Mixed light (QB)
ELS = Spiral tubes (FB)
LED = With LED (DB)

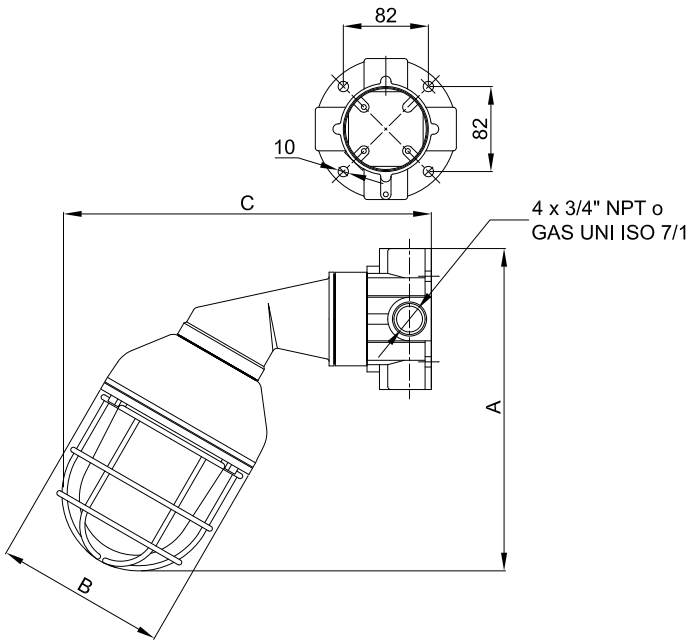
Dimensions in mm

EVIX series selection chart Wall mounting

Coce	Dimensioi mm			Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max surface temperature °C	Weight kg	mm
	A	B	C							
EVIX-5050	285	150	310	AL	E 27	70	T4	123	2,9	190x170x390
EVIX-5050	285	150	310	AL	E 27	105	T3	154	2,9	190x170x390
EVIX-5050	285	150	310	AL	E 27	140	T3	154	2,9	190x170x390
EVIX-5050	285	150	310	ELS	E 27	15	T6	84	2,9	190x170x390
EVIX-5050	285	150	310	LED	E 27	8	T6	74	2,9	190x170x390
EVIX-5060	339	170	344	EL	E 27	23	T5	86	3,7	260x210x490
EVIX-5060	339	170	344	ELS	E 27	23	T5	86	3,7	260x210x490
EVIX-5060	339	170	344	LED	E 27	12	T6	74	3,7	260x210x490
EVIX-5070	368	200	365	MIX	E 27	100	T3	152	4,7	260x210x490
EVIX-5070	368	200	365	MIX	E 27	160	T3	152	4,7	260x210x490
EVIX-5070	368	200	365	EL	E 27	33	T6	83	4,7	260x210x490
EVIX-5080	435	220	409	MIX	E 40	250	T3	166	7,5	240x240x700
EVIX-5080	435	220	409	ELS	E 27	42	T5	89	7,5	240x240x700
EVIX-50100	488	280	448	ELS	E 40	75	T5	88	8,7	280x280x850
EVIX-50100	488	280	448	ELS	E 40	105	T5	91	8,7	280x280x850
EVIX-50100	488	280	448	MIX	E 40	500	T3	185	8,7	280x280x850

PHASE OUT

EVIX Wall mounting with 30° bracket



Key

EL = Linear tubes (FBT)
AL = Halogen (HSGSA)
MIX = Mixed light (QB)
ELS = Spiral tubes (FB)
LED = With LED (DB)

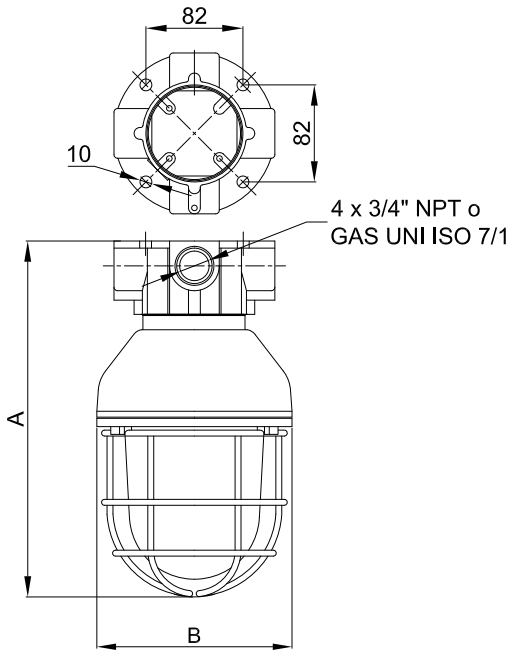
Dimensions in mm

EVX series selection chart Ceiling mounting

Code	Dimension mm A	Dimension mm B	Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max surface temperature °C	Weight kg	mm
EVX-5050	260	150	AL	E 27	70	T4	123	2,4	160x150x330
EVX-5050	260	150	AL	E 27	105	T3	154	2,4	160x150x330
EVX-5050	260	150	AL	E 27	140	T3	154	2,4	160x150x330
EVX-5050	260	150	ELS	E 27	15	T6	84	2,4	160x150x330
EVX-5050	260	150	LED	E 27	8	T6	74	2,4	160x150x330
EVX-5060	322	170	EL	E 27	23	T5	86	3,2	190x170x390
EVX-5060	322	170	ELS	E 27	23	T5	86	3,2	190x170x390
EVX-5060	322	170	LED	E 27	12	T6	74	3,2	190x170x390
EVX-5070	353	200	MIX	E 27	100	T3	152	4,2	210x200x430
EVX-5070	353	200	MIX	E 27	160	T3	152	4,2	210x200x430
EVX-5070	353	200	EL	E 27	33	T6	83	4,2	210x200x430
EVX-5080	429	220	MIX	E 40	250	T3	166	6,6	230x220x510
EVX-5080	429	220	ELS	E 27	42	T5	89	6,6	230x220x510
EVX-50100	488	280	ELS	E 40	75	T5	88	9,6	280x280x850
EVX-50100	488	280	ELS	E 40	105	T5	91	9,6	280x280x850
EVX-50100	488	280	MIX	E 40	500	T3	185	9,6	280x280x850

PHASE OUT

EVX Ceiling mounting



Dimensions in mm

Key

EL = Linear tubes (FBT)
AL = Halogen (HSGSA)
MIX = Mixed light (QB)
ELS = Spiral tubes (FB)
LED = With LED (DB)

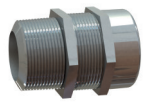
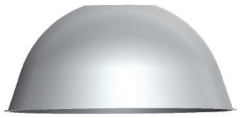
DON'T FORGET TO ORDER THE ACCESSORIES

e.g. Type of lighting fixture EVA-5060 + Lamp LAMP-PL23 + Dome reflector G60-427D + other... see key

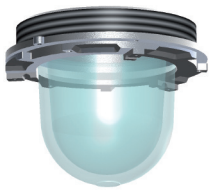
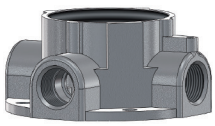
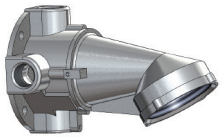
EV... series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	LED lamp	E27	8 W (DB8W)	LAMPLED8W	
		E27	12 W (DB12W)	LAMPLED12W	
	Warning signs on request on the frame	50	Materials: Translucent film on plexiglass and aluminium frame	G-0513	
		60		G-0513/1	
	Emergency Exit	G-0513 G-0513/1	Materials: Translucent film	U-420/P	
	Emergency Exit on the right			U-420/P1	
	Emergency Exit on the left			U-420/P2	
	Emergency Exit upward			U-420/P3	
	Emergency Exit downward			U-420/P4	

EV... series Accessories and spare parts available on request

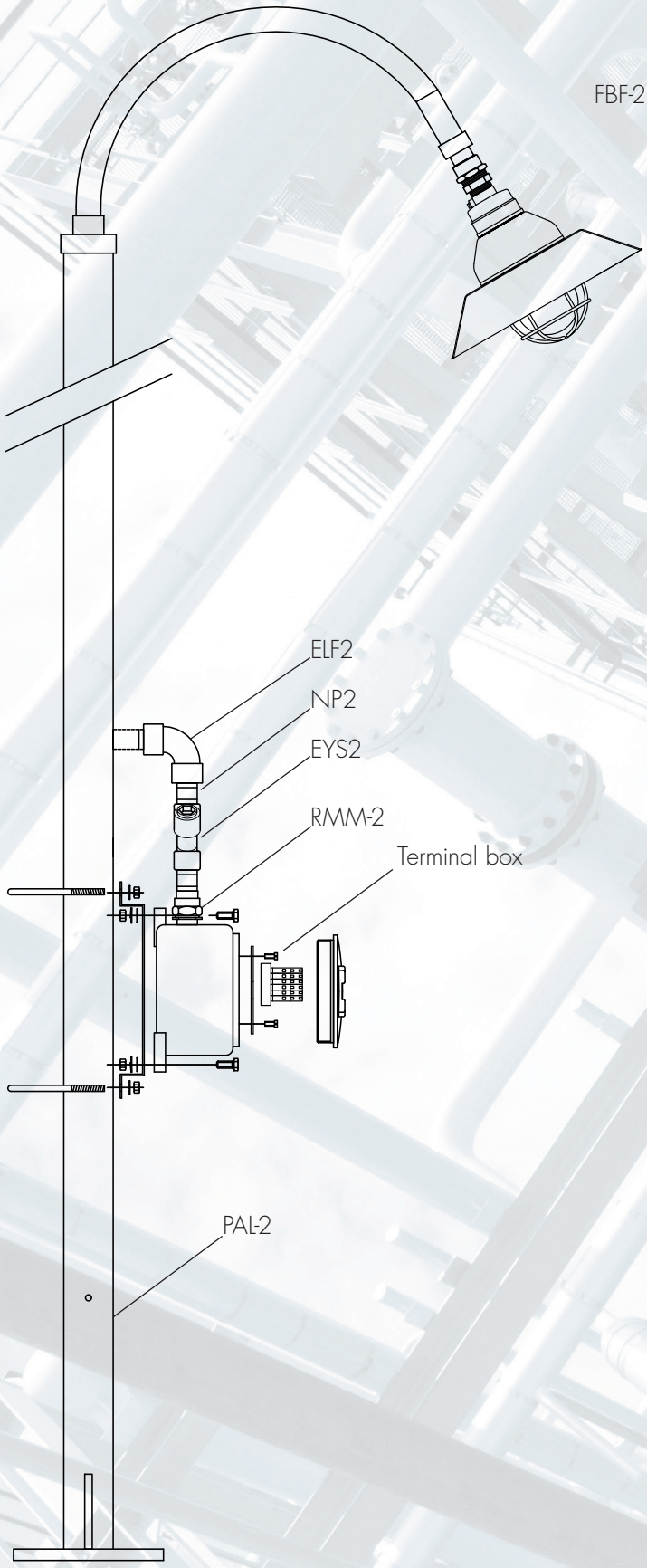
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Cable gland		For models and codes, visit www.cortemgroup.com	FB 2NBK FGAB2NBK	ACCESSORY SPARE PART
	Reflector	50	White painted aluminium Stainless steel	G50-427 G50-427IN	ACCESSORY SPARE PART
		60	White painted aluminium Stainless steel	G60-427 G60-427IN	
		70	White painted aluminium Stainless steel	G70-427 G70-427IN	
		80	White painted aluminium Stainless steel	G80-427 G80-427IN	
		100	White painted aluminium Stainless steel	G100-427 G100-427IN	
	Dome reflector	50	Contact our Sales Office for availability		ACCESSORY SPARE PART
		60	White painted aluminium	G60-427D	
		70	Contact our Sales Office for availability		
		80	White painted aluminium	G80-427D	
		100	White painted aluminium	G100-427D	
	30° inclined dome reflector	50	Contact our Sales Office for availability		ACCESSORY SPARE PART
		60	White painted aluminium	G60-427DI	
		70	White painted aluminium	G70-427DI	
		80	White painted aluminium	G80-427DI	
		100	Contact our Sales Office for availability		
	Ceramic lamp holder	E27	250V 4A	PORT E-27	SPARE PART
		E40	750V 16A	PORT E-40	
	Protective guard	50	Material: Electro-polished stainless steel	G50-0417	SPARE PART
		60		G60-0417	
		70		G70-0417	
		80		G80-0417	
		100		G100-0417	

EV... series Accessories and spare parts available on request

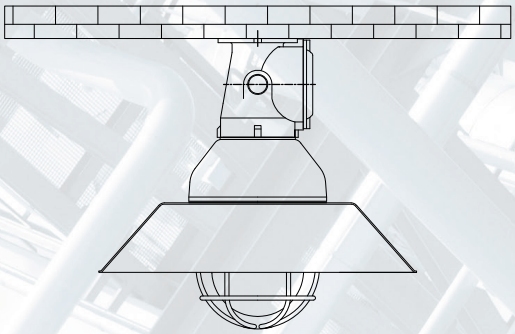
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	O-ring	Globo 50	Material: silicone	OR-4512SH70S	SPARE PART
		Globo 60		K15-131S	
		Globo 70		K33-131S	
		Globo 80		K34-131S	
		Globo 100		K27-131S	
	Globe with shade ring	50	Borosilicate glass globe Threaded aluminium shade ring	G50-0440CM	SPARE PART
		60		G60-0440CM	
		70		G70-0440CM	
		80		G80-0440CM	
		100		G100-0440CM	
	Pendant eyebolt		Material: Galvanised steel	GOF-8	SPARE PART
	Pendant mounting EVA	50	1 x 3/4" Entry	G-0213	SPARE PART
		60			
		70			
		80			
		100			
	Pendant mounting with eyebolt EVGC	50	4 x 3/4" Entries	G-0216	SPARE PART
		60			
		70			
		80			
		100			
	Ceiling mounting EVX	50	4 x 3/4" Entries	G-0214	SPARE PART
		60			
		70			
		80			
		100			
	Wall mounting with bracket EV IX	50	4 x 3/4" Entries	G-0215	SPARE PART
		60			
		70			
		80			
		100			

Installation and mounting methods

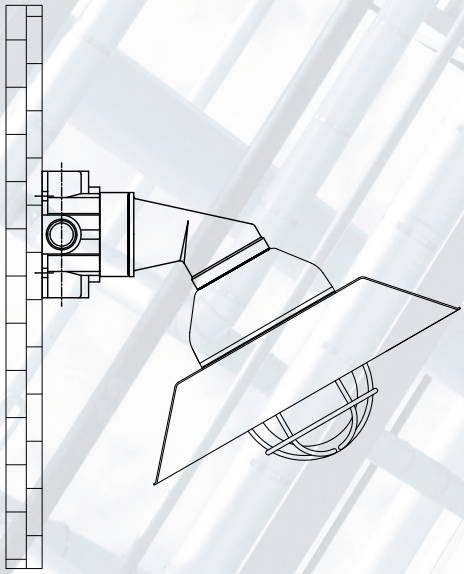
Example of pole mounting



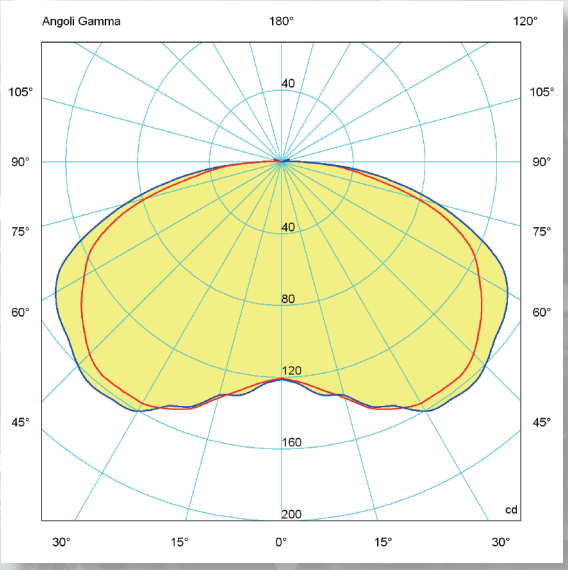
Example of ceiling mounting



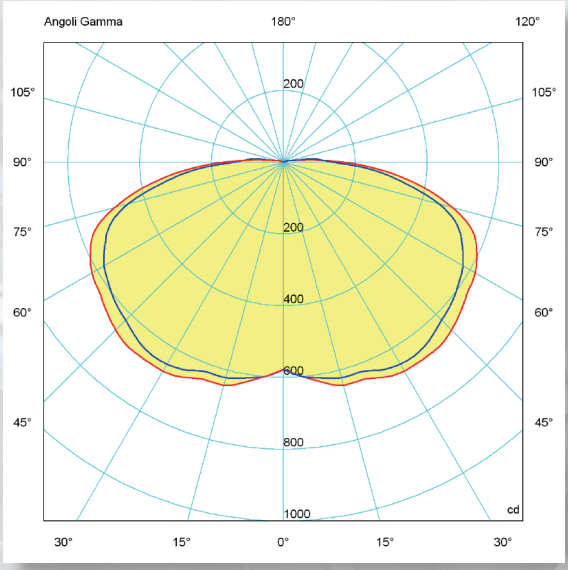
Example of wall mounting



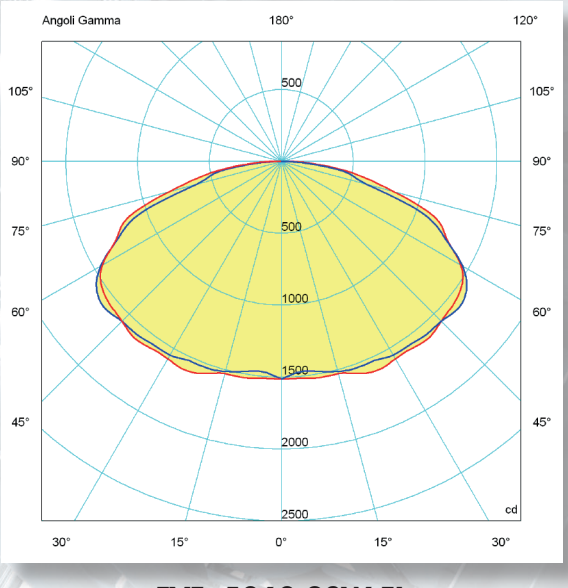
Photometric diagram



EVE..5060 23W EL



EVE..5060 23W EL



EVE..5060 23W EL

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.

= plane 90270

= plane 0180

CURRENTLY IN PHASE-OUT

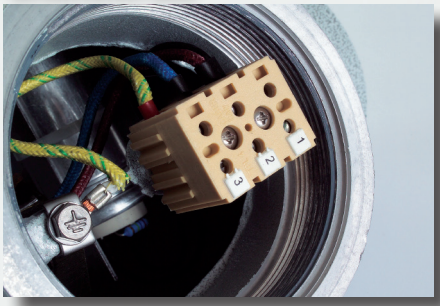
EW

- Suitable for installation with ambient temperature from -50°C to +60°C
- Suitable for discharge lamps of up to 150W
- Zones 1, 2, 21, 22

Cooling fins

4 Joule shock resistant borosilicate glass globe

Internal connection terminal box

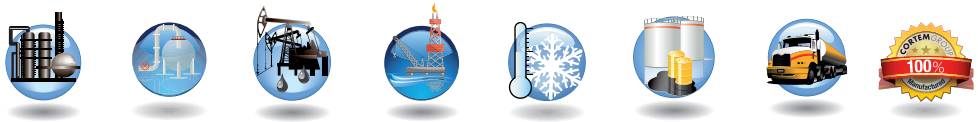


Stainless steel protective guard

EW series Lighting fixtures for discharge lamps up to 150W

EW series of lighting fixtures for discharge lamps has been designed in compliance with ATEX Directive 2014/34/UE for all those areas defined as "hazardous" due to the presence of potentially explosive flammable gases and dusts where good local lighting is a necessity. The low copper content aluminium alloy lamp body has cooling fins for better heat dissipation that ensures a longer lifespan and more effective electrical consumption. The borosilicate glass globe has excellent thermal and mechanical properties. For this reason, the fixture can also be installed without a protective guard. The resistance of this lighting fixture to high (+60°C) and low (-50°C) temperatures makes it ideal for use in any type of climatic condition and it can be used in plants worldwide.
As EW series was designed with the "Ex d" protection method, the "entry" to the fixture, as specified in the installation standard (EN/IEC 60079-14), must be only through an Ex "barrier" cable gland (sealed) or, in the case of a conduit system, with an EYS, EZS sealing fittings.

Application sectors



Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Low temperatures | Fuel depots | Fuel tanker loading/ unloading areas | 100% Cortem product

CERTIFICATION DATA

Classificazione:	Group II	Category 2GD		
Installazione:	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Esecuzione:	CE 0722 Ex II 2GD Ex d IIC T.. Gb - Ex tb IIIC T..°C Db IP66			
Certificato:	ATEX CESI 12 ATEX 006			
	IEC Ex CES 07.0004	All IEC Ex and TR CU certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE			
Norme:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2011, IEC 60079-1: 2007, IEC 60079-31: 2008 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	See the selection table			
Ambient temperature:	Standard -20°C +60°C	Special -50°C +60°C		
Degree of protection:	IP66			

EW series Lighting fixtures for discharge lamps up to 150W



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
Globe:	Shock and temperature resistant borosilicate glass with aluminium shade ring
Gaskets:	Silicone acid/hydrocarbon resistant
Guard:	Electro-polished stainless steel. Can also be supplied on request without a guard as the lighting fixture has passed the glass breakage test (4 Joule EN60079-0 / IEC60079-0)
Mounting:	See "EW series dimensional drawings"
Bolts and screws:	Stainless steel
Entries:	3/4" NPT threads. See "EW series dimensional drawings"
Coating:	Polyester coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	E27 or E40 ceramic
Ballast:	Electromechanical
Rated voltage:	230 V AC
Rated frequency:	50 Hz
Connection:	Direct connection to the terminal box L, N, Pe. Section 4mm^2
Power factor:	0.96
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

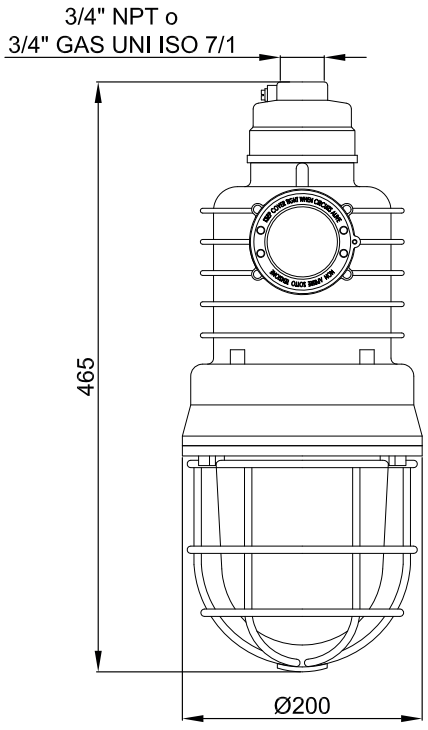
Discharge lamp
Different rated voltages
Rated frequency: 60 Hz at 230 V (code EW-5070N1/**60**)
External reflector
Cable gland: FGAB2NBK for armoured cable or FB2NBK for non-armoured cable
GAS UNI ISO 7/1 thread

EW series selection chart

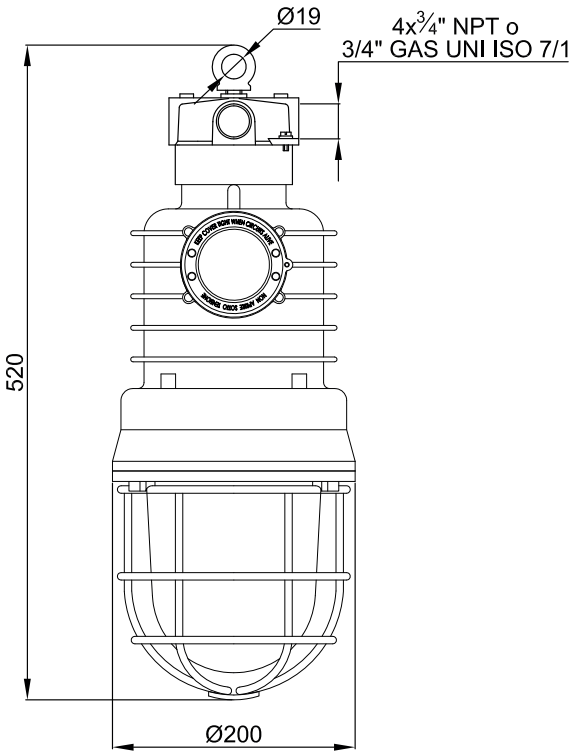
Code	Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max Surface temperature°C	Weight kg	mm
EW-5070N1	Sodium vapour	E 27	70	T4	130	6,7	260x210x580
EW-5070N2	Sodium vapour	E 40	100	T4	126	7,0	260x210x580
EW-5070IM1	Metal halide	E 27	70	T4	128	6,7	260x210x580
EW-5070IM2	Metal halide	E 27	100	T4	128	6,8	260x210x580
EW-5070IM4	Metal halide	E 27	150	T3	161	7,6	260x210x580

Code	Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max Surface temperature°C	Weight kg	mm
EWGC-5070N1	Sodium vapour	E 27	70	T4	130	7,3	260x210x580
EWGC-5070N2	Sodium vapour	E 40	100	T4	126	7,7	260x210x580
EWGC-5070IM1	Metal halide	E 27	70	T4	128	7,3	260x210x580
EWGC-5070IM2	Metal halide	E 27	100	T4	128	7,4	260x210x580
EWGC-5070IM4	Metal halide	E 27	150	T3	161	8,2	260x210x580

EW Pendant mounting



EWGC Pendant mounting with eyebolt



Dimensions in mm

DON'T FORGET TO ORDER THE ACCESSORIES

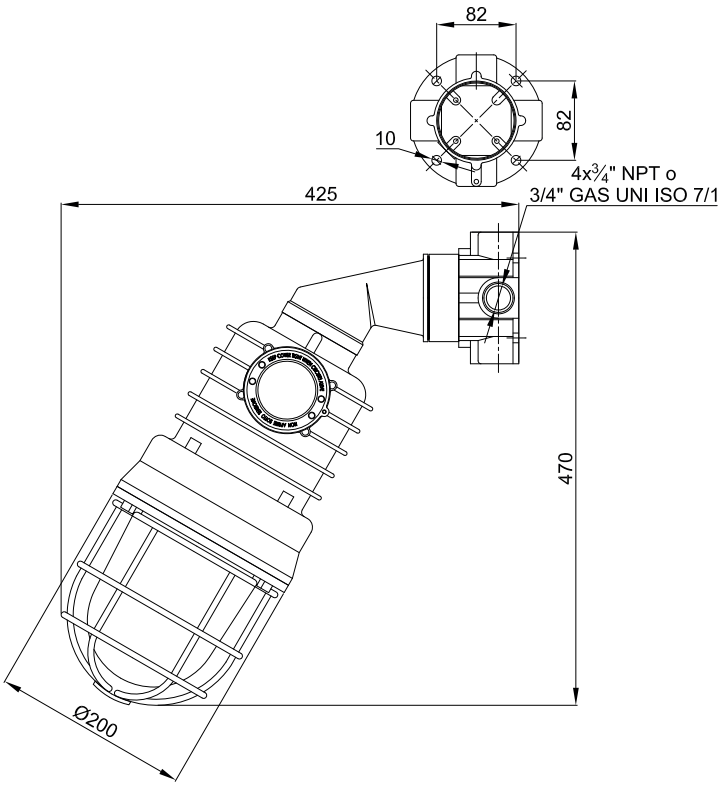
Example: Type of lighting fixture EW X -5070N2 + Lamp LAMPNAV10 0W + Inclined dome reflector G70-427DI + + other...see key

EW series selection chart

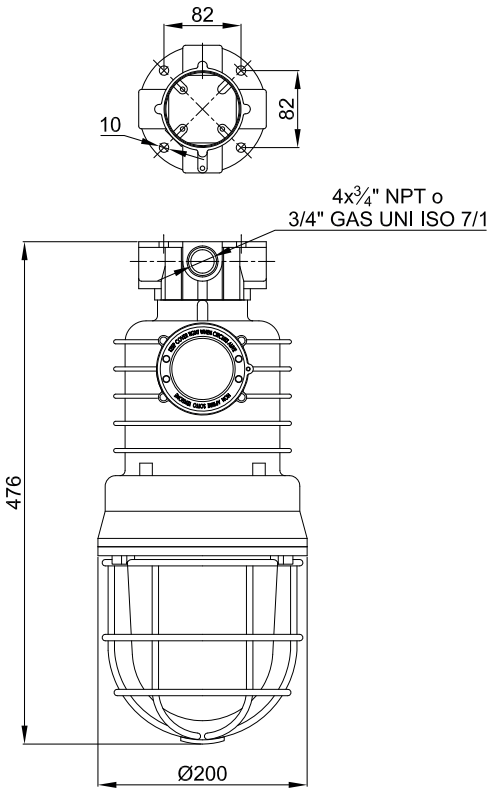
Code	Lamp type	Lamp holder	Watt	Clase Ta=+60°C	Max Surface temperature°C	Weight kg	mm
EWIX-5070N1	Sodium vapour	E 27	70	T4	130	7,5	240x240x660
EWIX-5070N2	Sodium vapour	E 40	100	T4	126	7,9	240x240x660
EWIX-5070IM1	Metal halide	E 27	70	T4	128	7,5	240x240x660
EWIX-5070IM2	Metal halide	E 27	100	T4	128	7,6	240x240x660
EWIX-5070IM4	Metal halide	E 27	150	T3	161	8,4	240x240x660

Code	Lamp type	Lamp holder	Watt	Clase Ta=+60°C	Max Surface temperature°C	Weight kg	mm
EWX-5070N1	Sodium vapour	E 27	70	T4	130	7,1	260x210x580
EWX-5070N2	Sodium vapour	E 40	100	T4	126	7,4	260x210x580
EWX-5070IM1	Metal halide	E 27	70	T4	128	7,1	260x210x580
EWX-5070IM2	Metal halide	E 27	100	T4	128	7,2	260x210x580
EWX-5070IM4	Metal halide	E 27	150	T3	161	8	260x210x580

EWIX Wall mounting with 30° bracket

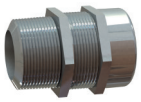
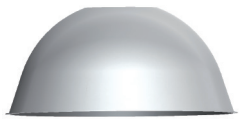


EWX Ceiling mounting

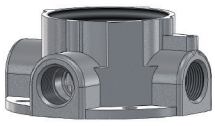
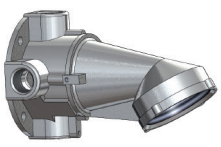


Dimension in mm

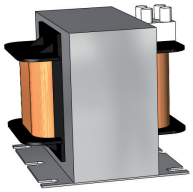
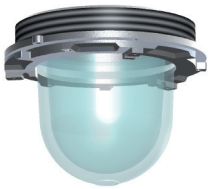
EW series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	High pressure sodium vapour lamp	E27	70 W (SE70W)	LAMPNAV70WPLUS	ACCESSORY SPARE PART
		E40	100 W (SE100W)	LAMPNAV100WPLUS	
	Metal halide lamp	E27	100 W (ME100W)	LAMP100WJM	ACCESSORY SPARE PART
			150 W (ME150W)	LAMP150WJM	
	Cable gland		Per modelli e codici dei pressacavi vedi sito www.cortemgroup.com	FB2NBK FGAB2NBK	ACCESSORY SPARE PART
	Reflector		White painted aluminium Stainless steel	G70-427 G70-427IN	ACCESSORY SPARE PART
	Dome reflector		Contact our Sales Office for availability		ACCESSORY SPARE PART
	30° inclined dome reflector		White painted aluminium	G70-427DI	ACCESSORY SPARE PART

EW series Accessories and spare parts available on request

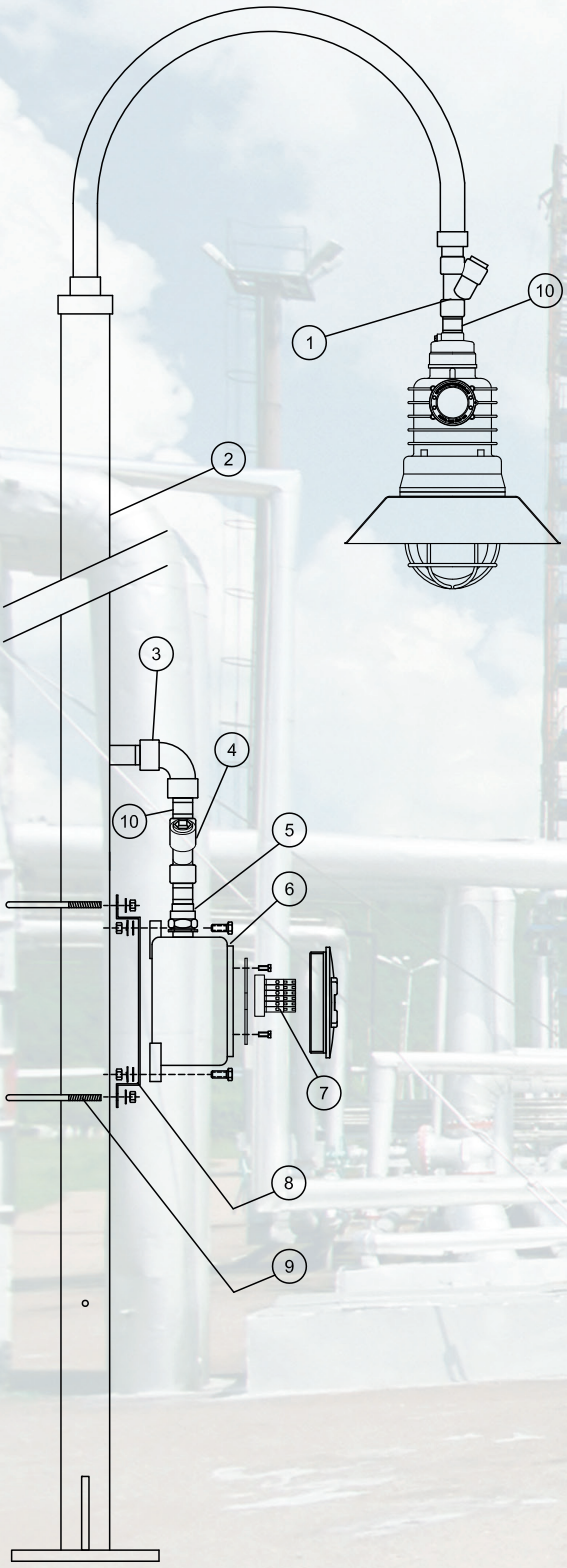
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Protective guard		Material: Electro-polished stainless steel	G70-0417	SPARE PART
	Pendant eyebolt		in galvanised steel	G0F-8	SPARE PART
	Pendant mounting EW		1 x 3/4" entry	G-0213	SPARE PART
	Pendant mounting with eyebolt EWGC		4 x 3/4" entries	G-0216	SPARE PART
	Ceiling mounting EWX		4 x 3/4" entries	G-0214	SPARE PART
	Wall mounting with bracket EWIX		4 x 3/4" entries	G-0215	SPARE PART

EW series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	O-ring		Material: silicone	K33-131S	SPARE PART
	Ballast for sodium vapour and metal halide lamp		70 W	R-70NAAP	SPARE PART
			100 W	R-100NA	
			150 W	R-150NA	
	Metal capacitor	5070N1	12,5µF 250V	F-12,5	SPARE PART
		5070N2	12,5µF 250V	F-12,5	
		5070IM2	12,5µF 250V	F-12,5	
		5070IM4	20µF 250V	F-20	
	Ceramic lamp holder	E27 E40	250V 4A 750V 16A	PORT E-27 PORT E-40	SPARE PART
	Igniter		50-400 W	R100	SPARE PART
	Globe with shade ring		Borosilicate glass globe Threaded aluminium shade ring	G70-0440CM	SPARE PART

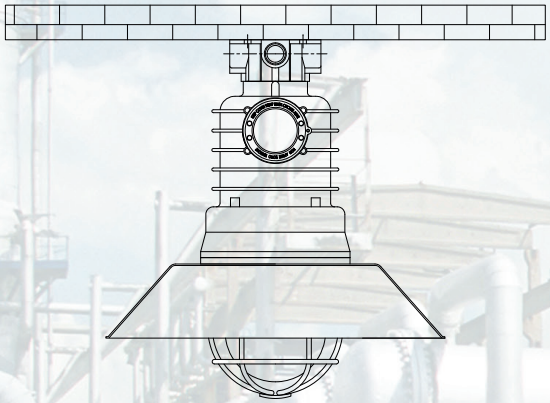
Installation and mounting methods

Example of pole mounting

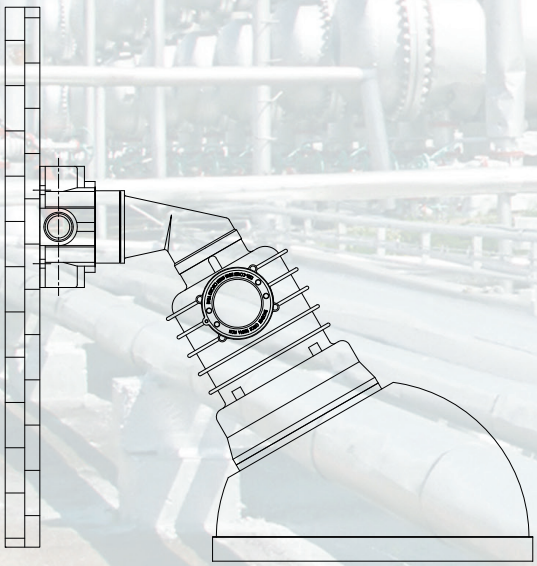


1. EYS sealing fittings
2. Hot dip galvanised steel pole
3. ELF curve
4. EYS sealed
5. RMM 3-piece union
6. GUB-01 Junction box
7. Terminal box
8. Support frame
9. UBD clevis
10. NP nipple

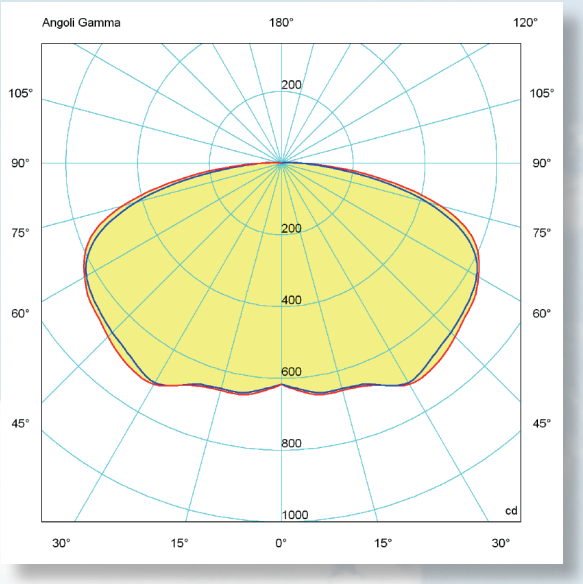
Example of ceiling mounting



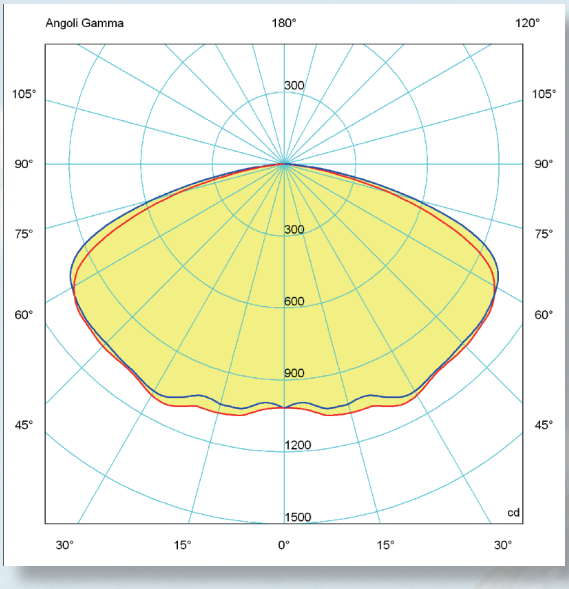
Example of wall mounting



Photometric diagram



EW-5070 70W sodium



EW-5070 100W sodium

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= plane 90270
= plane 0180

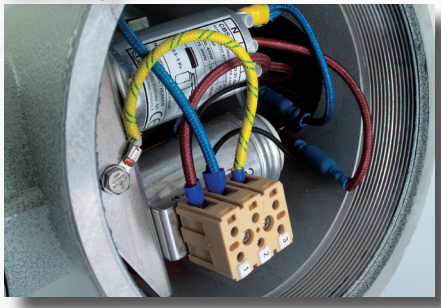
EWA

- Suitable for installation with ambient temperatures from -50°C to +60°C
- Suitable for discharge lamps up to 400W
- Zones 1, 2, 21, 22

Painted aluminium body

4 Joule shock resistant Borosilicate glass globe

Electrical component housing

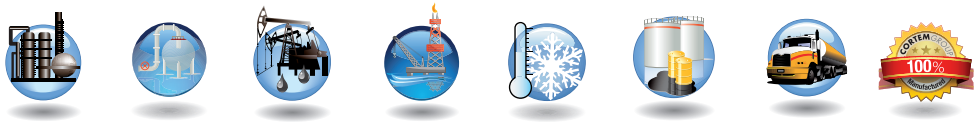


Stainless steel protective guard

EWA series Lighting fixtures for discharge lamps up to 400W

EWA series of lighting fixtures for discharge lamps has been designed in compliance with ATEX Directive 2014/34/UE for all those areas defined as "hazardous" due to the presence of potentially explosive flammable gases and dusts where good local lighting is a necessity. The body of the lamp is made of low copper content aluminium alloy, the globe is made of borosilicate glass and has excellent thermal and mechanical properties. For this reason, the fixture can also be installed without a protective guard. The resistance of this lighting fixture to high (+60°C) and low (-50°C) temperatures makes it ideal for use in any type of climatic condition and it can be used in plants worldwide.
As EWA series was designed with the "Ex d" protection method the "entry" to the fixture, as specified in the installation standard (EN/IEC 60079-14), must be only through an Ex "barrier" cable gland (sealed) or, in the case of a conduit system, with an EYS, EZS sealing fittings.

Application sectors



Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Low temperatures | Fuel depots | Fuel tanker loading/ unloading areas | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD		
Installation:	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Marking:	CE 0722 Ex II 2GD Ex d IIC T.. Gb - Ex tb IIIC T..°C Db IP66			
Certification:	ATEX CESI 12 ATEX 006			
	IEC Ex CES 07.0004	All IEC Ex and TR CU certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE			
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2012, IEC 60079-1: 2007, IEC 60079-7: 2007, IEC 60079-31: 2009 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	See the selection table			
Ambient temperature:	Standard -20°C +60°C	Special -50°C +60°C not possible for model EWA...100		
Degree of protection:	IP66			

EWA series Lighting fixtures for discharge lamps up to 400W



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy Complete with housing for electrical components
Globe:	Shock and high temperature resistant borosilicate glass with aluminium shade ring
Gaskets:	Silicone acid/hydrocarbon resistant
Guard:	Electro-polished stainless steel. Can also be supplied on request without a guard as the lighting fixture has passed the glass breakage test (4 Joule EN60079-0 / IEC60079-0)
Mounting:	See "EWA series dimensional drawings"
Bolts and screws:	Stainless steel
Entries:	3/4" NPT threads
Coating:	Polyester coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	E27 or E40 ceramic
Ballast:	Electromechanical
Rated voltage:	230 V AC
Rated frequency:	50 Hz
Connection:	Direct connection to the terminal box L, N, Pe. Section 4mm^2
Power factor:	0.96
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures

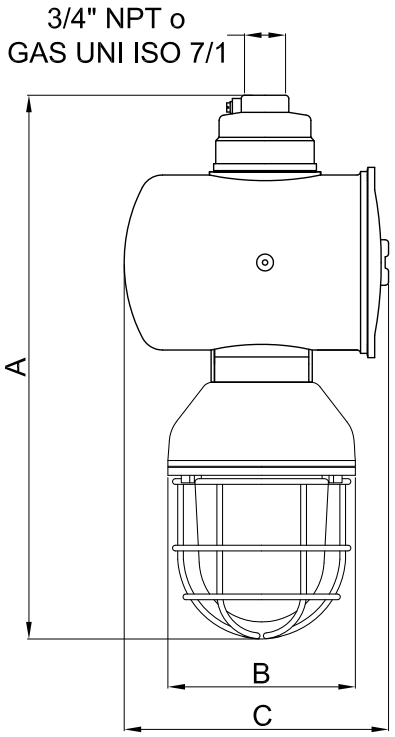
ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Discharge lamp
Different rated voltages
Rated frequency: 60 Hz at 230 V (code EWA-5080F5/**60**)
External reflector
Cable gland: FGAB2NBK for armoured cable or FB2NBK for non-armoured cable
GAS UNI ISO 7/1 thread
Bracket for pole mounting

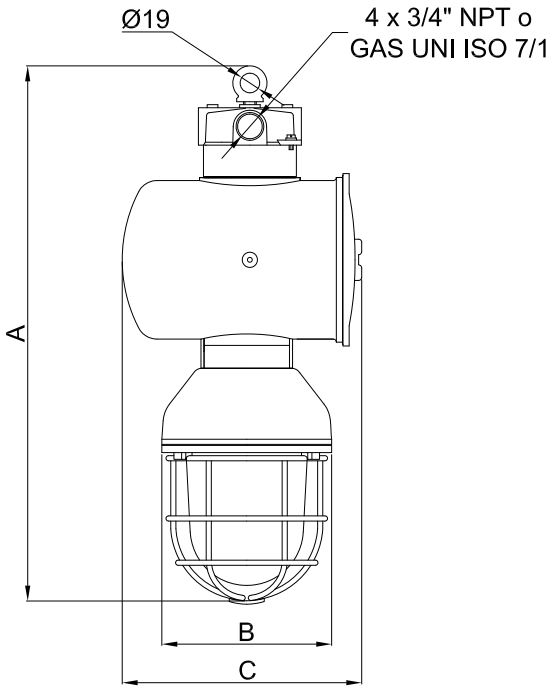
EWA series selection chart

Code	Dimensions mm			Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max Temp. superf. °C	Weight kg	mm
	A	B	C							
EWAT-5080N2	610	220	235	Sodium vapour	E 40	100	T4	132	10,4	240x240x660
EWAT-5080N4	610	220	235	Sodium vapour	E 40	150	T4	132	11,4	240x240x660
EWAT-5080N5	610	220	235	Sodium vapour	E 40	250	T3	159	12,4	240x240x660
EWAT-50100N6	677	280	265	Sodium vapour	E 40	400	T3	164	17,1	280x280x850
EWAT-5080IM2	610	220	235	Metal halide	E 27	100	T4	130	10,3	240x240x660
EWAT-5080IM4	610	220	235	Metal halide	E 27	150	T4	130	11,1	240x240x660
EWAT-5080IM5	610	220	235	Metal halide	E 40	250	T3	180	12,7	240x240x660
EWAT-50100IM6	677	280	265	Metal halide	E 40	400	T3	163	15,5	280x280x850
EWAGC-5080N2	643	220	235	Sodium vapour	E 40	100	T4	132	10,4	240x240x660
EWAGC-5080N4	643	220	235	Sodium vapour	E 40	150	T4	132	11,2	240x240x660
EWAGC-5080N5	643	220	235	Sodium vapour	E 40	250	T3	159	12,5	240x240x660
EWAGC-50100N6	713	280	265	Sodium vapour	E 40	400	T3	164	17,9	280x280x850
EWAGC-5080IM2	643	220	235	Metal halide	E 27	100	T4	130	10,1	240x240x660
EWAGC-5080IM4	643	220	235	Metal halide	E 27	150	T4	130	10,9	240x240x660
EWAGC-5080IM5	643	220	235	Metal halide	E 40	250	T3	180	12,4	240x240x660
EWAGC-50100IM6	713	280	265	Metal halide	E 40	400	T3	163	16,6	280x280x850

EWAT Pendant mounting



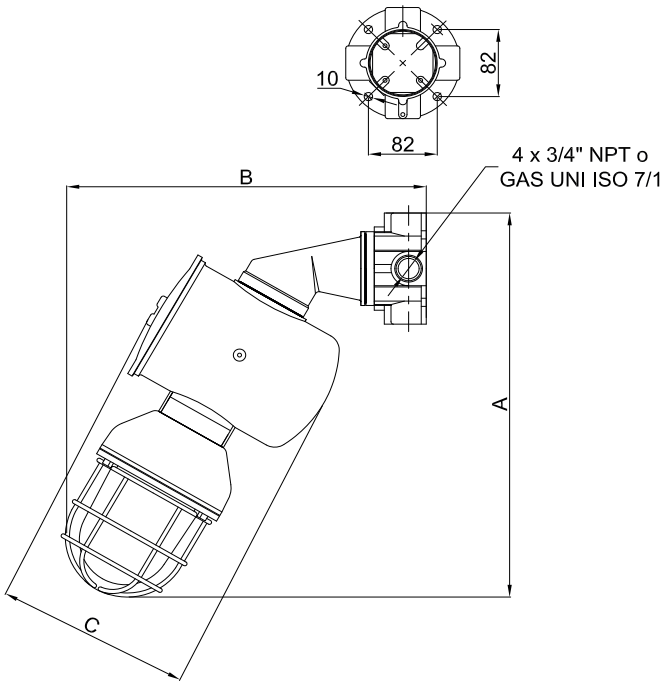
EWAGC Pendant mounting with eyebolt



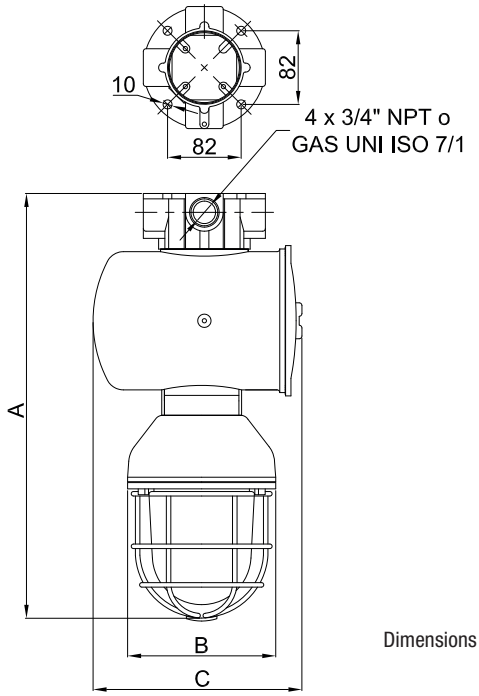
EWA series selection chart

Code	Dimensions mm A	B	C	Lamp typo	Lamp holder	Watt	Class Ta=+60°C	Max Temp. superf. °C	Weight kg	mm
EWAIX-5080N2	592	500	235	Sodium vapour	E 40	100	T4	132	10,7	280x280x850
EWAIX-5080N4	592	500	235	Sodium vapour	E 40	150	T4	132	11,5	280x280x850
EWAIX-5080N5	592	500	235	Sodium vapour	E 40	250	T3	159	12,8	280x280x850
EWAIX-50100N6	650	547	265	Sodium vapour	E 40	400	T3	164	15,4	280x280x850
EWAIX-5080IM2	592	500	235	Metal halide	E 27	100	T4	130	10,4	280x280x850
EWAIX-5080IM4	592	500	235	Metal halide	E 27	150	T4	130	11,2	280x280x850
EWAIX-5080IM5	592	500	235	Metal halide	E 40	250	T3	180	12,7	280x280x850
EWAIX-50100IM6	650	547	265	Metal halide	E 40	400	T3	163	14,1	280x280x850
EWAX-5080N2	610	220	235	Sodium vapour	E 40	100	T4	132	10,6	240x240x660
EWAX-5080N4	610	220	235	Sodium vapour	E 40	150	T4	132	11,4	240x240x660
EWAX-5080N5	610	220	235	Sodium vapour	E 40	250	T3	159	12,7	240x240x660
EWAX-50100N6	677	280	265	Sodium vapour	E 40	400	T3	164	16,2	280x280x850
EWAX-5080IM2	610	220	235	Metal halide	E 27	100	T4	130	10,3	240x240x660
EWAX-5080IM4	610	220	235	Metal halide	E 27	150	T4	130	11,1	240x240x660
EWAX-5080IM5	610	220	235	Metal halide	E 40	250	T3	180	12,7	240x240x660
EWAX-50100IM6	677	280	265	Metal halide	E 40	400	T3	163	16,0	280x280x850

EWAIX Wall mounting with 30° bracket

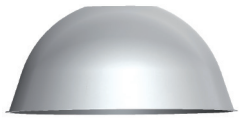
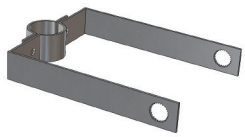


EWAX Ceiling mounting

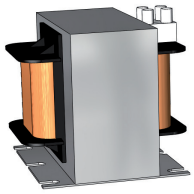
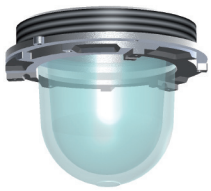


Dimensions in mm

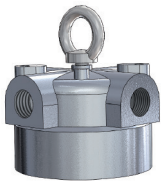
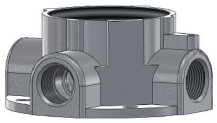
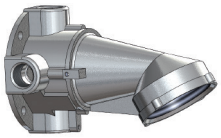
EWA series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	High pressure sodium vapour lamp	E40	100 W (SE100W)	LAMPNAV100WPLUS	ACCESSORY SPARE PART
			150 W (SE150W	LAMPNAV150WPLUS	
			250 W (SE250W)	LAMPNAV250WPLUS	
			400 W (SE400W)	LAMPNAV400WPLUS	
	Metal halide lamp	E27	100 W (ME100W)	LAMP100WJM	ACCESSORY SPARE PART
			150 W (ME150W)	LAMP150WJM	
		E40	230 W (ME250W)	LAMP230WJM	
			360 W (ME400W)	LAMP360WJM	
	Cable gland		For models and codes, visit www.cortemgroup.com	FB2NBK FGAB2NBK	ACCESSORY SPARE PART
	Reflector	80	White painted aluminium Stainless steel	G80-427 G80-427IN	ACCESSORY SPARE PART
		100	White painted aluminium Stainless steel	G100-427 G100-427IN	
	Dome reflector	80	White painted aluminium	G80-427D	ACCESSORY SPARE PART
		100	White painted aluminium	G100-427D	
	30° inclined dome reflector	80	White painted aluminium	G80-427DI	ACCESSORY SPARE PART
		100	Contact our Sales Office for availability		
	Galvanised steel brackets for pole mounting (see installation and mounting methods	80	1 1/4″ pole	G4-0541	ACCESSORY SPARE PART
		100		G4-0542	
		80	1 1/2″ pole	G5-0541	
		100		G5-0542	
		80	2″ pole	G6-0541	
		100		G6-0542	
		80	2 1/2″ pole	G7-0541	
		100		G7-0542	

EWA series Accessories and spare parts available on request

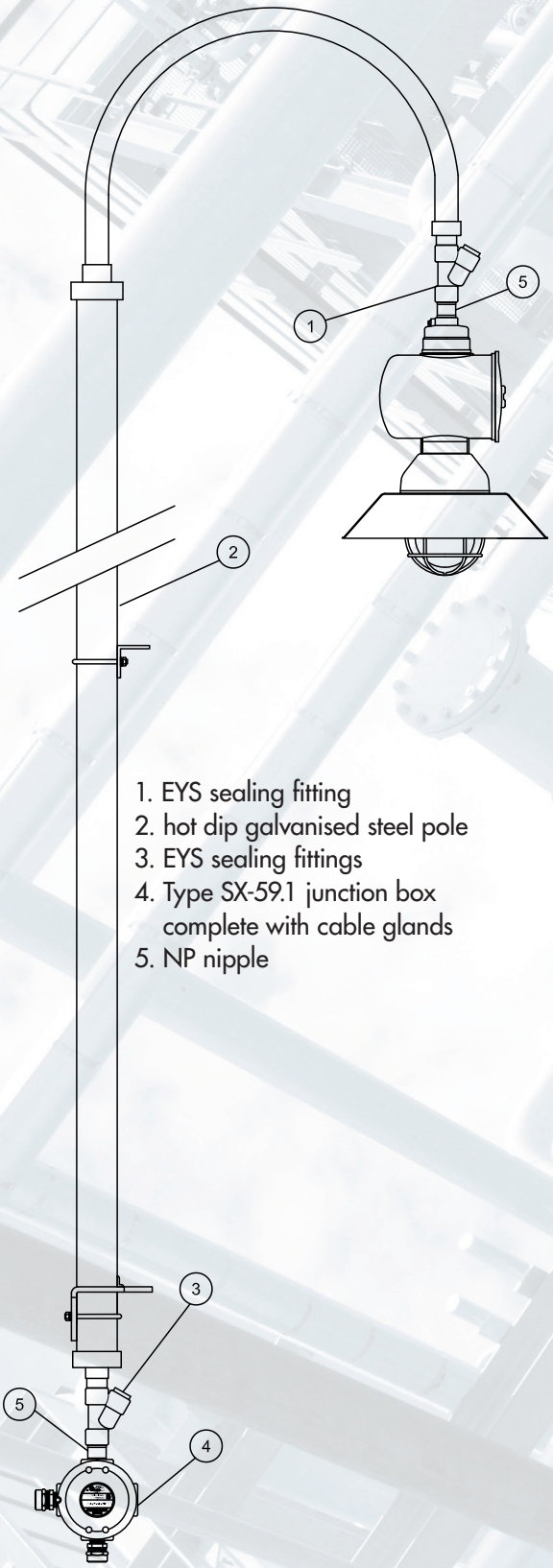
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	O-ring	Globo 80	Material: silicone	K34-131S	SPARE PART
		Globo 100		K27-131S	
	Ballast for sodium vapour and metal halide lamps		100 W	R-100NA	SPARE PART
			150 W	R-150NA	
			250 W	R-250NA	
			400 W (sodium)	R-400NA	
			400 W (halide)	R-400	
	Metal capacitor	5080N2	16µF 250V	F-16	SPARE PART
		5080N4	20µF 250V	F-20	
		5080N5	35µF 250V	F-35	
		50100N6	50µF 250V	F-50	
		5080IM2	12,5µF 250V	F-12,5	
		5080IM4	20µF 250V	F-20	
		5080IM5	30µF 250V	F-30	
		50100IM6	40µF 250V	F-40	
	Ceramic lamp holder	E27	250V 4A	PORT E-27	SPARE PART
		E40	750V 16A	PORT E-40	
	Igniter		50-400 W	R100	SPARE PART
	Globe with shade ring	80	Borosilicate glass globe Threaded aluminium shade ring	G80-0440CM	SPARE PART
		100		G100-0440CM	
	Protective guard	80	Material: electro-polished stainless steel	G80-0417	SPARE PART
		100		G100-0417	

EWA series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Pendant eyebolt		In galvanised steel	GOF-8	
	Pendant mounting EWA		1 x 3/4" entry	G-0213	
	Pendant mounting with eyebolt EWAGC		4 x 3/4" entries	G-0216	
	Ceiling mounting EWAX		4 x 3/4" entries	G-0214	
	Wall mountings with bracket EWAIX		4 x 3/4" entries	G-0215	

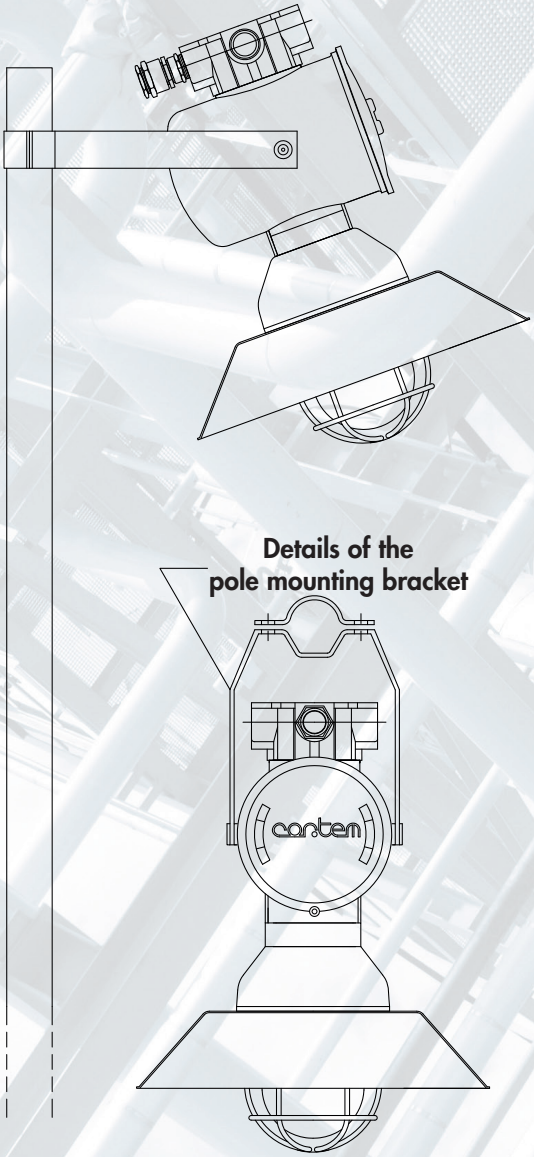
Installation and mounting methods

Example of pole mounting



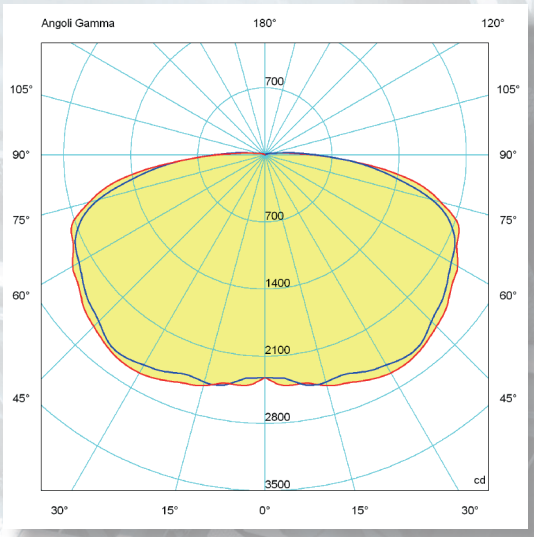
1. EYS sealing fitting
2. hot dip galvanised steel pole
3. EYS sealing fittings
4. Type SX-59.1 junction box complete with cable glands
5. NP nipple

Pole mounting system with bracket

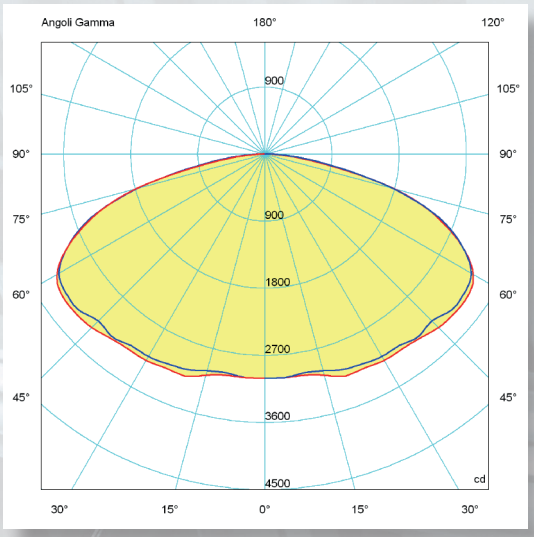


Details of the pole mounting bracket

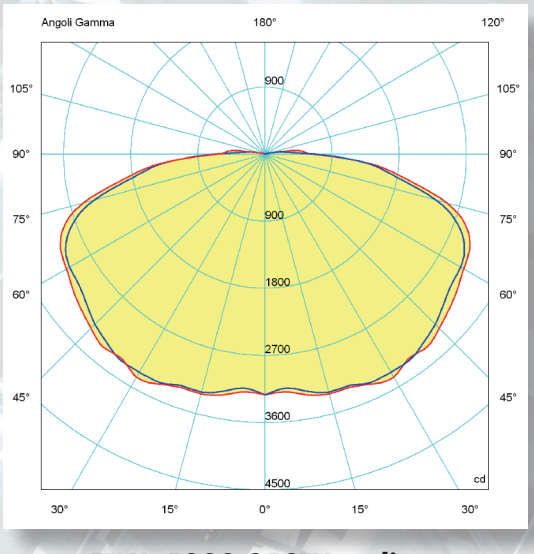
Photometric diagram



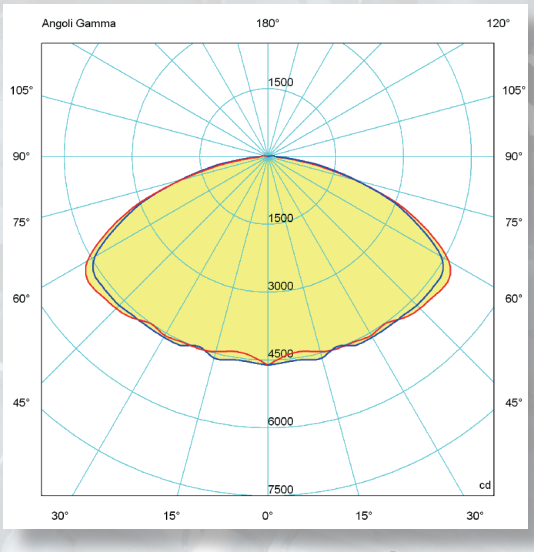
EWA-5080 250W halide



EWA-50100 400W halide



EWA-5080 250W sodium



EWA-50100 400W sodium

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.

= plane 90270
= plane 0180

FLF

- Zone 1, 2, 21, 22
- Excellent “CX” coefficient
- Easy re-lamping
- Designed to last over time

4 Joule shock resistant borosilicate glass

Cable entry

Simplified maintenance



FLF series Lighting fixtures for fluorescent tubes

FLF series lighting fixtures have two low copper content aluminium heads fitted with G13 lamp holder, a tempered boro-silicate glass tube that is resistant to changes in heat and a white painted aluminium reflector. Unlike the FLFE series, as specified in the appropriate installation standard (EN/IEC 60079-14), entry to the fixture must be through an Ex "barrier" cable gland (sealed) or, in the case of a conduit system, with an EYS, EZS series sealing fittings. The round cross section of the lamp provides a better "Cx" coefficient with less resistance to the wind and less accumulation of dust. For this reason, these units are recommended for use in hazardous places where climatic and environmental conditions are severe and as they require less maintenance. FLF series has been designed to facilitate and speed up maintenance operations. As the electrical components are housed on a frame with guides, re-lamping is quick and efficient. The fact that the fixture is fitted with a glass tube as opposed to a plastic material, makes it more effective and with a longer lifespan.

Application sectors:

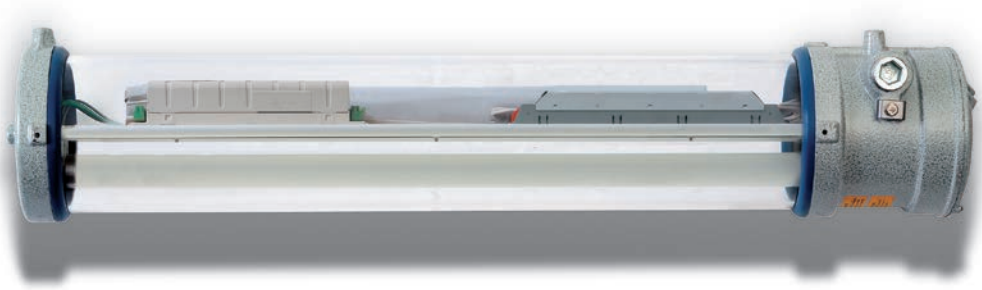


Oil refineries | Chemical and petro-chemical plants | Oil and combustible liquid depots | Offshore plants | Onshore plants | Stair handrails | Chemical Farm produce applications | 100% Cortem product

CERTIFICATION DATA

Classificazione:	Group II	Category 2GD		
Installation:	zona 1 - zona 2 (Gas)	zona 21 - zona 22 (Dust)		
Marking:	CE 0722 Ex II 2GD Ex db IIC T6 Gb Ex tb IIIC T75÷T80°C Db IP66			
Certification:	ATEX CESI 09 ATEX 008			
	IEC Ex CES 11.0021	All IEC Ex, TR CU and INMETRO certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE			
	INMETRO DNV 12.0159			
Standards:	CENELEC EN60079-0: 2012, EN60079-1: 2007, EN60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC60079-0: 2011, IEC60079-1: 2007, IEC60079-31: 2008 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	85°C (T6)			
Ambient temperature:	Standard -20°C +55°C	with emergency system -20°C +50°C		
Degree of protection:	IP66			

FLF series Lighting fixtures for fluorescent tubes



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy heads
External tube:	Shock and high temperature resistant borosilicate glass
Gaskets:	Acid/hydrocarbon resistant NBR on cover
Inner frame:	White painted aluminium that acts as reflector
Bolts and screws:	Stainless steel
Cap chain:	Stainless steel
Mounting:	Fixture pre-drilled with 2 x M8 holes
Entries:	2 x 3/4" threaded NPT. Fixture set with 1 x PLG2N plug
Coating:	Epoxy coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holders:	Bi-pin G13
Ballast:	Single channel electronic
Rated voltage:	230 V AC
Rated frequency:	50/60 Hz
Connection:	Direct to internal jumper connections for input/output L, N, Pe section 4 mm^2
Power factor:	0.98
Emergency unit:	Electronic inverter 110/230V, 50/60Hz, 18...58 W. Ni/Cd batteries, 4 Ah or 7 Ah, 6 V, battery charging monitored by high luminosity red LED (estimated LED lifespan 50,000 hours)
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures
Safety:	Emergency safety switch fitted inside lighting fixture

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

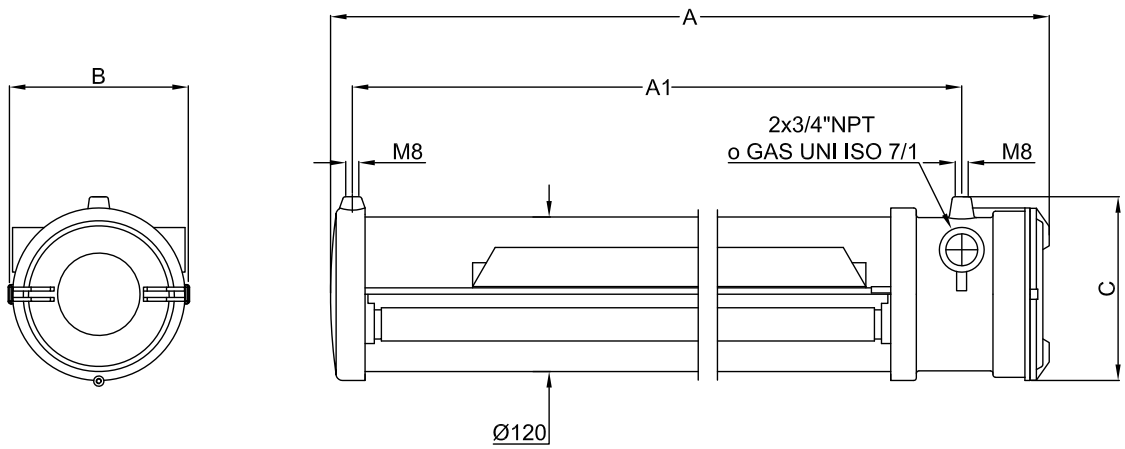
2 pin Ø26 fluorescent tubes model T8
Installation mounting brackets
Stainless steel or galvanized steel guard with external aluminium protection
External aluminium protection recommended for outdoor installations
Re-lamping bracket for use on in-line lighting fixtures
Cable gland: FGAB2NBK for armoured cable or FB2NBK for non-armoured cable
Rated voltage: 277 V with double channel electronic ballast (code FLF-236EF4**/277**)
110/240 V with double channel electronic ballast (code FLF-236EF4**S**)
GAS UNI ISO 7/1 thread
Can also be supplied in single tube normal operation version: FLF-118 / FLF-136 / FLF-158
Rated voltage: 24 Vdc only for normal operation (Code FLF-118/**24**)
Execution for compact fluorescent tubes 4 pins only for normal operation (Code FLF-136**C** e FLF-236**C**).
Cable entry: 2 x ISO M20 holes. Lighting fixture with 1 model PLG1IB plugs (Code FLF-118EF4/**20**)

FLF series selection chart

Double lamp

Code	Dimensions mm				Operating type	N° of lamps	Power supply	Watt	Discharge time	Weight kg	mm
	A	A1	B	C							
FLF-218	725	640	142	145	-	2	230 V 50/60 Hz.	18	-	4,9	240x230x800
FLF-236	1325	1240	142	145	-	2	230 V 50/60 Hz.	36	-	7,3	240x230x1410
FLF-258	1625	1540	142	145	-	2	230 V 50/60 Hz.	58	-	9,6	240x230x1700
FLF-218EF4	725	640	142	145	normal + emergency	2	230 V 50/60 Hz.	18	120’	7,3	240x230x800
FLF-236EF4	1325	1240	142	145	normal + emergency	2	230 V 50/60 Hz.	36	90’	8,6	240x230x1410
FLF-258EF4	1625	1540	142	145	normal + emergency	2	230 V 50/60 Hz.	58	70’	10,4	240x230x1700
FLF-218EF7	725	640	142	145	normal + emergency	2	230 V 50/60 Hz.	18	200’	7,0	240x230x800
FLF-236EF7	1325	1240	142	145	normal + emergency	2	230 V 50/60 Hz.	36	180’	9	240x230x1410
FLF-258EF7	1625	1540	142	145	normal + emergency	2	230 V 50/60 Hz.	58	150’	12,5	240x230x1700

DIMENSIONAL DRAWING



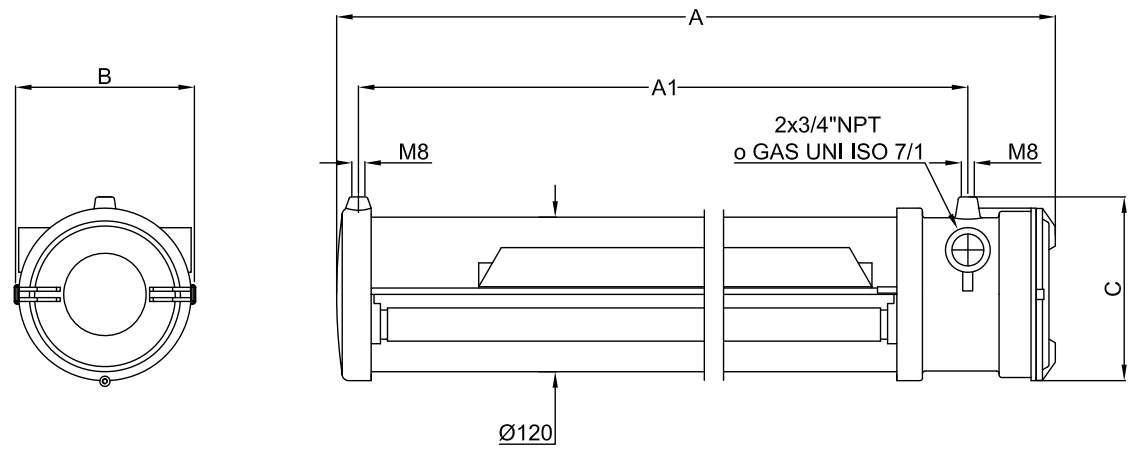
Dimensions in mm

FLF series selection chart

Single lamp

Code	Dimensions mm A	A1	B	C	Operating type	N° of lamps	Power supply	Watt	Discharge time	Weight kg	mm
FLF-118EF4	725	640	142	145	normal + emergency	1	230 V 50/60 Hz.	18	120’	5.6	240x230x800
FLF-136EF4	1325	1240	142	145	normal + emergency	1	230 V 50/60 Hz.	36	90’	9.7	240x230x1410
FLF-158EF4	1625	1540	142	145	normal + emergency	1	230 V 50/60 Hz.	58	70’	12.0	240x230x1700
FLF-118EF7	725	640	142	145	normal + emergency	1	230 V 50/60 Hz.	18	200’	6.7	240x230x800
FLF-136EF7	1325	1240	142	145	normal + emergency	1	230 V 50/60 Hz.	36	180’	10.2	240x230x1410
FLF-158EF7	1625	1540	142	145	normal + emergency	1	230 V 50/60 Hz.	58	150’	12.5	240x230x1700
FLF-118EE4	725	640	142	145	emergency	1	110/230 V 50/60 Hz.	18	120’	6.3	240x230x800
FLF-136EE4	1325	1240	142	145	emergency	1	110/230 V 50/60 Hz.	36	90’	9.7	240x230x1410
FLF-158EE4	1625	1540	142	145	emergency	1	110/230 V 50/60 Hz.	58	70’	12.0	240x230x1700
FLF-118EE7	725	640	142	145	emergency	1	110/230 V 50/60 Hz.	18	200’	6.7	240x230x800
FLF-136EE7	1325	1240	142	145	emergency	1	110/230 V 50/60 Hz.	36	180’	10.2	240x230x1410
FLF-158EE7	1625	1540	142	145	emergency	1	110/230 V 50/60 Hz.	58	150’	12.5	240x230x1700

DIMENSIONAL DRAWING

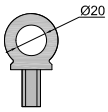
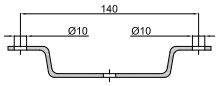
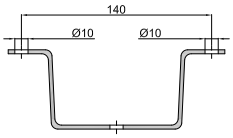
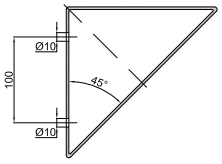
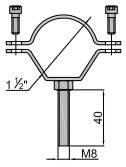
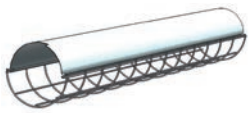


Dimensions in mm

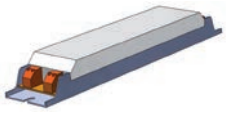
DON’T FORGET TO ORDER THE ACCESSORIES

Example: Type of lighting fixture FLF-236 + Fluorescent tubes LAMPL36W21 + Installation bracket G-258 + other... see key

FLF series Accessories and spare parts available on request

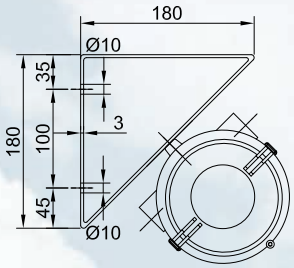
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Tri-phosphor fluorescent tubes G13 fitting 3.000K	18 W	1350 lm (FD18W)	LAMPL18W21	
		36 W	3350 lm (FD36W)	LAMPL36W21	
		58 W	5200 lm (FD58W)	LAMPL58W21	
	Compact fluorescent tubes 2G11 fittings	36 W	2700 lm	LAMP-PLL36W	
	Tige	Lunghezza: 250 mm	Material: stainless steel	BRF8MIN/250	
	Type O eyebolt		Material: galvanised steel	GOF-8	
	Type U bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0609	
	Type V bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0610	
	Type D bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0611	
	Type P bracket		Material: galvanised steel	G-0480	
	Guard with Light blue/white painted 10/10 aluminium external protection	18 W	Stainless steel guard	G18-0529	
		36 W		G36-0529	
		58 W		G58-0529	
		18 W	Galvanised steel guard	G18-0529G	
		36 W		G36-0529G	
		58 W		G58-0529G	

FLF series Accessories and spare parts available on request

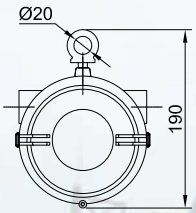
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	External protection	18W	Light blue/white painted 10/10 aluminium external protection	G18-568	ACCESSORY SPARE PART
		36W		G36-568	
		58W		G58-568	
		18W	10/10 stainless steel AISI 304 external protection	G18-568IN	
		36W		G36-568IN	
		58W		G58-568IN	
	Cable gland		For models and codes, visit www.cortemgroup.com	FB2NBK FGAB2NBK	ACCESSORY SPARE PART
	Reflector inner frame	2 x 18 W	Painted 20/10 aluminium	G18-567	SPARE PART
		2 x 36 W		G36-567	
		2 x 58 W		G58-567	
		1 x 18 W		G18-661	
		1 x 36 W		G36-661	
		1 x 58 W		G58-661	
	Battery pack		4 Ah 6V NiCd	BATT4AH/D	SPARE PART
			7 Ah 6V NiCd	BATT7AH/D	
	Electronic ballast	2 x 18 W 2 x 36 W	230 V 50/60 Hz	RV236	SPARE PART
		1 x 18 W 1 x 36 W		RV136	
		2 x 58 W		R258P	
		1 x 58 W		R158P	
	Electronic inverter		110/230 V 50/60 Hz	INVERTER	SPARE PART
	Lamp holder	FLF-1..	G13 250 V, 4 A	STU3249-12/S	SPARE PART
		FLF-2..			
	Re-lamping bracket with clip system for use on in-line lighting fixtures		Material: galvanised steel	G-0318 + G-0318/1	ACCESSORY SPARE PART


WARNING
DO NOT OPEN when energized.
After de-energizing, delay
10 minutes before opening.
WARNING
DO NOT OPEN when an
explosive atmosphere
may be present.
230 V
50/60 Hz
2x18 W
ELFT

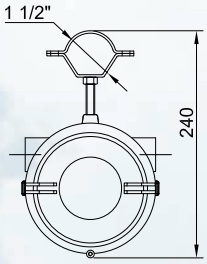
Installation and mounting methods FLF series



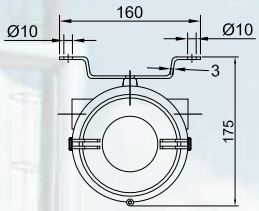
45° angle mounting
TYPE "D"



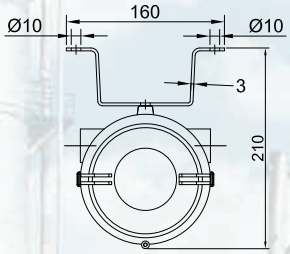
Pendant mounting with
eyebolt TYPE "O"



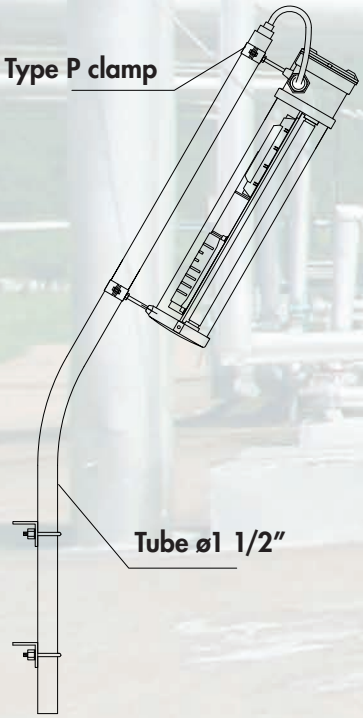
Mounting using 1.1/2"
metal clamps TYPE "P"



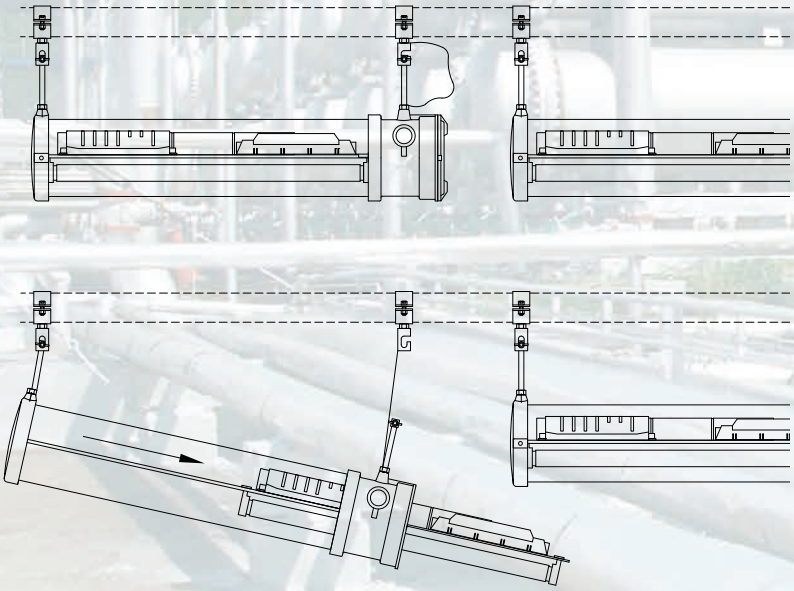
Low ceiling mounting with
clamp TYPE "U"



High ceiling mounting with
clamp TYPE "V"

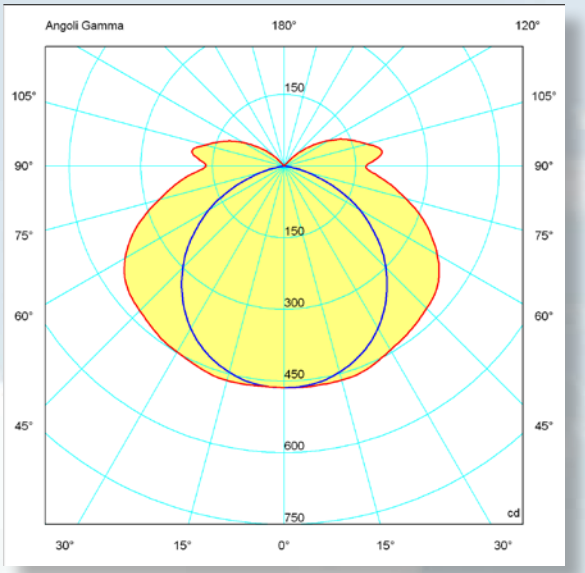


Pole mounting for FLF... with
barrier cable gland

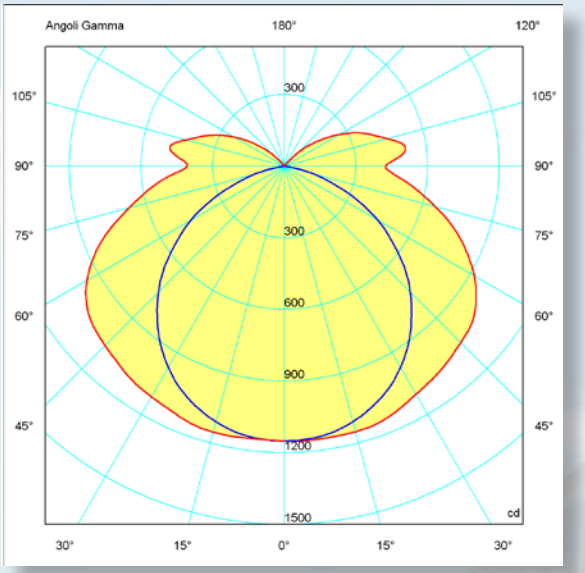


Mounting system with quick release clip for easy fluorescent tube replacement. System suitable for installing in-line lighting fixtures.

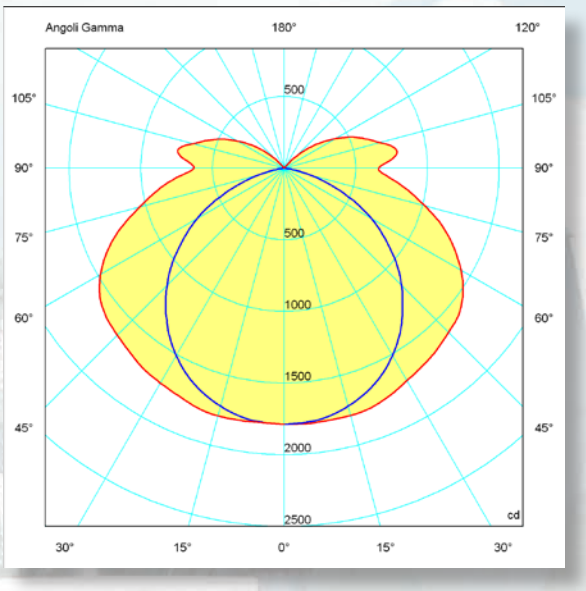
Dimensioni in mm



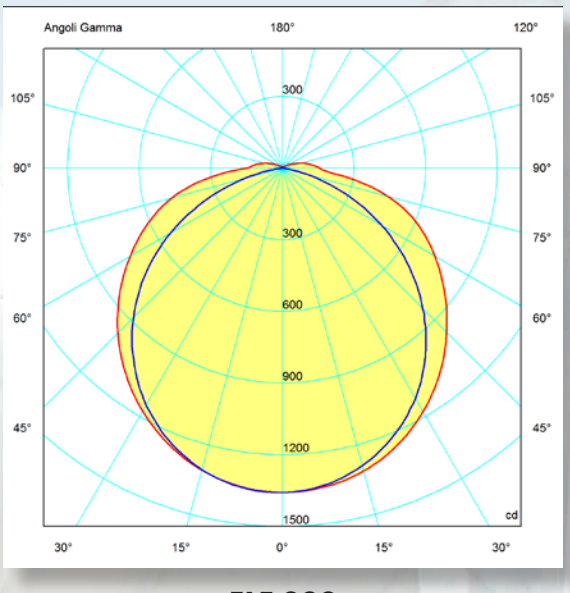
FLF-218



FLF-236



FLF-258



FLF-222

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.

= plane 90270

= plane 0180

EVFD

- Constant lighting performance
- Long range light diffusion

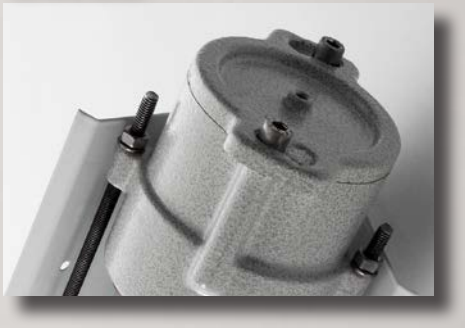
Body and head in painted aluminium

Borosilicate glass

Galvanised steel reflector



Lamp cover to replace fluorescent tube



Silicone resin

Electrical component housing

EVFD series Lighting fixtures for fluorescent tubes

As their high mechanical resistance, EVFD fluorescent lighting fixtures are recommended for use in all those hazardous areas where the atmosphere is constantly contaminated with fumes, gases and dusts. These units have been designed to provide the even distribution of light without taking up the limited vertical space available. The specially curved reflector and the transparency of the tempered glass tube combine to allow light to diffuse over a wide range and provide more pleasant, less tiring working conditions. All the electrical components are housed in an aluminium "enclosure" that can be easily removed from the fixture for maintenance work. Simply cleaning the glass tube ensures constant excellent illumination over time. As specified in the appropriate installation standard (EN/IEC 60079-14), the only "entry" to the fixture must be through an Ex "barrier" cable gland (sealed) or, in the case of a conduit system, with an EYS, EZS series sealing fitting. EVFD series lighting fixtures come in single or twin lamp versions. The twin lamp versions and connecting kits are only supplied following a specific request from the customer.

Application sectors



Oil refineries | Chemical and petrochemical plants | Stairs handrails | Offshore plants | Emergency exits | Fuel depots | Oil loading/ unloading jetties | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD			
Installation:	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)			
Marking:	CE 0722 Ex II 2GD Ex d IIC T5/T6 - Ex tD A21 IP 66				
Certification:	ATEX CESI 03 ATEX 098				
Standards:	CENELEC EN 60079-0: 2006, EN 60079-1: 2004, EN 61241-0: 2006, EN 61241-1: 2004, EN 60598-1:2008+A11:2009, EN 60598-2-1_1989, EN 61547: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2004, IEC 60079-1: 2007, IEC 61241-0: 2004, IEC 61241-1: 2004 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS				
Class temperature:	100°C (T5)				
Ambient temperature:	-20°C +55°C				
Degree of protection:	IP66				

EVFD series Lighting fixtures for fluorescent tubes



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
External tube:	Shock and high temperature resistant borosilicate glass
Seal:	Silicone resin between the aluminium heads and the glass tubes
Gaskets:	Acid/hydrocarbon resistant NBR
External reflector:	White painted galvanised steel
Bolts and screws:	Stainless steel
Mounting:	2 x galvanised steel brackets with Ø9 slots
Entries:	3 x 3/4" threaded NPT. Fixture complete with 2 x PLG2NA aluminium plugs
Coating:	Polyester coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	Bi-pin G13
Ballast:	Electronic
Rated voltage:	230 V AC
Rated frequency:	50/60 Hz
Connection:	Direct to the terminal board L, N, Pe section 4 mm^2 terminal board with jumpers for input/output (only for 18 W and 36 W)
Power factor:	0.98
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures

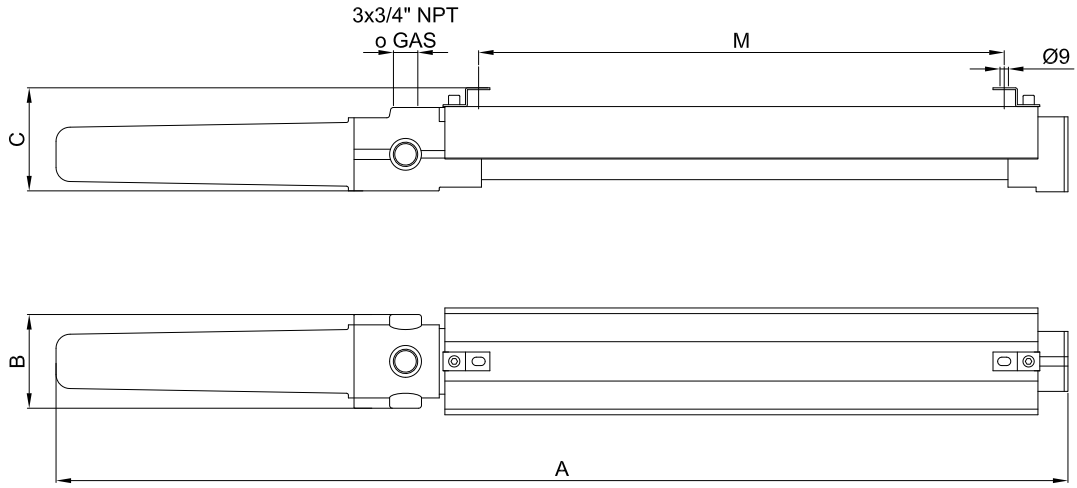
ACCESSORIES AVAILABLE / SPECIAL REQUESTS

2 pin Ø26 fluorescent tubes model T8
Installation mounting brackets
Stainless steel external reflector
Stainless steel guard
Re-lamping bracket for use on in-line lighting fixtures
Cable gland: FB2NBK for armoured cable or FGAB2NBK for non-armoured cable
GAS UNI ISO 7/1 thread

EVFD series selection chart

Code	Dimensions mm A	B	C	M	Type of ballast N	N° of lamps	Power supply	Watt	Weight kg	mm
EVFD-118EB	1080	114	110	561	single channel electronic	1	230 V 50/60 Hz	18	3,7	1175x120x155
EVFD-136EB	1690	114	110	1173	single channel electronic	1	230 V 50/60 Hz	36	5,2	1790x120x155
EVFD-158EB	1990	114	110	1473	single channel electronic	1	230 V 50/60 Hz	58	6,3	2090x120x155

DIMENSIONAL DRAWING

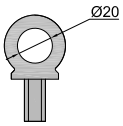
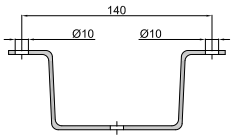
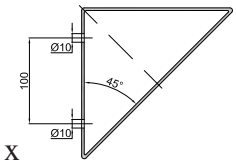
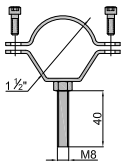


Dimensions in mm

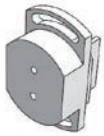
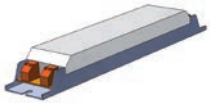
DON'T FORGET TO ORDER THE ACCESSORIES

e.g. Type of lighting fixture **EVFD-118EB** + Fluorescent tubes **LAMP-L18W233** + Installation bracket **G-258** + Cable gland **FL2BK** + other... see key ACCESSORY

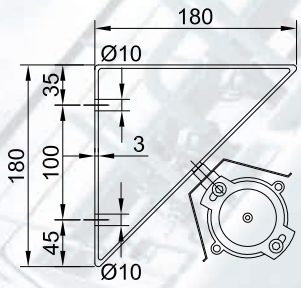
EVFD series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Tri-phosphor fluorescent tubes G13 fitting 3.000K	18 W (FD18W)	1350 lm	LAMPL18W21	
		36 W (FD36W)	3350 lm	LAMPL36W21	
		58 W (FD58W)	5200 lm	LAMP L58W21	
	Tige	Lunghezza: 250 mm	Material: stainless steel	BRF8MIN/250	
	Type O eyebolt		Material: galvanised steel	GOF-8	
	Type U bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0609	
	Type V bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0610	
	Type D bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0611	
	Type P bracket		Material: galvanised steel	G-0480	
	Cable gland		For models and codes, visit www.cortemgroup.com	FB2NBK FGAB2NBK	
	Guard	EVFD-118EB	AISI 316L stainless steel Electro-polished	G118-0418S	
		EVFD-136EB		G136-0418S	
		EVFD-158EB		G158-0418S	
	Stainless steel reflector	EVFD-118EB	Stainless steel plate	G118-455IN	
		EVFD-136EB		G136-455IN	
		EVFD-158EB		G158-455IN	
	Standard reflector	EVFD-118EB	White painted galvanised steel	G118-455	
		EVFD-136EB		G136-455	
		EVFD-158EB		G158-455	

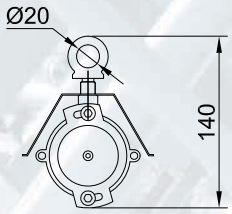
EVFD series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Assembly for glass tubes for normal lamps	EVFD-118EB	Completely assembled glass tubes with head, tensioners, lamp holder and bushes	G118-0411CM	
		EVFD-136EB		G136-0411/1	SPARE PART
		EVFD-158EB		G158-0411/1	
	Reduction bush for fluorescent tube insertion		Material: Black polypropylene	G-276	SPARE PART
	Lamp holder	G13	250V - 4A cable kit	G-0392...	SPARE PART
	Re-lamping bracket with clip system for use on in-line lighting installation		Material: galvanised steel	G-0318 + G-0318/1	ACCESSORY SPARE PART
	Electronic ballast	EVFD-118EB	230V	RV-136	
		EVFD-136EB		RV-136	SPARE PART
		EVFD-158EB		RV-158	

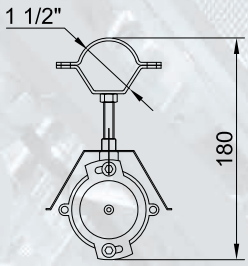
Installation and mounting methods EVFD series



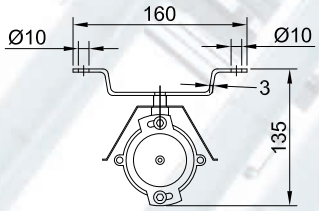
45° angle mounting
TYPE "D"



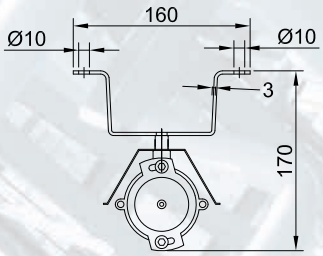
Pendant mounting
with eyebolt TYPE "O"



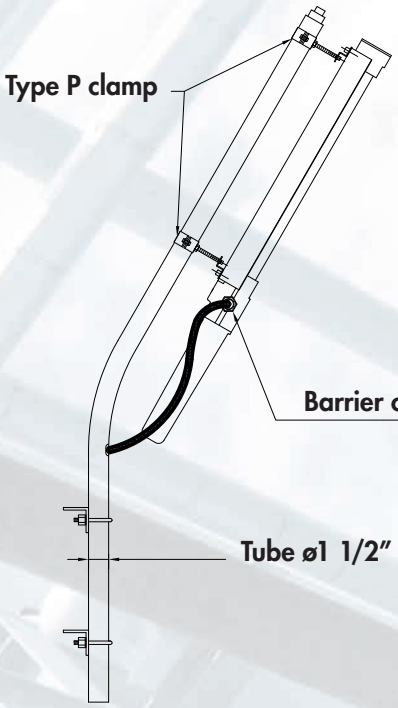
Mounting using 1.1/2"
metal clamps TYPE "P"



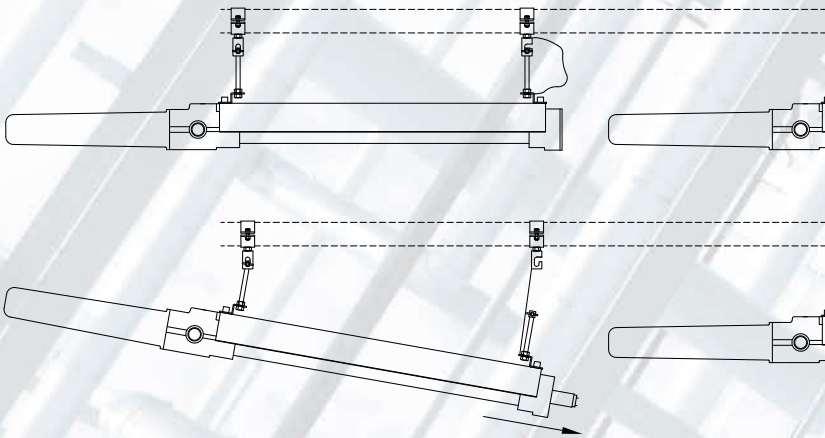
Low ceiling mounting with
clamp TYPE "U"



High ceiling mounting with
clamp TYPE "V"

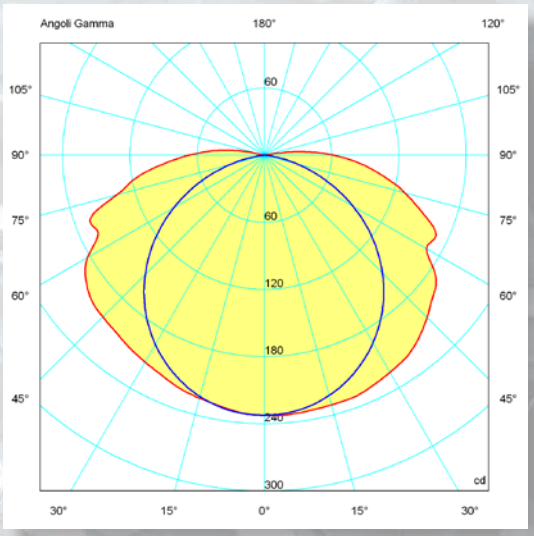


Pole mounting for EVFD...
with cable gland

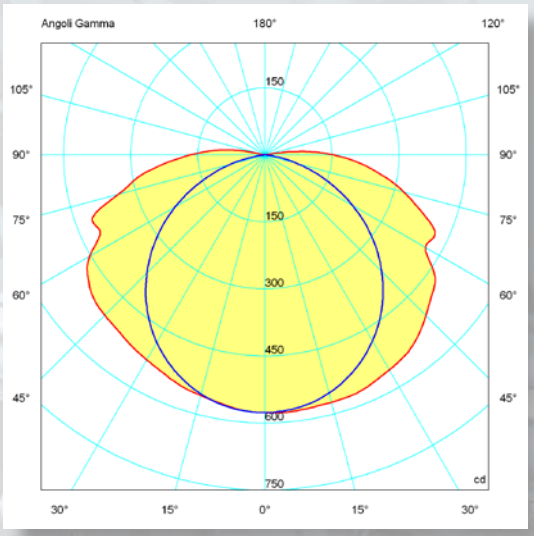


Mounting system with quick release clip for easy fluorescent tube replacement. System adopted for installing in-line lighting fixtures.

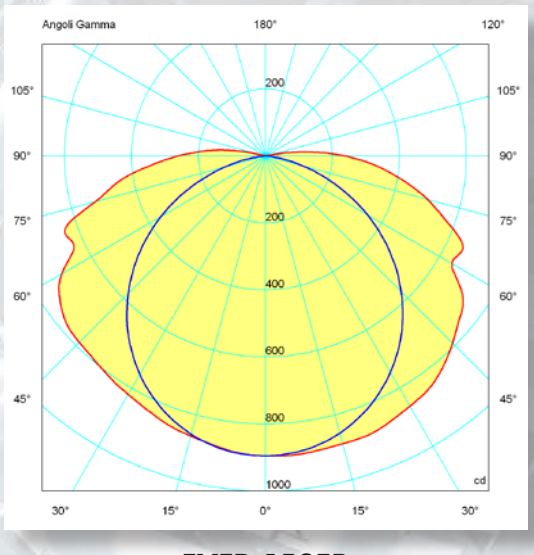
Dimensions in mm



EVFD-118EB



EVFD-136EB



EVFD-158EB

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

= plane 90270

= plane 0180

FHL

- Zones 1, 2, 21, 22
- Integrated electronic ballast
- Power supply 24 V DC
- Compact 24/36 W fluorescent tube
- Degree of protection IP66

Body in aluminium

Polycarbonate tube

Guard in stainless steel

Suitable for 4-pin fluorescent tubes



Stainless steel hook



FHL series Portable inspection lamp

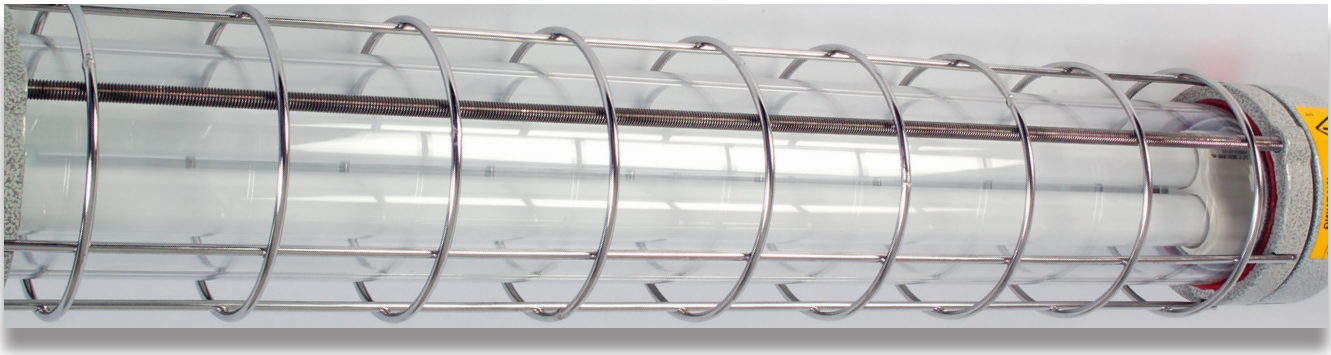
FHL series portable inspection lamps for compact 24/36 Watt fluorescent tubes have been specifically designed for carrying out inspection and maintenance work in all areas that are potentially explosive due to the presence of gases and dusts such as in the petrochemical industry, off-shore installations, tank control and processing areas. Thanks to their robust construction, they are easily handled and have a high degree of protection and optimal performance. They are also used in the naval sector for inspecting engine rooms and in the farming industry for checking the inside of silos. In general, these lamps are ideal for any application calling for a reliable source of light. Thanks also to the accessories which these lamps are fitted, they can be used in a wide variety of ways furthermore, thanks to the energy saving Philips master PL fluorescent tubes, the FHL series also provides an excellent colour rendering index in any position and operating temperature.

Application sectors:

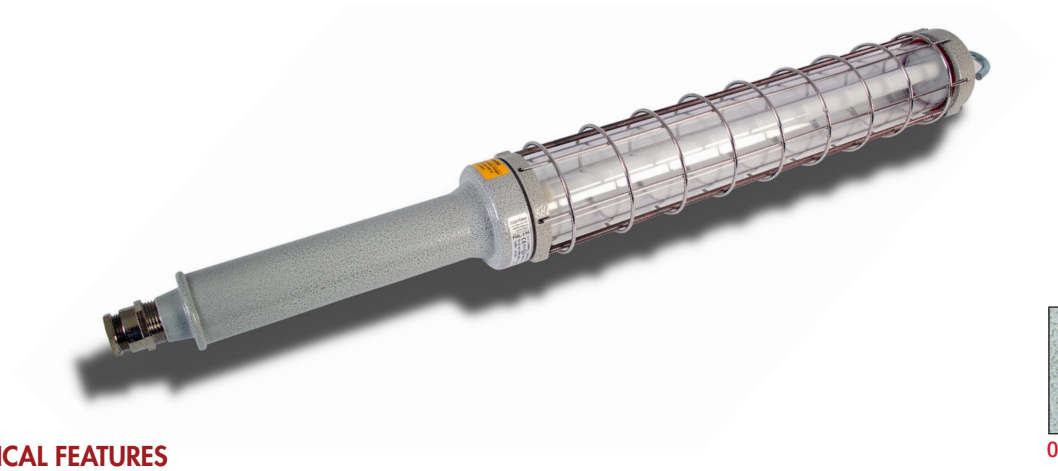
- Oil refineries
- Chemical and petrochemical plants
- Naval installations
- Farm produce applications
- Offshore plants
- Pharmaceutical industry
- Tank and silo inspections
- 100% Cortem product

CERTIFICATION DATA

Classification::	Group II	Category 2GD			
Installation:	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)			
Marking:	CE 0722 Ex II 2GD Ex e mb IIC T.. Gb - Ex tb IIIC T..°C Db IP66				
Certification:	ATEX CESI 09 ATEX 041X				
Standards:	CENELEC EN60079-0:2009, EN60079-1:2007, EN60079-31:2009, EN60598-1:2008+A1:2009, EN60598-2-8:2012, EN61547:2009 and EUROPEAN DIRECTIVE 2014/34/UE European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS				
Class temperature:	85°C (T6)				
Ambient temperature:	-40°C +50°C				
Degree of protection:	IP66				



FHL series Portable inspection lamp



ORIGINAL PRODUCT

MECHANICAL FEATURES

Handle and heads:	Low copper content aluminium alloy
External tube:	Polycarbonate with excellent transparency and brilliance characteristics (in the visible light field with wavelengths of between 400 and 700µm, the uniform transmission is of about 89%). Exceptional shock and UV resistance, flame retardant.
Seal:	Silicone resin between the aluminium heads and the polycarbonate tube
Guard:	Electro-polished 316L stainless steel.
Gaskets:	Acid, hydrocarbon and high temperature resistant silicone
Bolts and screws:	Stainless steel
Hook:	Stainless steel
Entries:	1 x 1/2" NPT entry. Lighting fixture complete with NAV1NB cable gland for non-armoured cable
Coating:	Polyester coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	2G11 (4-pins)
Ballast:	Electronic, installed in the handle
Rated voltage:	24 Vdc
Connection:	Direct to the connectors fixed on the electronic board L, N, Pe max section 2.5 mm^2
Wiring:	Silicone rubber cables with glass braid protection against high temperatures

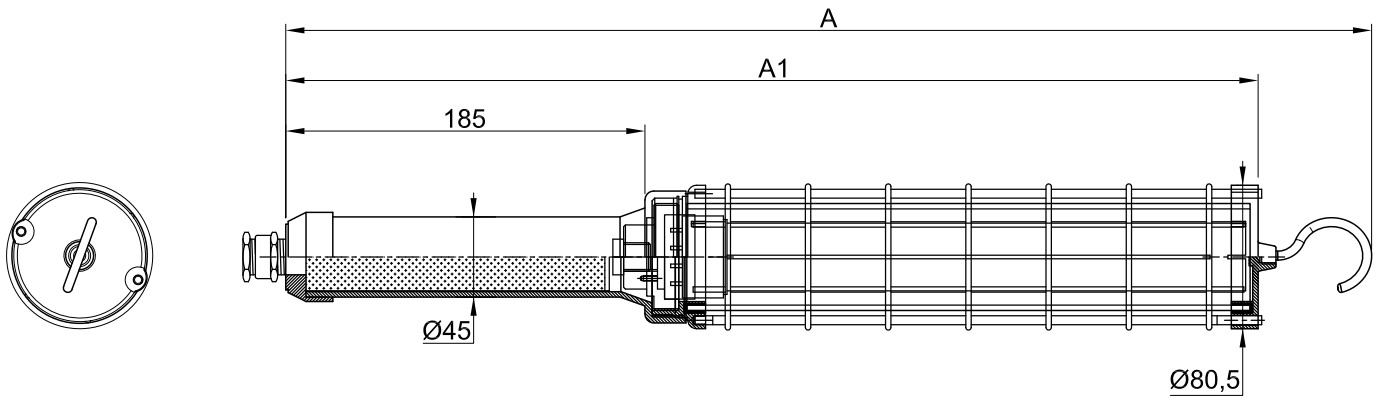
ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Compact 4 pin PL-L 24W fluorescent lamp for FHL-124 or PL-L36W for FHL-136
Eyebolt internal Ø 20mm
Protective reflector
Base for vertical use
Magnetic mounting
Cable winder (14 metres)
Portable lamp complete with 5m of 3x1.5mm^2 cable and Cortem plug model SPY (Code FHL-124C5 and FHL-136C5)
GAS UNI ISO 7/1 thread

FHL series selection chart

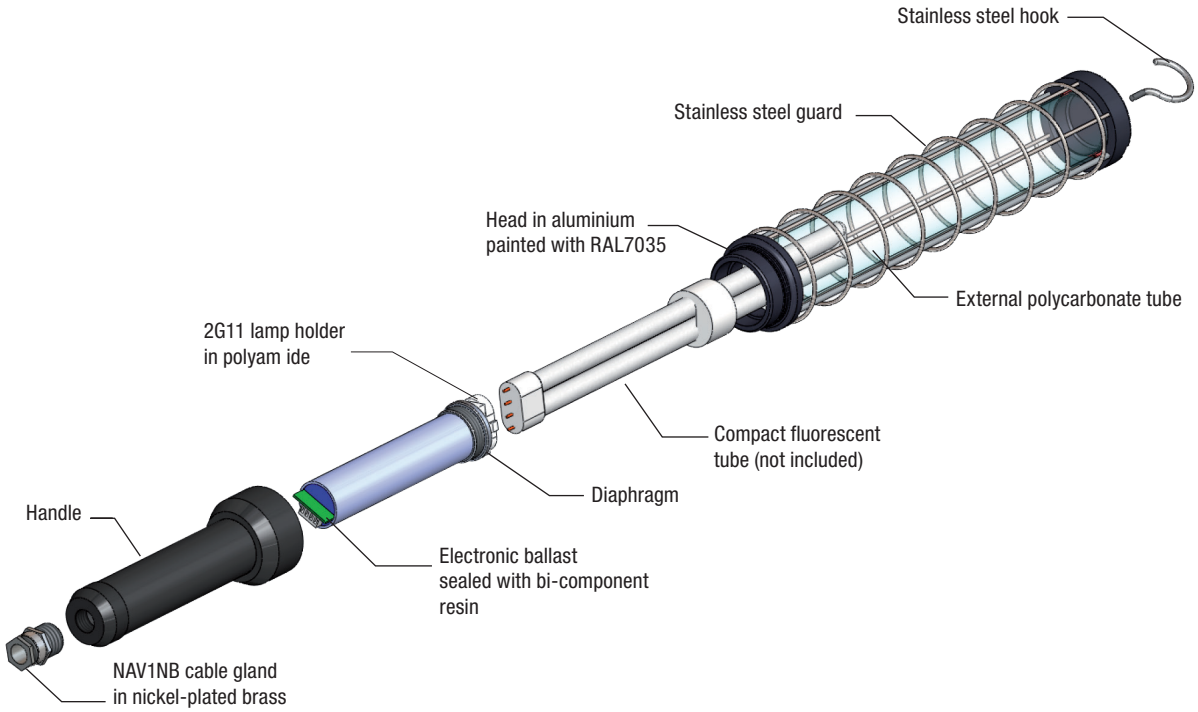
Code	Dimensions mm A	Dimensions mm A1	Lamp n°	Power supply	Watt	Class T.a. +50°C	Max. surface temp. °C	Weight kg
FHL-124	622	544	1	24 Vdc	24	T6	79,1	1.30
FHL-136	713	638	1	24 Vdc	36	T6	79,1	1.50

DIMENSIONAL DRAWING



Dimensions in mm

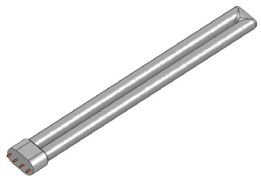
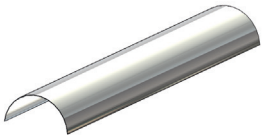
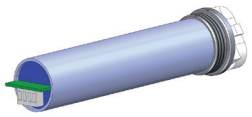
EXPLODED DIAGRAM OF PORTABLE LAMP



DON'T FORGET TO ORDER THE ACCESSORIES

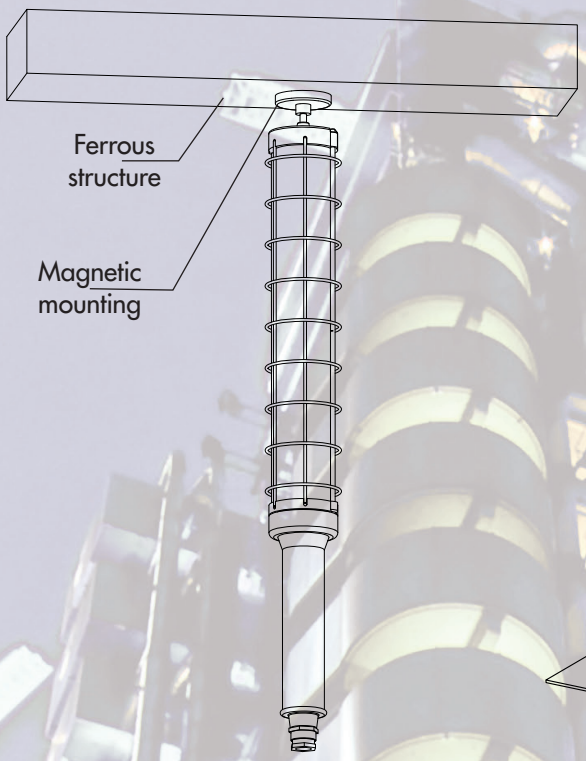
Example: Type of lighting fixture FHL-124 + Fluorescent tubes LAMP-PLL24W + Protective reflector G24-669 + Eyebolt GOF-8 + other...see key ACCESSORY

FHL series Accessories and spare parts available on request

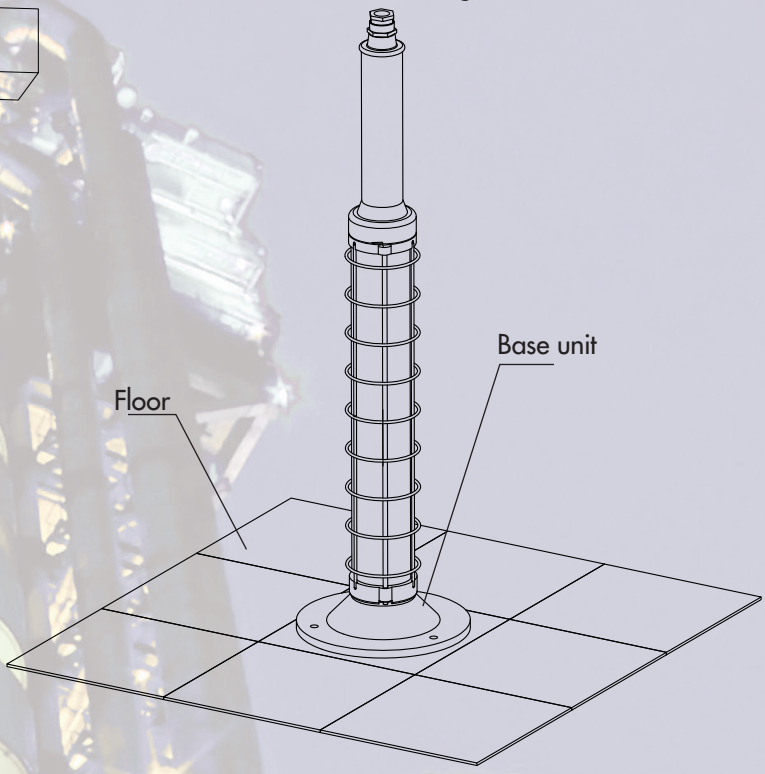
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Compact fluorescent tube	24 W	1800 lm (FSD24W)	LAMP-PLL24W	ACCESSORY SPARE PART
		36 W	2900 lm (FSD36W)	LAMP-PLL36W	
	Base for vertical use	FHL-124 FHL-136	Material: white RAL 7035 paint	G-161	ACCESSORY SPARE PART
	Permanent magnet for pendant or horizontal mounting	FHL-124 FHL-136	Material: round 63x14 magnet, traction 320N	FTN-32	ACCESSORY SPARE PART
	Eyebolt internal Ø20 mm	FHL-124 FHL-136	Material: galvanised steel	GOF-8	ACCESSORY SPARE PART
	Protective reflector	FHL-124	Material: white painted alumi-nium	G24-669	ACCESSORY SPARE PART
		FHL-136		G36-669	
	Automatic wall-mounted spring-loaded cable winder **Attention: the cable winder can only be used in safe areas**	FHL-124 FHL-136	Alluminium cable winder body with IP65 degree of protection Stainless steel support bracket Cable length - 23 metres	ZECA6189PRCIP65	ACCESSORY SPARE PART
	Electronic ballast sealed with sparkpro-of two-part resin	FHL-124	24 Vdc	G24-0558	SPARE PART
		FHL-136		G36-0558	
	Hook	FHL-124 FHL-136	Material: stainless steel	HOOK-M8	SPARE PART
	Cable gland		For models and codes, visit www.cortemgroup.com	NAV1NB	SPARE PART

Installation and mounting methods FHL series

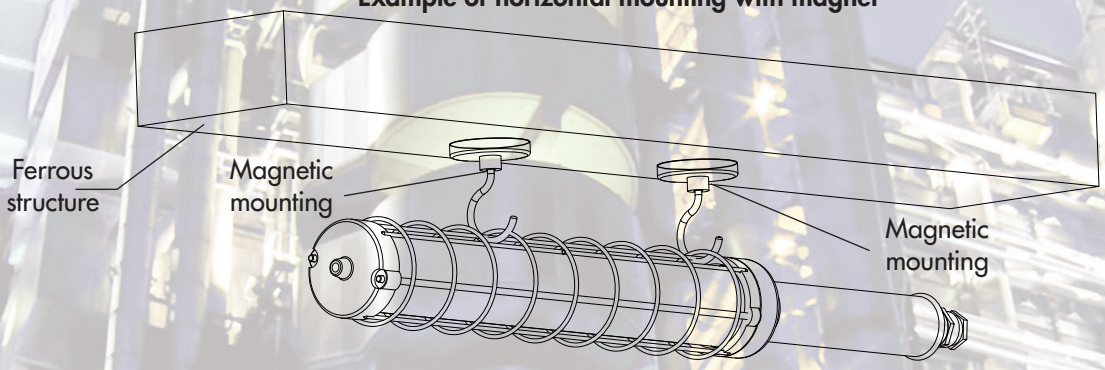
Example of pendant mounting with magnet



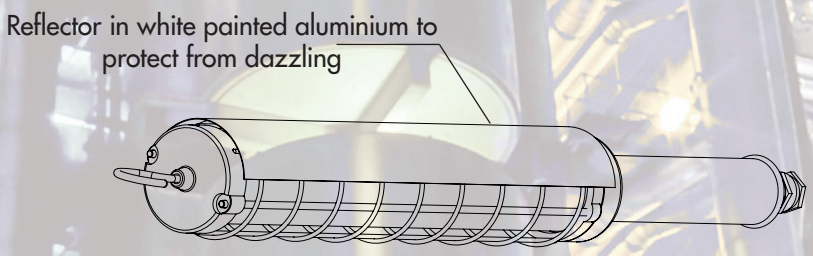
Example of the base being used for vertical mounting



Example of horizontal mounting with magnet



Protective reflector mounting system



RLFE

- Fast, easy installation
- Suitable for discharge lamps of up to 400W
- Robust and safe over time
- Zones 1, 2, 21, 22

Mounting bracket

Stainless steel guard

Ex e terminal housing



RLFE series Lighting fixtures for discharge lamps up to 400W

RLFE series lighting fixtures for discharge lamps are ideal for lighting large areas specifically in the chemical, on and off shore petrochemical industries. They are certified for use in Zones 1, 2, 21, 22 and comply with the 2014/34/UE directive. The body of the lighting fixture is made from low copper content aluminium alloy, the globe is made of borosilicate glass and has excellent thermal and mechanical properties. For this reason, the fixture can also be installed without a protective guard as specified in the relevant standards. In the RLFE series, the lamp and lamp holder are separated by a "chamber" housing the ballast and igniter that in turn are separated by a "Ex e" terminal box that is used to connect the lighting fixture to the power supply through a cable gland with an Ex (non barrier) seal as specified in EN/IEC 60079-14. The ease of access to the different "chambers" housing the electrical components means lower installation and maintenance costs and less wear and tear over time means a longer lifespan for the lamp.

Application sectors



Oil refineries | Perimeter lighting | Onshore plants | Offshore plants | Chemical and petrochemical plants | Gas plants | Naval installations | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD		
Installation:	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Marking:	CE 0722 Ex II 2GD Ex de IIC T.. Gb - Ex tb IIIC T..°C Db IP66			
Certification:	ATEX ITS 12 ATEX 17645X			
	IEC Ex ITS 12.0048X	All IEC Ex and TR CU certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE			
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2011, IEC 60079-1:2007, IEC 60079-7:2006, IEC 60079-31: 2008 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	See selection chart			
Ambient temperature:	-20°C +60°C			
Degree of protection:	IP66			

RLFE series Lighting fixtures for discharge lamps up to 400W



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy Fitted with cooling fins for better heat dissipation
Globe:	Shock and temperature resistant borosilicate glass sealed with aluminium shade ring
Gaskets:	Acid, hydrocarbon and high temperature resistant silicone
Guard:	Electro-polished stainless steel.
Bolts and screws:	Stainless steel
Entries:	2 x ISO M25 entries. Lighting fixture kit with PLG2IB plug and NAV25IB cable gland
Coating:	Polyester coating Ral 7035 (light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	E27 or E40 ceramic
Ballast:	Electromechanical
Rated voltage:	230 V AC
Rated frequency:	50 Hz
Connection:	Direct connection to the terminal board L, N, Pe. Section 4mm^2, suitable for input/output
Power factor:	0.96
Wiring:	Silicone rubber cables with glass braid protection against high temperatures

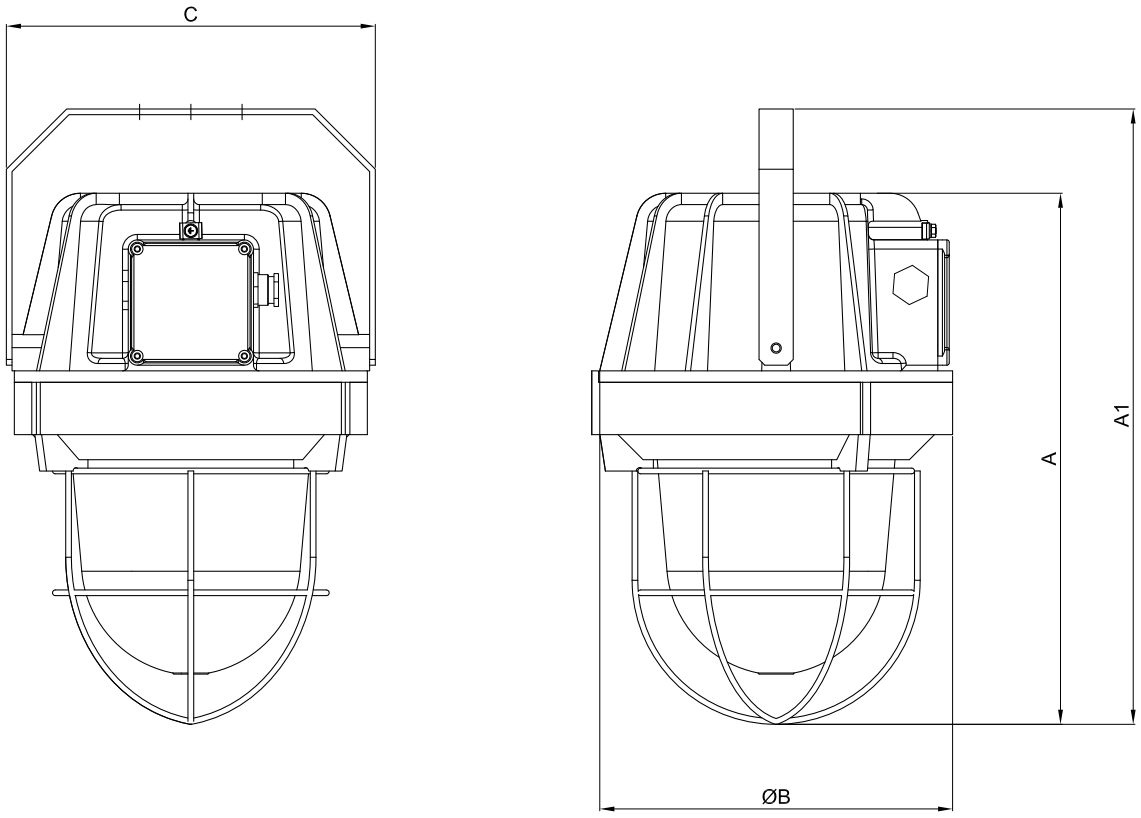
ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Discharge lamp
Different rated voltages
External reflector

RLFE series selection chart

Code	Dimensions mm				Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max surface temp. °C	Weight kg	mm
	A	A1	øB	C							
RLFE-80N1	425	495	236	250	Sodium vapour	E 27	70	T4	113	10,5	425x250x250
RLFE-80N2	425	495	236	250	Sodium vapour	E 40	100	T4	125	10,5	425x250x250
RLFE-80N4	425	495	236	250	Sodium vapour	E 40	150	T4	125	10,5	425x250x250
RLFE-80IM1	425	495	236	250	Metal halide	E 27	70	T4	113	10,5	425x250x250
RLFE-80IM2	425	495	236	250	Metal halide	E 27	100	T4	125	10,5	425x250x250
RLFE-80IM4	425	495	236	250	Metal halide	E 27	150	T4	125	10,5	425x250x250
RLFE-100N5	480	565	310	325	Sodium vapour	E 40	250	T4	132	19	480x325x325
RLFE-100IM5	480	565	310	325	Metal halide	E 40	250	T4	132	19	480x325x325
RLFE-110N6	575	645	310	325	Sodium vapour	E 40	400	T4	129	22	475x325x325
RLFE-110IM6	575	645	310	325	Metal halide	E 40	400	T4	129	22	475x325x325

DIMENSIONAL DRAWING



DON'T FORGET TO ORDER THE ACCESSORIES

Example: Type of lighting fixture + RLFE-110F5 | Lamp LAMP400WHQL | + | Dome reflector G110-672 | + | other... see key

RLFE series Accessories and spare parts available on request

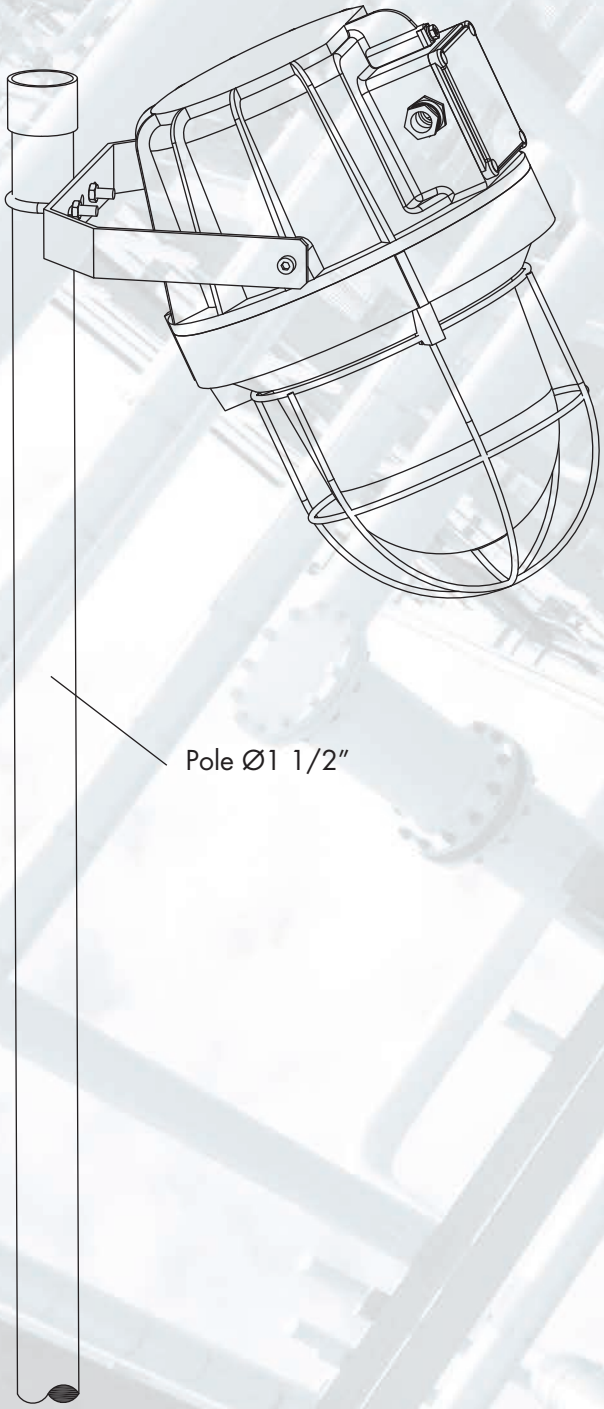
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	High pressure sodium vapour lamp	E27	70 W (SE70W)	LAMPNAV70WPLUS	
			100 W (SE100W)	LAMPNAV100WPLUS	
		E40	150 W (SE150W)	LAMPNAV150WPLUS	
			250 W (SE250W)	LAMPNAV250WPLUS	
			400 W (SE400W)	LAMPNAV400WPLUS	
	Metal halide lamp	E27	70 W (ME70W)	LAMP70WJM	
			100 W (ME100W)	LAMP100WJM	
			150 W (ME150W)	LAMP150WJM	
		E40	230 W (ME250W)	LAMP230WJM	
			360 W (ME400W)	LAMP360WJM	
	Dome reflector	RLFE-80	White painted aluminium	G80-672D	
		RLFE-100	Contact our Sales Office for availability		
		RLFE-110	Contact our Sales Office for availability		

RLFE series Accessories and spare parts available on request

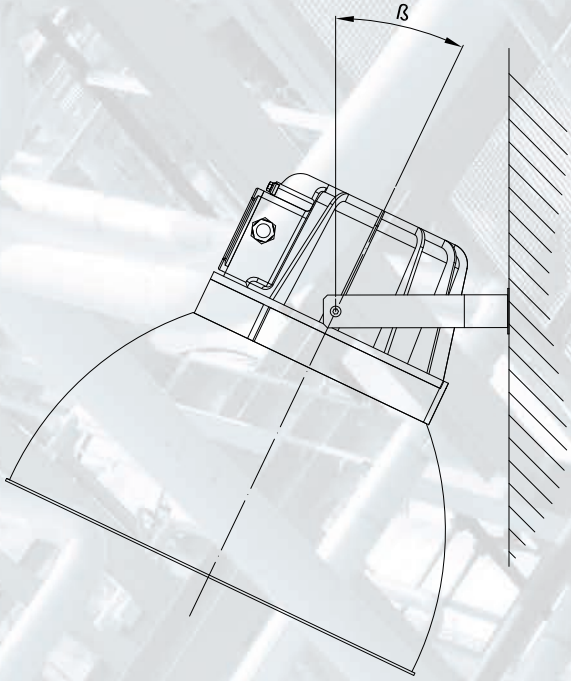
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Protective guard	RLFE-80	Material: Electro-polished stainless steel	G70-0417	SPARE PART
		RLFE-100		G100-0417	
		RLFE-110		G110-0417	
	Mounting bracket	RLFE-80	Material: galvanised steel	G1-670	SPARE PART
		RLFE-100 RLFE-110		G2-670	
	Ceramic lamp holder	E27 (RLFE-80)	250V 4A	PORT E-27/X	SPARE PART
		E27	250V 4A	PORT E-27	
		E40	750V 16A	PORT E-40	
	Igniter		50-400W	R100	SPARE PART
	Cable gland	ISO M25	(std. range cable 11÷20)	NAV25IB	SPARE PART
	Metal capacitor		7 µF	F-70	SPARE PART
			8 µFv	F-80	
			10 µF	F-125	
			12 µF	F-12	
			20 µF	F-20	
	Ballast for sodium vapour and metal halide lamp		70 W	W R-70NAAP	SPARE PART
			100 W	R-100NA	
			150 W	R-150NA	
			250 W	R-250NA	
			400 W (sodio)	R-400NA	
			400 W (ioduri)	R-400	

Installation and mounting methods

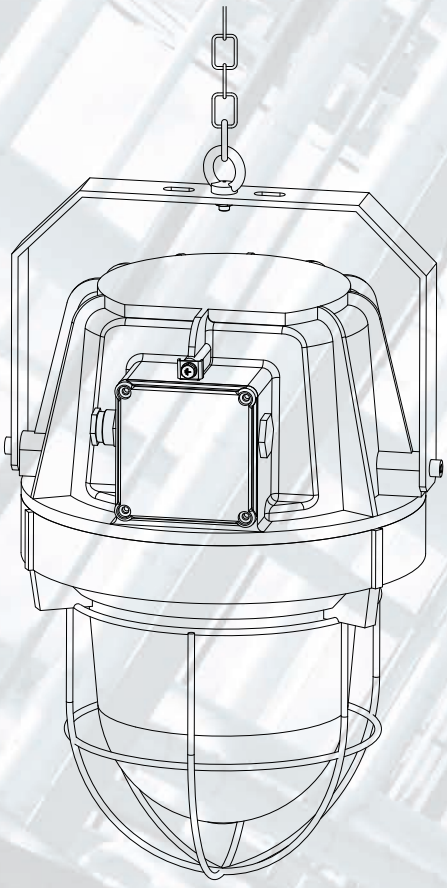
Example of pole mounting



Example of wall mounting



Example of ceiling mounting




WARNING
2018
s.n. 18/100118
RLFE-80
IECEx ITS 12.0048X
Made in ITALY
W 150NA
TESTED
f5101bc943

EVE

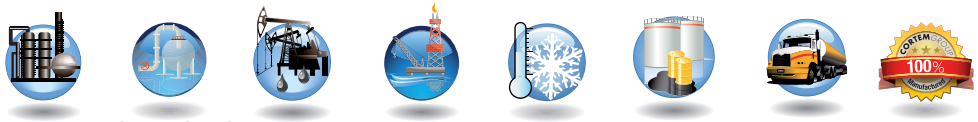
- Optimal performance at high (+60°C) and low (-50°C) temperatures
- Easy to install, low maintenance costs
- Zone 1, 2, 21, 22



EVE series Lighting fixtures for traditional and LED lamps

EVE series lighting fixtures have been specially designed for use in the petrochemical and oil refining industries as they combine beauty and functionality along with high performance and simplicity in complete compliance with the technological requirements of the "Ex sector". The low copper content aluminium alloy, shockproof borosilicate glass and electropolished stainless steel components make these lighting fixtures ideal for use in environments with corrosive atmospheric agents, salts and industrial pollution. Mechanical characteristics such as ceramic lamp holders with high heat resistance and insulating properties and acid-proof silicone gaskets guarantee a long working life with little maintenance. Scheduled maintenance work involves simply cleaning the glass that, thanks to its IP66 protection, can be safely cleaned with a wet cloth. Electrical connection is made via a terminal box in a "Ex e" compartment that allows the entry to the lighting fixture through an "Ex" O-ring (non barrier) cable gland as specified in the installation specification standards (EN/IEC 60079-14).

Application sectors



Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Low temperatures | Fuel depots | Fuel tanker loading/ unloading areas | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Categoria 2GD		
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Marking:	CE 0722 Ex II 2GD Ex de IIC T.. Gb - Ex tb IIIC T..°C Db IP66			
Certification:	ATEX CESI 12 ATEX 006			
	IEC Ex CES 07.0004	All IEC Ex and TR CU certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE			
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2011, IEC 60079-1: 2007, IEC 60079-7: 2007, IEC 60079-31: 2008 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	See the selection table			
Ambient temperature:	Standard -20°C +60°C	Special -50°C +60°C not possible for model EVE...100		
Degree of protection:	IP66			

EVE series Lighting fixtures for traditional and LED lamps





ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
Globe:	Shock and temperature resistant borosilicate glass with aluminium shade ring
Gaskets:	Acid/hydrocarbon resistant silicone
Guard:	Electro-polished stainless steel. Can also be supplied on request without a guard as the lighting fixture has passed the glass breakage test (4 Joule EN60079-0 / IEC60079-0)
Mounting:	See "EVE series dimensional drawings"
Bolts and screws:	Stainless steel
Entries:	See "EVE series dimensional drawings"
Coating:	Polyester coating Ral 7035 (Light grey)
Corrosion Resistance	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	E27 or E40 ceramic
Rated voltage:	230 V AC
Rated frequency:	50/60 Hz
Connection:	Direct connection to the terminal box L, N, Pe. Section 4mm^2

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

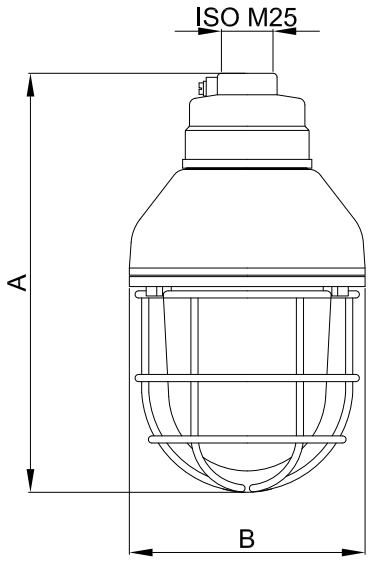
LED lamps
External reflector
Cable gland: NAV25IB for armored or NEV25IB for non-armored cable
Warning signs: G-0513
Swivel bracket for inclined mounting

EVEA series selection chart Pendant mounting

Code	Dimensions mm A	B	Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max Surface Temperature °C	Weight kg	mm
EVEA-5050	261	150	AL	E 27	70	T4	123	1,9	160x150x330
EVEA-5050	261	150	AL	E 27	105	T3	154	1,9	160x150x330
EVEA-5050	261	150	AL	E 27	140	T3	154	1,9	160x150x330
EVEA-5050	261	150	ELS	E 27	15	T6	84	1,9	160x150x330
EVEA-5050	261	150	LED	E 27	8	T6	74	1,9	160x150x330
EVEA-5050	323	170	EL	E 27	23	T5	86	2,7	190x170x390
EVEA-5060	323	170	ELS	E 27	23	T5	86	2,7	190x170x390
EVEA-5060	323	170	LED	E 27	12	T6	74	2,7	190x170x390
EVEA-5070	357	200	MIX	E 27	100	T3	152	3,7	210x200x430
EVEA-5070	357	200	MIX	E 27	160	T3	152	3,7	210x200x430
EVEA-5070	357	200	EL	E 27	33	T6	83	3,7	210x200x430
EVEA-5080	430	220	MIX	E 40	250	T3	166	6,0	230x220x510
EVEA-5080	430	220	ELS	E 27	42	T5	89	6,0	230x220x510
EVEA-50100	489	280	ELS	E 40	75	T5	88	8,7	280x280x850
EVEA-50100	489	280	ELS	E 40	105	T5	91	8,7	280x280x850
EVEA-50100	489	280	MIX	E 40	500	T3	185	8,7	280x280x850

PHASE OUT

EVEA Pendant mounting



Key

EL = Linear tubes (FBT)
AL = Halogen (HSGSA)
MIX = Mixed light (QB)
ELS = Spiral tubes (FB)
LED = With LED (DB)

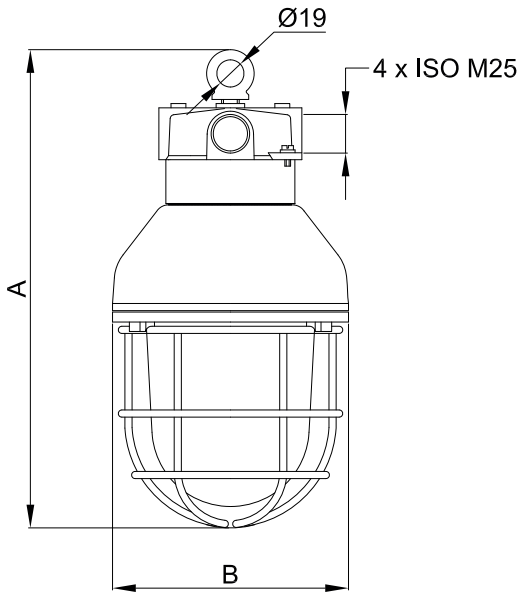
Dimensions in mm

EVEGC series selection chart Pendant mounting with eyebolt

Code	Dimensions mm A	Dimensions mm B	Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max Surface temperature °C	Weigth kg	mm
EVEGC-5050	296	150	AL	E 27	70	T4	123	2,1	160x150x330
EVEGC-5050	296	150	AL	E 27	105	T3	154	2,1	160x150x330
EVEGC-5050	296	150	AL	E 27	140	T3	154	2,1	160x150x330
EVEGC-5050	296	150	ELS	E 27	15	T6	84	2,1	160x150x330
EVEGC-5050	296	150	LED	E 27	8	T6	74	2,1	160x150x330
EVEGC-5060	358	170	EL	E 27	23	T5	86	2,8	190x170x390
EVEGC-5060	358	170	ELS	E 27	23	T5	86	2,8	190x170x390
EVEGC-5060	358	170	LED	E 27	12	T6	74	2,8	190x170x390
EVEGC-5070	389	200	MIX	E 27	100	T3	152	4,5	210x200x430
EVEGC-5070	389	200	MIX	E 27	160	T3	152	4,5	210x200x430
EVEGC-5070	389	200	EL	E 27	33	T6	83	4,5	210x200x430
EVEGC-5080	465	220	MIX	E 40	250	T3	166	6,3	230x220x510
EVEGC-5080	465	220	ELS	E 27	42	T5	89	6,3	230x220x510
EVEGC-50100	524	280	ELS	E 40	75	T5	88	9,2	280x280x850
EVEGC-50100	524	280	ELS	E 40	105	T5	91	9,2	280x280x850
EVEGC-50100	524	280	MIX	E 40	500	T3	185	9,2	280x280x850

PHASE OUT

EVEGC Pendant mounting with eyebolt



Key

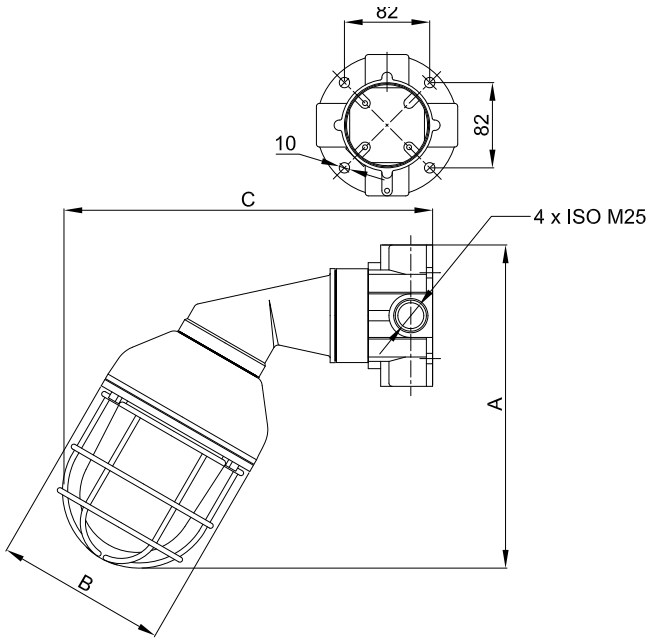
EL = Linear tubes (FBT)
AL = Halogen (HSGSA)
MIX = Mixed light (QB)
ELS = Spiral tubes (FB)
LED = With LED (DB)

Dimensions in mm

PHASE OUT

Code	Dimensions mm A	B	C	Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max Surface temperature °C	Weight kg	mm
EVEIX-5050	285	150	310	AL	E 27	70	T4	123	2,9	190x170x390
EVEIX-5050	285	150	310	AL	E 27	105	T3	154	2,9	190x170x390
EVEIX-5050	285	150	310	AL	E 27	140	T3	154	2,9	190x170x390
EVEIX-5050	285	150	310	ELS	E 27	15	T6	84	2,9	190x170x390
EVEIX-5050	285	150	310	LED	E 27	8	T6	74	2,9	190x170x390
EVEIX-5060	339	170	344	EL	E 27	23	T5	86	3,7	260x210x490
EVEIX-5060	339	170	344	ELS	E 27	23	T5	86	3,7	260x210x490
EVEIX-5060	339	170	344	LED	E 27	12	T6	74	3,7	260x210x490
EVEIX-5070	368	200	365	MIX	E 27	100	T3	152	4,7	260x210x490
EVEIX-5070	368	200	365	MIX	E 27	160	T3	152	4,7	260x210x490
EVEIX-5070	368	200	365	EL	E 27	33	T6	83	4,7	260x210x490
EVEIX-5080	435	220	409	MIX	E 40	250	T3	166	7,5	240x240x700
EVEIX-5080	435	220	409	ELS	E 27	42	T5	89	7,5	240x240x700
EVEIX-50100	488	280	448	ELS	E 40	75	T5	88	8,7	280x280x850
EVEIX-50100	488	280	448	ELS	E 40	105	T5	91	8,7	280x280x850
EVEIX-50100	488	280	448	MIX	E 40	500	T3	185	8,7	280x280x850

EVEIX Wall mounting with 30° bracket



Key

EL = Linear tubes (FBT)
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MIX = Mixed light (QB)
ELS = Spiral tubes (FB)
LED = With LED (DB)

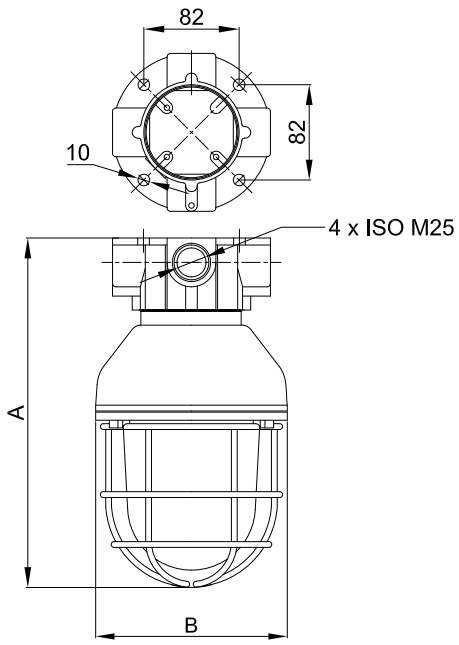
Dimensions in mm

EVEX series selection chart Ceiling mounting

Code	Dimensions mm A	B	Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max Surface temperature °C	Weight kg	mm
EVEX-5050	260	150	AL	E 27	70	T4	123	1,9	160x150x330
EVEX-5050	260	150	AL	E 27	105	T3	154	1,9	160x150x330
EVEX-5050	260	150	AL	E 27	140	T3	154	1,9	160x150x330
EVEX-5050	260	150	ELS	E 27	15	T6	84	1,9	160x150x330
EVEX-5050	260	150	LED	E 27	8	T6	74	1,9	160x150x330
EVEX-5060	322	170	EL	E 27	23	T5	86	3,3	190x170x390
EVEX-5060	322	170	ELS	E 27	23	T5	86	3,3	190x170x390
EVEX-5060	322	170	LED	E 27	12	T6	74	3,3	190x170x390
EVEX-5070	353	200	MIX	E 27	100	T3	152	4,5	210x200x430
EVEX-5070	353	200	MIX	E 27	160	T3	152	4,5	210x200x430
EVEX-5070	353	200	EL	E 27	33	T6	83	4,5	210x200x430
EVEX-5080	429	220	MIX	E 40	250	T3	166	4,5	210x200x430
EVEX-5080	429	220	ELS	E 27	42	T5	89	7,6	230x220x510
EVEX-50100	488	280	ELS	E 40	75	T5	88	7,6	230x220x510
EVEX-50100	488	280	ELS	E 40	105	T5	91	8,8	280x280x850
EVEX-50100	488	280	MIX	E 40	500	T3	185	8,8	280x280x850

PHASE OUT

EVEX Ceiling mounting



Key

EL = Linear tubes (FBT)
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LED = With LED (DB)

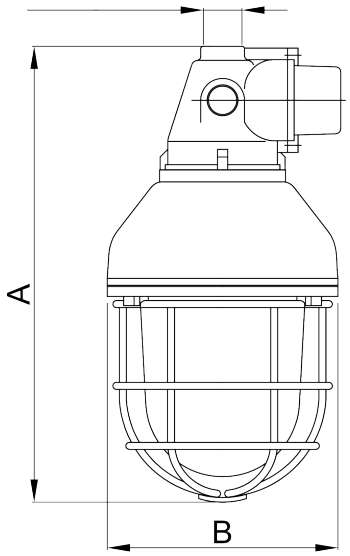
Dimensions in mm

Selection chart for lighting fixtures with loop-in/loop out systems

Code	Dimensions mm A	B	Lamp type	Lmap holder	Watt	Class Ta=+60°C	Max Surface temperature °C	Weight kg	mm
EVE -5050	294	150	AL	E 27	70	T4	123	2,2	160x150x330
EVE -5050	294	150	AL	E 27	105	T3	154	2,2	160x150x330
EVE -5050	294	150	AL	E 27	140	T3	154	2,2	160x150x330
EVE -5050	294	150	ELS	E 27	15	T6	84	2,2	160x150x330
EVE -5050	294	150	LED	E 27	8	T6	74	2,2	160x150x330
EVE-5060	356	170	EL	E 27	23	T5	86	3,5	190x170x390
EVE-5060	356	170	ELS	E 27	23	T5	86	3,5	190x170x390
EVE-5060	356	170	LED	E 27	12	T6	74	3,5	190x170x390
EVE-5070	387	200	MIX	E 27	100	T3	152	4,1	210x200x430
EVE-5070	387	200	MIX	E 27	160	T3	152	4,1	210x200x430
EVE-5070	387	200	EL	E 27	33	T6	83	4,1	210x200x430
EVE-5080	463	220	MIX	E 40	250	T3	166	6,5	230x220x510
EVE-5080	463	220	ELS	E 27	42	T5	89	6,5	230x220x510
EVE-50100	523	280	ELS	E 40	75	T5	88	9,0	280x280x510
EVE-50100	523	280	ELS	E 40	105	T5	91	9,0	280x280x510
EVE-50100	523	280	MIX	E 40	500	T3	185	9,0	280x280x510

PHASE OUT

EVE Pendant mounting



Key

EL = Linear tubes (FBT)
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LED = With LED (DB)

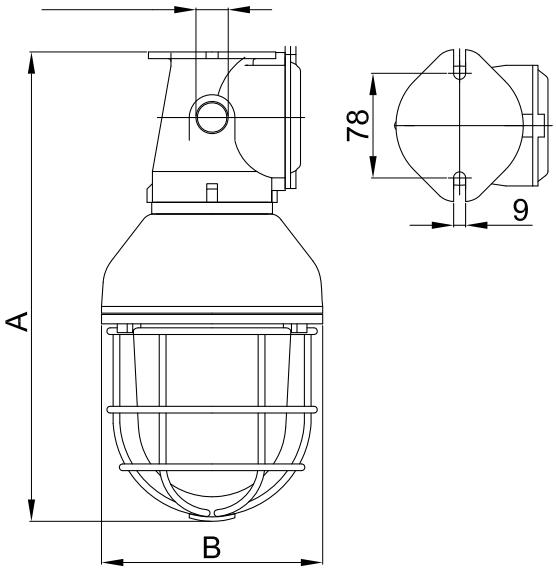
Dimensions in mm

Selection chart for lighting fixtures with loop-in/loop out systems

Code	Dimensions mm A	B	Lamp type	Lamp golder	Watt	Classe Ta=+60°C	Max Surface temperature °C	Weight kg	mm
EVES -5050	317	150	AL	E 27	70	T4	123	2,7	160x150x330
EVES -5050	317	150	AL	E 27	105	T3	154	2,7	160x150x330
EVES -5050	317	150	AL	E 27	140	T3	154	2,7	160x150x330
EVES -5050	317	150	ELS	E 27	15	T6	84	2,7	160x150x330
EVES -5050	317	150	LED	E 27	8	T6	74	2,7	160x150x330
EVES-5060	379	170	EL	E 27	23	T5	86	3,5	190x170x390
EVES-5060	379	170	ELS	E 27	23	T5	86	3,5	190x170x390
EVES-5060	379	170	LED	E 27	12	T6	74	3,5	190x170x390
EVES-5070	410	200	MIX	E 27	100	T3	152	4,0	210x200x430
EVES-5070	410	200	MIX	E 27	160	T3	152	4,0	210x200x430
EVES-5070	410	200	EL	E 27	33	T6	83	4,0	210x200x430
EVES-5080	486	220	MIX	E 40	250	T3	166	6,5	230x220x510
EVES-5080	486	220	ELS	E 27	42	T5	89	6,5	230x220x510
EVES-50100	546	280	ELS	E 40	75	T5	88	9,0	280x280x510
EVES-50100	546	280	ELS	E 40	105	T5	91	9,0	280x280x510
EVES-50100	546	280	MIX	E 40	500	T3	185	9,0	280x280x510

PHASE OUT

EVES Ceiling mounting



Dimensions in mm

Key

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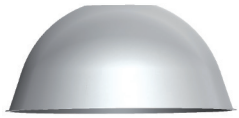
DON'T FORGET TO ORDER THE ACCESSORIES

Example: Type of lighting fixture + EVEA-5060 | Lamp LAMP-PL23 + | Dome reflector G60-427D + | other... see key

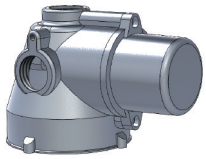
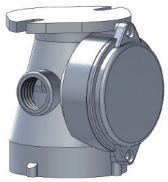
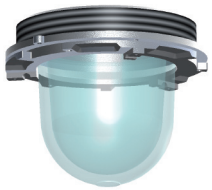
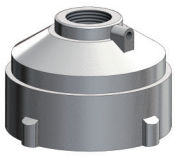
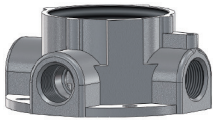
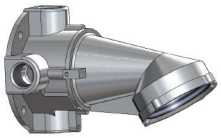
EVE... series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	LED lamp	E27	8 W (DB8W)	LAMPLED8W	ACCESSORY SPARE PART
		E27	12 W (DB12W)	LAMPLED12W	
	Cable gland		For models and codes, visit www.cortemgroup.com	NAV25IB NEV25IB	ACCESSORY SPARE PART
	Swivel bracket for inclined mounting (see example in installation methods)	50	Material: galvanised steel	G-0543	ACCESSORY SPARE PART
		60			
		70			
	Protective guard	50	Material: electro-polished stainless steel	G50-0417	SPARE PART
		60		G60-0417	
		70		G70-0417	
		80		G80-0417	
		100		G100-0417	
	Ceramic lamp holder	E27	250 V 4 A	PORT E-27	SPARE PART
		E40	750 V 16 A	PORT E-40	
	O-ring	Globo 50	Material: silicone	OR-4512SH70S	SPARE PART
		Globo 60		K15-131S	
		Globo 70		K33-131S	
		Globo 80		K34-131S	
		Globo 100		K27-131S	

EVE... series Accessories and spare parts available on request

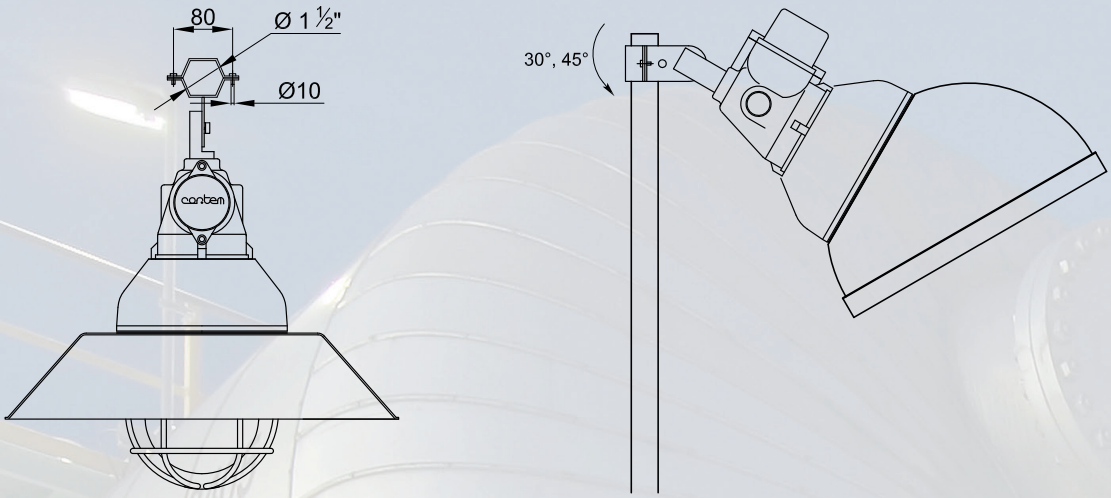
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Warning signs on the frame	50	Materials: translucent film on plexiglass and aluminium frame	G-0513	
		60		G-0513/1	
	Emergency Exit	G-0513 G-0513/1	Material: film translúcido	U-420/P	
	Emergency Exit on the right			U-420/P1	
	Emergency Exit on the left			U-420/P2	
	Emergency Exit upward			U-420/P3	
	Emergency Exit downward			U-420/P4	
	Reflector	50	White painted aluminium Stainless stee	G50-427 G50-427IN	
		60	White painted aluminium Stainless stee	G60-427 G60-427IN	
		70	White painted aluminium Stainless stee	G70-427 G70-427IN	
		80	White painted aluminium Stainless stee	G80-427 G80-427IN	
		100	White painted aluminium Stainless stee	G100-427 G100-427IN	
	Dome reflector	50	Contact our Sales Office for availability		
		60	White painted aluminium	G60-427D	
		70	Contact our Sales Office for availability		
		80	White painted aluminium	G80-427D	
		100	White painted aluminium	G100-427D	
	30° inclined dome reflector	50	Contact our Sales Office for availability		
		60	White painted aluminium	G60-427DI	
		70	White painted aluminium	G70-427DI	
		80	White painted aluminium	G80-427DI	
		100	Contact our Sales Office for availability		

EVE... series Accessories and spare parts available on request

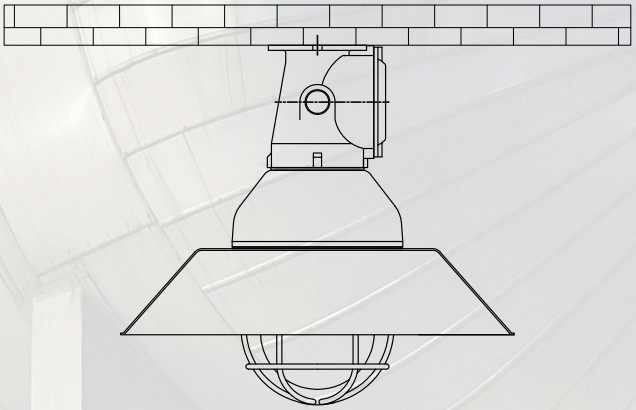
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Ex e pendant mounting EVE	50	3 x entries ISO M25	G-0444	SPARE PART
		60			
		70			
		80			
		100			
	Attacco tipo Ex e a soffitto EVES	50	2 x entries ISO M25	G-0439	SPARE PART
		60			
		70			
		80			
		100			
	Globe with shade ring	50	Borosilicate glass globe Threaded aluminium shade ring	G50-0440CM	SPARE PART
		60		G60-0440CM	
		70		G70-0440CM	
		80		G80-0440CM	
		100		G100-0440CM	
	Pendant eyebolt		Material: galvanised steel	G0F-8	SPARE PART
	Pendant mounting EVEA	50	1 x ISO M25 entry	G-0213I	SPARE PART
		60			
		70			
		80			
		100			
	Pendant mounting with eyebolt EVEGC	50	4 x ISO M25 entries	G-0216I	SPARE PART
		60			
		70			
		80			
		100			
	Ceiling mounting EVEX	50	4 x ISO M25 entries	G-0214I	SPARE PART
		60			
		70			
		80			
		100			
	Wall mounting with 30° bracket	50	4 x ISO M25 entries	G-0215I	SPARE PART
		60			
		70			
		80			
		100			

Installation and mounting methods

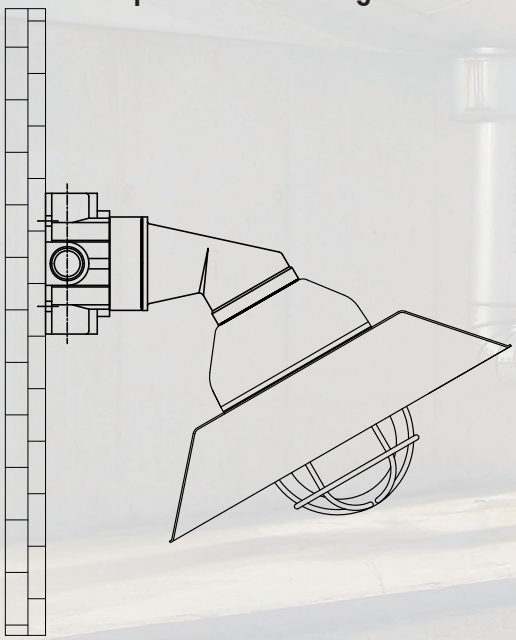
Example of swivel bracket mounting



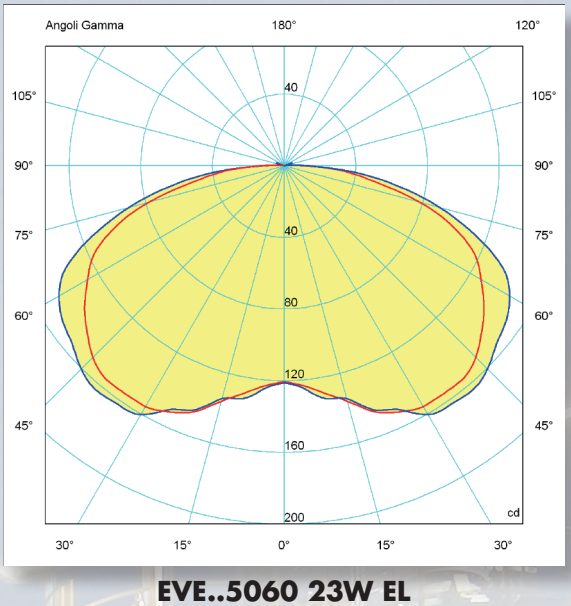
Example of ceiling mounting with lighting fixture for loop-in/loop-out



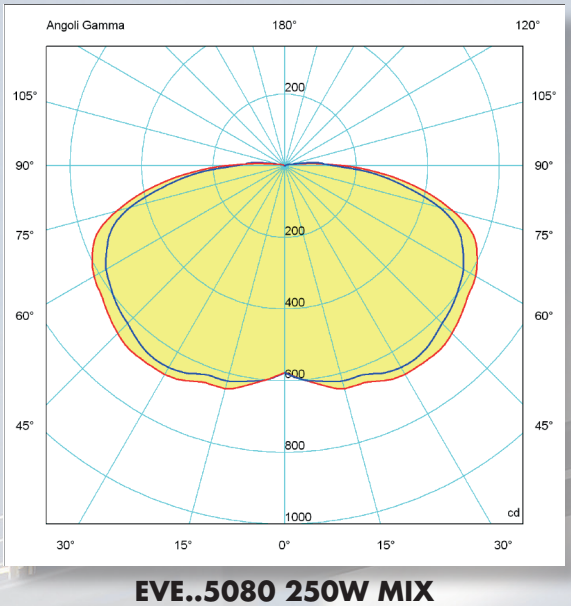
Example of wall mounting



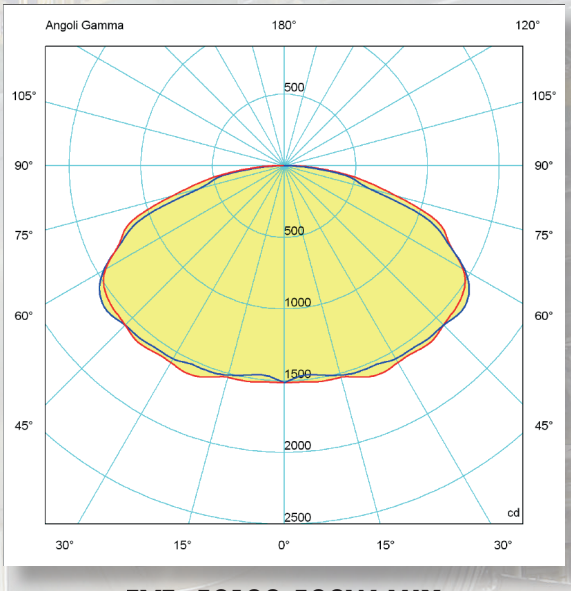
Dimensiones en mm



EVE..5060 23W EL



EVE..5080 250W MIX



EVE..50100 500W MIX

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.

= plane 90270

= plane 0180

CURRENTLY IN PHASE-OUT

EWE

- Suitable for installation with ambient temperature from -50°C to +60°C
- Suitable for discharge lamps of up to 150W
- Suitable for loop-in/loop-out connections
- Zones 1, 2, 21, 22



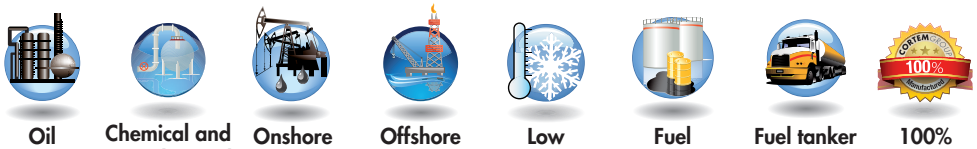
Ex terminal box housing for fast connection

CORTEM GROUP®

EWE series Lighting fixtures for discharge lamps of up to 150W

EWE series of lighting fixtures for discharge lamps has been designed in compliance with ATEX Directive 2014/34/UE for all those areas defined as "hazardous" due to the presence of potentially explosive flammable gases and dusts where good local lighting is a necessity. The low copper content aluminium alloy lamp body has cooling fins for better heat dissipation that ensures a longer lifespan and more effective electrical consumption. The borosilicate glass globe has excellent thermal and mechanical properties. For this reason, the fixture can also be installed without a protective guard. The resistance of this lighting fixture to high (+60°C) and low (-50°C) temperatures makes it ideal for use in any type of climatic condition and it can be used in plants worldwide.
In EWE series, the lamp and lamp holder are separated by a "chamber" housing the ballast and igniter. The chamber itself is separated by a "Ex e" terminal box. This box is used to connect the lighting fixture to the power supply through a cable gland with an Ex (non barrier) seal as specified in EN/IEC 60079-14. This easy access to the different "chambers" housing the electrical components helps reducing installation and maintenance costs.

Application sectors



Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Low temperatures | Fuel depots | Fuel tanker loading/ unloading areas | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD		
Installation: EN 60079.14	zona 1 - zona 2 (Gas)	zona 21 - zona 22 (Dust)		
Marking:	CE 0722 Ex II 2GD Ex de IIC T.. Gb - Ex tb IIIC T..°C Db IP66			
Certification	ATEX CESI 12 ATEX 006			
	IEC Ex CES 07.0004	All IEC Ex and TR CU certification data can be downloaded at www.cortemgroup.com		
	TR CU DISPONIBILE			
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2011, IEC 60079-1: 2007, IEC 60079-31: 2008 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	See selection chart			
Max surface temperature:	Standard -20°C +60°C	Special -50°C +60°C		
Degree of protection:	IP66			

EWE series Lighting fixtures for discharge lamps up to 150W



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
Globe:	Shock and temperature resistant borosilicate glass sealed with aluminium shade ring
Gaskets:	Silicone acid/hydrocarbon resistant
Guard:	Electro-polished stainless steel. Can also be supplied on request without a guard as the lighting fixture has passed the glass breakage test (4 Joule EN60079-0 / IEC60079-0)
Mounting:	See "EWE series dimensional drawings"
Bolts and screws:	Stainless steel
Entries:	ISO M25 threads
Coating:	Epoxy coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	E27 or E40 ceramic
Ballast:	Electromechanical
Rated voltage:	230 V AC
Rated frequency:	50 Hz
Connection:	Direct connection to the terminal box L, N, Pe. Section 4mm^2, suitable for entry/exit
Power factor:	0.96
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

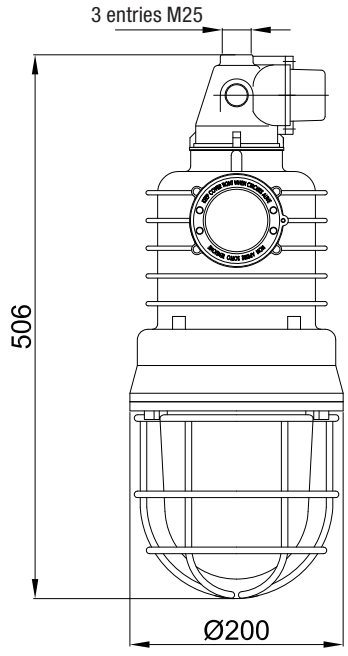
Discharge lamp
Different rated voltages
Rated frequency: 60 Hz at 230 V (code EWE-5070N1/**60**)
External reflector
Cable gland: NAV20IB for armoured cable or NEV20IB for non-armoured cable
30° supporting bracket

EWE series selection chart

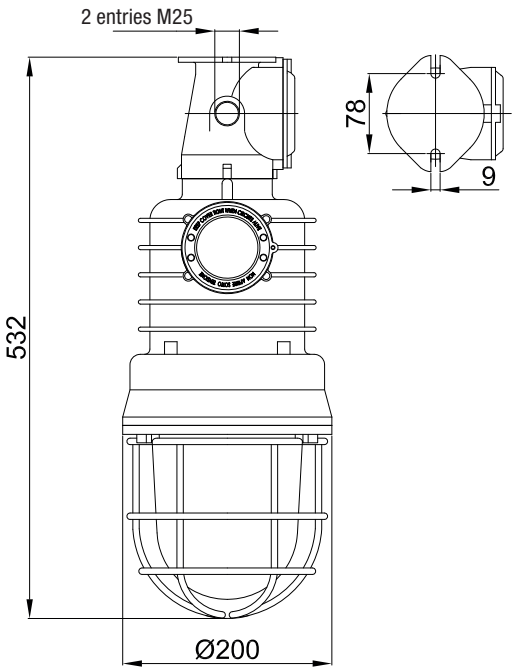
Code	Lamp type	Lamp holder	Watt	Class Ta=+60°C	Max surface temperature °C	Weight kg	mm
EWE-5070N1	Sodium vapour	E 27	70	T4	130	7,7	260x210x580
EWE-5070N2	Sodium vapour	E 40	100	T4	126	8,1	260x210x580
EWE-5070IM1	Metal halide	E 27	70	T4	126	7,7	260x210x580
EWE-5070IM2	Metal halide	E 27	100	T4	128	7,8	260x210x580
EWE-5070IM4	Metal halide	E 27	150	T3	161	8,6	260x210x580
EWES-5070N1	Sodium vapour	E 27	70	T4	130	7,4	260x210x580
EWES-5070N2	Sodium vapour	E 40	100	T4	126	7,8	260x210x580
EWES-5070IM1	Metal halide	E 27	70	T4	128	7,4	260x210x580
EWES-5070IM2	Metal halide	E 27	100	T4	128	7,5	260x210x580
EWES-5070IM4	Metal halide	E 27	150	T3	161	8,5	260x210x580

DIMENSIONAL DRAWINGS

EWE-5070... Pendant mounting



EWES-5070... Ceiling mounting

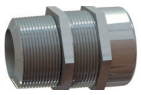
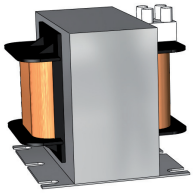
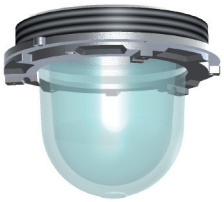


Dimensions in mm

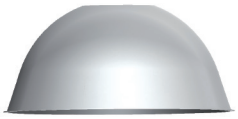
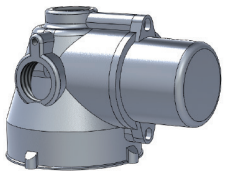
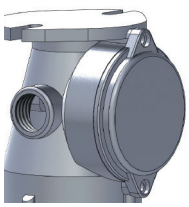
DON'T FORGET TO ORDER THE ACCESSORIES

Example: Type of lighting fixture EWE-5070N2 + Lampada LAMPNAV10 0W + Dome reflectorG70-427DI + other... see key

EWE series Accessories and spare parts available on request

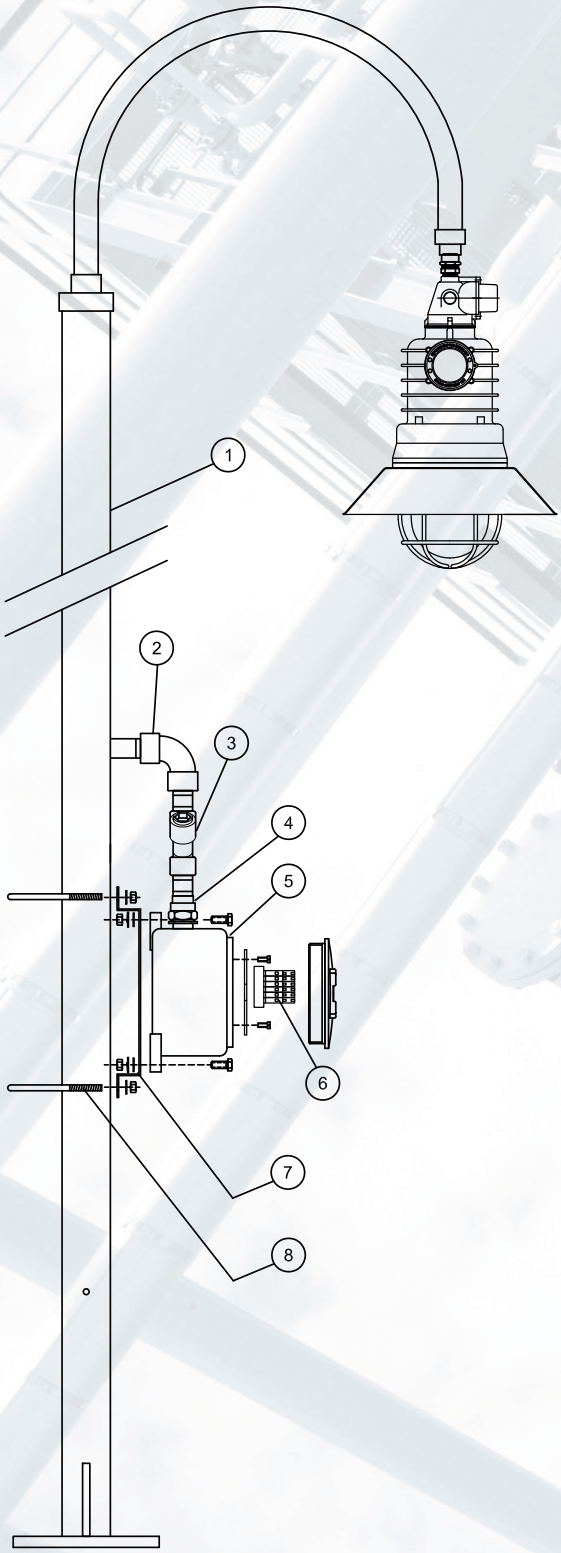
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	High pressure sodium vapour lamp	E27	70 W (SE70W)	LAMPNAV70WPLUS	ACCESSORY SPARE PART
		E40	100 W (SE100W)	LAMPNAV100WPLUS	
	Metal halide lamp	E27	100 W (ME100W)	LAMP100WJM	ACCESSORY SPARE PART
			150 W (ME150W)	LAMP150WJM	
	Cable gland		For models and codes, visit www.cortemgroup.com	NAV25IB NEV25IB	ACCESSORY SPARE PART
	O-ring		Material: silicone	G70-427 G70-427IN	SPARE PART
	Ballast for sodium vapour and metal halide lamp		70 W	R-70NAAP	SPARE PART
			100 W	R-100NA	
			150 W	R-150NA	
	Metallic capacitor	5070N1	12,5µF 250V	F-12,5	SPARE PART
		5070N2	12,5µF 250V	F-12,5	
		5070IM2	12,5µF 250V	F-12,5	
		5070IM4	20µF 250V	F-20	
	Ceramic lamp holder	E27 E40	250V 4A 750V 16A	PORT E-27 PORT E-40	SPARE PART
	Igniter		50-400 W	R100	SPARE PART
	Globe with shade ring		Borosilicate glass globe Threaded aluminium shade ring	G70-0440CM	SPARE PART

EWE series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Reflector		White painted aluminium Stainless steel	G70-427 G70-427IN	
	Dome reflector		Contact our Sales Office for availability		
	30° inclined dome reflector		White painted aluminium	G70-427DI	
	Protective guard		Material: Electro-polished stainless steel	G70-0417	
	ISO M25-M8 Pendant eyebolt with reduction		In galvanised steel	G0F-8 + PLG2IG/8	
	30° support bracket EWES		In galvanised steel	G-663	
	Ex e pendant mounting EWE		3 x entries ISO M25	G-0444	
	Ex e ceiling mounting EWAE		2 x entries ISO M25	G-0439	

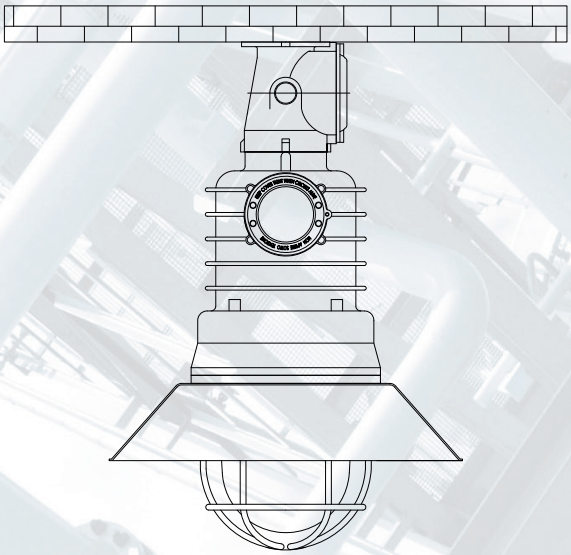
Methods of installation and assembly

Example of pole mounting

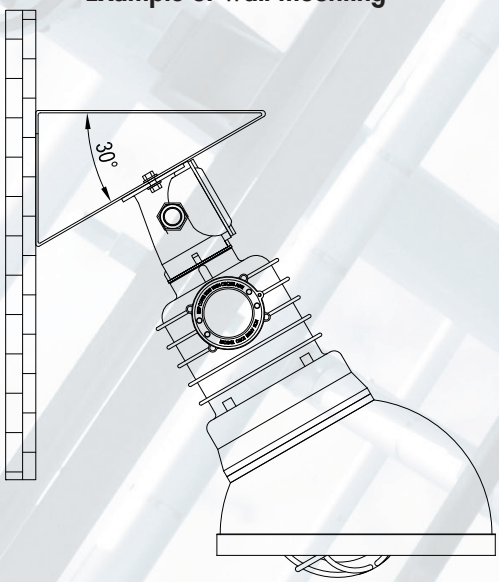


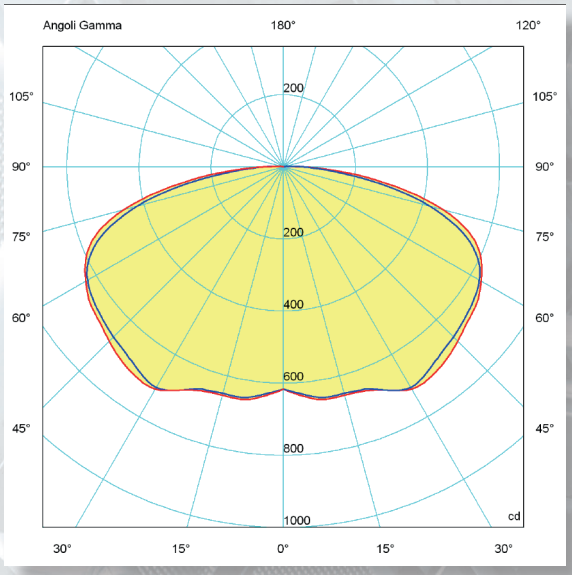
1. Hot dip galvanised steel pole
2. ELF curve
3. EYS sealing fitting
4. RMM 3-piece union
5. GUB-01 junction box
6. Terminal box
7. Support frame
8. UBD clevis

Example of ceiling mounting

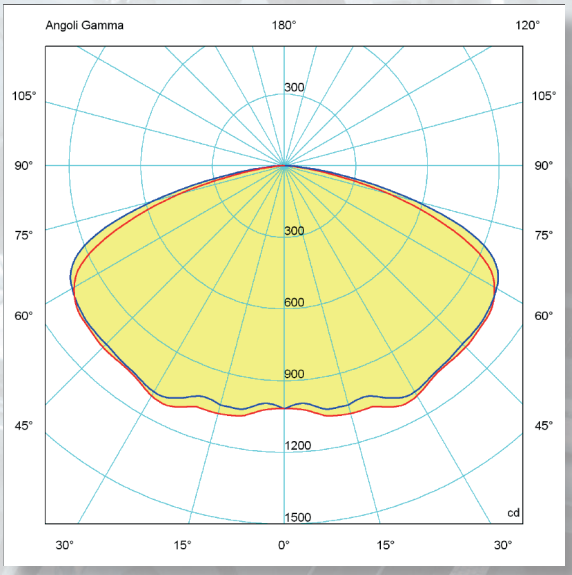


Example of wall mounting





EWE-5070 70W sodium



EWE-5070 100W sodium

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

= plane 90270

= plane 0180

CURRENTLY IN PHASE-OUT

EWAE

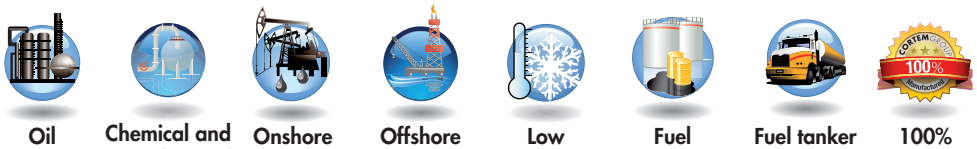
- Suitable for installation with ambient temperature range from -50°C to +60°C
- Suitable for discharge lamps of up to 400W
- Suitable for loop-in/loop-out connections
- Zones 1, 2, 21, 22



EWAE series Lighting fixtures for discharge lamps up to 400W

EWAE series of lighting fixtures for discharge lamps has been designed in compliance with ATEX Directive 2014/34/UE for all those areas defined as "hazardous" due to the presence of potentially explosive flammable gases and dusts where good local lighting is a necessity. The body of the lamp is made low copper content aluminium alloy, the globe is made borosilicate glass and has excellent thermal and mechanical properties. For this reason, the fixture can also be installed without a protective guard. The resistance of this lighting fixture to high (+60°C) and low (-50°C) temperatures makes it ideal for use in any type of climatic condition and it can be used in plants worldwide.
In EWAE series, the lamp and lamp holder are separated by a "chamber" housing the ballast and igniter. The chamber itself is separated by a "Ex e" terminal box. This box is used to connect the lighting fixture to the power supply through a cable gland with an Ex (non barrier) seal as specified in EN/IEC 60079-14. This easy access to the different "chambers" housing the electrical components helps installation and maintenance costs.

Application sectors



Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Low temperatures | Fuel depots | Fuel tanker loading/ unloading areas | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD		
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Marking:	CE 0722 Ex II 2GD Ex de IIC T.. Gb - Ex tb IIIC T..°C Db IP66			
Certification:	ATEX CESI 12 ATEX 006			
	IEC Ex CES 07.0004	All IEC Ex and TR CU certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE			
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2011, IEC 60079-1: 2007, IEC 60079-7: 2007, IEC 60079-31: 2008 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	See selection chart			
Ambient temperature:	Standard -20°C +60°C	Special -50°C +60°C not possible for model EWAE...100		
Degree of protection:	IP66			

EWAE series Lighting fixtures for discharge lamps up to 400W



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy Complete with housing for electrical components
Globe:	Shock and high temperature resistant borosilicate glass with aluminium shade ring
Gaskets:	Silicone acid/hydrocarbon resistant
Guard:	Electro-polished stainless steel. Can also be supplied on request without a guard as the lighting fixture has passed the glass breakage test (4 Joule EN60079-0 / IEC60079-0)
Mounting:	See "EWAE series dimensional drawings"
Bolts and screws:	Stainless steel
Entries:	ISO M25 threads. See "EWAE series dimensional drawings"
Coating:	Polyester coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	E27 or E40 ceramic
Ballast:	Electromechanical
Rated voltage:	230 V AC
Rated frequency:	50 Hz
Connection:	Direct connection to the terminal box L, N, Pe. Section 4mm^2, suitable for entry/exit
Power factor:	0.96
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

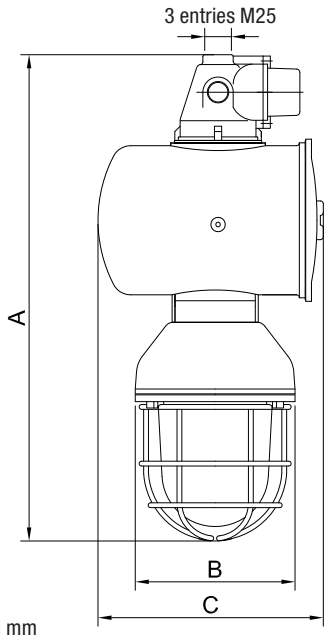
Discharge lamp
External reflector
Cable gland: NAV20IB for armoured cable or NEV20IB for non-armoured cable
Different rated voltages
Rated frequency: 60Hz at 230 V (code EWAE-5080F5/**60**)
Bracket for pole mounting
30° supporting bracket

EWAE series selection chart

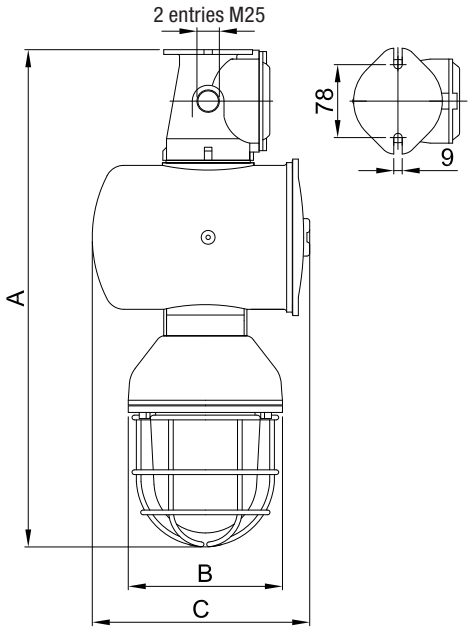
Code	Dimension mm			Lamp type	Lamp hoder	Watt	Class Ta=+60°C	Max surface temperature °C	Weight kg	mm
	A	B	C							
EWAE-5080N2	643	220	235	Sodium vapour	E 40	100	T4	132	10,1	240x240x660
EWAE-5080N4	643	220	235	Sodium vapour	E 40	150	T4	132	10,1	240x240x660
EWAE-5080N5	643	220	235	Sodium vapour	E 40	250	T3	159	10,1	240x240x660
EWAE-50100N6	710	280	265	Sodium vapour	E 40	400	T3	164	15,5	280x280x850
EWAE-5080IM2	643	220	235	Metal halide	E 27	100	T4	130	10,1	240x240x660
EWAE-5080IM4	643	220	235	Metal halide	E 27	150	T4	130	10,1	240x240x660
EWAE-5080IM5	643	220	235	Metal halide	E 40	250	T3	180	10,1	240x240x660
EWAE-50100IM6	710	280	265	Metal halide	E 40	400	T3	163	16,3	280x280x850
EWAES-5080N2	670	220	235	Sodium vapour	E 40	100	T4	132	10,1	240x240x670
EWAES-5080N4	670	220	235	Sodium vapour	E 40	150	T4	132	10,1	240x240x670
EWAES-5080N5	670	220	235	Sodium vapour	E 40	250	T3	159	10,1	240x240x670
EWAES-50100N6	736	280	265	Sodium vapour	E 40	400	T3	164	16,5	280x280x850
EWAES-5080IM2	670	220	235	Metal halide	E 27	100	T4	130	10,1	240x240x670
EWAES-5080IM4	670	220	235	Metal halide	E 27	150	T4	130	10,1	240x240x670
EWAES-5080IM5	670	220	235	Metal halide	E 40	250	T3	180	10,1	240x240x670
EWAES-50100IM6	736	280	265	Metal halide	E 40	400	T3	163	16,5	280x280x850

DIMENSIONAL DRAWINGS

EWAE-... Pendant mounting



EWAES-... Ceiling mounting

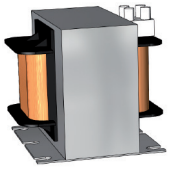
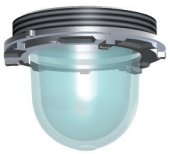


Dimensions in mm

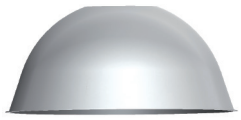
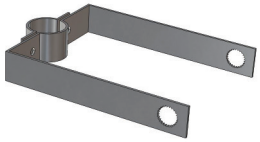
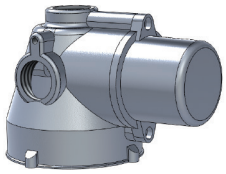
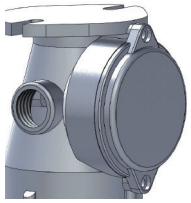
DON'T FORGET TO ORDER THE ACCESSORIES

Example: Type of lighting fixture + EWAE-5080F5 | Lamp LAMP250WHQL | + | Dome reflector G80-427D | + | other... see key

EWAE series Accessories and spare parts available on request

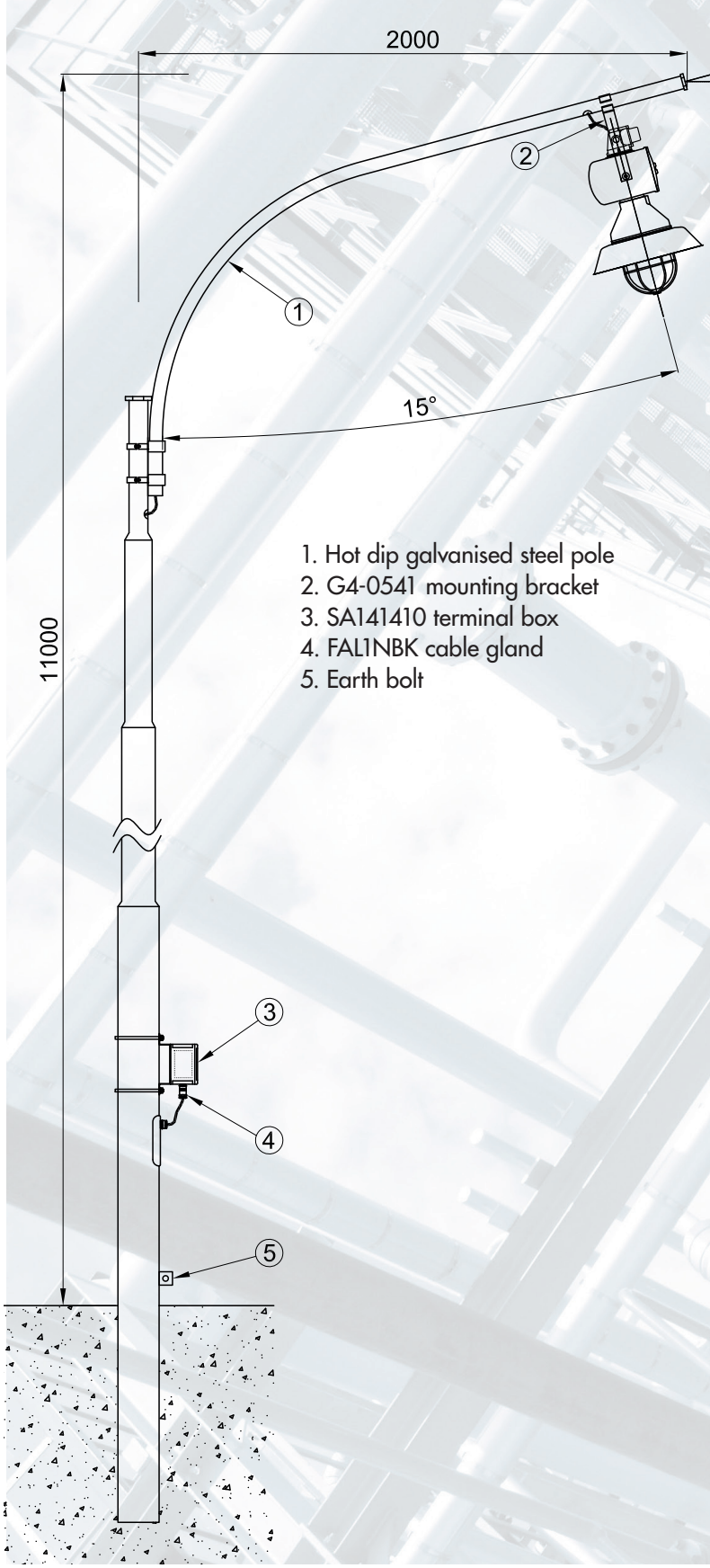
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	High pressure sodium vapour lamp	E40	100 W (SE100W)	LAMPNAV100WPLUS	ACCESSORY SPARE PART
			150 W (SE150W)	LAMPNAV150WPLUS	
			250 W (SE250W)	LAMPNAV250WPLUS	
			400 W (SE400W)	LAMPNAV400WPLUS	
	Metal halide lamp	E27	100 W (ME100W)	LAMP100WJM	ACCESSORY SPARE PART
			150 W (SE150W)	LAMP150WJM	
		E40	230 W (SE250W)	LAMP230WJM	
			360 W (SE400W)	LAMP360WJM	
	Cable gland	ISO M25	For models and codes, visit www.cortemgroup.com	NAV25IB NEV25IB	ACCESSORY SPARE PART
	O-ring	Globo 80	Material: silicone	K34-131S	SPARE PART
		Globo 100		K27-131S	
	Ballast for sodium vapour and metal halide lamp		100 W	R-100NA	SPARE PART
			150 W	R-150NA	
			250 W	R-250NA	
			400 W (sodium) 400 W (halide)	R-400NA R-400	
	Metal capacitor	5080N2	16µF 250V	F-16	SPARE PART
		5080N4	20µF 250V	F-20	
		5080N5	35µF 250V	F-35	
		50100N6	50µF 250V	F-50	
		5080IM2	12,5µF 250V	F-12,5	
		5080IM4	20µF 250V	F-20	
		5080IM5	30µF 250V	F-20	
		50100IM6	40µF 250V	F-30	
	Ceramic lamp holder	E27	250V 4A	PORT E-27	SPARE PART
		E40	750V 16A	PORT E-40	
	Igniter		50-400 W	R100	SPARE PART
	Globe with shade ring	80	Borosilicate glass globe Threaded aluminium shade ring	G80-0440CM	SPARE PART
		100		G100-0440CM	
	Protective guard	80	Material: Electro-polished stainless steel	G80-0417	SPARE PART
		100		G100-0417	

EWAE series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Reflector		White painted aluminium Stainless steel	**G80-427** **G80-427IN**	ACCESSORY SPARE PART
			White painted aluminium Stainless steel	**G100-427** **G100-427IN**	
	Dome reflector		White painted aluminium	**G80-427D**	ACCESSORY SPARE PART
			White painted aluminium	**G100-427D**	
	30° inclined dome reflector		White painted aluminium	**G80-427DI**	ACCESSORY SPARE PART
			Contact our Sales Office for availability		
	Galvanised steel brackets for pole mounting (see installation and mounting methods	80 100	1 1/4" pole	**G4-0541** **G4-0542**	SPARE PART
		80 100	1 1/2" pole	**G5-0541** **G5-0542**	
		80 100	2" pole	**G6-0541** **G6-0542**	
		80 100	2 1/2" pole	**G7-0541** **G7-0542**	
	ISO M25-M8 pendant eyebolt with reduction		In galvanised steel	**GOF-8** **+** **PLG2IG/8**	ACCESSORY SPARE PART
	30° support bracket EWAES		In galvanised steel	**G-663**	ACCESSORY SPARE PART
	Ex e pendant mounting EWAE		3 x entries ISO M25	**G-0444**	SPARE PART
	Ex e ceiling mounting EWAES		2 x entries ISO M25	**G-0439**	SPARE PART

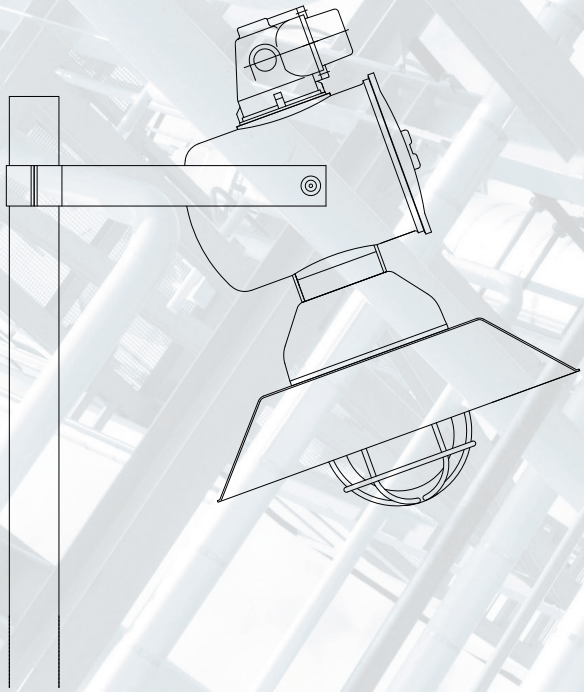
Installation and mounting methods

Example of pole bracket

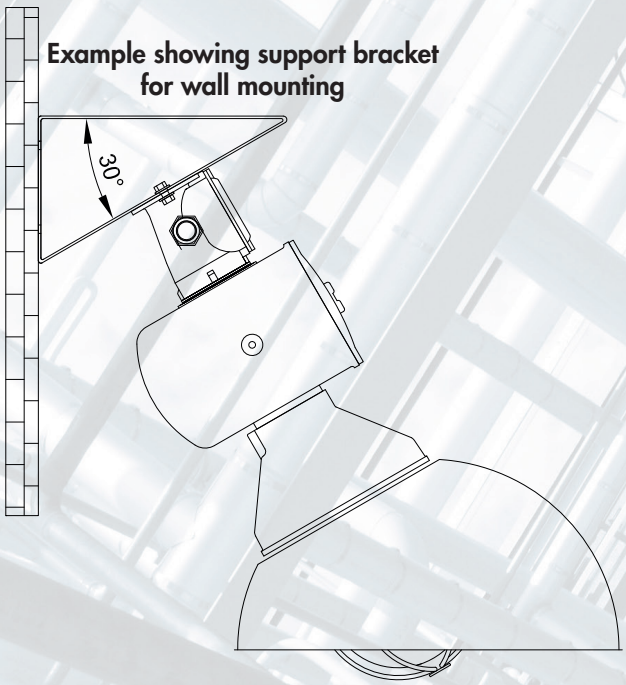


1. Hot dip galvanised steel pole
2. G4-0541 mounting bracket
3. SA141410 terminal box
4. FAL1NBK cable gland
5. Earth bolt

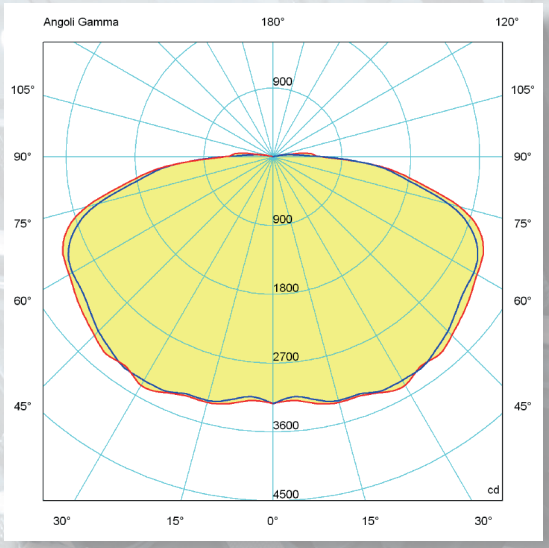
Example showing support bracket on vertical pole mounting



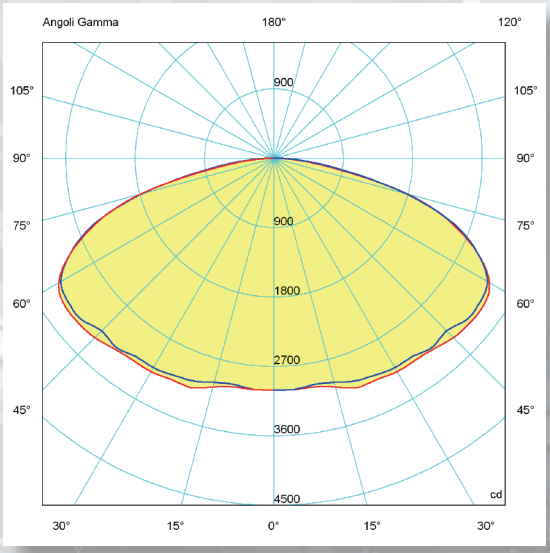
Example showing support bracket for wall mounting



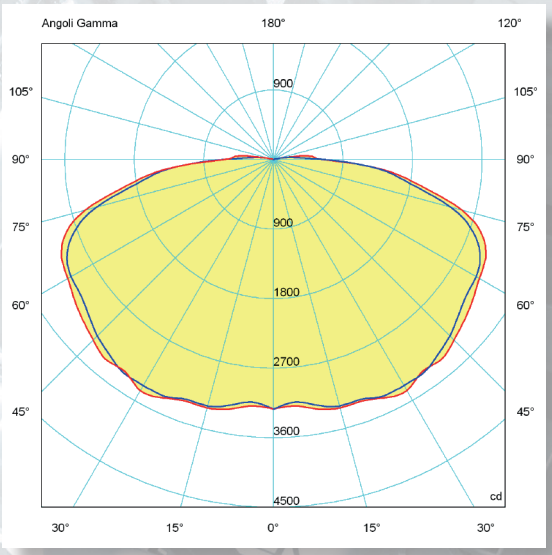
Photometric diagram



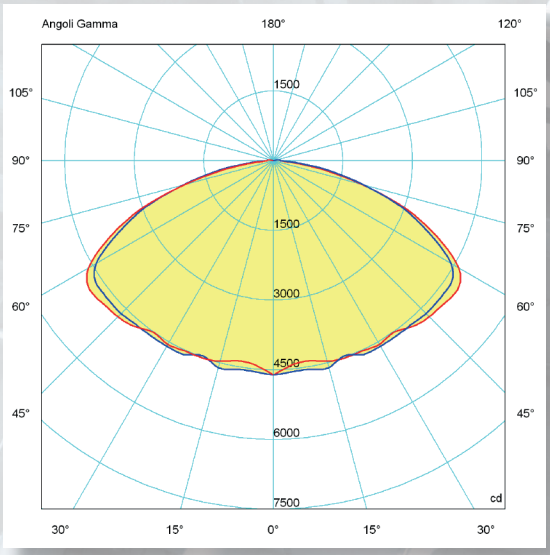
EWAE-5080 250W halide



EWAE-50100 400W halide



EWAE-5080 250W sodium



EWAE-50100 400W sodium

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

= plane 90270
= plane 0180

FLFE

- Zone 1, 2, 21, 22
- Excellent “CX” coefficient
- Easy re-lamping
- Designed to last over time

"Ex e" terminal board housing

Silicone sealing

4 Joule shock resistant borosilicate glass

White painted reflector/frame

Simplified maintenance



FLFE series Lighting fixtures for fluorescent tubes

FLFE series lighting fixtures have two low copper content aluminium heads fitted with G13 lamp holder, a tempered boro-silicate glass tube that is resistant to changes in heat and a white painted aluminium reflector. This lighting fixture features an "Ex e" terminal board housing that allows entry to the lamp with a cable gland with an "Ex" seal (normal) as specified in installation standard (EN/IEC 60079.14). The lighting fixture can be supplied in both the normal and emergency version. The round cross section of the lamp provides a better "Cx" coefficient with less resistance to the wind and less accumulation of dust. For this reason, these units are recommended for use in hazardous places where climatic and environmental conditions are severe and as they require less maintenance thanks to a very high ageing index. FLFE series has been designed to facilitate and speed up maintenance operations. As the electrical components are housed on a frame with guides, re-lamping is quick and efficient. The fact that the fixture is fitted with a glass tube as opposed to a plastic material, makes it more effective and with a longer lifespan.

Application sectors:

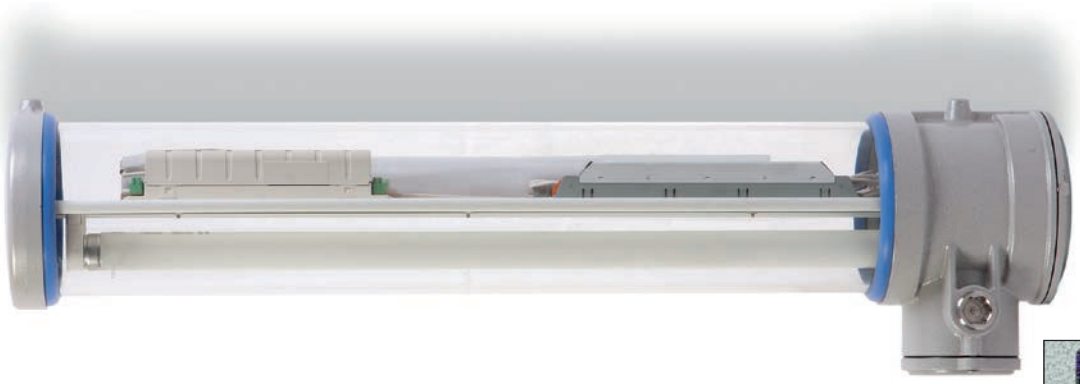


Oil refineries | Chemical and petro-chemical plants | Oil and combustible liquid depots | Offshore plants | Onshore plants | Stair handrails | Chemical Farm produce applications | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD		
Installation: EN 60079.14	zona 1 - zona 2 (Gas)	zona 21 - zona 22 (Dust)		
Marking:	CE 0722 Ex II 2GD Ex de IIC T6 Gb - Ex tb IIIC T67°C÷T80°C Db IP66			
Certification:	ATEX CESI 09 ATEX 008			
	IEC Ex CES 11.0021	All IEC Ex, TR CU and INMETRO certification data can be downloaded at www.cortemgroup.com		
	TR CU AVALIABLE			
	INMETRO DNV 12.0159			
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2011, IEC 60079-1: 2007, IEC 60079-7: 2007, IEC 60079-31: 2008 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	85°C (T6)			
Ambient temperature::	Standard -20°C +55°C	With emergency -20°C +50°C	Special with emergency -20°C +55°C	
Degree of protection	IP66			

FLFE series Lighting fixtures for fluorescent tubes



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy heads
External tube:	Shock and high temperature resistant borosilicate glass
Gaskets:	Acid/hydrocarbon resistant NBR on covers
Inner frame:	White painted aluminium that acts as reflector
Bolts and screws:	Stainless steel
Cap chain:	Stainless steel
Mounting:	2 x M8 holes
Entries:	2 x ISO M25 entries. Fixture kit with PLG2IB plug and NAV25IB cable gland
Coating:	Epoxy coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holders:	Bi-pin G13
Ballast:	Single channel electronic
Rated voltage:	230 V AC
Rated frequency:	50/60 Hz
Connection:	Direct to the terminal board L, N, Pe section 4 mm^2 with jumpers suitable for input/output
Power factor:	0.98
Emergency unit:	Electronic inverter 110/230V, 50/60Hz, 18...58W. Ni/Cd batteries, 4Ah or 7Ah, 6V, battery charging monitored by high luminosity red LED (estimated LED lifespan 50,000 hours)
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures
Safety:	Emergency safety switch fitted inside lighting fixture

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

2 pin Ø26 fluorescent tubes model T8
Installation mounting brackets
Stainless steel or galvanized steel guard with external aluminium protection
External aluminium protection recommended for outdoor installations
Re-lamping bracket for use on in-line lighting fixtures
Rated voltage: 277 V with double channel electronic ballast (code FLFE-236EF4**/277**)
110/240 V with double channel electronic ballast (code FLFE-236EF4**S**)
Can also be supplied in single tube normal operation version: FLFE-118 / FLFE-136 / FLFE-158
Lighting fixture with emergency system and ambient temperature -20°C +55°C with batteries housed in junction boxSA141410
Rated voltage: 24 Vdc only for normal operation (codice FLFE-118**/24**)
Execution with LED tubes from 22 W. Rated voltage: 220/240 Vac (Code FLFE-**122L** and FLFE-**222L**). LED tubes included.
Cable entry: 2 x ISO M20 holes. Lighting fixture with 1 model PLG1IB plugs and 1 model NAV20SIB cable glands for non-armoured cable (code FLFE-118EF4/**20**)

Double lamp

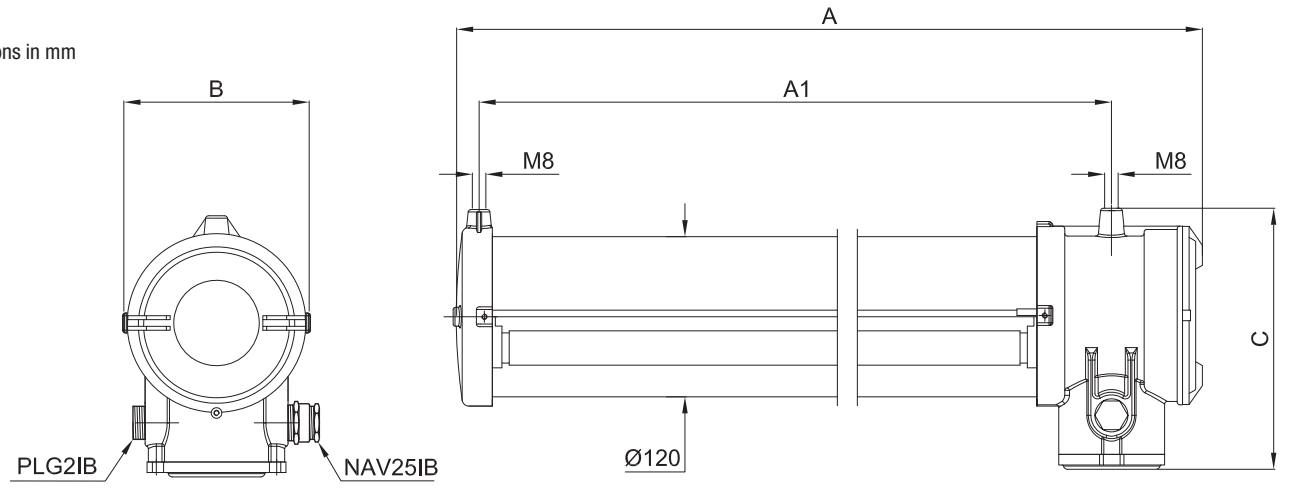
Codice	Dimensions mm A	A1	B	C	Operating type	N° of lamps	Power supply	Watt	Discharg time	Weight kg	mm
FLFE-218	725	640	142	197	-	2	230 V 50/60 Hz.	18	-	5,4	240x230x800
FLFE-236	1325	1240	142	197	-	2	230 V 50/60 Hz.	36	-	7,5	240x230x1410
FLFE-258	1625	1540	142	197	-	2	230 V 50/60 Hz.	58	-	10	240x230x1700
FLFE-218EF4	725	640	142	197	normal + emergency	2	230 V 50/60 Hz.	18	120’	6,1	240x230x800
FLFE-236EF4	1325	1240	142	197	normal + emergency	2	230 V 50/60 Hz.	36	90’	9,0	240x230x1410
FLFE-258EF4	1625	1540	142	197	normal + emergency	2	230 V 50/60 Hz.	58	70’	10,6	240x230x1700
FLFE-218EF7	725	640	142	197	normal + emergency	2	230 V 50/60 Hz.	18	200’	7.3	240x230x800
FLFE-236EF7	1325	1240	142	197	normal + emergency	2	230 V 50/60 Hz.	36	180’	9,4	240x230x1410
FLFE-258EF7	1625	1540	142	197	normal + emergency	2	230 V 50/60 Hz.	58	150’	12,9	240x230x1700

Lighting fixture in emergency for loop-in loop-out execution (see methods of installation)

Code	Dimensions mm A	A1	B	C	Operating type	N° of lamps	Power supply	Watt	Discharge time	Weight kg	mm
FLFE-218EF4EE	725	640	142	197	normal + emergency	2	230 V 50/60 Hz.	18	120’	8,8	240x230x800
FLFE-236EF4EE	1325	1240	142	197	normal + emergency	2	230 V 50/60 Hz.	36	90’	11,2	240x230x1410
FLFE-258EF4EE	1625	1540	142	197	normal + emergency	2	230 V 50/60 Hz.	58	70’	13,5	240x230x1700
FLFE-218EF7EE	725	640	142	197	normal + emergency	2	230 V 50/60 Hz.	18	200’	8,3	240x230x800
FLFE-236EF7EE	1325	1240	142	197	normal + emergency	2	230 V 50/60 Hz.	36	180’	11,7	240x230x1410
FLFE-258EF7EE	1625	1540	142	197	normal + emergency	2	230 V 50/60 Hz.	58	150’	14	240x230x1700

DIMENSIONAL DRAWING

Dimensions in mm



FLFE series selection chart

Single lamp

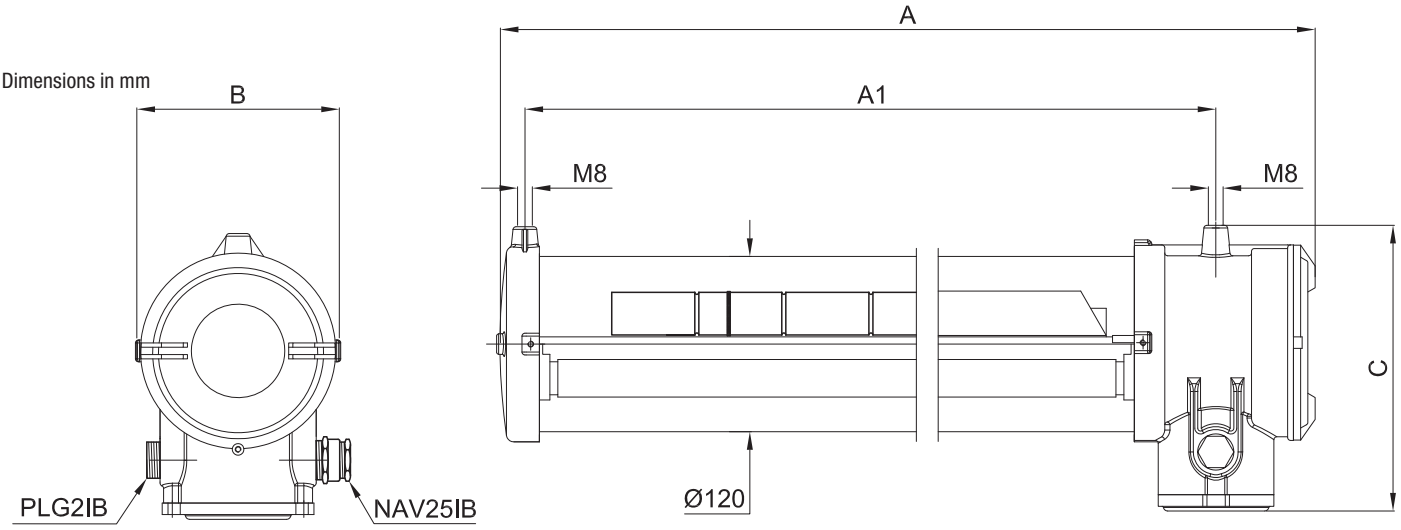
Code	Dimensions mm A	A1	B	C	Operating type	N° of lamps	Power supply	Watt	Discharge time	Weight kg	mm
FLFE-118EF4	725	640	142	197	normal + emergency	1	230 V 50/60 Hz.	18	120’	6,8	240x230x800
FLFE-136EF4	1325	1240	142	197	normal + emergency	1	230 V 50/60 Hz.	36	90’	10,2	240x230x1410
FLFE-158EF4	1625	1540	142	197	normal + emergency	1	230 V 50/60 Hz.	58	70’	12,5	240x230x1700
FLFE-118EF7	725	640	142	197	normal + emergency	1	230 V 50/60 Hz.	18	200’	7,3	240x230x800
FLFE-136EF7	1325	1240	142	197	normal + emergency	1	230 V 50/60 Hz.	36	180’	10,7	240x230x1410
FLFE-158EF7	1625	1540	142	197	normal + emergency	1	230 V 50/60 Hz.	58	150’	13	240x230x1700
FLFE-118EE4	725	640	142	197	emergency	1	230 V 50/60 Hz.	18	120’	6,8	240x230x800
FLFE-136EE4	1325	1240	142	197	emergency	1	230 V 50/60 Hz.	36	90’	8,9	240x230x1410
FLFE-158EE4	1625	1540	142	197	emergency	1	230 V 50/60 Hz.	58	70’	12,5	240x230x1700
FLFE-118EE7	725	640	142	197	emergency	1	230 V 50/60 Hz.	18	200’	7,3	240x230x800
FLFE-136EE7	1325	1240	142	197	emergency	1	230 V 50/60 Hz.	36	180’	10,7	240x230x1410
FLFE-158EE7	1625	1540	142	197	emergency	1	230 V 50/60 Hz.	58	150’	13	240x230x1700

Lighting fixture in emergency for loop-in loop-out execution (see methods of installation)

Code	Dimensions mm A	A1	B	C	Operating type	N° of lamps	Power supply	Watt	Discharge time	Weight kg	mm
FLFE-118EF4EE	725	640	142	197	normal + emergency	1	230 V 50/60 Hz.	18	120’	8,8	240x230x800
FLFE-136EF4EE	1325	1240	142	197	normal + emergency	1	230 V 50/60 Hz.	36	90’	11,2	240x230x1410
FLFE-158EF4EE	1625	1540	142	197	normal + emergency	1	230 V 50/60 Hz.	58	70’	13,5	240x230x1700
FLFE-118EF7EE	725	640	142	197	normal + emergency	1	230 V 50/60 Hz.	18	200’	8,3	240x230x800
FLFE-136EF7EE	1325	1240	142	197	normal + emergency	1	230 V 50/60 Hz.	36	180’	11,7	240x230x1410
FLFE-158EF7EE	1625	1540	142	197	normal + emergency	1	230 V 50/60 Hz.	58	150’	14	240x230x1700

DIMENSIONAL DRAWING

Dimensions in mm



FLFE series selection chart

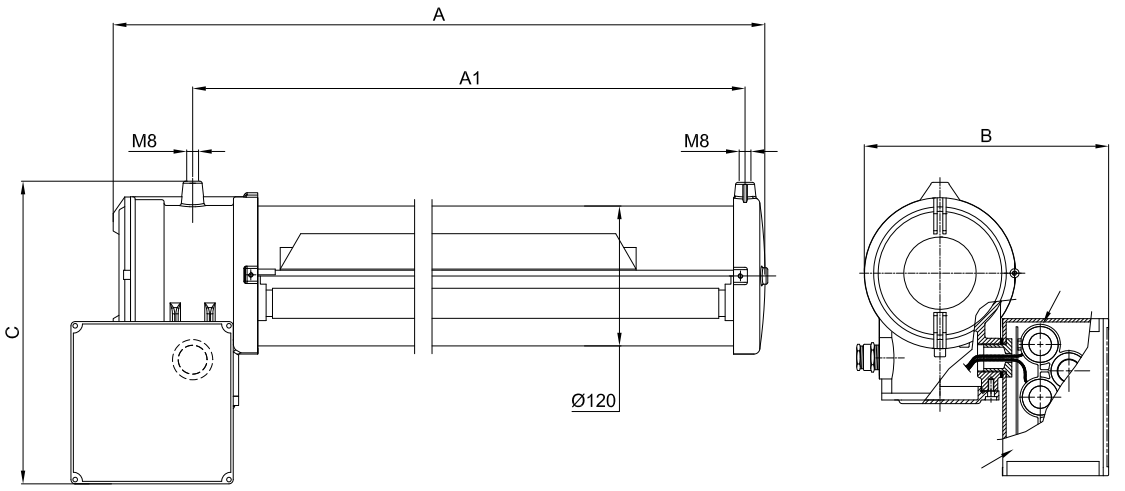
Lighting fixture in emergency for ambient temperature -20°C +55°C manufactured with batteries housed in junction box type SA141410

Code	Dimensions mm A	A1	B	C	Operating type	N° of lamps	Power supply	Watt	Discharge time	Weight kg	mm
FLFE-218EF4E	725	640	223	273	normale+emergenza	2	230 V 50/60 Hz.	18	120’	7,8	370x320x800
FLFE-236EF4E	1325	1240	223	273	normale+emergenza	2	230 V 50/60 Hz.	36	90’	11,2	370x320x1410
FLFE-218EF7E	725	640	223	273	normale+emergenza	2	230 V 50/60 Hz.	18	200’	8,3	370x320x800
FLFE-236EF7E	1325	1240	223	273	normale+emergenza	2	230 V 50/60 Hz.	36	180’	11,7	370x320x1410

Code	Dimensions mm A	A1	B	C	Operating type	N° of lamps	Power supply	Watt	Discharge time	Weight kg	mm
FLFE-118EF4E	725	640	223	273	normal + emergency	1	230 V 50/60 Hz.	18	120’	7,8	370x320x800
FLFE-136EF4E	1325	1240	223	273	normal + emergency	1	230 V 50/60 Hz.	36	90’	11,2	370x320x1410
FLFE-118EF7E	725	640	223	273	normal + emergency	1	230 V 50/60 Hz.	18	200’	8,3	370x320x800
FLFE-136EF7E	1325	1240	223	273	normal + emergency	1	230 V 50/60 Hz.	36	180’	11,7	370x320x1410
FLFE-118EE4E	725	640	223	273	emergency	1	110/230 V 50/60 Hz.	18	120'	7,8	370x320x800
FLFE-136EE4E	1325	1240	223	273	emergency	1	110/230 V 50/60 Hz.	36	90'	11,2	370x320x1410
FLFE-118EE7E	725	640	223	273	emergency	1	110/230 V 50/60 Hz.	18	200'	8,3	370x320x800
FLFE-136EE7E	1325	1240	223	273	emergency	1	110/230 V 50/60 Hz.	36	180'	11,7	370x320x1410

Execution only possible for 18W and 36W lighting fixtures

DIMENSIONAL DRAWING

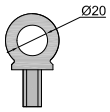
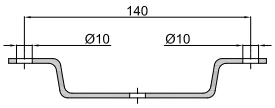
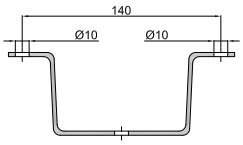
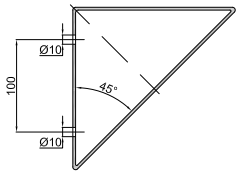
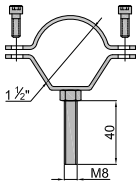
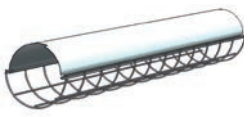


Dimensions in mm

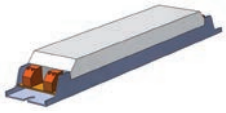
DON’T FORGET TO ORDER THE ACCESSORIES

Example: Type of lighting fixture FLFE-218 + Fluorescent tubes LAMPL18W21 + Installation bracket G-258 + other... see key

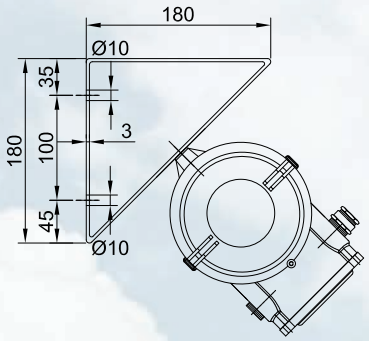
Accessori a richiesta e parti di ricambio serie FLFE...

ILLUSTRAZIONE	DESCRIZIONE	MODELLO	CARATTERISCTICHE	CODICE	LEGENDA
	Triphosphor fluorescent tubes G13 fitting 3.000K	18 W	1350 lm (FD18W)	LAMPL18W21	
		36 W	3350 lm (FD36W)	LAMPL36W21	
		58 W	5200 lm (FD58W)	LAMPL58W21	
	Compact fluorescent tubes 2G11 fittings	36 W	2700 lm	LAMP-PLL36W	
	Tige	Lunghezza: 250 mm	Material: stainless steel	BRF8MIN/250	
	Type O eyebolt		Material: galvanised steel	GOF-8	
	Type U bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0609	
	Type V bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0610	
	Type D bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0611	
	Type P bracket		Material: galvanised steel	G-0480	
	Guard with Light blue/white painted 10/10 aluminium external protection	18 W	Stainless steel guard	G18-0529	
		36 W		G36-0529	
		58 W		G58-0529	
		18 W	Galvanized steel guard	G18-0529G	
		36 W		G36-0529G	
		58 W		G58-0529G	

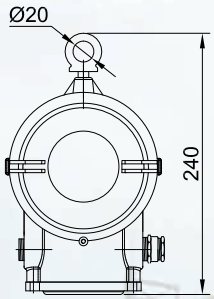
Accessori a richiesta e parti di ricambio serie FLFE...

ILLUSTRAZIONE	DESCRIZIONE	MODELLO	CARATTERISTICHE	CODICE	LEGENDA
	External protection	18W	Light blue/white painted 10/10 aluminium external protection	G18-568	ACCESSORY SPARE PART
		36W		G36-568	
		58W		G58-568	
		18W	10/10 stainless steel AISI 304 external protection	G18-568IN	
		36W		G36-568IN	
		58W		G58-568IN	
	Cable gland	ISO M25	std. range cavo 11÷20	NAV25IB	SPARE PART
	Reflector inner frame	2 x 18 W	Painted 20/10 aluminium	G18-567	SPARE PART
		2 x 36 W		G36-567	
		2 x 58 W		G58-567	
		1 x 18 W		G18-661	
		1 x 36 W		G36-661	
		1 x 58 W		G58-661	
	Battery pack		4 Ah	BATT4AH/D	SPARE PART
			7 Ah	BATT7AH/D	
	Battery pack for execution with batteries housed in type SA141410 junction box	18W e 36W	4 Ah	G0309B	SPARE PART
			7 Ah	G-0309	
	Electronic ballast	2 x 18 W 2 x 36 W	230 V 50/60 Hz	RV236	SPARE PART
		1 x 18 W 1 x 36 W		RV136	
		2 x 58 W		R258P	
		1 x 58 W		R158P	
	Electronic inverter		110/230 V 50/60 Hz	INVERTER	SPARE PART
	Lamp holder	FLFE-1..	G13 250 V, 4 A	STU3249-12/S	SPARE PART
		FLFE-2..			
	Re-lamping bracket with clip system for use on in-line lighting fixtures		Material: galvanised steel	G-0318 + G-0318/1	ACCESSORY SPARE PART

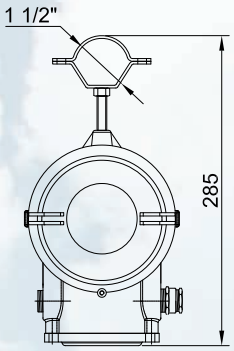
Installation and mounting methods FLFE series



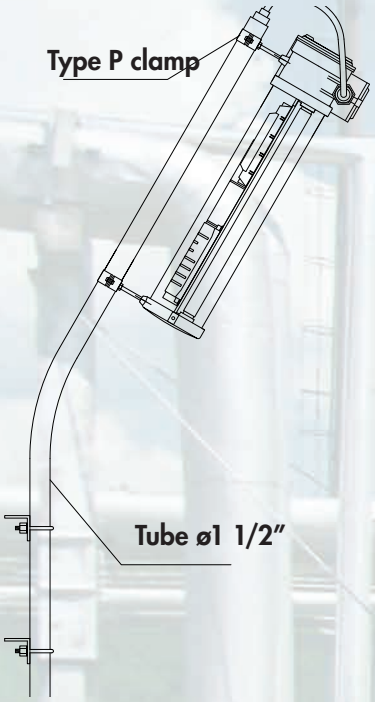
45° angle mounting
TYPE "D"



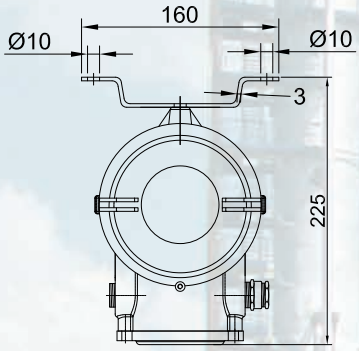
Pendant mounting
eyebolt TYPE "O"



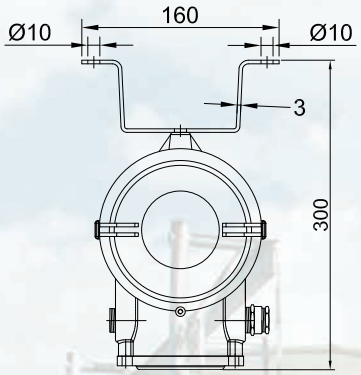
Mounting using 1.1/2"
metal clamps TYPE "P"



Pole mounting for FLFE with
barrier cable gland

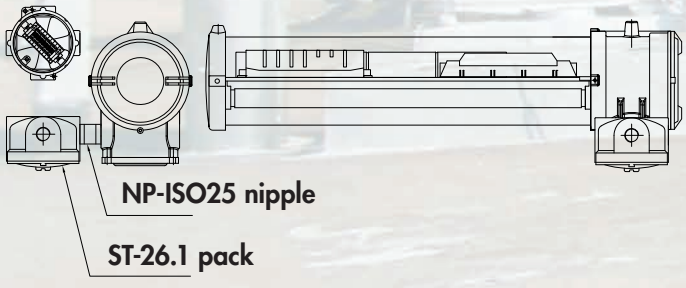


Low ceiling mounting with
clamp TYPE "U"

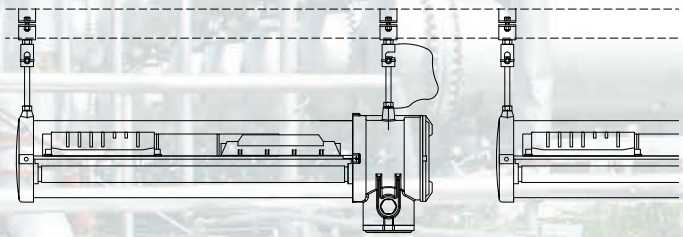


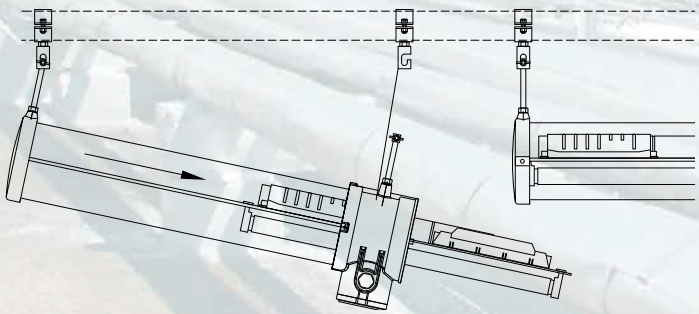
High ceiling mounting with
clamp TYPE "V"

Internal view



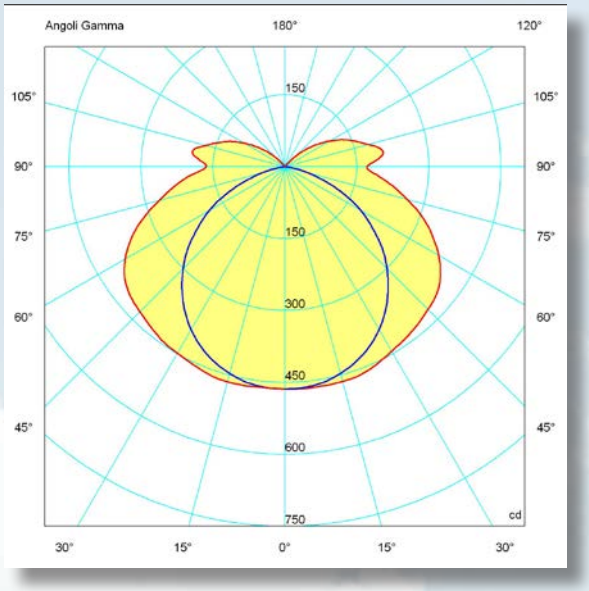
FLFE assembly in emergency for
special execution with loop-in loop-out.



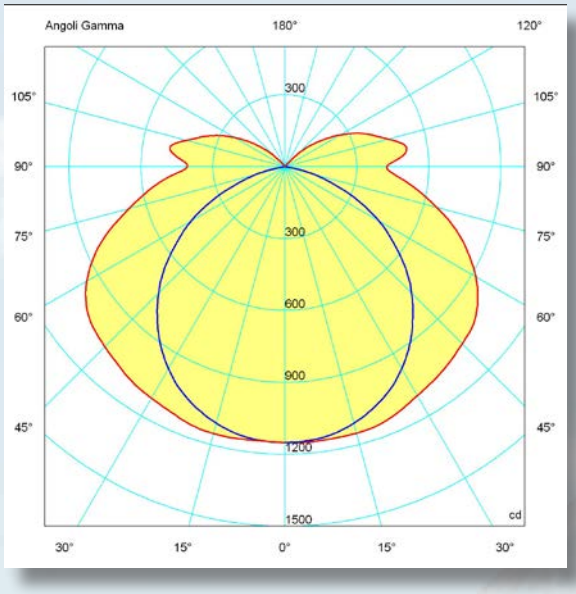


Mounting system with release clip for easy fluorescent
tube replacement. System adopted for installing
in-line lighting fixtures.

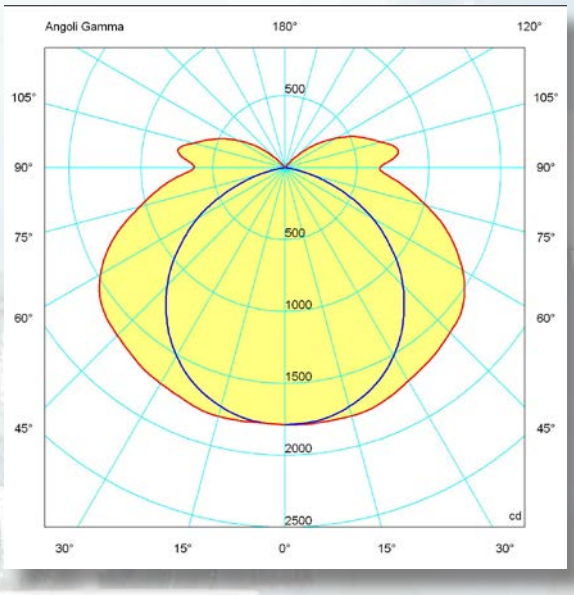
Dimensions in mm



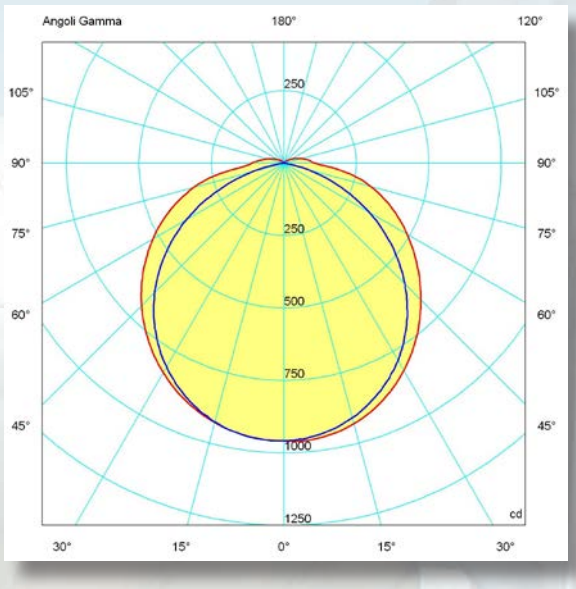
FLFE-218



FLFE-236



FLFE-258



FLFE-222L

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.

= plane 90270

= plane C 0180

EXEL

- **Double locking system operated by hexagonal-head tool**
- **Double channel electronic ballast**
- **Zones 1, 2, 21, 22**

G13 bi-pin lamp holder

Reinforced polyester resin body

EOL Protected

Internal emergency batteries



Reinforced locking system

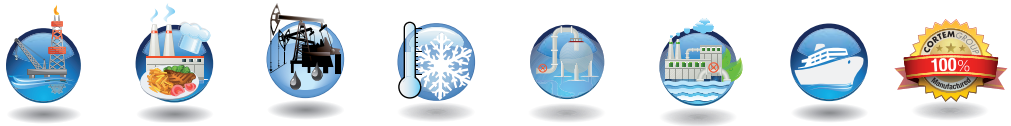


Transparent polycarbonate cover

EXEL series Lighting fixtures for fluorescent tubes

EXEL series increased safety bi-pin fluorescent lighting fixture have a Cortem electronic ballast system that complies with Atex Directive 2014/34/UE. They can be installed in hazardous zones 1, 2, 21 and 22 where a high degree of protection and resistance against corrosion is required such as in chemical and petrochemical plants, off-shore and on-shore plants, processing areas in food industries etc… Fluorescent tubes that reach the end of their working lives are safely monitored and switched off by means of the EOL (End-Of-Life) system. The fact that they have different voltage ratings means they can be used wordwide. Thanks to the double channel ballast design, if one of the tubes stops working, the other continues working independently. As cable entries/exits are fitted to both sides of the fixture body, installation is simple and fast. The transparent cover is clipped into place on both sides of the fixture body with 8 clips on the 18W and 14 on the 36W unit. This ensures excellent protection against dust and water over time despite any degradation caused by ageing. For this very reason, these units are often installed in water purification plants and in areas that are hazardous for ships and ferries. A safety switch is housed inside the fixture that automatically cuts off the power supply when the fixture is opened to replace a fluorescent tube and/or an electrical component. EXEL...E series is fitted with a Ni-Cd battery and electronic inverter for use in emergency operation. The operating time under emergency operation of the single fluorescent tube can be selected depending on requirements and can last from a minimum of 90 minutes to a maximum of 200 minutes. A red LED warning light comes off if the battery needs to be replaced due to a short circuit or if the battery itself is dead.

Application sectors:



Offshore plants | Farm produce applications | Onshore plants | Low temperatures | Chemical and petrochemical plants | Waste water purification | Naval installations | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD		
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Marking:	CE 0722 Ex II 2GD - Ex de mb IIC T4 Gb - Ex tb IIIC T70°C, T80°C Db IP66 (*)			
	CE 0722 Ex II 2GD Ex de IIC T4 Gb - Ex tb IIIC T70°C, T80°C Db IP66 (**)			

(*) Marking valid for lighting fixtures with operating type normal and normal + emergency.
(**) Marking valid only for lighting fixtures with operating type emergency and emergency with batteries housed in separate box.

Certification:	ATEX CESI 03 ATEX 074	All IEC Ex, TR CU and INMETRO certification data can be downloaded at ww.cortemgroup.com
	IEC Ex CES 07.0001	
	TR CU AVAILABLE	
	INMETRO DNV 12.0055 X	

Standards:

CENELEC EN60079-0: 2012, EN60079-1: 2007, EN60079-7: 2007, EN60079-31: 2014, EN61000- 3-2, EN 55022, EN60598-1:2008, EN60598-2-22, EN 60529: 1991 and DIRETTIVA EUROPEA 2014/34/UE.
IEC60079-0:2011, IEC60079-1:2007, IEC60079-7:2006-07, IEC60079-18:2009, IEC60079-31:2013
European Directive 2006/95 Low voltage
European Directive 2004/108 Electromagnetic compatibility
European Directive 2003/108 WEEE Waste electrical and electronic equipment
European Directive 2011/64 RoHS

Ambient temperature:	Normal operation -40°C +55°C (T4)	Emergency operation -20°C +50°C (T4)	Separate emergency -20°C +55°C (T4)
Degree of protection:	IP66		

EXEL series Lighting fixtures for fluorescent tubes



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Black shock and UV resistant fibreglass reinforced anti-static polyester resin
Diffuser:	Transparent polycarbonate, shock and UV resistant
Protected opening system:	Sliding system operated by a hexagonal-head tool (for safety reasons, the fixture can not be opened without the tool)
Gasket:	Acid/hydrocarbon resistant expanded silicone
Internal reflector:	White painted aluminium
Inner frame:	Extruded aluminium
Bolts and screws:	Stainless steel
Entries:	4 x Ø25.5 entries (suitable for ISO M25x1.5 threads). Lighting fixture kit contains 3 model PLG2ILXE7 plugs and 2 model NAVP25IXE-X6DS cable glands for non-armoured cable
Mounting:	Nickel plated brass inserts with 2 x M8 holes

ELECTRICAL FEATURES

Lamp holder:	Bi-pin G13
Ballast:	Double channel electronic with EOL protection
Rated voltage:	110/240 Vac/dc
Rated frequency:	50/60 Hz
Connection:	Directly to terminal board L, N, Pe section 4 mm^2 terminal board with jumpers suitable for input/output from either side
Power factor:	0.97
Emergency unit:	Electronic inverter 110V/240V, 50/60Hz. Batteries Ni/Cd, 4 Ah or 7 Ah, 6 V Battery charging monitored by high luminosity red LED (estimated LED lifespan 50,000 hours)
Safety:	Internal "Ex de" safety switch
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

2 pin Ø26 fluorescent tubes model T8
Installation brackets
Grey polyester resin body (code EXEL-118EE**4G**)
Cable entry: 4 x Ø20.5 holes. Lighting fixture kit contains 3 model PLG1ILXE7 plugs and 2 model NAVP20IXE cable glands for non-armoured cable (code EXEL-118EE4/**20**)
Earthing continuity plates for metal cable glands

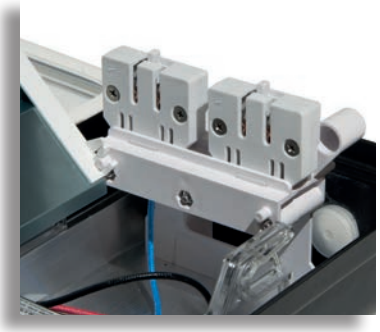
Close up of EXEL series lighting fixtures



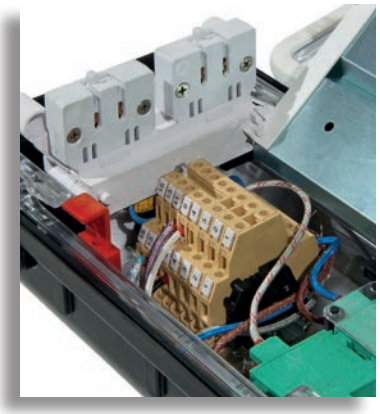
Certified lamp holder made at PBT reinforced polyester. G13 bi-pin fitting

Removable internal reflector

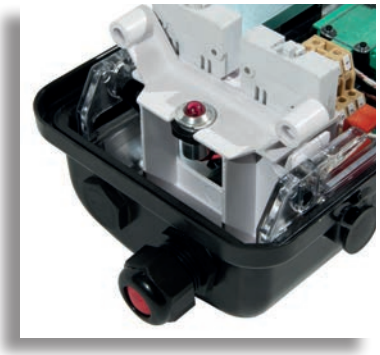
Certified NiCd 6V batteries connected in series for emergency lighting. Can be either 4 or 7Ah units housed in polyethylene box



Certified electronic inverter housed in cylindrical aluminium box with one end sealed to allow passage of cables



Certified electronic ballast EBV with the electronic part housed in an insulating enclosure completely incorporated in resin. Manufactured with electronic circuit made to match the requirements regarding the lamp's End Of Life (EOL) protection; provided with protections to prevent over heating of thelamps at end of life



Safety switch

Terminal board section 4mm^2

EXEL series selection chart

Single and double tube

Code	Dimensions mm A	A1	B	C	Type of ballast	N° of lamps	Power supply	Watt	Weight kg	mm
EXEL-118	785	420	185	155	electronic	1	110/240 V 50/60 Hz.	18	5,2	195x155x820
EXEL-136	1370	720	185	155	electronic	1	110/240 V 50/60 Hz.	36	7,9	196x155x1400
EXEL-218	785	420	185	155	electronic double channel	2	110/240 V 50/60 Hz.	18	5,3	196x155x820
EXEL-236	1370	720	185	155	electronic double channel	2	110/240 V 50/60 Hz.	36	7,9	196x155x1400

Single and double tube with emergency unit

Code	Dimensions mm A	A1	B	C	Operating type	N° of lamps	Power supply	Discharge time in minutes	Watt	Weight kg	mm
EXEL-118EF4	785	420	185	155	normal + emergency	1	110/240 V 50/60 Hz.	120’	18	6,9	196x155x820
EXEL-136EF4	1370	720	185	155	normal + emergency	1	110/240 V 50/60 Hz.	90’	36	10,0	196x155x1400
EXEL-218EF4	785	420	185	155	normal + emergency	2	110/240 V 50/60 Hz.	120’	18	7,05	196x155x820
EXEL-236EF4	1370	720	185	155	normal + emergency	2	110/240 V 50/60 Hz.	90’	36	9,61	196x155x1400
EXEL-118EE4	785	420	185	155	emergency only	1	110/240 V 50/60 Hz.	120’	18	5,62	196x155x820
EXEL-136EE4	1370	720	185	155	emergency only	1	110/240 V 50/60 Hz.	90’	36	8,27	196x155x1400
EXEL-118EF7	785	420	185	155	normal + emergency	1	110/240 V 50/60 Hz.	200’	18	7,60	196x155x820
EXEL-136EF7	1370	720	185	155	normal + emergency	1	110/240 V 50/60 Hz.	180’	36	10,0	196x155x1400
EXEL-218EF7	785	420	185	155	normal + emergency	2	110/240 V 50/60 Hz.	200’	18	7,40	196x155x820
EXEL-236EF7	1370	720	185	155	normal + emergency	2	110/240 V 50/60 Hz.	180’	36	10,2	196x155x1400
EXEL-118EE7	785	420	185	155	emergency only	1	110/240 V 50/60 Hz.	200’	18	6,00	196x155x820
EXEL-136EE7	1370	720	185	155	emergency only	1	110/240 V 50/60 Hz.	180’	36	8,60	196x155x1400

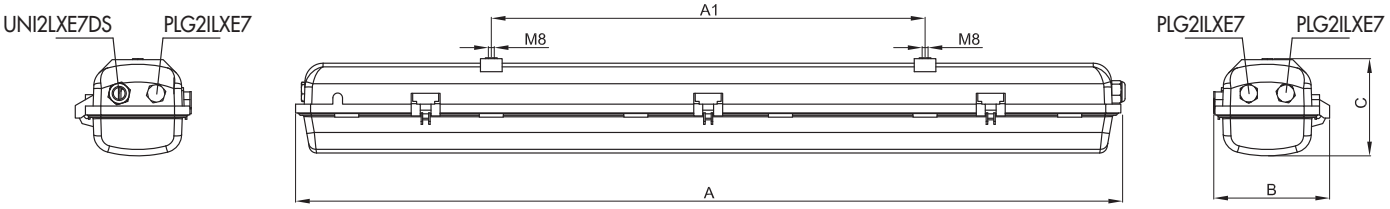
DON’T FORGET TO ORDER THE ACCESSORIES

Example: Type of lighting fixture + EXEL-118EF4 | Fluorescent tubes LAMPL18W21 | + | Installation fittings G-244 | + other...see key ACCESSORY

Single and double lamp units with separate emergency battery pack for temperatures of -20°C to + 55°C

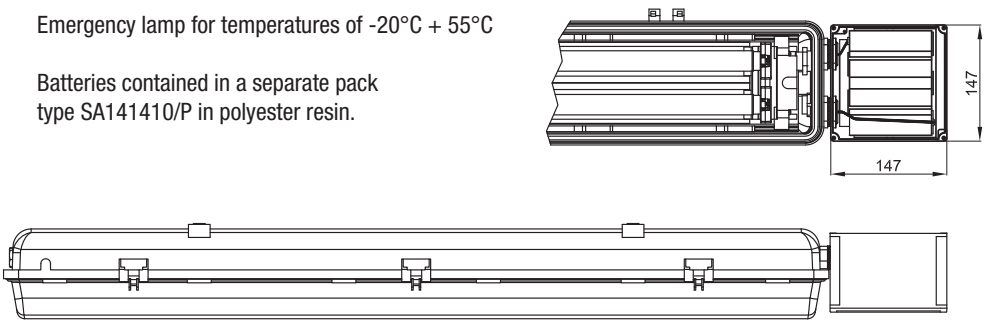
Code	Dimensios mm A	A1	B	C	Operating type	N° of lamps	Power supply	Discharge time in minutes	Watt	Weight kg	mm
EXEL-118EF4E	785	420	185	155	normal + emergency	1	110/240 V 50/60 Hz.	120’	18	7,80	200x170x950
EXEL-136EF4E	1370	720	185	155	normal + emergency	1	110/240 V 50/60 Hz.	90’	36	11,0	200x170x1550
EXEL-218EF4E	785	420	185	155	normal + emergency	2	110/240 V 50/60 Hz.	120’	18	8,00	200x170x950
EXEL-236EF4E	1370	720	185	155	normal + emergency	2	110/240 V 50/60 Hz.	90’	36	10,7	200x170x1550
EXEL-118EE4E	785	420	185	155	emergency only	1	110/240 V 50/60 Hz.	120’	18	6,50	200x170x950
EXEL-136EE4E	1370	720	185	155	emergency only	1	110/240 V 50/60 Hz.	90’	36	9,20	200x170x1550
EXEL-118EF7E	785	420	185	155	normal + emergency	1	110/240 V 50/60 Hz.	200’	18	8,50	200x170x950
EXEL-136EF7E	1370	720	185	155	normal + emergency	1	110/240 V 50/60 Hz.	180’	36	10,9	200x170x1550
EXEL-218EF7E	785	420	185	155	normal + emergency	2	110/240 V 50/60 Hz.	200’	18	8,50	200x170x950
EXEL-236EF7E	1370	720	185	155	normal + emergency	2	110/240 V 50/60 Hz.	180’	36	11,1	200x170x1550
EXEL-118EE7E	785	420	185	155	emergency only	1	110/240 V 50/60 Hz.	200’	18	7,00	200x170x950
EXEL-136EE7E	1370	720	185	155	emergency only	1	110/240 V 50/60 Hz.	180’	36	12,4	200x170x1550

DIMENSIONAL DRAWINGS

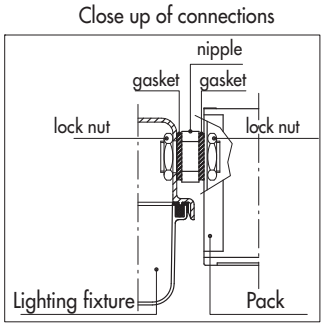


Emergency lamp for temperatures of -20°C + 55°C

Batteries contained in a separate pack type SA141410/P in polyester resin.

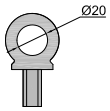
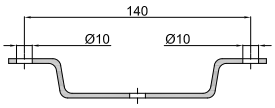
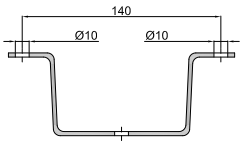
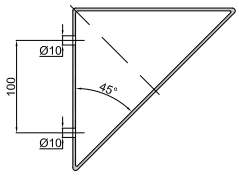
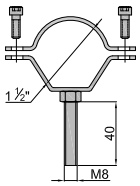
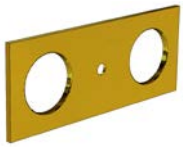


Protección externa SA141410/P en resina de poliester



Dimensions in mm

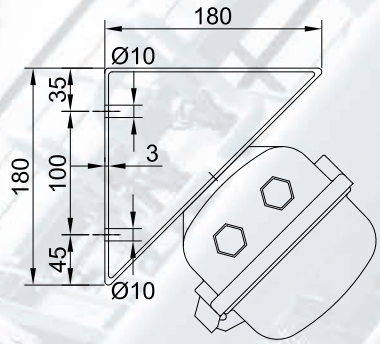
EXEL series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Tri-phosphor fluorescent tubes G13 fitting 3.000 K	18 W	1350 lm (FD18W)	LAMPL18W21	ACCESSORY SPARE PART
		36 W	3350 lm (FD36W)	LAMPL36W21	
	Tige	Lunghezza: 250 mm	Material: stainless steel	BRF8MIN/250	ACCESSORY SPARE PART
	Eyebolt		Material: galvanised steel	GOF-8	ACCESSORY SPARE PART
	Type U bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0609	ACCESSORY SPARE PART
	Type V bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0610	ACCESSORY SPARE PART
	Type D bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0611	ACCESSORY SPARE PART
	Type P bracket		Material: galvanised steel	G-0480	ACCESSORY SPARE PART
	Earthing continuity plates for metal cable glands	Holes: M25x1.5	Material: brass	B-479	SPARE PART
		Holes: M20x1.5		B-479/1	
	Non-armoured cable gland complete with rubbers, seal and lock nut	ISO M25x1,5	Ex e II IP 66/67 (std. range cavo 10÷18)	NAVP25IXE-X6DS	SPARE PART
	Plug with seal and lock nut	ISO M25x1,5	Ex e II IP 66/67	PLG2ILXE7	SPARE PART

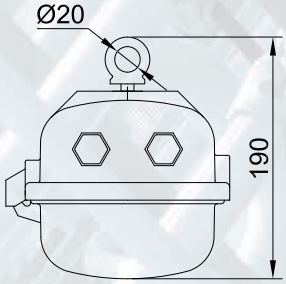
EXEL series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Transparent diffuser	18 W	Material: polycarbonate	B18-363	SPARE PART
		36 W		B36-363	
	Standard Reflector	18 W	Material: white plastic coated aluminium	B18-0213	SPARE PART
		36 W		B36-0213	
	Safety switch: Ex de	18 W 36 W	2 for normal lamps 4 for emergency lamps	M-0530/A	SPARE PART
		solo per 36 W EF	2 pz M-0530/A + 2 pz M-0530	M-0530/A + M-0530	
	Inverter fixing bracket		Material: nylon	B-380	SPARE PART
	Hexagonal-head tool	Hexagon 10		CLAFT10	SPARE PART
	Electronic inverter		110/240 V 50/60 Hz	EI-58	SPARE PART
	Battery pack		4 Ah 6V NiCd	G-0309B	SPARE PART
			7 Ah 6V NiCd	G-0309	
	Lamp holder	G13	320 V - 2 A	G-0598	SPARE PART
	Lamp holder	G13	250 V - 4 A	G-0312E/...	SPARE PART
	Double channel electronic ballast	1 x 18 W	110/240 V 50/60 Hz	EB4118/M	SPARE PART
		2 x 18 W		EB4218/M	
		1 x 36 W		EB4136/M	
		2 x 36 W		EB4236/M	
	Double channel resin-bonded electronic ballast	1 x 18 W 2 x 18 W 1 x 36 W 2 x 36 W	110/240 Vac/dc 0/50/60 Hz	EBV-1	SPARE PART

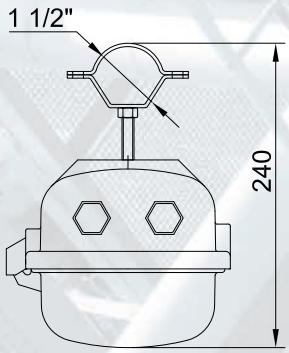
Installation and mounting methods EXEL series



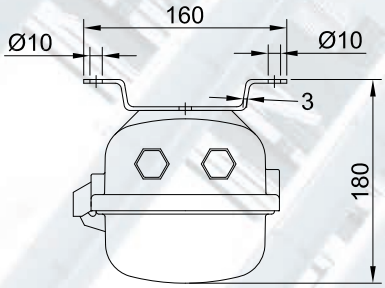
45° angle mounting
TYPE "D"



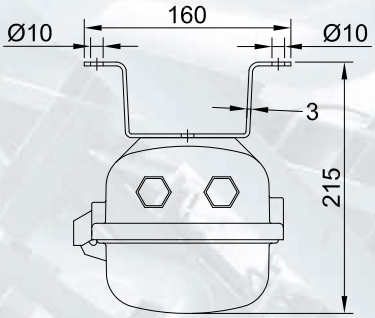
Pendant mounting
with eyebolt TYPE "O"



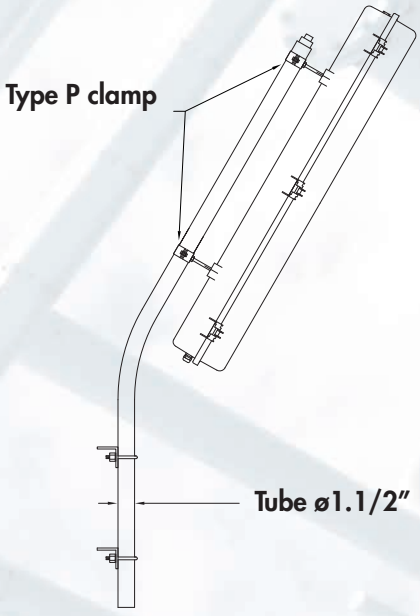
Mounting using 1.1/2"
metal clamps TYPE "P"



Low ceiling mounting with
clamp TYPE "U"



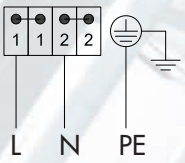
High ceiling mounting with
clamp TYPE "V"



Standard pole mounting

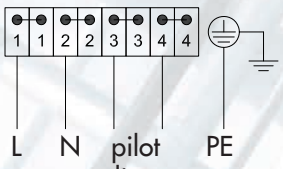
Wiring diagrams

Normal lighting fixture



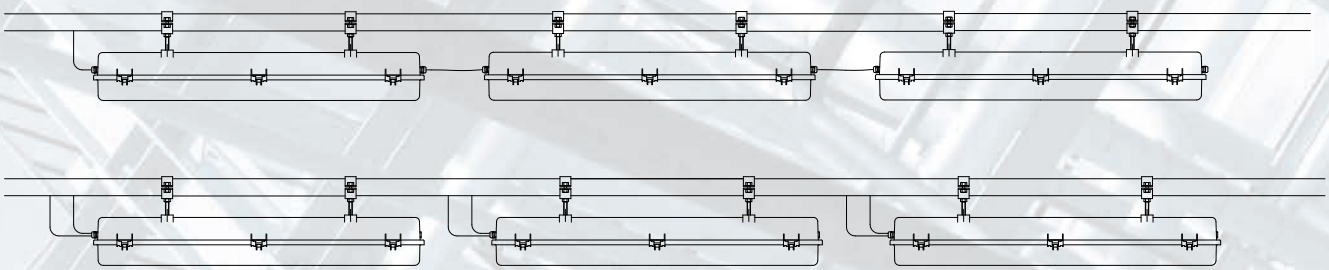
Power supply

Lighting fixture with emergency system

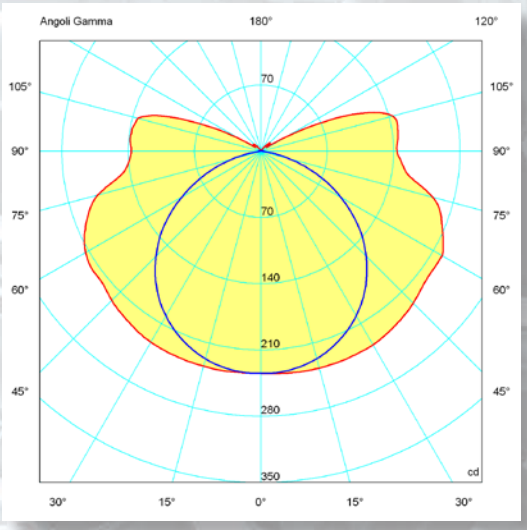


Power supply

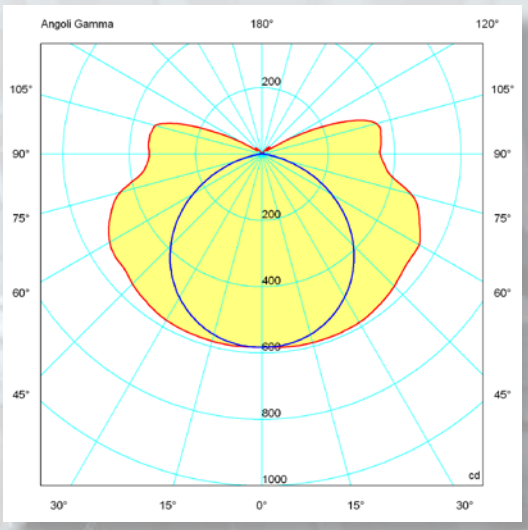
Connections can be made on either side of the fixture body for simple, fast installation



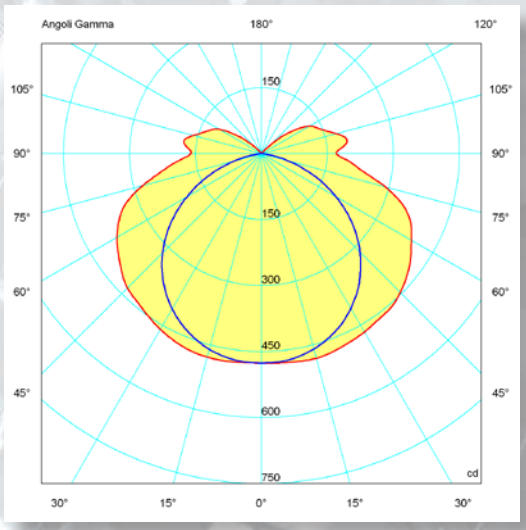
Photometric diagrams



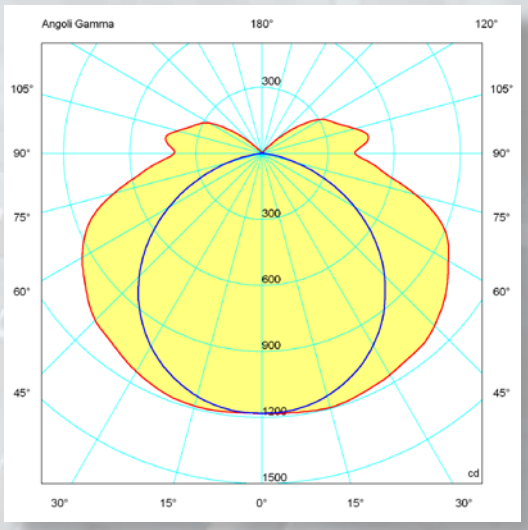
EXEL-118



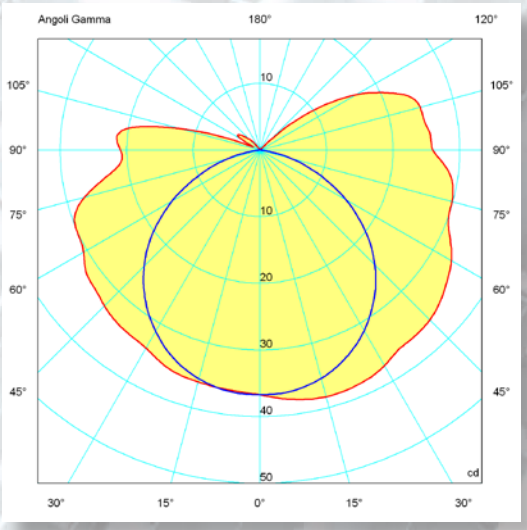
EXEL-136



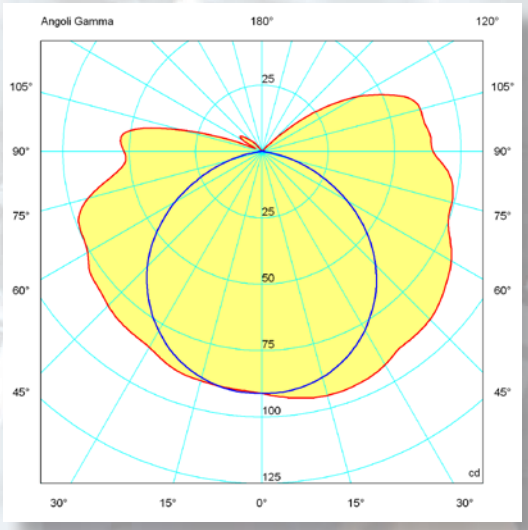
EXEL-218



EXEL-236



EXEL-218EF4



EXEL-236EF4

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.

= plane 90270

= plane 0180

SLEE

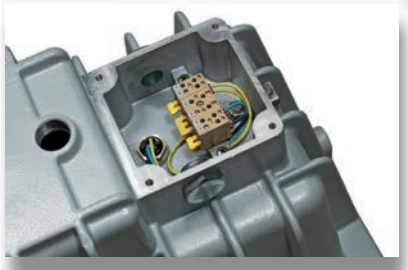
- Suitable for high (+55°C) and low (-50°C) temperatures
- Elevated degree of protection IP67
- IIB + H2 marking (hydrogen)
- Zones 1, 2, 21, 22

Supporting bracket

Hinge for opening lamp holder housing

Tempered shockproof glass

Ex e housing for terminal entries



CORTEM GROUP®

SLEE series Rectangular horizontal floodlights

SLEE series floodlights have been specially designed for lighting large indoor and outdoor areas in hazardous zones. Thanks to their versatility and small size, they are the ideal solution for those seeking a balance of quality and value for money. Apart from being suitable for use in environments where there is hydrogen (H2) present, they are also certified with a high degree of mechanical protection (IP67) and guarantee a symmetrical and concentrated distribution of light. The symmetrical reflector makes sure that the light is spread symmetrically in all directions to provide uniform lighting. Electrical connection with the floodlight is made via a terminal board in a "Ex e" enclosure that allows the entry to the lighting fixture through a cable gland with an "Ex" O-ring (non barrier) as specified in the installation specification standards (EN/IEC 60079.14). As these units comply with international standards (IEC Ex), they can be installed anywhere in the world. SLEE series floodlights also comply with anti light pollution standards (Regional Law date 27 March 2000 N°17 – Article 6).

Application sectors:



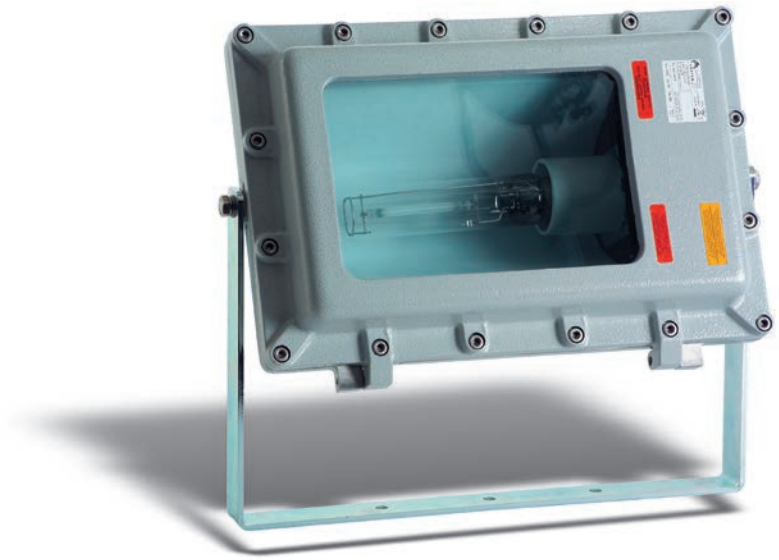
Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Perimeter lighting | Anti light pollution | Presence of hydrogen | 100% Cortem product

CERTIFICATION DATA

Classificazione:	Group II	Category2GD		
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Marking:	CE 0722 Ex II 2GD Ex de IIB + H2 T2/T3/T4 - Ex tD A21 IP 66/67			
Certification:	ATEX CESI 03 ATEX 200			
	IEC Ex CES 18.0003X	All IEC Ex, TR CU and INMETRO certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE			
	INMETRO AVAILABLE			
Standards:	CENELEC EN 60079-0: 2006, EN 60079-1: 2004, EN 60079-7: 2007, EN 61241-0: 2006, EN 61241-1: 2004, EN60598-1:2008+A11:2009, EN60598-2-5:1998, EN61547:2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0:2004, IEC 60079-1:2007, IEC 60079-7:2006, IEC 61241-0:2004, IEC 61241-1:2004 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	300°C (T2)	200°C (T3)	135°C (T4)	
Ambient temperature:	Standard (IIB+H2) -20°C +55°C	Special (IIB) -50°C +55°C		
Degree of protection:	IP66/67			

This equipment can be used in an environment containing explosive atmosphere and with the presence of hydrogen.

SLEE series Rectangular horizontal floodlights



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
Glass face:	Shock and high temperature resistant tempered glass
Gaskets:	Silicone acid/hydrocarbon resistant
Internal reflector:	Anodised aluminium
Supporting bracket:	Galvanised steel
Mounting:	3 x Ø12 holes
Bolts and screws:	Stainless steel
Entries:	2 x ISO M25 entries. Floodlight set with 1 x PLG2IG plug
Coating:	Polyester coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

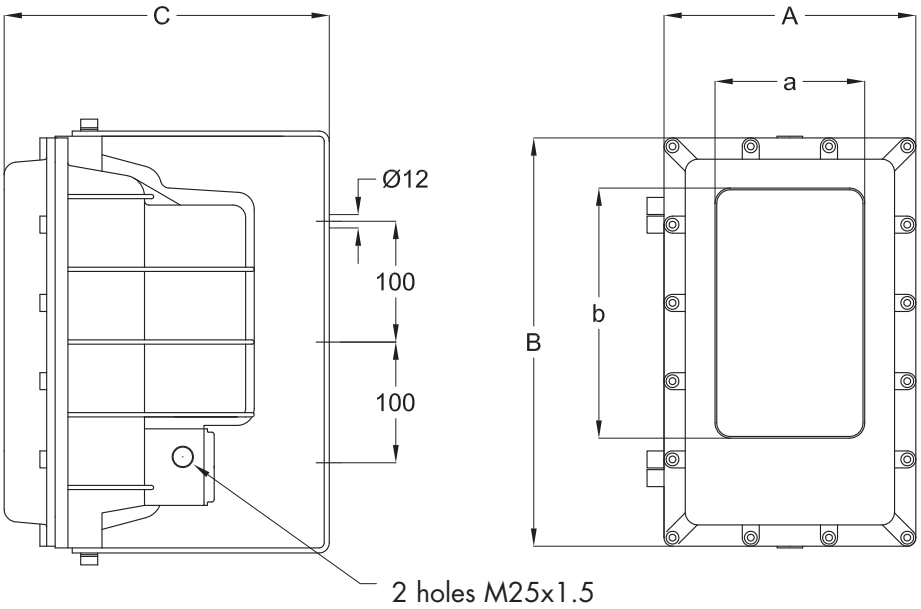
Lamp holder:	E40 ceramic
Rated voltage:	230 V AC
Rated frequency:	50 Hz
Connection:	Direct connection to the terminal board L, N, Pe. Section 4 mm^2, suitable for input/output
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures
Power factor:	0.96

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

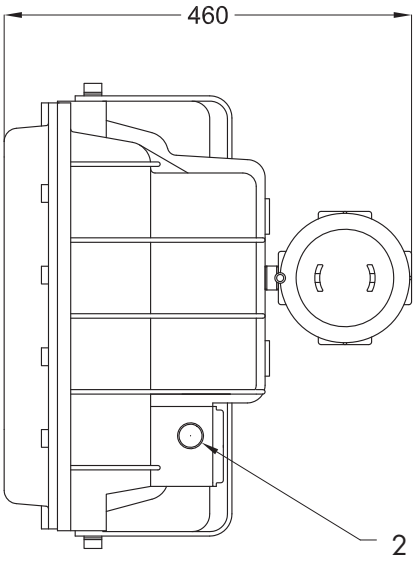
Discharge lamp
Different rated voltages
Cable gland: NAV25IB for armoured cable or NEV25IB for non-armoured cable
Angular orientation system
Reinforced supporting bracket for mounting on mobile structures
Frame for mounting floodlight on pole

SLEE series dimensional drawings

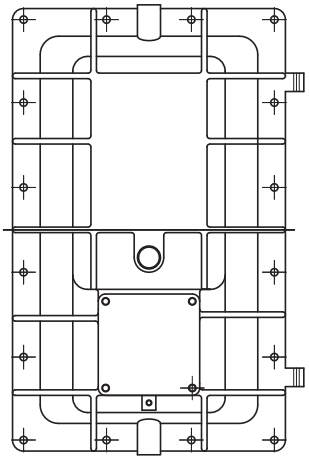
Code	Dimensions mm A	B	C	a	b	Lamp type	Lamp holder	Watt	Class Ta +55 °C	Max Temp. superf. °C	Weight kg	mm
SLEE-40IM5	296	482	480	174	291	metal halide	E40	250	T3	165	26	550x350x540
SLEE-40IM6	296	482	480	174	291	metal halide	E40	400	T3	191	27	550x350x540
SLEE-40N5	296	482	480	174	291	high pressure sodium	E40	250	T3	168	26	550x350x540
SLEE-40N6	296	482	480	174	291	high pressure sodium	E40	400	T2 (T3 Ta+53°C)	201	27	550x350x540



SLEE-40 floodlight kits with 400 W ballast are supplied as standard with a separate enclosure housing starter and capacitor.



Back view SLEE-40

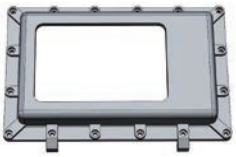


Dimensions in mm

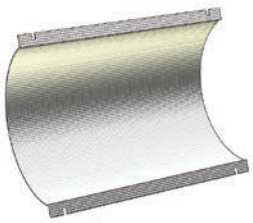
DON'T FORGET TO ORDER THE ACCESSORIES

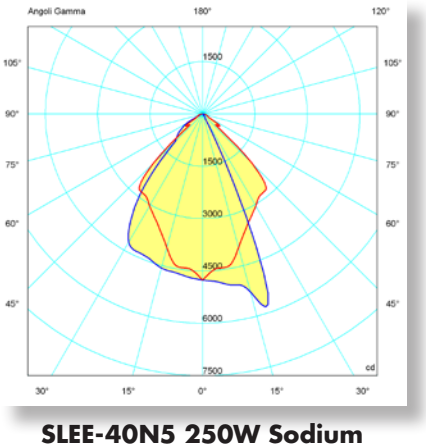
Example: Floodlight model SLEE-40N5 + Lamp LAMPNAVT400W + Cable gland NAV25IB + other ...see key

SLEE series Accessories and spare parts available on request

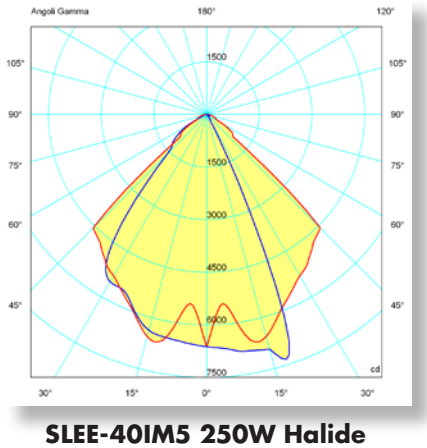
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	High pressure sodium vapour lamp	E40	250 W (ST250W)	LAMPNAVT250WPLU	
			400 W (ST400W)	LAMPNAVT400WPLU	
	Metal halide lamp	E40	230 W (MT250W)	LAMP230WJMT	
			360 W (MT400W)	LAMP360WJMT	
	Reinforced supporting bracket for mounting on mobile structures	SLEE-40	Material: galvanised steel	G-418/1	
	Cable gland	ISO M25	For models and codes, visit www.cortemgroup.com	NAV25IB NEV25IB	
	Front ring with glass	SLEE-40	In copper free alumi-nium with tempered glass front	G400-0322	
	Supporting bracket	SLEE-40	Material: galvanised steel	G-418	
	Angular orientation system fitted to supporting bracket (locking point every 15°)		Material: stainless steel	G-604	
	Frame for mounting floodlight on pole		Material: galvanised steel	G-0534	
	Sodium vapour and metal halide ballast	250W IM5	230V 50Hz	R-250NA	
		400W IM6		R-400	
		250W N5		R-250NA	
		400W N6		R-400NA	
	Ceramic lamp holder	E40	750V - 16A	PORT.E40	

SLEE series Accessories and spare parts available on request

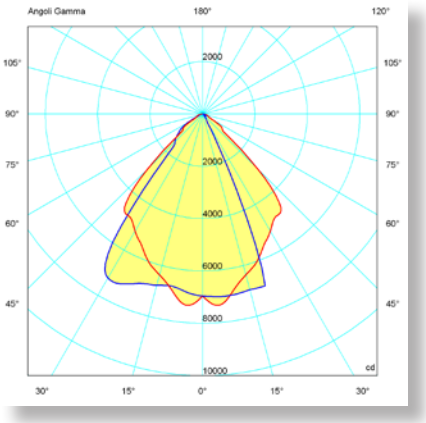
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Capacitor for sodium vapour	250 W	35µF 250V	F-35	SPARE PART
		400 W	50µF 250V	F-50	
	Capacitor for metal halide	250 W	30µF 250V	F-30	
		400 W	40µF 250V	F-40	
	Igniter	250 W	100-400 W	R100	SPARE PART
		400 W		R100P	
	Reflector	SLEE-40	Material: anodised aluminium	G-726	SPARE PART



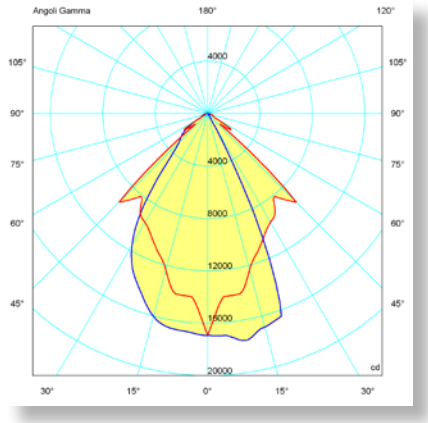
SLEE-40N5 250W Sodium



SLEE-40IM5 250W Halide



SLEE-40N6 400W Sodium



SLEE-40IM6 400W Halide

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.

= plane 90270
= plane 0180

SLFE

- Suitable for high (+55°C) and low (-50°C) temperatures
- Easy side access for replacement lamps
- Optimal performance at low temperatures (-50°C)
- Zones 1, 2, 21, 22

Electrical components compartment

Shock resistant tempered glass

Lamp up to 600 W

Side view for lamp replacement



CORTEM GROUP®

SLFE series Rectangular vertical floodlights

New generation SLFE series floodlights have been specially designed to provide the symmetrical, powerful distribution of light in all those areas where an intense, concentrated illumination is needed. The symmetrical reflector makes sure that the light is spread symmetrically in all directions to provide uniform lighting. Their rectangular design is both unique and innovative with the benefit of facilitating maintenance work. Lamps replacement is greatly simplified thanks to access through a side panel and there is no need for the glass to be removed. SLFE floodlights have a built in "Ex e" terminal board housing that allows to enter the lighting fixture through a cable gland with a "Ex" O-ring (non barrier) as specified in the installation specification standards (EN/IEC 60079.14). The electrical components (ballast, capacitor, igniter) are thermally separated from the lamp compartment thus ensuring a long and efficient working life. SLFE floodlights can be fitted with lamps of up to a maximum of 600 Watt. SLFE series floodlights also comply with anti light pollution standards (Regional Law date 27 March 2000 N°17 – Article 6).

Application sectors:



Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Perimeter lighting | Anti light pollution | Oil loading/ unloading jetties | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD		
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Certification:	CE 0722 Ex II 2GD Ex de IIB T2/T3 - Ex tD A21 IP 66			
Certificato:	ATEX CESI 09 ATEX 009			
	TR CU AVAILABLE	Per tutti i dati di certificazione TR CU scaricare il certificato dal sito www.cortemgroup.com		
Standards:	CENELEC EN 60079-0: 2006, EN 60079-1: 2007, EN 60079-7: 2007, EN 61241-0: 2006, EN 61241- 1: 2004, EN 60598-1:2008+A11:2009, EN 60598-2-1_1989, EN 61547: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0:2004, IEC 60079-1:2007, IEC 60079-7:2006, IEC 61241-0:2004, IEC 61241-1: 2004 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	300°C (T2)	200°C (T3)		
Ambient temperature:	Standard -20°C +55°C	Special -50°C +55°C		
Degree of protection:	IP66			



SLFE series Rectangular vertical floodlights



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
Glass face:	Shock and high temperature resistant tempered glass
Gaskets:	Acid, hydrocarbon and high temperature resistant silicone
Internal reflector:	Anodised aluminium
Supporting bracket	Galvanised steel, thickness 5mm
Mounting:	3 x Ø15mm holes
Bolts and screws:	Stainless steel
Entries:	1xISO M25 entry. Floodlight complete with NAV25IB cable gland for non-armoured cable
Coating:	Polyester coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	E40 ceramic
Rated voltage:	230 V AC
Rated frequency:	50 Hz
Connection:	Direct connection to the terminal board L, N, Pe. Section 4 mm^2
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures
Power factor:	0.96

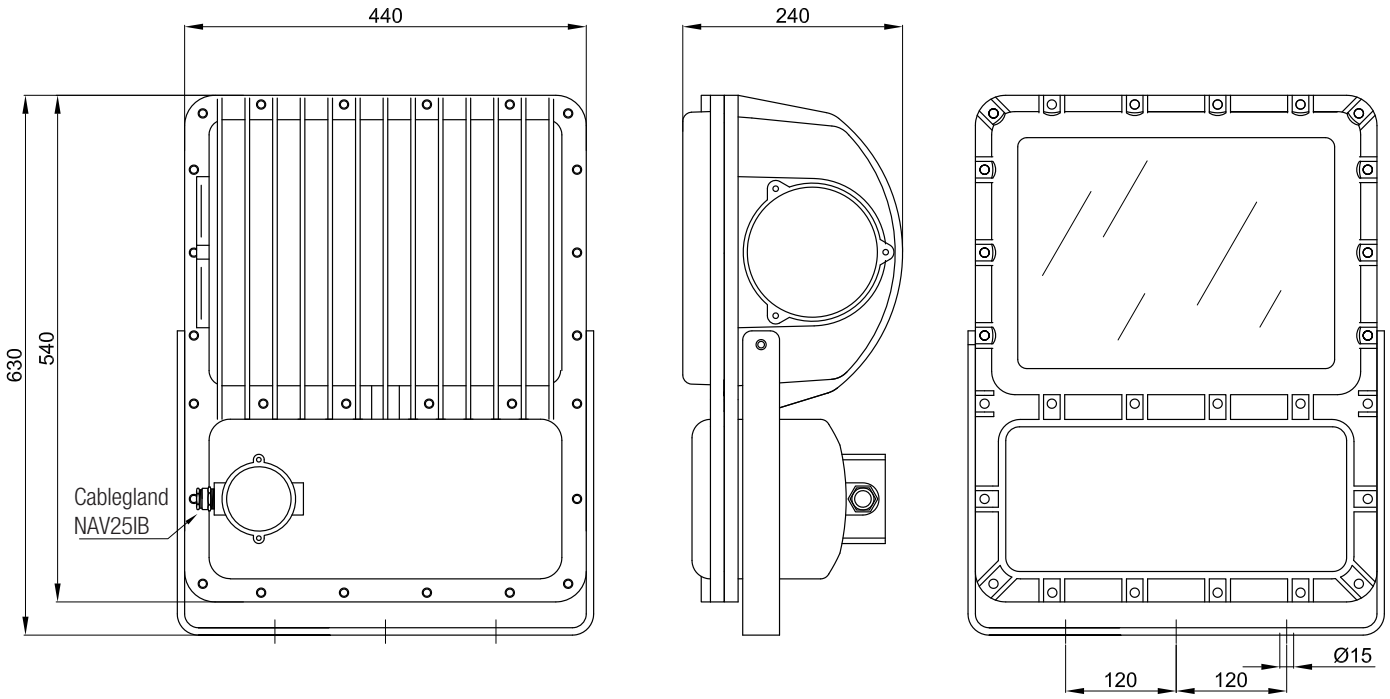
ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Discharge lamp
Swivelling base for 360° rotation
Different rated voltages
Reinforced supporting bracket for mounting on mobile structures
Frame for mounting floodlight on pole

SLFE series selection chart

Code	Lamp type	Lamp holder	Watt	Class T.a. +55°C	Max Temp. superf. °C	Weight kg	mm
SLFE-40IM5	metal halide	E40	250	T3	163	36	660x500x270
SLFE-40IM6	metal halide	E40	400	T3	193	37	660x500x270
SLFE-40N5	sodium vapour	E40	250	T3	163	36	660x500x270
SLFE-40N6	sodium vapour	E40	400	T3	193	37	660x500x270
SLFE-40N7	sodium vapour	E40	600	T2	221	38	660x500x270

DIMENSIONAL DRAWING

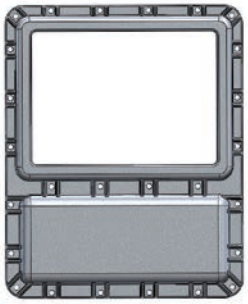


Dimensions in mm

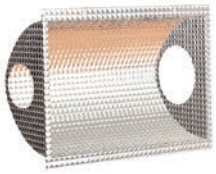
DON'T FORGET TO ORDER THE ACCESSORIES

Example: Floodlight model SLFE-40N5 + Discharge lamp LAMPNAVT250W + other... see key

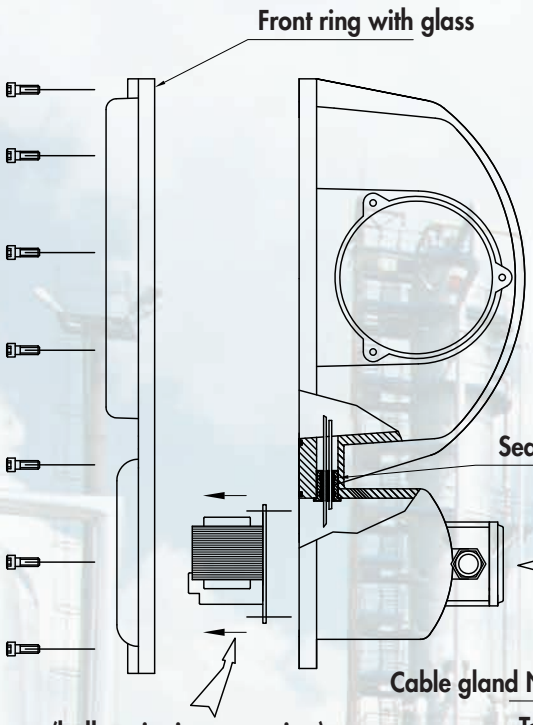
SLFE series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	High pressure sodium vapour lamp	E40	250 W (ST250W)	LAMPNAVT250WPLU	ACCESSORY SPARE PART
			400 W (ST400W)	LAMPNAVT400WPLU	
			600 W (ST600W)	LAMPNAVT600WPLU	
	Metal halide lamp	E40	230 W (MT250W)	LAMP230WJMT	ACCESSORY SPARE PART
			360 W (MT400W)	LAMP360WJMT	
			600 W (MT600W)	LAMP600WJMT	
	Supporting bracket		Material: galvanised steel	G-558	SPARE PART
	Cable gland for no-narmoured cable	ISO M25	(std. range cable 111÷20)	NAV25IB	SPARE PART
	Front ring with glass		In copper free alumi-nium with tempered glass front	G-0622	SPARE PART
	Reinforced supporting bracket for mounting on mobile structures		Material: galvanised steel	G-558/1	ACCESSORY SPARE PART

SLFE series Accessories and spare parts available on request

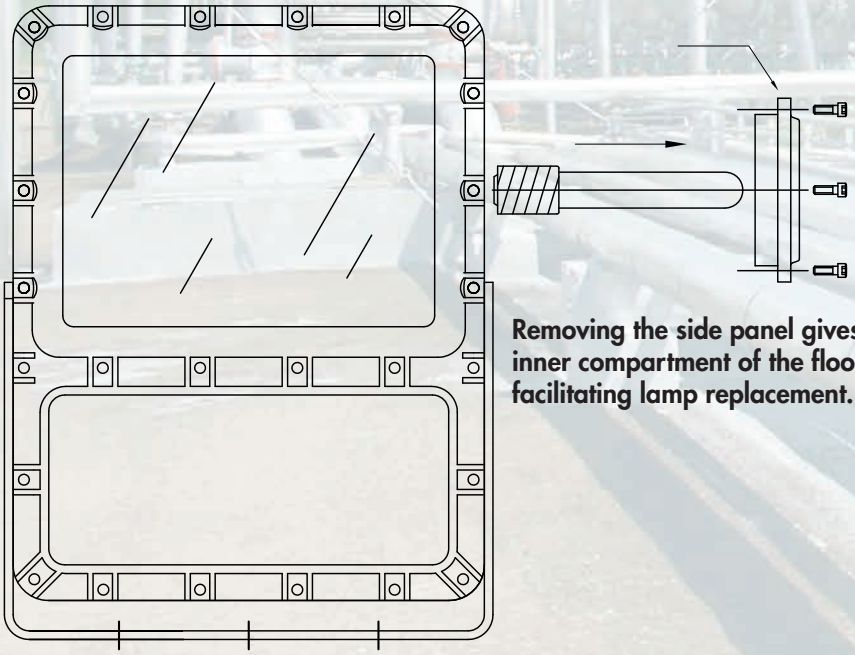
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Reflector		Material: anodised aluminium	**G-555**	SPARE PART
	Ceramic lamp holder	E40	750W 16A	**PORT E-40**	SPARE PART
	Sodium vapour and metal halide ballast	250W	230V 50 Hz	**R-250 NA**	SPARE PART
		400W		**R-400 NA**	
	Metal capacitor for mercury vapour and metal halide	250W	20 µF 250V	**F-30**	SPARE PART
		400W	40 µF 250V	**F-40**	
	Metal capacitor for sodium vapour	250W	35 µF 250V	**F-35**	SPARE PART
		400W	50 µF 250V	**F-50**	
		600W	65 µF 250V	**F-65**	
	Igniter	250W 400W		**R 100**	SPARE PART
		600W 700W		**R 1000**	
	Frame for mounting floodlight on pole		Material: galvanised steel	**G-0534**	ACCESSORY SPARE PART
	Swivelling base for 360° rotation		Material: aluminium coating RAL 7035	**G-326 + G-327**	ACCESSORY SPARE PART

Construction features

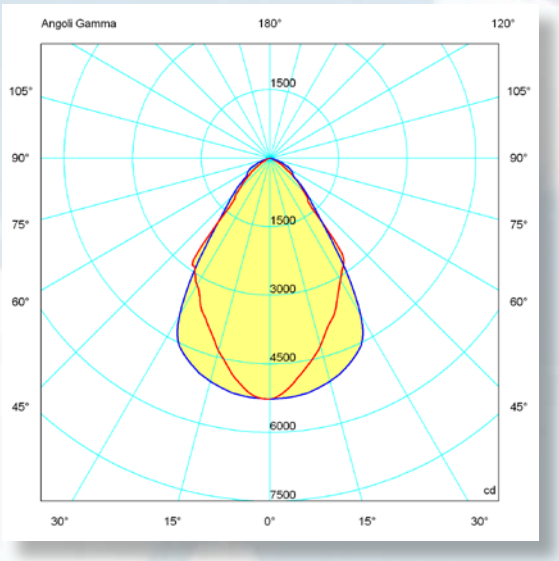


Electrical components (ballast, igniter, capacitor) installated in separate housing.

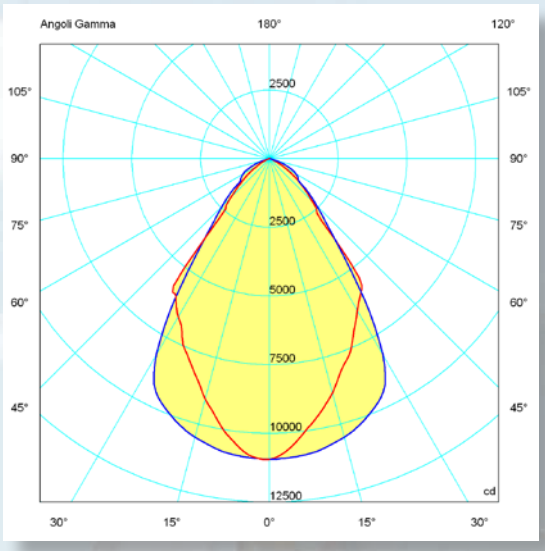
The floodlight is fitted with an "Ex e" terminal board housing that allows the floodlight to be positioned in ZONE 1 with an Ex non sealed cable gland.



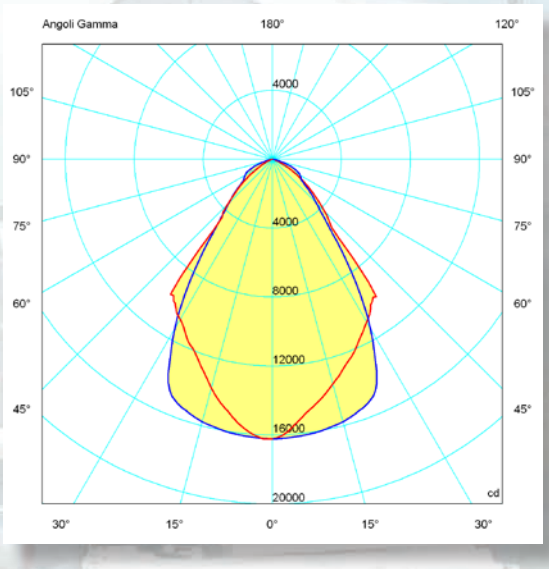
Removing the side panel gives direct access to the inner compartment of the floodlight thus greatly facilitating lamp replacement.



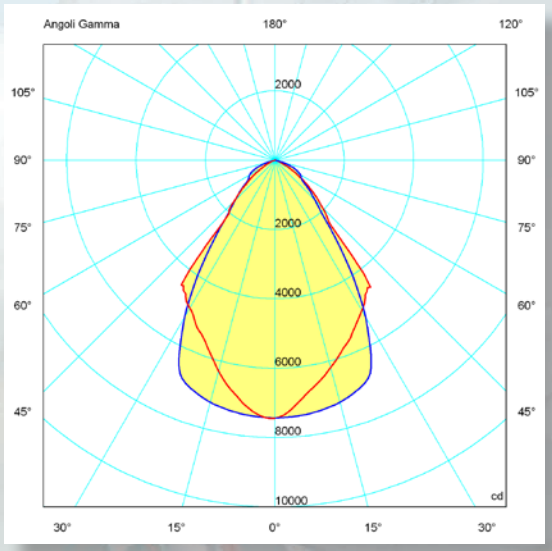
SLFE-40 250W halide



SLFE-40 400W sodium



SLFE-40 250W sodium



SLFE-40 400W halide

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.

= plane 90270

= plane C 0180

VIXLU

EOL Protected

- Mechanically very robust
- Extremely lightweight
- Fast, safe and easy fluorescent tube change
- Anti-light pollution flat glass
- Multi-voltage double channel electronic reactor
- Zones 1, 2, 21, 22

G13 bi-pin lamp holder

Stainless steel body

Silicone gasket and tempered glass

Cable gland and plugs in nickel-plated brass



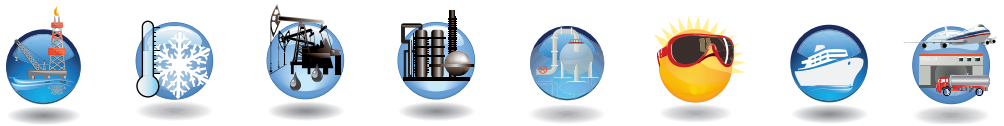
Closing clips in stainless steel



VIXLU series... Lighting fixtures for fluorescent tubes stainless steel/glass series

Increased safety lighting fixtures VIXLU for series bi-pin fluorescent tubes feature an IP66 fixture with an AISI 304 stainless steel (AISI 316L on request) body and a tempered shock- and high temperature-resistant glass diffuser. This construction method makes them ideal for applications where greater protection is needed against chemically aggressive substances or where there is an elevated risk of accidental physical damage such as in certain areas of the chemical or pharmaceutical industries. They are also ideal for use in paint booths or even more specifically for use in areas where specialised electronic components are made for the aerospace industry. They are recommended for use in highly corrosive environments and in areas where water and dust are present or where there are severe variations in climate. Fluorescent tubes that reach the end of their working lives are monitored and turned off by the EOL (End of Life) safety system in compliance with EN 60079-7. If one of the two tubes stops working, the double channel multi-voltage electronic ballast allows the other to continue working independently. The lighting fixture is closed with 6 clips for the 18W version and 8 clips for the 36W. The clips keep the protective glass hooked to the body of the lighting fixture, making maintenance easier and speeding up fluorescent tube replacement.

Application sectors:



Offshore plants | Low temperatures | Onshore plants | Oil refineries | Chemical and petro-chemical plants | Anti-light pollution | Naval installations | Aeroplane hangars

CERTIFICATION DATA

Classification:	Group II	Category 2GD			
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)			
Marking:	CE 0722 Ex II 2GD - Ex e mb IIC T4 Gb - Ex tb IIIC T70°C Db IP66				
Certification:	ATEX CESI 15 ATEX 037				
	IEC Ex IECEx CES 15.0019		All IEC Ex and TR CU certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE				
Standards:	CENELEC EN60079-0: 2012, EN60079-7: 2007, EN60079-31: 2014, EN60079-18: 2009 and EUROPEAN DIRECTIVE 2014/34/UE. IEC 60079-0: 2011, IEC 60079-18: 2009, IEC 60079-31: 2013, IEC 60079-7: 2006-07 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE European Directive 2011/64 RoHS				
Temperature class:	135°C (T4)				
Ambient temperature:	-40°C +55°C				
Degree of protection:	IP66				

VIXLU series... Lighting fixtures for fluorescent tubes stainless steel/glass series



ORIGINAL PRODUCT

MECHANICAL CHARACTERISTICS

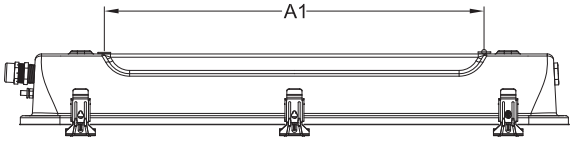
Body:	AISI 304 stainless steel
Diffuser:	Shock and high temperature resistant tempered glass
Lighting fixture hinge mechanism:	Stainless steel clips
Hinge:	Stainless steel and polyamides secured to the glass and light body
Gasket:	Acid/hydrocarbon resistant silicone
Stainless steel internal frame/reflector:	Painted white steel
Bolts and screws:	Stainless steel
Ground screw:	Stainless steel
Entries:	3 Ø20.5 entries. Lighting fixture complete with kit containing 2 PLG1IB model plugs and 1 NAV20SIB model cable gland in nickel-plated brass for non-armoured cables.
Mounting:	2 M8 threaded holes

ELECTRICAL CHARACTERISTICS

Lamp holder:	Non-sparking and multi-voltage G13 bi-pin
Ballast:	Double channel electronic with EOL protection
Rated voltage:	110/240 V AC/DC
Rated frequency:	50/60 Hz
Connection:	Directly to the L, N, Pe terminal block 4mm^2 cross-section, terminal block with jumper suitable for input-output
Power factor:	0.96
Wiring:	Silicone rubber cables with glass braid protection against high temperatures

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

2 pin Ø26 fluorescent tubes model T8
Reflector in extra-shiny aluminium to increase luminous output
Installation mounting brackets
Stainless steel cable gland NAV20SIS for non-armoured cables or NEV20SIS for armoured cables
Body in AISI 316L stainless steel painted RAL 9016 for installations in marine or naval environments (order code VIXLU-236MP)
Body in AISI 316L stainless steel for installations in marine environments (order code VIXLU-236M)

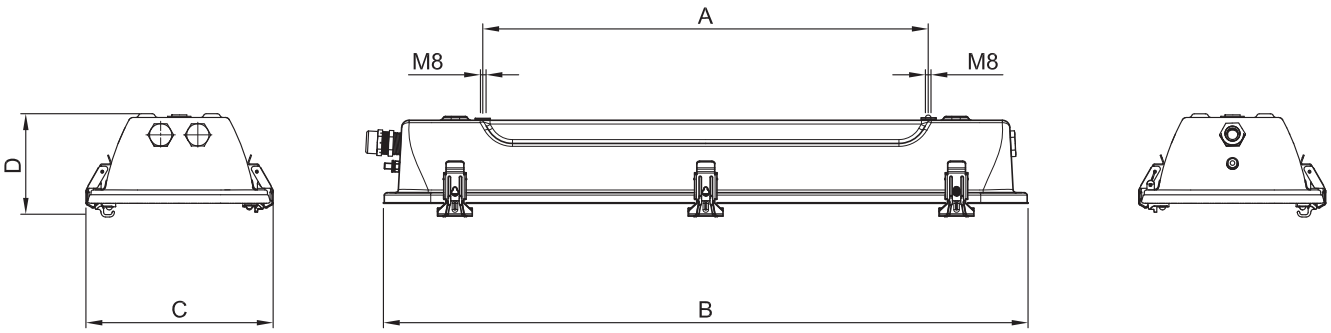


Lighting fixtures for marine environments	A1
VIXLU-118M..	430
VIXLU-136M..	950
VIXLU-218M..	430
VIXLU-236M..	950

Tabella di selezione serie VIXLU...

Code	Dimensions mm A	B	C	D	Type of reactor	Lamp n°	Supply	Watt	Weight kg	mm
VIXLU-118	480	690	198	100	double channel electronic	1	110/240V 50/60Hz	18	3,9	750x220x150
VIXLU-218	480	690	198	100	double channel electronic	2	110/240V 50/60Hz	18	4,0	750x220x150
VIXLU-136	1090	1300	198	100	double channel electronic	1	110/240V 50/60Hz	36	6,3	1355x220x150
VIXLU-236	1090	1300	198	100	double channel electronic	2	110/240V 50/60Hz	36	6,5	1355x220x150

DIMENSIONAL DRAWINGS



VIXLU LIGHTING FIXTURE IN DETAIL

Fixture access

Speed - The fixture does not need to be disassembled to access the connection terminal block. Thanks to the removable frame system on which the fluorescent tubes are housed, in fact, you can directly access the inside of the lighting fixture extremely easily, simplifying any operator maintenance activities.



Opening/closing system

Protection - The lighting fixture is closed by 6 clips for the 18W version and 8 clips for the 36W. The clips keep the protective glass hooked to the body of the lighting fixture, making maintenance easier and speeding up fluorescent tube replacement.





Materials

Duration - The body made entirely in AISI 304 stainless steel ensures high resistance to corrosion and duration over time in very harsh conditions. Also available in AISI 316L stainless steel or AISI 316L painted on request. Shock- and high temperature-resistant tempered glass.



VIXLU series extra accessories and spare parts...

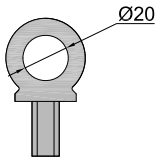
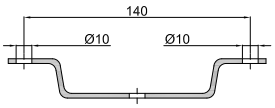
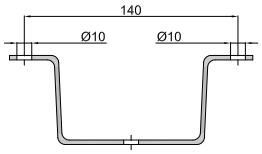
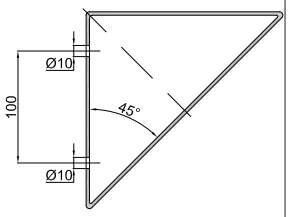
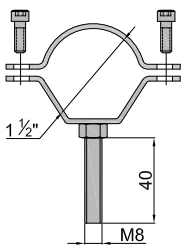
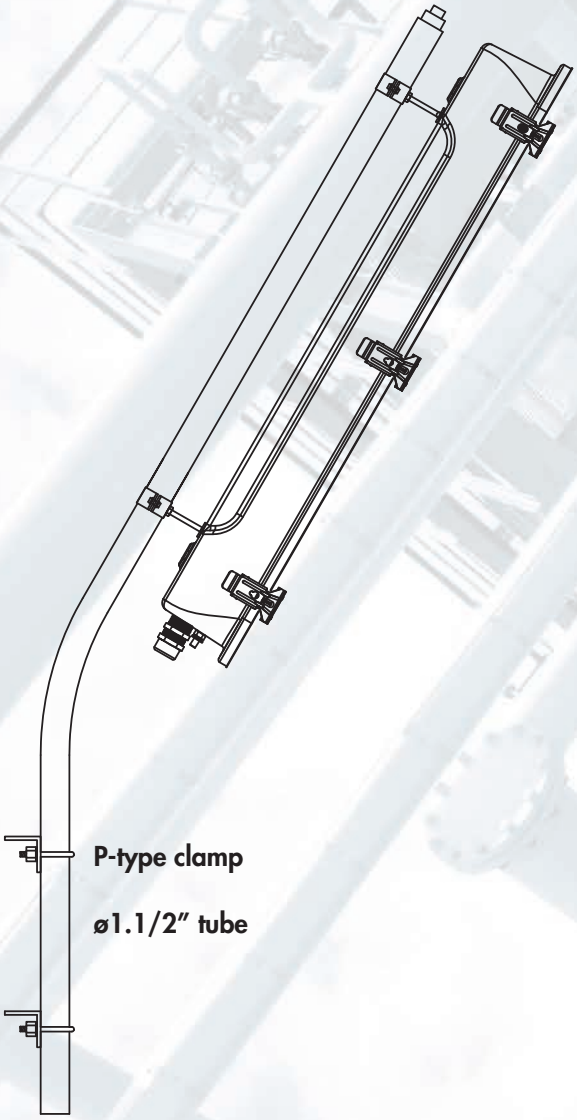
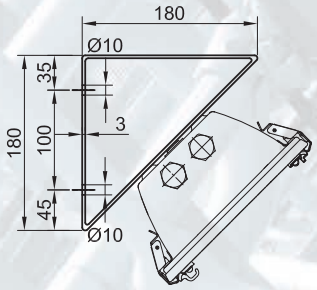
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	G13 coupling tri-phosphor fluorescent tubes 3.000K	18 W	1350 lm (FD18W)	**LAMPL18W21**	
		36 W	3350 lm (FD36W)	**LAMPL36W21**	
	Tige	Length: 250 mm	Material: stainless steel	**BRF8MIN/250**	
	Eyebolt		Material: galvanised steel	**GOF-8**	
	U-type bracket complete with hardware		Material bracket: galvanised steel screws: stainless steel	**G-0609**	
	V-type bracket complete with hardware		Material bracket: galvanised steel screws: stainless steel	**G-0610**	
	D-type bracket complete with hardware		Material bracket: galvanised steel screws: stainless steel	**G-0611**	
	P-type bracket		Material: galvanised steel	**G-0480**	

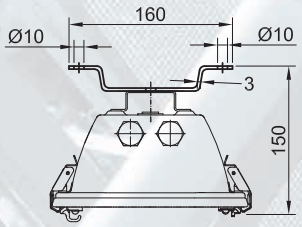
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Extra-shiny reflector	18 W	Material: aluminium	PC053960	ACCESSORY SPARE PART
		36 W		PC053961	
	Transparent cover complete with hooks	18 W	Material: tempered glass	PC054280	SPARE PART
		36 W		PC054281	
	IDouble channel multi-voltage electronic reactor	1 x 18 W 2 x 18 W 1 x 36 W 2 x 36 W	110/240 V 50/60 Hz	EBV-1	SPARE PART
	Bi-pin lamp holder	G13	320 V - 2 A	G-0598	SPARE PART
	Cable gland	ISO M20	std. range cavo 6,5÷14	NAV20IB	SPARE PART



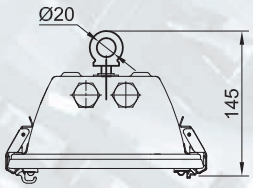
Standard pole assembly



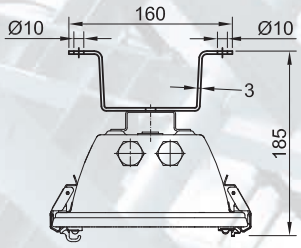
"D" TYPE corner assembly at 45°



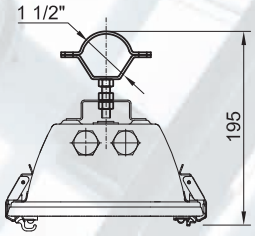
"U" TYPE low model ceiling assembly



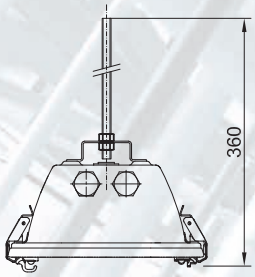
"O" TYPE suspended assembly with eyebolt



"V" TYPE high model ceiling assembly



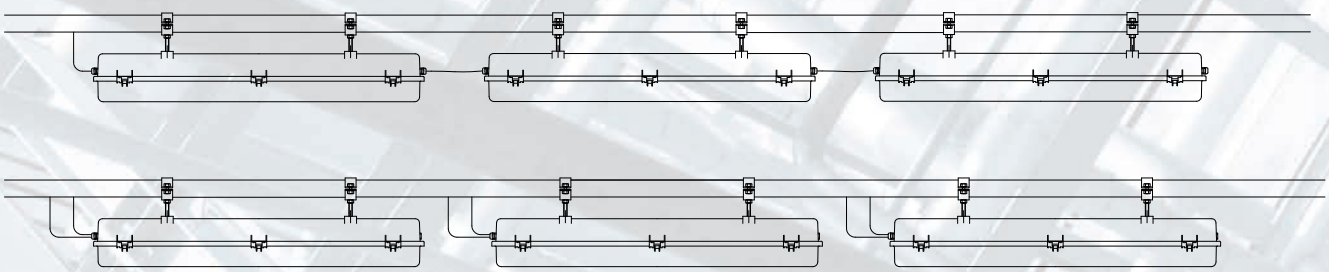
Assembly with 1.1/2" metal clamps "P" TYPE

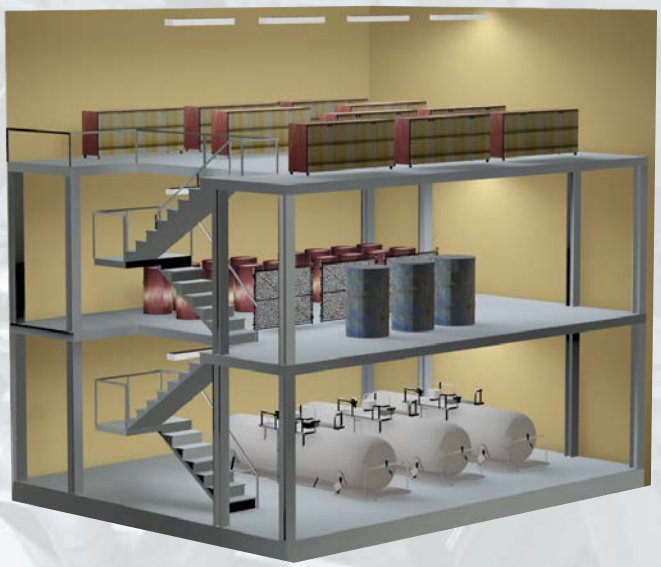


Assembly with Tige M8 x 250mm

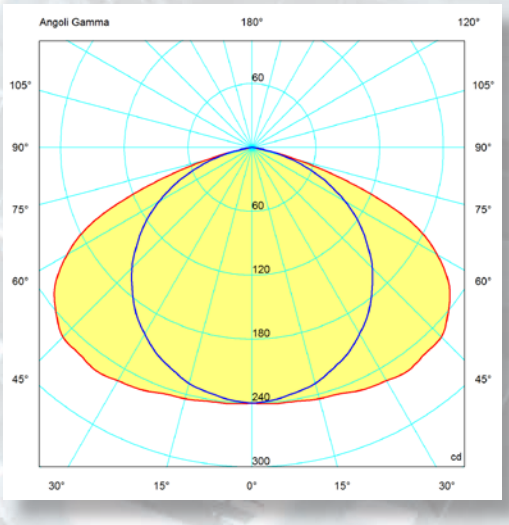
Note: check the fixing distances according to the chosen model

In-out connections can be made on one or both sides of the light body for quick, low-cost installation

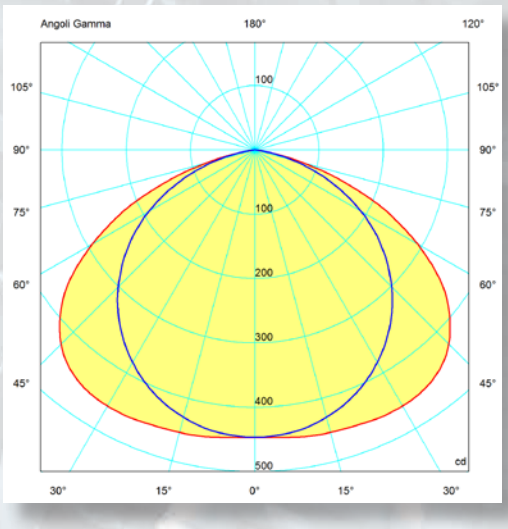




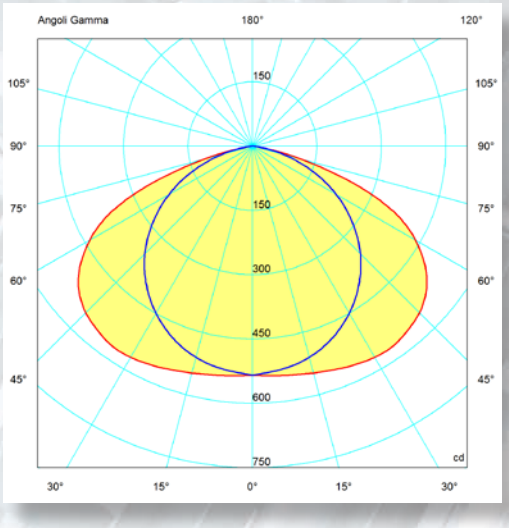
Example of lighting study made with lighting fixtures for VIXLU-236 fluorescent tubes



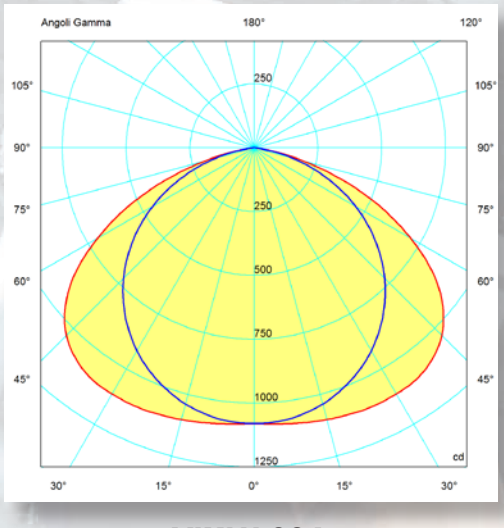
VIXLU-118



VIXLU-218



VIXLU-136



VIXLU-236

The lighting files are available at www.cortemgroup.com for designs and simulations of 2D-3D lighting levels, renderings and ray-tracing.

= plane 90270

= plane 0180

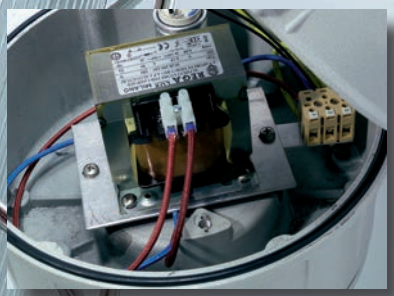
EWN

- Optimal performance at high (+60°C) and low (-50°C) temperatures
- Simplified re-lamping
- High resistance to corrosion and extreme weather conditions
- Ideal for installation at low and medium heights
- Zone 2, Zone 21, 22

Silicone gasket

Borosilicate glass

Electrical component housing



Hinged electrical component compartment



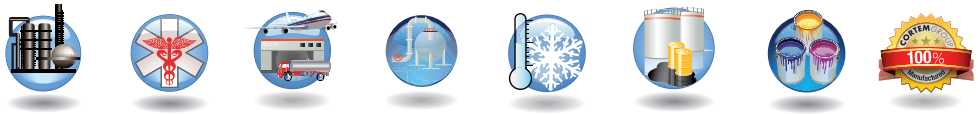
Protective guard

CORTEM GROUP®

EWN series Lighting fixtures for discharge lamps in zone 2/22

EWN series lighting fixtures have been specially designed for both indoor and outdoor lighting in industrial processes, especially in the chemical and petrochemical sector, as their mechanical and lighting properties outperform "Ex d" type fixtures. EWN series fixtures have aluminium alloy bodies and borosilicate glass prismatic compartment. They combine structural strength and resistance in chemically aggressive environments with illumination of the process areas where they have to provide light at ground level (horizontal lux) as well as show up potential obstacles (vertical lux). "Ex nR" protection (restricted breathing) is obtained through the use of special wear and tear resistant silicone gaskets that make EWN lighting fixtures category 3 items of equipment. They are therefore suitable for use in hazardous areas classified as Zone 2 (Gases) and Zone 21, 22 (Dusts). These units come in three sizes 60, 80 and 100 with suitable electrical fitting to use discharge lamps ranging in power from 20W to 400W. They feature a large compartment to house electrical components separated from the optical compartment and excellent dissipation of heat generated by the ballast and lamp. The large dispersion area reduces the surface temperature and keeps it below the class T3/T4/T6 limits even when the units are installed in ambient temperatures of up to +60°C. Installation and maintenance are greatly facilitated by the ease of access offered by these lighting fixtures. Opening the compartment housing the electrical components is facilitated by the fact that just one bolt is used to fasten the hinge that makes the compartment an integral part of the whole unit. This allows maintenance staff to work hands-free without having to replace any part of the lighting fixture.

Application sectors:



Oil refineries | Pharmaceutical industry | Aircraft storage facilities Hangars | Chemical and petrochemical plants | Low temperatures | Oil and combustible liquid depots | Paint booths | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 3GD		
Intallation: EN 60079.14	zona 2 (Gas)	zone 22 (Dust))	zone 21 (for IECEx, TR CU and INMETRO	
Marking:	CE 0722 Ex II 3GD Ex nR IIC T... Gc - Ex tc IIIC T... Dc IP66			
Certification:	ATEX CESI 05 ATEX 018X			
	IEC Ex CES 11.0017X	All IEC Ex, TR CU and INMETRO certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE			
	INMETRO DNV 12.0160X			
Standards:	CENELEC EN 60079-0: 2012, EN 60079-15: 2010, EN 60079-31: 2009, EN 60529: 1991, EN 60598-1 ed alla DIRETTIVA EUROPEA 2014/34/UE IEC 60079-0: 2011, IEC 60079-15: 2010, IEC 60079-31: 2008, IEC 60529: 2001			
Class temperature:	200°C (T3)	135°C (T4)		
Ambient temperature:	Standard -25°C +60°C	Special -50°C +60°C		
Degree of protection:	IP66			

EWN series Lighting fixtures for discharge lamps in zone 2/22



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
Globe:	Shock and high temperature resistant borosilicate glass
Protected opening system:	Easy access opening/closing system supplied as standard on the EWN-100 model only
Hinge:	Cast aluminium
Gaskets:	Acid, hydrocarbon and high temperature resistant silicone.
Guard:	Electro-polished stainless steel
Mounting:	Installation and mounting methods EWN series
Bolts and screws:	Stainless steel
Entries:	3/4" NPT threads
Coating:	Polyester coating Ral 7035 (light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	E27 or E40 ceramic
Rated voltage:	230 V AC
Rated frequency:	50 Hz
Connection:	Direct connection to terminal board L, N, Pe. Section 4 mm^2, suitable for entry/exit
Power factor:	0.96
Wiring:	Silicone rubber cables with glass braid protection against high temperatures

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Discharge lamp
External reflector
Cable gland: NEV2NB for armoured cable or NAV2NB for non-armoured cable
Suspension wire for optical unit
Different voltages: multitap ballast 120 V 208 V 240 V 277 V (example code EWNT-100N6**MT**)
Rated voltage: 480 V 50 Hz (code EWNT-100N6/**480**)
Rated voltage: 277 V 60 Hz (code EWNT-100N6/**277**)
Rated voltage: 120 V 60 Hz (code EWNT-100N6/**120**)
Rated frequency: 60 Hz at 230 V (code EWNT-100N6/**60**)
GAS UNI ISO 7/1 or ISO M25 threads

DON'T FORGET TO ORDER THE ACCESSORIES

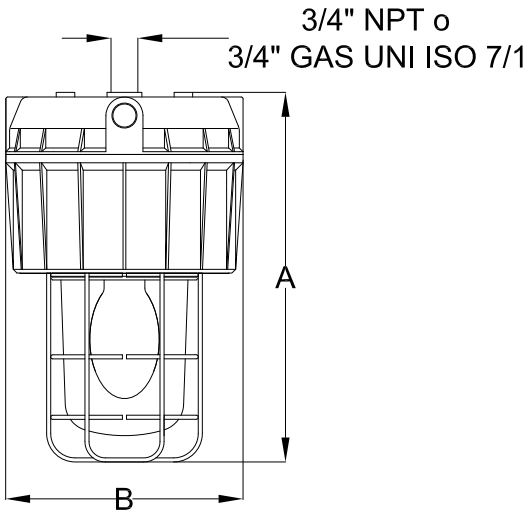
Example: Type of lighting fixture EWNT-60N1 + Lamp LAMPNAV70W + External reflector G60-527 + other...see key ACCESSORY

EWNT series selection chart Pendant mounting

Code	Dimension mm A	Dimension mm B	Type Lampada	lamp holder	Watt	Class Ta=+60°C	Max surface temp. °C	Weight kg	mm
EWNT-60IM1	370	260	Metal halide	E 27	70	T5	100	7	327x327x540
EWNT-60IM2	370	260	Metal halide	E 27	100	T4	122	7	327x327x540
EWNT-60IM4	370	260	Metal halide	E 27	150	T4	130	7	327x327x540
EWNT-60N1	370	260	Sodium vapour	E 27	70	T4	102	7	327x327x540
EWNT-60	370	260	Electronic	E 27	20	T6	77	5,6	327x327x540
EWNT-60	370	260	Electronic	E 27	23	T6	77	5,6	327x327x540
EWNT-80N4	455	260	Sodium vapour	E40	150	T4	124	8,7	327x327x540
EWNT-80N5	455	260	Sodium vapour	E40	250	T3	187	8,8	327x327x540
EWNT-80	455	260	Mixed light	E40	160	T4	124	8,9	327x327x540
EWNT-80	455	260	Mixed light	E40	250	T3	187	8,7	327x327x540
EWNT-80IM5	455	260	Metal halide	E40	250	T3	187	8,9	327x327x540
EWNT-100N6	550	350	Sodium vapour	E40	400	T3	151	20	410x410x700
EWNT-100IM6	550	350	Metal halide	E40	400	T3	151	20	410x410x700

Ex n

EWNT Pendant mounting

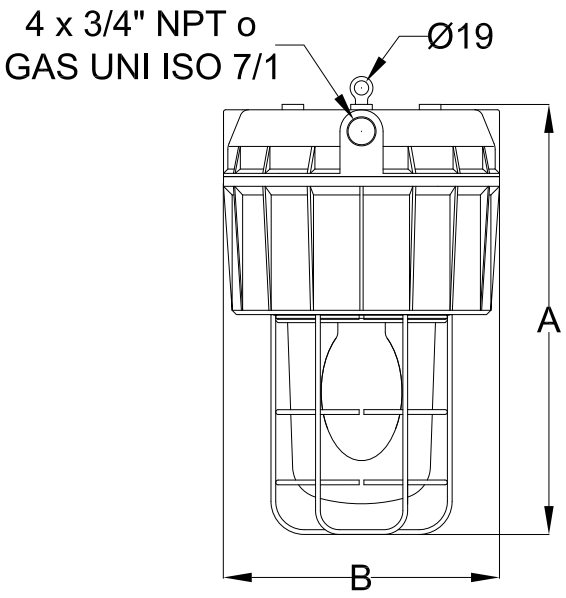


Dimension in mm

EWNGC series selection chart Pendant mounting with eyebolt

Code	Dimension mm A	B	Type Lampada	lamp holder	Watt	Class Ta=+60°C	Max surface temp. °C	Weight kg	mm
EWNGC-60IM1	370	260	Metal halide	E 27	70	T5	100	7	327x327x540
EWNGC-60IM2	370	260	Metal halide	E 27	100	T4	122	7	327x327x540
EWNGC-60IM4	370	260	Metal halide	E 27	150	T4	130	7	327x327x540
EWNGC-60N1	370	260	Sodium vapour	E 27	70	T4	102	7	327x327x540
EWNGC-60	370	260	Electronic	E 27	20	T6	77	5,6	327x327x540
EWNGC-60	370	260	Electronic	E 27	23	T6	77	5,6	327x327x540
EWNGC-80N4	455	260	Sodium vapour	E40	150	T4	124	8,7	327x327x540
EWNGC-80N5	455	260	Sodium vapour	E40	250	T3	187	8,8	327x327x540
EWNGC-80	455	260	Mixed light	E40	160	T4	124	8,9	327x327x540
EWNGC-80	455	260	Mixed light	E40	250	T3	187	8,7	327x327x540
EWNGC-80IM5	455	260	Metal halide	E40	250	T3	187	8,9	327x327x540
EWNGC-100N6	550	350	Sodium vapour	E40	400	T3	151	20	410x410x700
EWNGC-100IM6	550	350	Metal halide	E40	400	T3	151	20	410x410x700

EWNGC Mounting with eyebolt



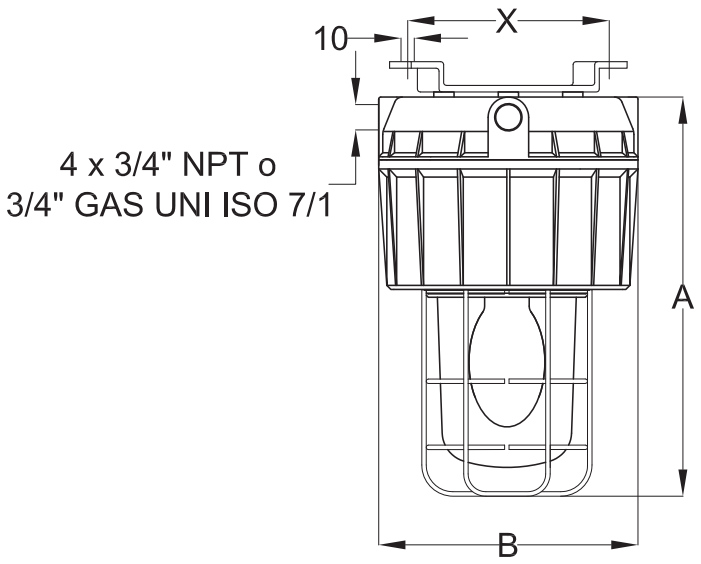
Dimension in mm

EWNX series selection chart Ceiling mounting with bracket

Code	Dimension mm			Type Lampada	lamp holder	Watt	Class Ta=+60°C	Max surface temp. °C	Weight kg	mm
	A	B	X							
EWNX-60IM1	370	260	290	Metal halide	E 27	70	T5	100	7	327x327x540
EWNX-60IM2	370	260	290	Metal halide	E 27	100	T4	122	7	327x327x540
EWNX-60IM4	370	260	290	Metal halide	E 27	150	T4	130	7	327x327x540
EWNX-60N1	370	260	290	Sodium vapour	E 27	70	T4	102	7	327x327x540
EWNX-60	370	260	290	Electronic	E 27	20	T6	77	5,6	327x327x540
EWNX-60	370	260	290	Electronic	E 27	23	T6	77	5,6	327x327x540
EWNX-80N4	455	260	290	Sodium vapour	E40	150	T4	124	8,7	327x327x540
EWNX-80N5	455	260	290	Sodium vapour	E40	250	T3	187	8,8	327x327x540
EWNX-80	455	260	290	Mixed light	E40	160	T4	124	8,9	327x327x540
EWNX-80	455	260	290	Mixed light	E40	250	T3	187	8,7	327x327x540
EWNX-80IM5	455	260	290	Metal halide	E40	250	T3	187	8,9	327x327x540
EWNX-100N6	550	350	370	Sodium vapour	E40	400	T3	151	20	410x410x700
EWNX-100IM6	550	350	370	Metal halide	E40	400	T3	151	20	410x410x700

Ex n

EWNX Ceiling mounting with bracket

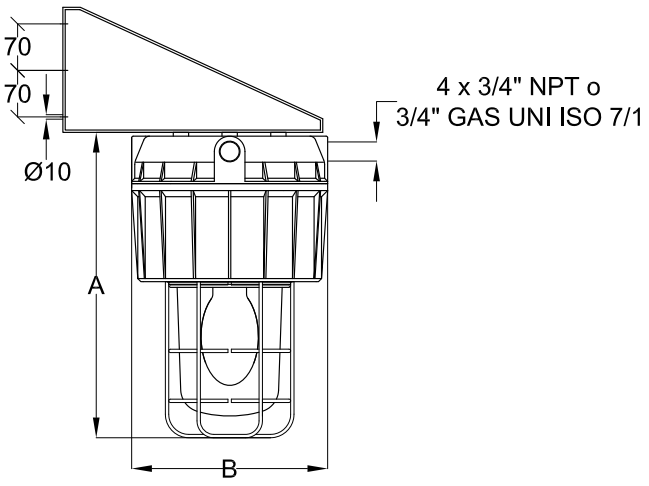


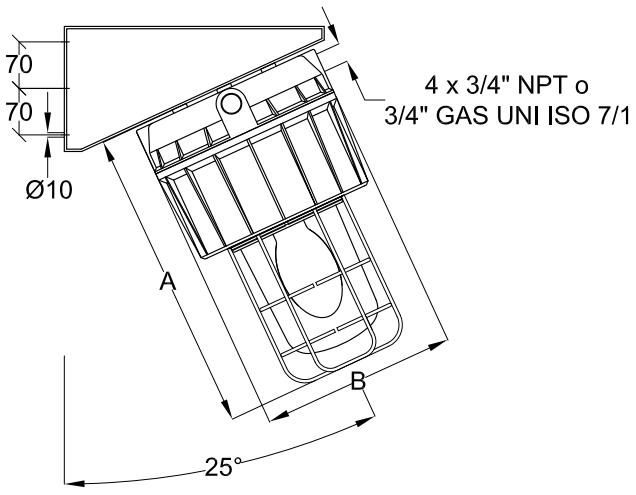
Dimension in mm

EWNIX series selection chart Wall mounting with bracket

Code	Dimension mm A	B	Type Lampada	lamp holder	Watt	Class Ta=+60°C	Max surface temp. °C	Weight kg	mm
EWNIX-60IM1	370	260	Metal halide	E 27	70	T5	100	7	327x327x540
EWNIX-60IM2	370	260	Metal halide	E 27	100	T4	122	7	327x327x540
EWNIX-60IM4	370	260	Metal halide	E 27	150	T4	130	7	327x327x540
EWNIX-60N1	370	260	Sodium vapour	E 27	70	T4	102	7	327x327x540
EWNIX-60	370	260	Electronic	E 27	20	T6	77	5,6	327x327x540
EWNIX-60	370	260	Electronic	E 27	23	T6	77	5,6	327x327x540
EWNIX-80N4	455	260	Sodium vapour	E40	150	T4	124	8,7	327x327x540
EWNIX-80N5	455	260	Sodium vapour	E40	250	T3	187	8,8	327x327x540
EWNIX-80	455	260	Mixed light	E40	160	T4	124	8,9	327x327x540
EWNIX-80	455	260	Mixed light	E40	250	T3	187	8,7	327x327x540
EWNIX-80IM5	455	260	Metal halide	E40	250	T3	187	8,9	327x327x540
EWNIX-100N6	550	350	Sodium vapour	E40	400	T3	151	20	410x410x700
EWNIX-100IM6	550	350	Metal halide	E40	400	T3	151	20	410x410x700

EWNIX Wall mounting with bracket





Dimension in mm

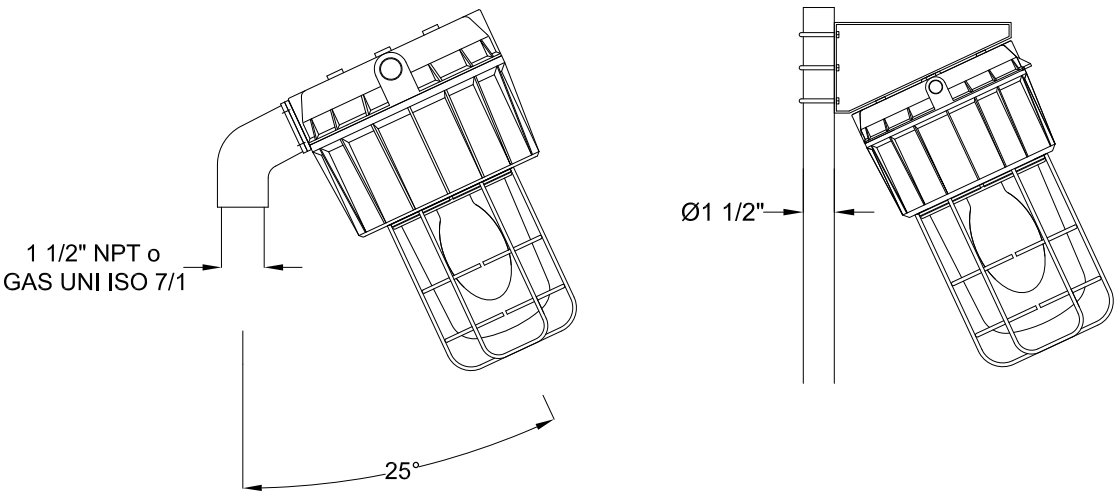
EWNP series selection chart Pole mounting

Code	Dimension mm A	Dimension mm B	Type Lampada	lamp holder	Watt	Class Ta=+60°C	Max surface temp. °C	Weight kg	mm
EWNP-60IM1	370	260	Metal halide	E 27	70	T5	100	7	327x327x540
EWNP-60IM2	370	260	Metal halide	E 27	100	T4	122	7	327x327x540
EWNP-60IM4	370	260	Metal halide	E 27	150	T4	130	7	327x327x540
EWNP-60N1	370	260	Sodium vapour	E 27	70	T4	102	7	327x327x540
EWNP-60	370	260	Electronic	E 27	20	T6	77	5,6	327x327x540
EWNP-60	370	260	Electronic	E 27	23	T6	77	5,6	327x327x540
EWNP-80N4	455	260	Sodium vapour	E40	150	T4	124	8,7	327x327x540
EWNP-80N5	455	260	Sodium vapour	E40	250	T3	187	8,8	327x327x540
EWNP-80	455	260	Mixed light	E40	160	T4	124	8,9	327x327x540
EWNP-80	455	260	Mixed light	E40	250	T3	187	8,7	327x327x540
EWNP-80IM5	455	260	Metal halide	E40	250	T3	187	8,9	327x327x540
EWNP-100N6	550	350	Sodium vapour	E40	400	T3	151	20	410x410x700
EWNP-100IM6	550	350	Metal halide	E40	400	T3	151	20	410x410x700

Ex n

EWNP Pole mounting

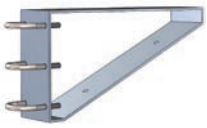
* for EWNP size 100, a mounting bracket and 3 galvanised steel U bolts are supplied to fit 1.1/2” poles



Dimension in mm

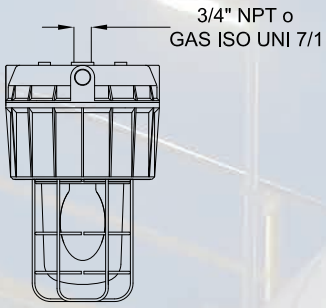
EWN series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	High pressure sodium vapour lamp	E27	70 W (FE70W)	LAMPNAV70WPLUS	
		E40	100 W (FE100W)	LAMPNAV100WPLUS	
		E40	150 W (FE150W)	LAMPNAV150WPLUS	
		E40	250 W (FE250)	LAMPNAV250WPLUS	
		E40	400 W (FE400W)	LAMPNAV400WPLUS	
	Metal halide lamp	E27	70 W (ME70W)	LAMP70WJM	
		E27	100 W (ME70W)	LAMP100WJM	
		E27	150 W (ME70W)	LAMP150WJM	
		E40	230 W (ME250W)	LAMP230WJM	
		E40	360 W (ME400W)	LAMP360WJM	
	Cable gland		For models and codes, visit www.cortemgroup.com	NAV2NB NEV2NB	
	Metallic capacitor	EWN-60 EWN-80 EWN-100	7µ	F-70	
			8µ	F-80	
			10µ	F-125	
			12µ	F-12.5	
			18µ	F-18	
			20µ	F-20	
			35µ	F-35	
	Igniter		50-400 W	R100	
	Ceramic lamp holder	E27	250V 4A	PORT E-27	
		E40	750V 16A	PORT E-40	

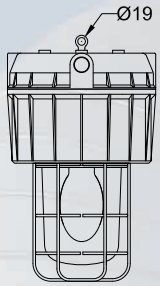
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Reflector	60	Material: white painted aluminium	G60-527	ACCESSORY SPARE PART
		80		G80-527	
		100		G100-527	
	Angled dome reflector	60	Material: white painted aluminium	G60-527DI	ACCESSORY SPARE PART
		80		G80-527DI	
		100	Contact our Sales Office for availability		
	Suspension wire for optical unit (see installation and mounting methods)		Material: steel wire length 500mm	G-0590	ACCESSORY SPARE PART
	Ring with globe including gasket and guard	60	Material: Aluminium ring Borosilicate glass globe Stainless steel guard	G60-0460	SPARE PART
		80		G80-0460	
		100		G100-0460	
	Bracket for ceiling mounting	60-80	Material: galvanised steel	G-532	SPARE PART
		100		G-532/1	
	Bracket for wall mounting	60-80	Material: galvanised steel	G-539	SPARE PART
		100		G-539/1	
	Pendant eyebolt	60-80	Material: galvanised steel	G0F-8	SPARE PART
	Cable gland mounting for pole mounting	For 1 1/2" pole	Material: aluminium Complete with cable gland for type NAV25IB non armoured cable standard cable range 11÷20	G-0462	SPARE PART
		For 2 1/2" pole		G-0462/1	
	Bracket for pole mounting complete with 3 x UBD5G	100	Material: galvanised steel	G-0550	SPARE PART
	Ballast for sodium vapour and metal halide lamp	60	70 W	R-70NAAP	SPARE PART
		80	150 W	R-150NA	
		80	250 W	R-250NA	
		100	400 W (ioduri)	R-400NA	
		100	400 W (ioduri)	R-400	

Installation and mounting methods EWN series...

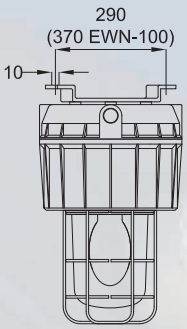
Standard installation of EWN series lighting fixtures



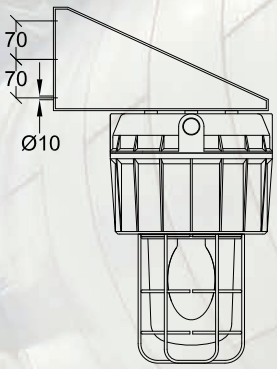
EWNT
Pendant mounting



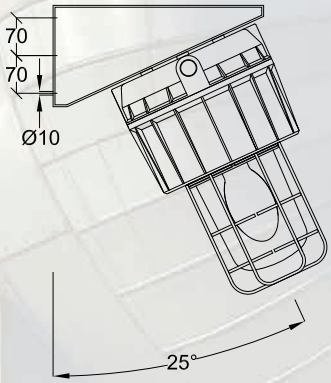
EWNCG
Pendant mounting with eyebolt



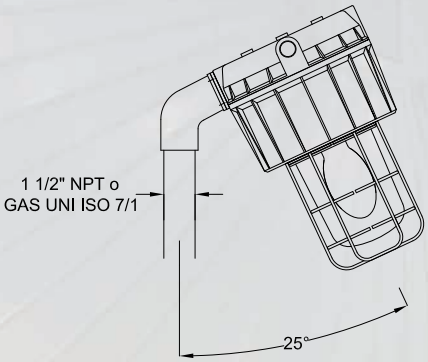
EEWNX
Ceiling mounting



EWNIX
Wall mounting with bracket

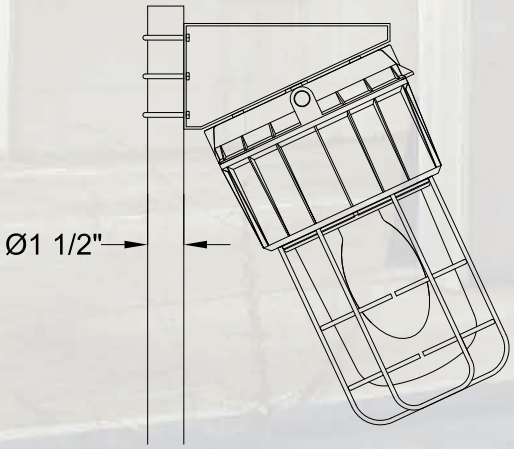


EWNIX
Wall mounting with 25° bracket

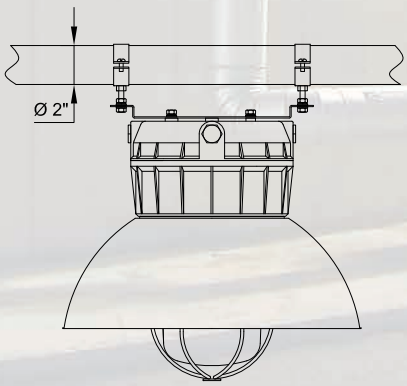


EWNP
pole mounting

For EWNP size 100, a mounting bracket and 3 galvanised steel lugs are supplied for 1 1/2" poles



Example of installation with G-532 bracket and OTER type G-0480/2



Easy access opening/closing system
Supplied as standard on EWN-100 model only

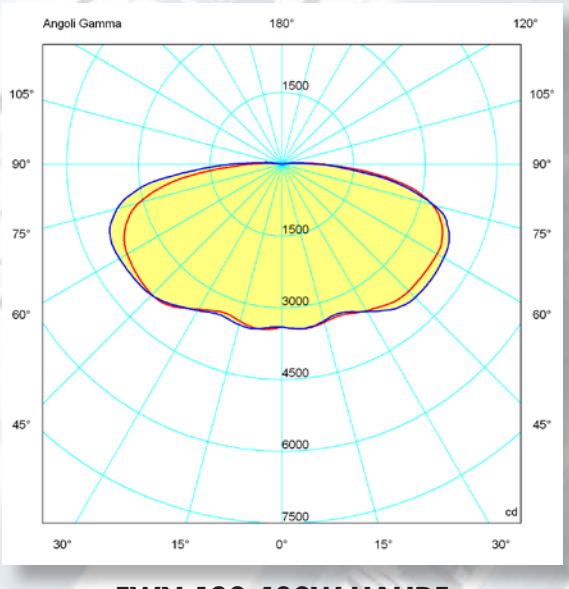


This system was specially designed to offer a easy access to the lamp body during maintenance work while increasing safety. The locking system keeps both hinged parts of the lamp body in position thus providing complete safety, even at heights, as the maintenance worker can use the socket with one hand only while the other can be used to grasp the ladder/raised platform. The advantages are clear in terms of installation times and the prevention of accidents

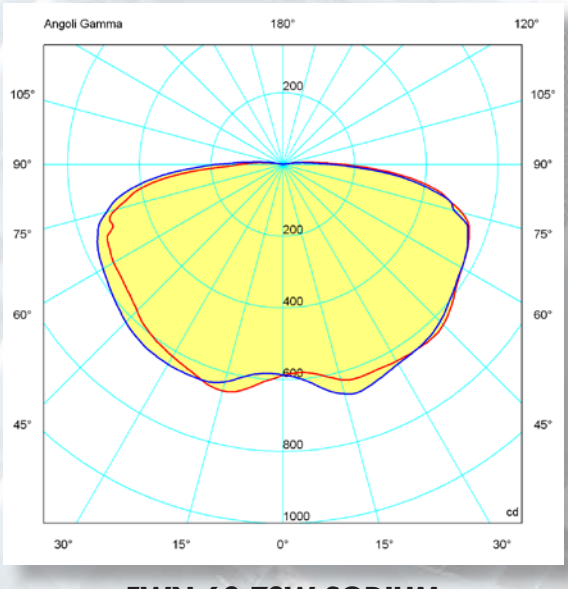
Suspension wire for optical unit
- Available on request -



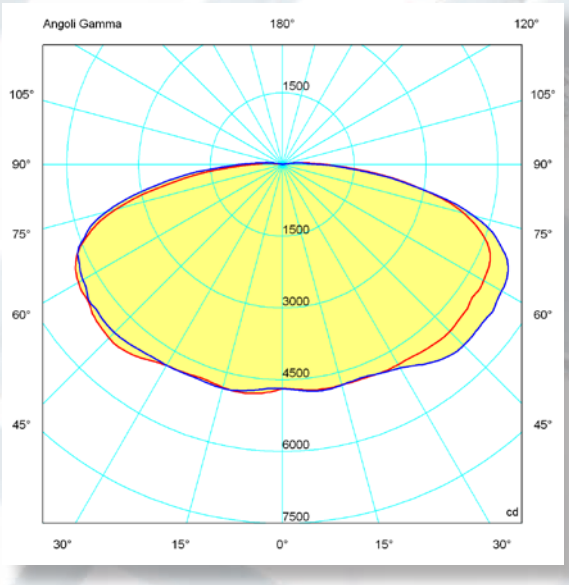
The suspension wire for the optical unit has been specially designed to further increase safety during installation and maintenance work and to decrease the risk of accidents. The wire, that acts as a "third hand" allows the installer to carry out all the necessary procedures without having to support the weight of the globe which remains suspended from the lamp body.



EWN 100 400W HALIDE



EWN 60 70W SODIUM

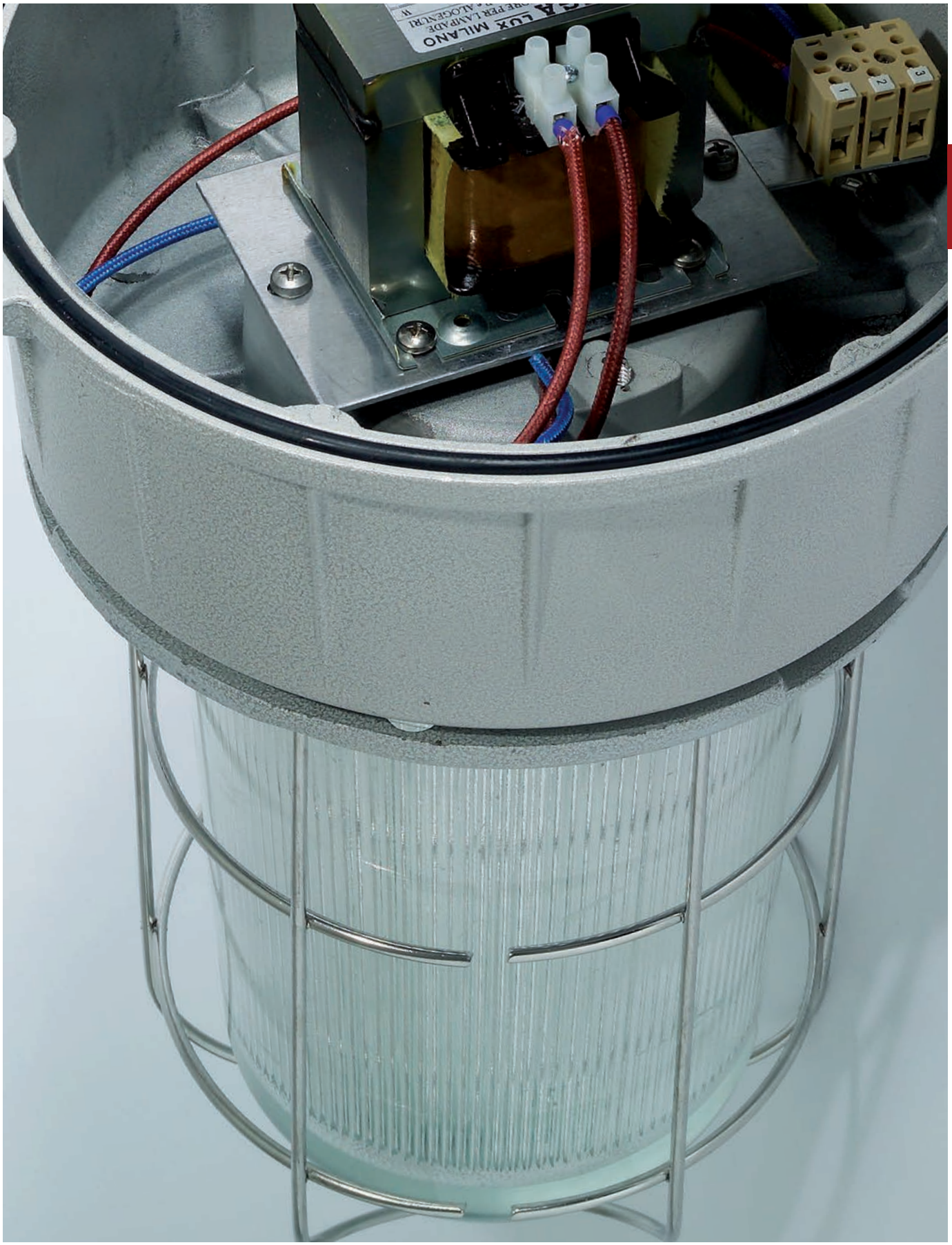


EWN 100 400W SODIUM

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

= plane 90270

= plane 0180


LUX MILANO
1
2
3

EXEN

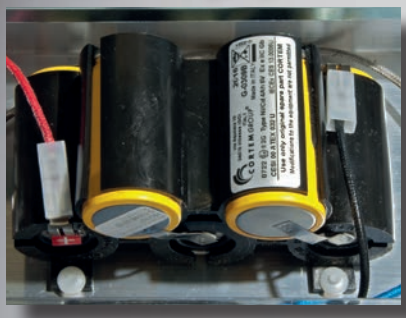
- **Double locking system operated by hexagonal-head tool**
- **Suitable for ambient temperatures from -40°C to +55°C**
- **High mechanical strength**
- **Zone 2, Zone 22**

Transparent polycarbonate cover

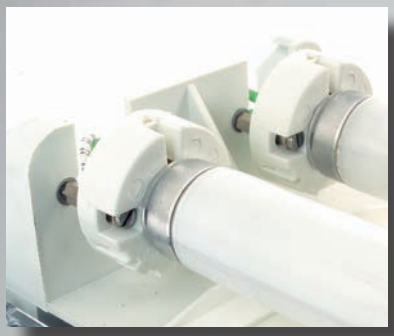
Reinforced polyester resin body

EOL Protected

Internal emergency batteries



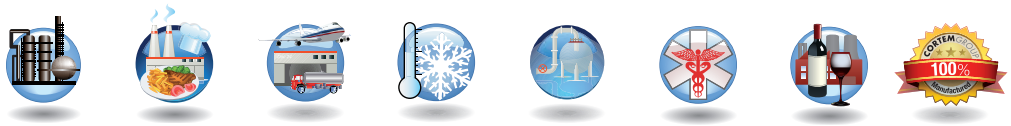
G13 bi-pin lamp holder



EXEN series Lighting fixtures "industrial series"

EXEN series fluorescent tube lighting fixtures can be installed in hazardous industrial plant units designated as Zone 2 and Zone 22. The materials used in their manufacture makes them ideal for use in all environments where a high degree of protection is needed against corrosion, dust, water and humidity.
Due to their robust mechanical properties, they are installed in both outdoor and indoor industrial environments such as refineries, petrochemical plants, rubber producing plants, paper mills, tunnels, galleries. In a more general sense, they are used in all those production processes where environmental conditions would deteriorate any other material and put the safety of the operating environment at risk. They are fitted with an electronic ballast system (RV series) for G13 bi-pin fluorescent tubes and can be supplied for either standard or emergency illumination. EXEN series lighting fixtures are easy to install and maintain and have a high degree of reliability thanks to the EOL Protected system that allows one fluorescent tube to stop working in safety. EXEN lighting fixtures have been designed to be connected in series thus simplifying installation and doing away with the need for junction boxes.

Application sectors:



Oil refineries | Chemical Farm produce applications | Aircraft storage facilities Hangars | Low temperatures | Chemical and petrochemical plants | Pharmaceu-tical industry | Distillation industry | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 3GD		
Installation: EN 60079.14	zone 2 (Gas)	zone 22 (Dust)		
Marking:	CE Ex II 3GD Ex nA II T4/T5 - Ex tD A22 IP 66			
	CE 0722 Ex II 3D Ex tD A22 IP 66			
Certification:	ATEX CESI 04 ATEX 042			
	IEC Ex CES 12.0010	All IEC Ex, TR CU and INMETRO certification data can be downloaded at www.cortemgroup.com		
	TR CU DISPONIBILE			
	INMETRO DNV 17.0050X			
Standards:	CENELEC EN 60079-0: 2006, EN 60079-15: 2005, EN 61241-0: 2006, EN 61241-1: 2004, EN60598-1:2008+A11:2009, EN60598-2-22:1998+A1:2003+A2:2008, EN61547:2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2007, IEC 60079-15: 2010, IEC 60079-31: 2008 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Degree of protection:	IP66			

For EXEN-...series lighting fixtures

Class temperature	Max. surface temperature	Ambient temperature
T5	T65°C	-40°C +40°C
T5	T80°C	-40°C +50°C
T4	T85°C	-40°C +55°C

For EXEN-..EF.. or EXEN-..EE..series lighting fixtures with emergency unit

Class temperature	Max. surface temperature	Ambient temperature
T5	T65°C	-40°C +40°C
T5	T80°C	-40°C +50°C

For EXEN-..EF..E o EXEN-..EE..E series lighting fixtures with emergency and separate emergency battery pack

Class temperature	Max. surface temperature	Ambient temperature
T4	T85°C	-40°C +55°C

EXEN series Lighting fixtures “industrial series”



ORIGINAL PRODUCT

MECHANICAL FEATURES

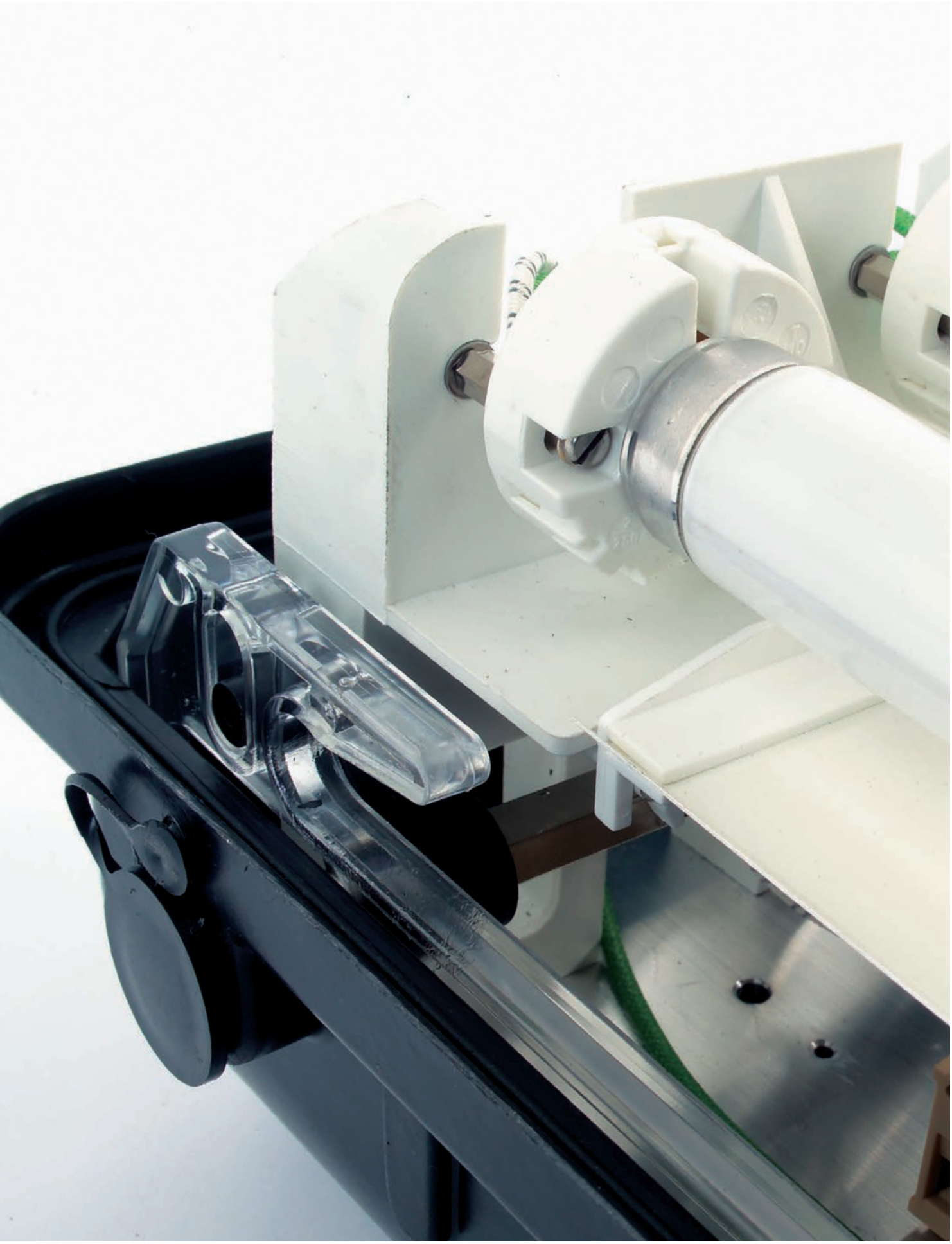
Body:	Black shock and UV resistant fibreglass reinforced anti-static polyester resin
Diffuser:	Transparent polycarbonate, shock and UV resistant
Protected opening system:	Sliding system operated by a hexagonal socket (for safety reasons, the fixture cannot be opened without the tool)
Gasket:	**A**cid/hydrocarbon resistant expanded silicone
Internal reflector:	White painted aluminium
Inner frame:	Extruded aluminium
Bolts and screws:	Stainless steel
Entries:	4 x Ø25.5 entries (suitable for ISO M25 threads). Lighting fixture kit contains 3 x model PLG2ILXE7 plugs and 2 x model NAVP25IXE-X6DS cable glands for non-armoured cable
Mounting:	Nickel plated brass inserts with 2 x M8 holes

ELECTRICAL FEATURES

Lamp holder:	Bi-pin G13
Ballast:	Electronic single channel
Rated voltage:	220-240 Vac ±10%
Rated frequency:	50/60 Hz
Connection:	Connected directly to terminal board L N, Pe section 4 mm^2 terminal board with jumpers for input-output
Power factor:	0.97
Emergency unit:	Electronic inverter 110V/240V, 50/60Hz. Batteries Ni/Cd, 4 Ah or 7 Ah, 6 V
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

2 pin Ø26 fluorescent tubes model T8
Installation brackets
Grey polyester resin body (code EXEN-118EE**4G**)
Cable entry: 4 x Ø20.5 holes. Lighting fixture kit contains 3 model PLG1ILXE7 plugs and 2 model NAVP20IXE cable glands for non-armoured cable (code EXEN-118EE4/**20**)
Earthing continuity plates for metal cable glands



EXEN series selection chart

Single and double tube

Code	Dimensions mm A	A1	B	C	Type of ballast	N° of lamps	Power supply	Watt	Weight kg	mm
EXEN-118	785	420	185	155	electronic single channel	1	230 V 50/60 Hz.	18	5,0	195x155x820
EXEN-136	1370	720	185	155	electronic single channel	1	230 V 50/60 Hz.	36	8,0	196x155x1400
EXEN-218	785	420	185	155	electronic single channel	2	230 V 50/60 Hz.	18	4,0	196x155x820
EXEN-236	1370	720	185	155	electronic single channel	2	230 V 50/60 Hz.	36	7,3	196x155x1400

Single and double tube with emergency unit

Code	Dimensions mm A	A1	B	C	Operating type	Lampade n°	Power supply	Discharge time minutes	Watt	Weight kg	mm
EXEN-118EE4	785	420	185	155	emergency only	1	230 V 50/60 Hz	120’	18	4,8	196x155x820
EXEN-118EE7	785	420	185	155	emergency only	1	230 V 50/60 Hz	210’	18	5,8	196x155x820
EXEN-136EE4	1370	720	185	155	emergency only	1	230 V 50/60 Hz	100’	36	7,5	196x155x1400
EXEN-136EE7	1370	720	185	155	emergency only	1	230 V 50/60 Hz	180’	36	8,5	196x155x1400
EXEN-118EF4	785	420	185	155	normal + emergency	1	230 V 50/60 Hz	120’	18	7,0	196x155x820
EXEN-118EF7	785	420	185	155	normal + emergency	1	230 V 50/60 Hz	210’	18	8,0	196x155x820
EXEN-136EF4	1370	720	185	155	normal + emergency	1	230 V 50/60 Hz	100’	36	7,5	196x155x1400
EXEN-136EF7	1370	720	185	155	normal + emergency	1	230 V 50/60 Hz	180’	36	8,5	196x155x1400
EXEN-218EF4	785	420	185	155	normal + emergency	2	230 V 50/60 Hz	120’	18	8,3	196x155x820
EXEN-218EF7	785	420	185	155	normal + emergency	2	230 V 50/60 Hz	210’	18	8,5	196x155x820
EXEN-236EF4	1370	720	185	155	normal + emergency	2	230 V 50/60 Hz	100’	36	7,8	196x155x1400
EXEN-236EF7	1370	720	185	155	normal + emergency	2	230 V 50/60 Hz	180’	36	8,8	196x155x1400

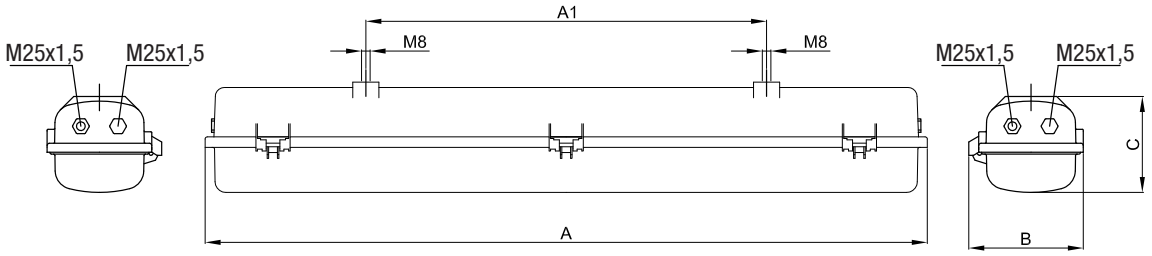
DON’T FORGET TO ORDER THE ACCESSORIES

Exaple: Type of lighting fixture EXEN-118EF4 + Fluorescent tubes LAMPL18W21 + Installation fittings G-244 + other...see key

Single and double lamp units with separate emergency battery pack for temperatures of -40°C to + 55°C

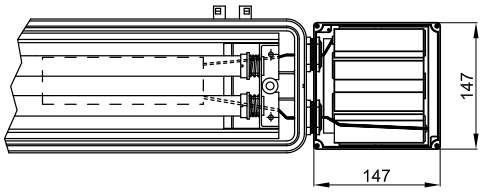
Code	Dimensions mm A	A1	B	C	Operating type	Lampade n°	Power supply	Discharge time minutes	Watt	Weight kg	mm
EXEN-118EE4E	785	420	185	155	emergency only	1	230 V 50/60 Hz.	120’	18	5,8	200x170x950
EXEN-118EE7E	785	420	185	155	emergency only	1	230 V 50/60 Hz.	210’	18	6,8	200x170x950
EXEN-136EE4E	1370	720	185	155	emergency only	1	230 V 50/60 Hz.	100’	36	8,5	200x170x1550
EXEN-136EE7E	1370	720	185	155	emergency only	1	230 V 50/60 Hz.	180’	36	9,5	200x170x1550
EXEN-118EF4E	785	420	185	155	normal + emergency	1	230 V 50/60 Hz.	120’	18	8,0	200x170x950
EXEN-118EF7E	785	420	185	155	normal + emergency	1	230 V 50/60 Hz.	210’	18	9,0	200x170x950
EXEN-136EF4E	1370	720	185	155	normal + emergency	1	230 V 50/60 Hz.	100’	36	8,5	200x170x1550
EXEN-136EF7E	1370	720	185	155	normal + emergency	1	230 V 50/60 Hz.	180’	36	9,5	200x170x1550
EXEN-218EF4E	785	420	185	155	normal + emergency	2	230 V 50/60 Hz.	120’	18	9,3	200x170x950
EXEN-218EF7E	785	420	185	155	normal + emergency	2	230 V 50/60 Hz.	210’	18	9,5	200x170x950
EXEN-236EF4E	1370	720	185	155	normal + emergency	2	230 V 50/60 Hz.	100’	36	8,8	200x170x1550
EXEN-236EF7E	1370	720	185	155	normal + emergency	2	230 V 50/60 Hz.	180’	36	9,8	200x170x1550

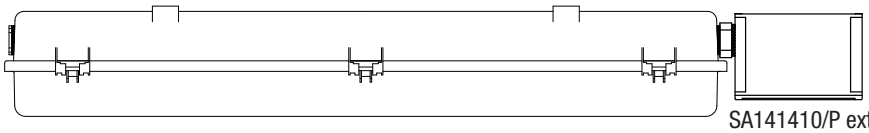
DIMENSIONAL DRAWINGS



Emergency lamp for temperatures of -40°C + 55°C

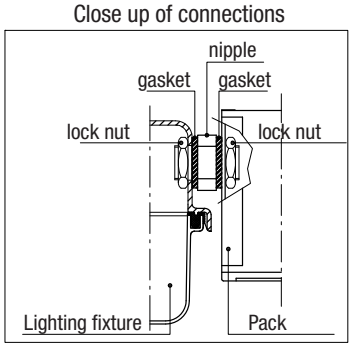
Batteries contained in a separate pack type SA141410/P in polyester resin





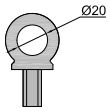
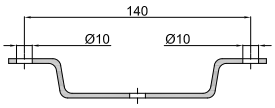
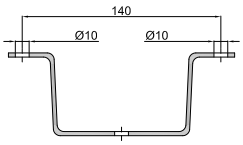
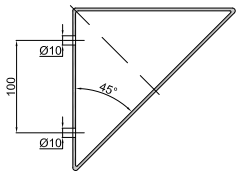
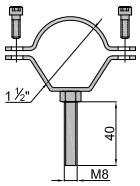
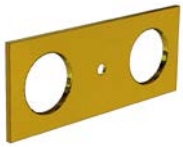
SA141410/P external pack in polyester resin

Close up of connections

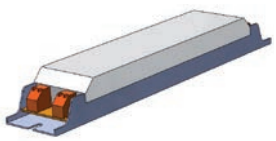


Dimensions in mm

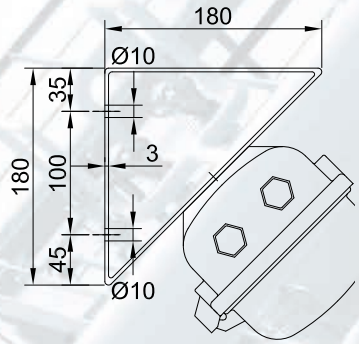
EXEN series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Tri-phosphor fluorescent tubes G13 fitting 3.000K	18 W	1350 lm (FD18W)	LAMPL18W21	
		36 W	3350 lm (FD36W)	LAMPL36W21	
	Tige	Length: 250 mm	Material: stainless steel	BRF8MIN/250	
	Eyebolt		Material: galvanised steel	GOF-8	
	Type U bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0609	
	Type V bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0610	
	Type D bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0611	
	Type P bracket		Material: galvanised steel	G-0480	
	Earthing continuity plates for metal cable glands	Fori M20x1.5	Material: brass	B-479	
		Fori M25x1.5		B-479/1	
	Non-armoured cable gland complete with rubbers, seal and lock nut	ISO M25x1,5	Ex and II IP 66/67 (std. range cable 10÷18)	NAVP25IXE-X6DS	
	Plug with seal and lock nut	ISO M25x1,5	Ex and II IP 66/67	PLG2ILXE7	

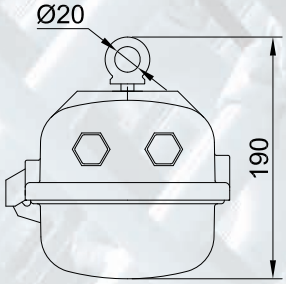
EXEN series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Transparent diffuser	18 W	Material: polycarbonate	B18-363	SPARE PART
		36 W		B36-363	
	Reflector	18 W	Material: white plastic coated aluminium	B18-0213	SPARE PART
		36 W		B36-0213	
	Hexagonal head tool			CLAFT10	SPARE PART
	Inverter			INVERTER	SPARE PART
	Battery pack		4 Ah 6V NiCd	G-0309B	SPARE PART
			7 Ah 6V NiCd	G-0309	
	Lamp holder		250 V - 4 A	B-0267	SPARE PART
	Electronic ballast	1 x 18 W	220-240 Vac ±10% 50/60 Hz	RV-118	SPARE PART
		2 x 18 W		RV-218	
		1 x 36 W		RV-136	
		2 x 36 W		RV-236	

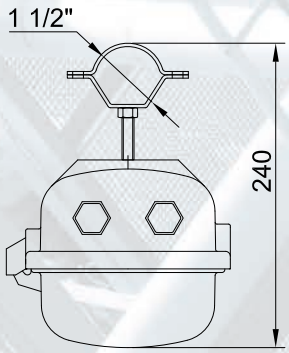
Installation and mounting methods EXEN series



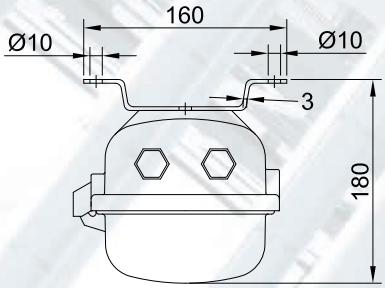
45° angle mounting
TYPE "D"



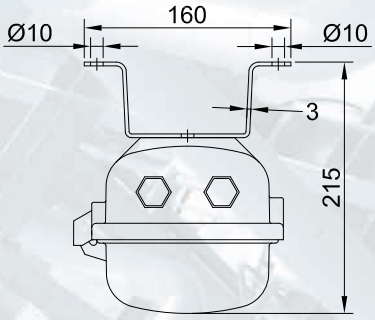
Pendant mounting with
eyebolt TYPE "O"



Mounting with 1.1/2"
metal clamps TYPE "P"

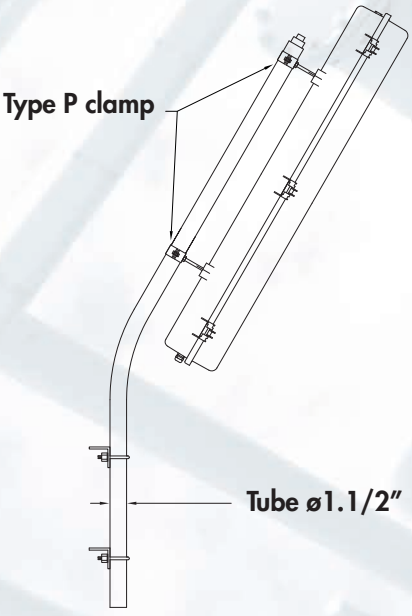


Low ceiling mounting with
clamp TYPE "U"



High ceiling mounting with
clamp TYPE "V"

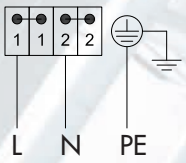
Dimensions in mm



Standard pole mounting

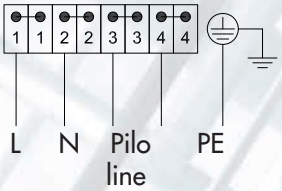
Wiring diagrams

Normal lighting fixture



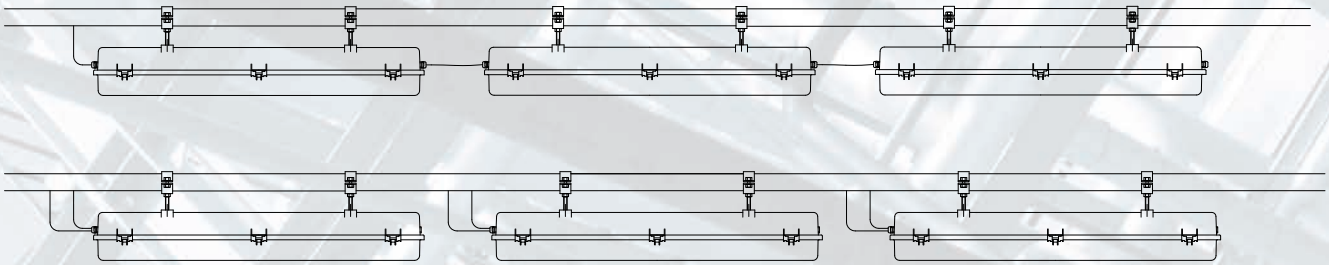
Alimentazione

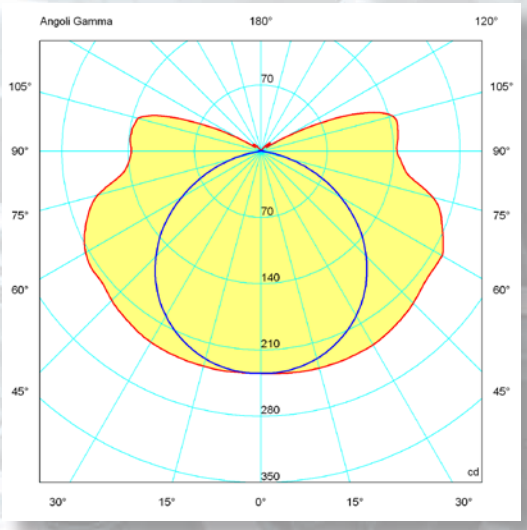
Lighting fixture with emergency system



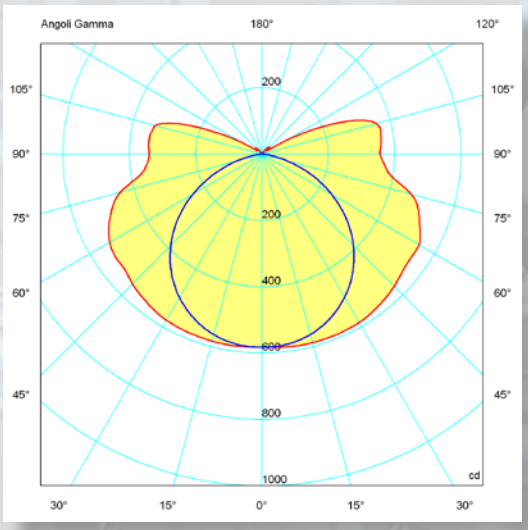
Alimentazione

Connections can be made on either side of the fixture body for simple, fast installation

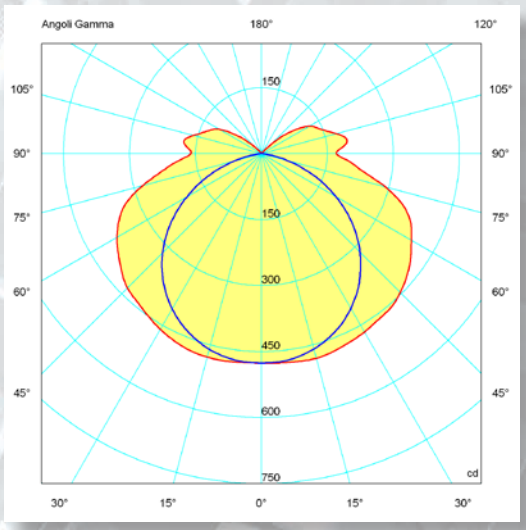




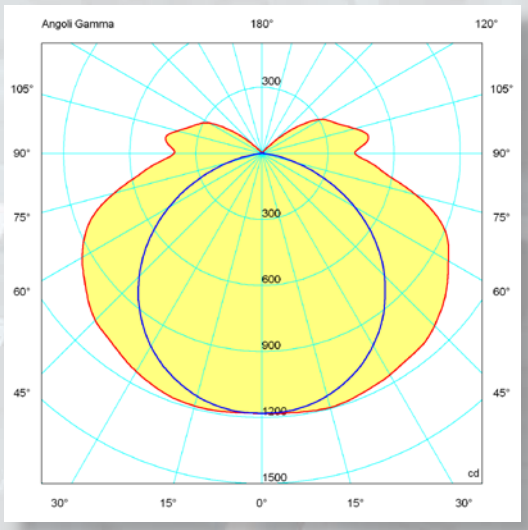
EXEN-118



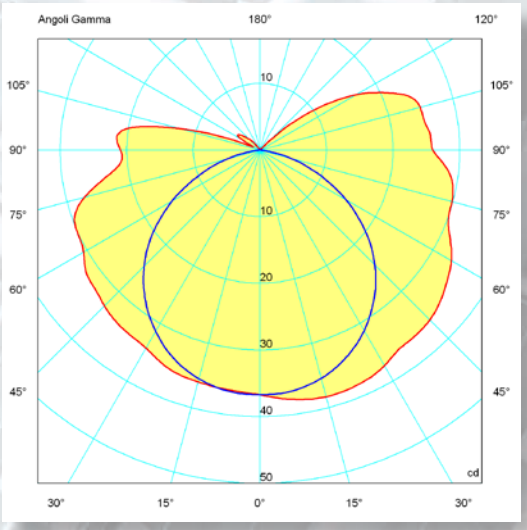
EXEN-136



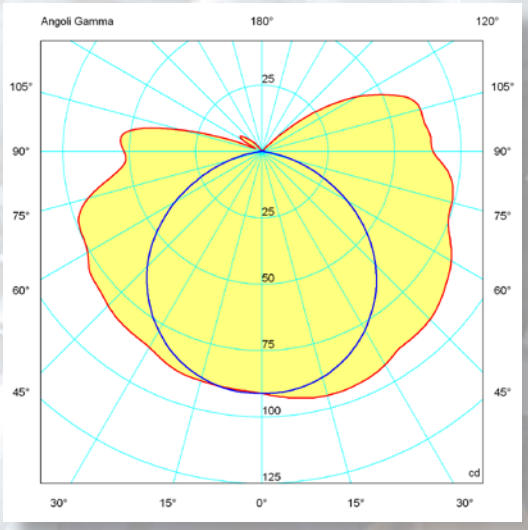
EXEN-218



EXEN-236



EXEN-218EF4



EXEN-236EF4

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.

= plane 90270
= plane 0180

EXENC

- Zone 2, Zone 21-22
- Low installation costs
- Locking system operated by hexagonal-head tool
- High quality electrical components



Armor closing system

G13 double-ended lampholder

CORTEM GROUP®

EXENC series Lighting fixtures “industrial series”

EXENC series fluorescent tube lighting fixtures can be installed in hazardous industrial plant units designated as Zone 2 and Zone 21-22. A careful research of the materials and the choice of the most performing electrical components give to EXENC, in addition to a considerable duration, greater safety in all environments where a high protection against corrosion, dust, water and humidity is required.
Due to their robust mechanical properties, they can be installed in both outdoor and indoor industrial environments such as refineries, petrochemical plants, rubber producing plants, paper mills, tunnels, galleries. In a more general sense, they are used in all those production processes where environmental conditions would deteriorate any other material and put the safety of the operating environment at risk. They are fitted with an electronic ballast system (RV series) for G13 bi-pin fluorescent tubes and can be supplied for either standard or emergency illumination. EXENC series lighting fixtures are easy to install and have a high degree of reliability thanks to the EOL Protected system that allows one fluorescent tube to stop working in safety. EXENC lighting fixtures have been designed to be connected in series thus simplifying installation and doing away with the need for junction boxes. The replacement of the battery, due to a fault in the emergency circuit or due to its depletion, is indicated by the turning off of the red LED.

Application sectors:



Offshore plants | Farm applications | Onshore plants | Low temperatures | Chemical and petrochemical plants | Waste water purification | Distillation industry | Painting plants

CERTIFICATION DATA

Classification:	Group II	Category 3GD/2D		
Installation: EN 60079.14	zone 2 (Gas)	zone 21-22 (Dust)		
Marking:	CE Ex II 3GD Ex nA IIC T... Gc - Ex tc IIIC T...°C Dc IP 66			
	CE 0722 Ex II 2D Ex tb IIIC T...°C Db IP66			
Certification:	ATEX CML 18 ATEX 3073X	3GD		
	ATEX CML 18 ATEX 4072X	2D		
	IEC Ex CML 18.0044X	All IEC Ex and INMETRO certification data can be downloaded at www.cortemgroup.com		
	INMETRO DNV 19.0018X			
Standards:	CENELEC EN60079-0: 2012+A11:2013, EN60079-28: 2015, EN60079-15: 2010, EN 60079-31: 2014 and EUROPEAN DIRECTIVE 2014/34/UE. IEC60079-0:2011, IEC60079-15:2010, IEC60079-28:2015, IEC60079-31: 2013 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	55°C (T4)	62°C (T4)	65°C (T3)	
Ambient temperature:	-20°C +40°C	-20°C +47°C	-20°C +50°C	
Degree of protection:	IP66			

EXENC series Lighting fixtures “industrial series”



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Black shock and UV resistant fibreglass reinforced anti-static polyester resin
Diffuser:	Transparent polycarbonate, shock and UV resistant
Protected opening system:	Sliding system operated by a hexagonal socket (for safety reasons, the fixture cannot be opened without the tool)
Gasket:	Acid/hydrocarbon resistant expanded silicone
Inner frame/reflector:	White painted steel
Bolts and screws:	Stainless steel
Entries:	2 x Ø25.5 entries (suitable for ISO M25 threads). Lighting fixture kit contains 1 x model PLG2ILXE7 plug and 1 x model NAVP25IXE-XEU25LDS cable gland for non-armoured cable
Mounting:	Two steel brackets

ELECTRICAL FEATURES

Lamp holder:	Bi-pin G13
Ballast:	Electronic single channel
Rated voltage:	220-240 Vac ±10%
Rated frequency:	50/60 Hz
Connection:	Connected directly to terminal board L N, Pe section 4 mm^2 terminal board with jumpers for input-output
Power factor:	0.97
Emergency unit:	Electronic inverter 110V/240V, 50/60Hz. Batteries Ni/Cd, 4 Ah or 7 Ah, 6 V
Wiring:	Silicone rubber cables with glass braid insulation for high temperatures

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

2 pin Ø26 fluorescent tubes model T8
Additional NAVP25IXE-XEU25LDS cable gland for unarmoured cable

EXENC series selection chart

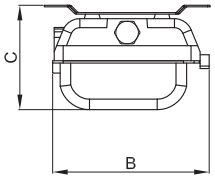
Single and double tube

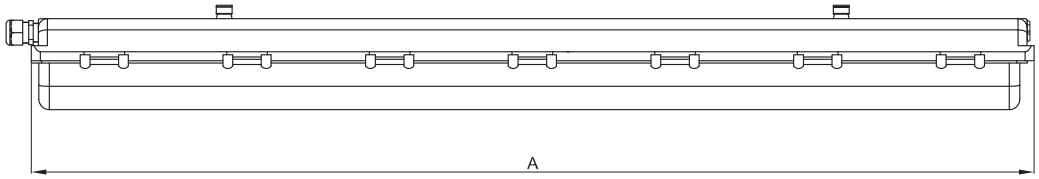
Code	Dimensions mm A	B	C	A1	Operating type	Type of ballast	N° of lamps	Watt	Weight kg	mm
EXENC-118	802	206	160	642	normal	electronic single channel	1	18	4,0	855x245x180
EXENC-136	1400	206	160	800	normal	electronic single channel	1	36	7,6	1425x245x180
EXENC-218	802	206	160	642	normal	electronic single channel	2	18	4,2	855x245x180
EXENC-236	1400	206	160	800	normal	electronic single channel	2	36	7,9	1425x245x180

Single and double tube with emergency unit

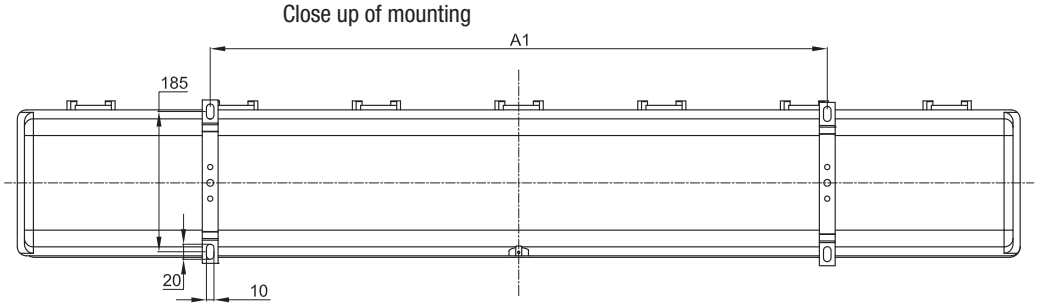
Code	Dimensions mm A	B	C	A1	Operating type	N° of lamps	Battery Ah	Discharge time minutes	Watt	Weight kg	mm
EXENC-118EF4	802	206	160	642	normal + emergency	1	4	120’	18	5,0	855x245x180
EXENC-136EF4	1400	206	160	800	normal + emergency	1	4	100'	36	8,3	1425x245x180
EXENC-218EF4	802	206	160	642	normal + emergency	2	4	120’	18	5,0	855x245x180
EXENC-236EF4	1400	206	160	800	normal + emergency	2	4	100’	36	8,3	1425x245x180
EXENC-118EF7	802	206	160	642	normal + emergency	1	7	210’	18	5,5	855x245x180
EXENC-136EF7	1400	206	160	800	normal + emergency	1	7	180’	36	8,8	1425x245x180
EXENC-218EF7	802	206	160	642	normal + emergency	2	7	210’	18	5,5	855x245x180
EXENC-236EF7	1400	206	160	800	normal + emergency	2	7	180’	36	8,8	1425x245x180
EXENC-118EE4	802	206	160	642	emergency only	1	4	120'	18	4,6	855x245x180
EXENC-136EE4	1400	206	160	800	emergency only	1	4	100'	36	7,9	1425x245x180
EXENC-118EE7	802	206	160	642	emergency only	1	7	210'	18	5,1	855x245x180
EXENC-136EE7	1400	206	160	800	emergency only	1	7	180'	36	8,4	1425x245x180

DIMENSIONAL DRAWINGS

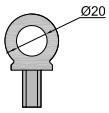
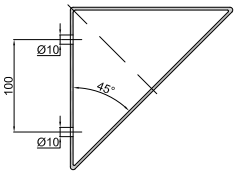
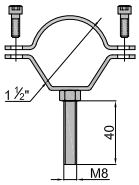




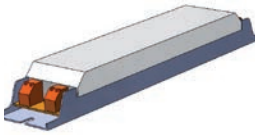
Close up of mounting



EXENC series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Triphosfore fluorescent tubes G13 connection 3.000K	18 W	1350 lm (FD18W)	LAMPL18W21	
		36 W	3350 lm (FD36W)	LAMPL36W21	
	Tige	Length: 250 mm	Material: stainless steel	BRF8MIN/250 + G-992	
	Eyebolt		Material: galvanised steel	GOF-8 + G-992	
	Type D bracket complete with screws		Material bracket: galvanised steel screws: stainless steel	G-0611/1	
	Type P bracket		Material: galvanised steel	G-0480 + G-992	
	Lamp holder	G13	250V - 4A	STU254/S	
	Non-armoured cable gland complete with rubber, seal and lock nut	ISO M25x1,5	Ex e II IP 66/67 (std. range cavo 10-18)	NAVP25IXE-XEU25LDS	
	Plug with seal and lock nut	ISO M25x1,5	Ex e II IP 66/67	PLG2ILXE7	

EXENC series Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Battery pack		4Ah 6V NiCd	BATT4AH/D	
			7Ah 6V NiCd	BATT7AH/D	
	Electronic inverter		110/240V 50/60Hz	INVERTER	
	Electronic ballast	1 x 18 W	220-240 Vac ±10% 50/60 Hz	RV-18N	
		2 x 18 W		RV-18N	
		1 x 36 W		RV-36N	
		2 x 36 W		RV-36N	

Installation and mounting methods EXENC series

45° angle mounting TYPE "D"

Dimensions in mm

Pendant mounting with eyebolt TYPE "O"

Mounting with 1.1/2" metal clamps TYPE "P"

Type P clamp

Low ceiling mounting with clamp TYPE "U"

Wiring diagrams

Normal lighting fixture

L N PE

Supply

Lighting fixture with emergency system

Tube ø1.1/2"

Standard pole mounting

LL N Pilo line PE

Supply

Connections can be made on either side of the fixture body for simple, fast installation

EXENC-218
Lumen: 2700 lm
Maximum light intensity: 353 cd

EXENC-236
Lumen: 6700 lm
Maximum light intensity: 1010 cd

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.

= piane 90270
= piane 0180

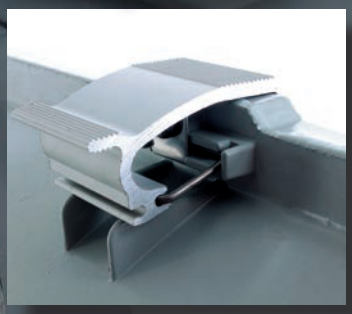
TIGER

- Suitable for high (+60°C) and low temperatures (-50°C)
- Fast maintenance
- Easy to wire
- Zones 2, 21, 22

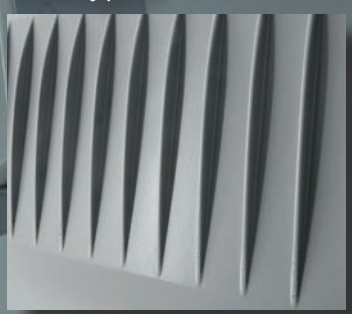
Shock resistant tempered glass

Adjustable tracking goniometer

Corrosion resistant aluminium clips



Cooling fins



TIGER series Rectangular floodlights

TIGER series floodlights have been manufactured and tested in compliance with European standards for use in hazardous areas classified as Zone 2 due to the presence of gases and as Zone 21, 22 for the presence of dusts. When fitted with a symmetrical internal reflector, they are ideal for lighting large areas and when fitted with an asymmetrical reflector they provide a concentrated beam of light exactly where it is required. Their IP66 degree of protection and excellent performance at high (+60°C) and low (-50°C) temperatures makes TIGER floodlights ideal for all those settings where climatic conditions are extreme. Wiring is greatly facilitated by the use of specially designated terminals that speed up installation and prevent wrong connections. The electrical components are easily accessed (ballast, capacitor, igniter) and are pre-wired to the terminal board this reducing maintenance time and installation costs.

Application sectors:


Oil refineries


Perimeter lighting


Aircraft storage facilities Hangars


Service stations


Low temperatures


Oil loading/ unloading jetties

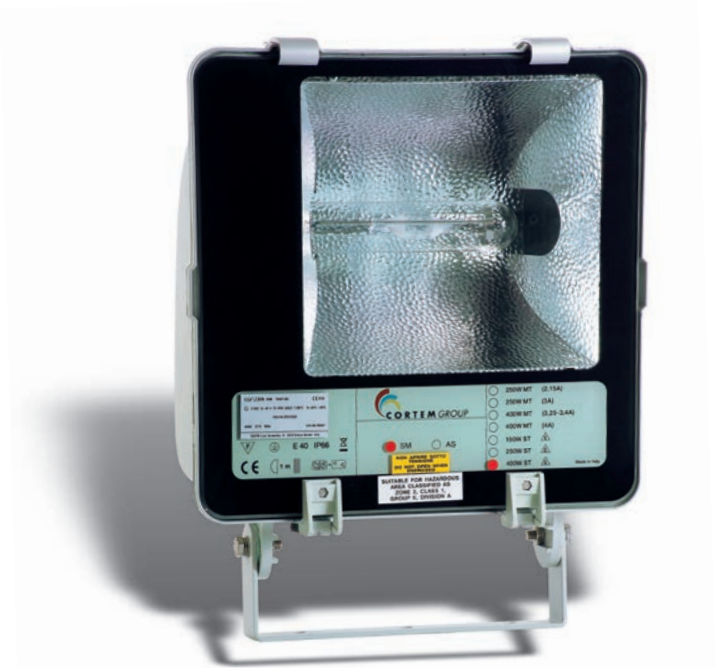

Fuel tanker loading/ unloading areas


Farm produce applications

CERTIFICATION DATA

Classification:	Group II	Category 3GD		
Installation: EN 60079.14	zone 2 (Gas)	zone 22 (Dust)	zone 21 (for IECEx, TR CU e INMETRO)	
Marking:	CE 0722 Ex II 3GD Ex nR IIC T3, T2 Gc; Ex tc IIIC T145°C ÷ T210°C Dc IP66			
Certification:	ATEX CESI 06 ATEX 054			
	IEC Ex ITS 12.0004X	All IEC Ex and TR CU certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE			
Standards:	CENELEC EN 60079-0: 2012, EN 60079-15: 2010, EN60079-31: 2009, EN 60529:1991 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2011, IEC 60079-15: 2010, IEC 60079-31: 2008, IEC 60529: 2001 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	300°C (T2)	200°C (T3)		
Ambient temperature:	Standard -25°C +60°C	Special -50°C +60°C		
Degree of protection:	IP66			

TIGER series Rectangular floodlights



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Die-cast aluminium (EN AB 46100)
Glass:	Tempered to withstand shock and high temperatures
Gaskts:	Acid, hydrocarbon and high temperature resistant silicone
Internal reflector:	Symmetrical and asymmetrical (see photometric diagrams) in 99.85 oxidised, polished aluminium
Supporting bracket:	5 mm galvanised steel with index for tracking goniometer
Mounting:	2 x Ø11 and 1 x Ø13 holes mm
Bolts and screws:	Stainless steel
Locking mechanism:	Aluminium clips
Hinge:	Stainless steel
Entries:	1xISO M20 entry. Floodlight fixture complete with cable gland UNI1LXE7 for non armoured cable
Coating:	Polyester Ral 7035 (Light grey)

ELECTRICAL FEATURES

Lamp holder:	E40 ceramic
Rated voltage:	230 V AC
Rated frequency:	50 Hz
Connection:	Direct connection to the terminal board L, N, Pe. Section 4mm^2
Power factor:	0.90

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

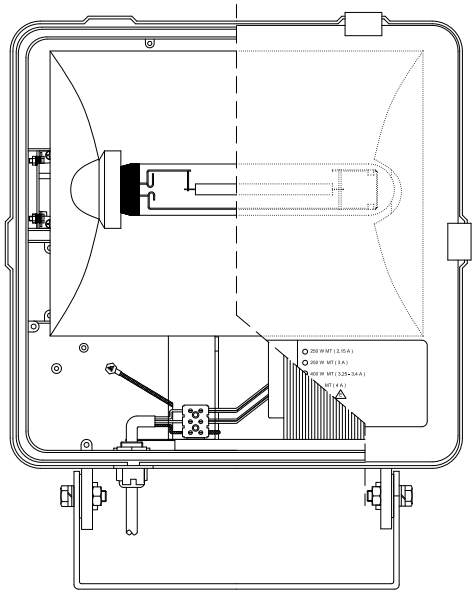
Discharge lamp
Rated voltage: 277 V 60 Hz (code TIGER-400HA/**277**)
Rated voltage: 480 V 50 Hz (code TIGER-400HA/**480**)
Rated frequency: 60 Hz at 230 V (code TIGER-400HA/**60**)
Loop in / loop out on request
Other voltages available on request

TIGER series selection chart

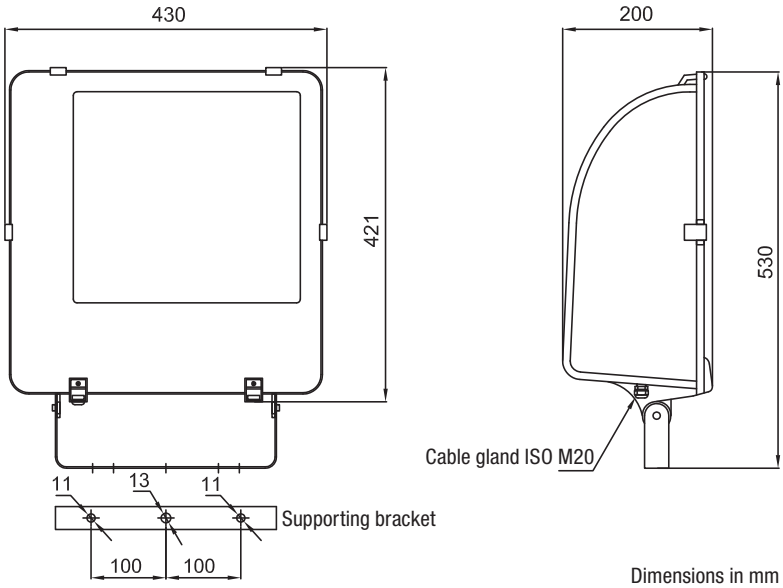
Code	Lamp type	Reflector	Watt	Class T.a. +55°C	Max surface temperature °C	Weight kg	mm
TIGER-150NA	high pressure sodium	Symmetrical	150	T3	160	9	480x440x220
TIGER-150NAAS	high pressure sodium	Asymmetrical	150	T3	160	9	480x440x220
TIGER-250NA	high pressure sodium	Symmetrical	250	T3	160	10,2	480x440x220
TIGER-250NAAS	high pressure sodium	Asymmetrical	250	T3	160	10,2	480x440x220
TIGER-400NA	high pressure sodium	Symmetrical	400	T3-T2	189-210	11,5	480x440x220
TIGER-400NAAS	high pressure sodium	Asymmetrical	400	T3-T2	189-210	11,5	480x440x220
TIGER-250HA	metal halide	Symmetrical	250	T2	160	10,2	480x440x220
TIGER-250HAAS	metal halide	Asymmetrical	250	T2	160	10,2	480x440x220
TIGER-400HA	metal halide	Symmetrical	400	T3-T2	189-210	10,2	480x440x220
TIGER-400HAAS	metal halide	Asymmetrical	400	T3-T2	189-210	10,2	480x440x220

Ex n

INTERNAL VIEW



DIMENSIONAL DRAWING



Dimensions in mm

DON'T FORGET TO ORDER THE ACCESSORIES

Example: Floodlight model TIGER-250NA + Lamp LAMPNAVT250W + other... see key

TIGER series Accessories and spare parts available on request

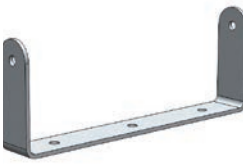
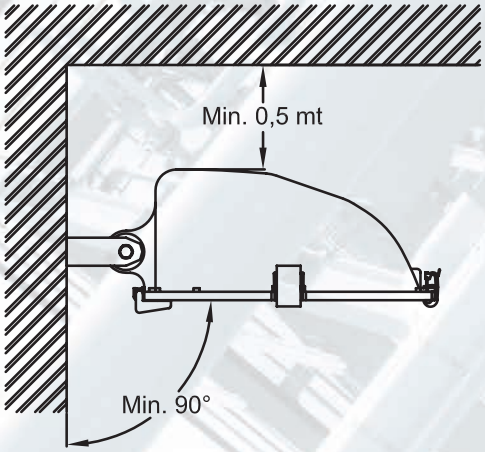
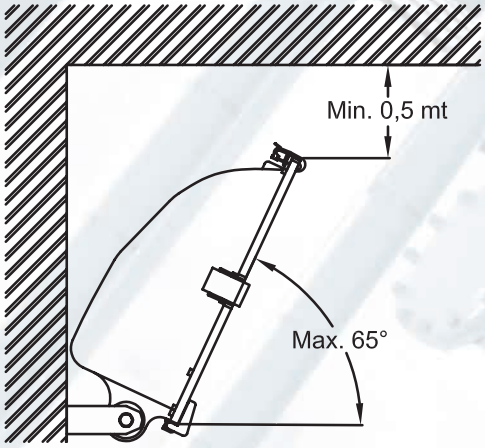
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	High pressure sodium vapour lamp	E40	150 W (ST150W)	LAMPNAVT150WPLU	
			250 W (ST250W)	LAMPNAVT250WPLU	
			400 W (ST400W)	LAMPNAVT400WPLU	
	Metal halide lamp	E40	230 W (MT250W)	LAMP230WJMT	
			360 W (MT400W)	LAMP360WJMT	
	Supporting bracket		Material: galvanised steel	000040877	
	Non-armoured cable gland kit with rubbers, seal and lock nut	ISO M20	Ex e II IP 66/68 (std. cable range 7÷12)	UNI1LXE7	
	Front ring with glass and hinges		Material: tempered glass	G-0563	

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Lamp holder	E40	750W 16A	PORT E-40	SPARE PART
	Sodium vapour and metal halide ballast	150 W	230V 50 Hz	R-150 NA	SPARE PART
		250W		R-250 NA	
		400W		R-400 NA	
	Capacitor for metal halide	250W	20 µF 250V	F-30	SPARE PART
		400W	40 µF 250V	F-40	
	Capacitor for sodium vapour	250W	35 µF 250V	F-35	SPARE PART
		400W	50 µF 250V	F-50	
	Igniter	150 W 250 W 400 W		R 100	SPARE PART

At the maximum ambient temperature T.a.+60°C, the temperature class and max surface temp of TIGER-400 model floodlights depends on the installation conditions.

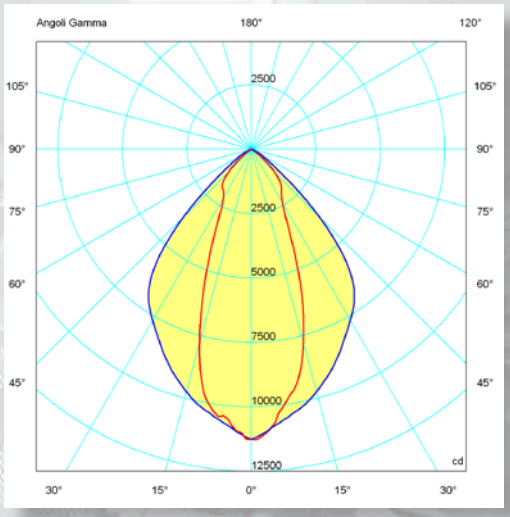


Temperature classes for floodlights installed at 180°		
LAMP	**45° C**	**60°C**
150 W	T3	T3
250 W	T3	T3
400 W	T3	T2

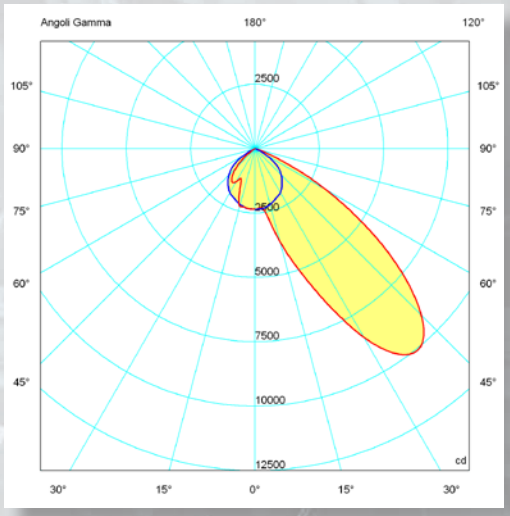


Temperature classes for floodlights installed at other angles		
LAMP	**45° C**	**60°C**
150 W	T3	T3
250 W	T3	T3
400 W	T3	T3

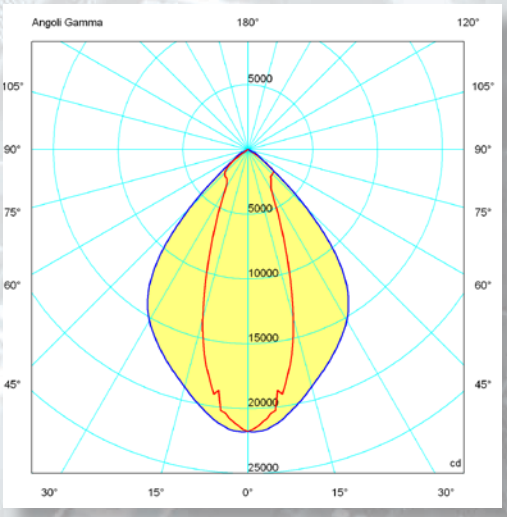




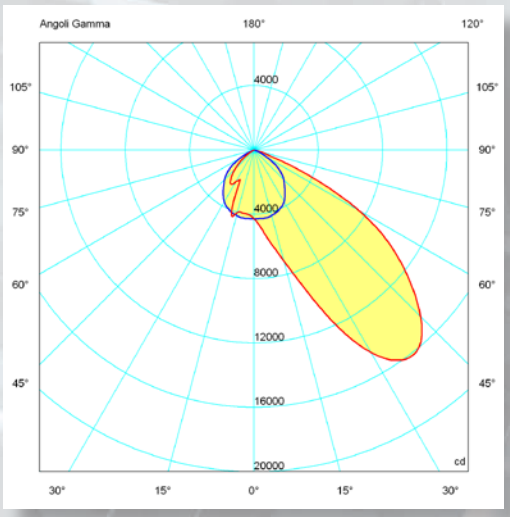
TIGER SYMMETRICAL 150W SODIUM



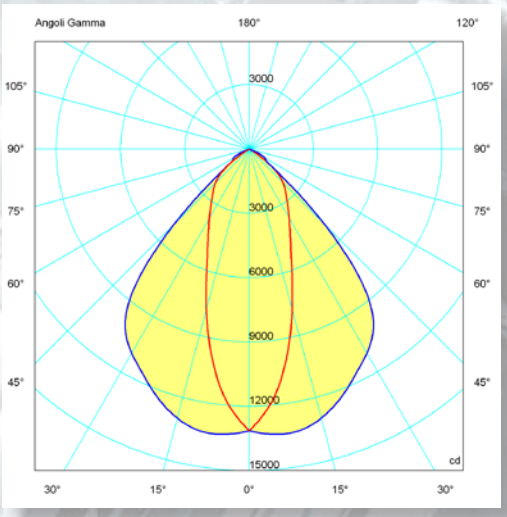
TIGER ASYMMETRICAL 150W SODIUM



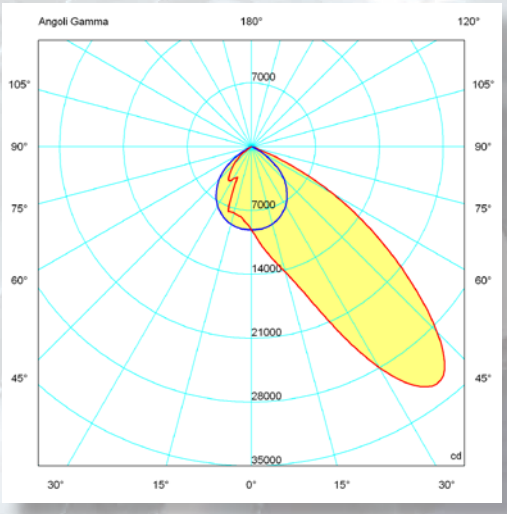
TIGER SYMMETRICAL 250W SODIUM



TIGER ASYMMETRICAL 250W SODIUM



TIGER SYMMETRICAL 400W SODIUM



TIGER ASYMMETRICAL 400W SODIUM

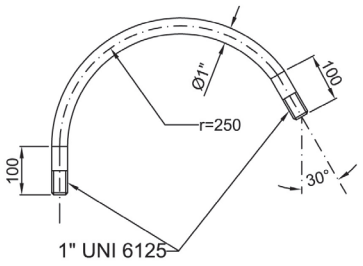
On Cortem Group web site you can download .LDT and .IES lighting data files for the design and simulation of lighting levels in 2D and 3D, rendering and ray tracing.

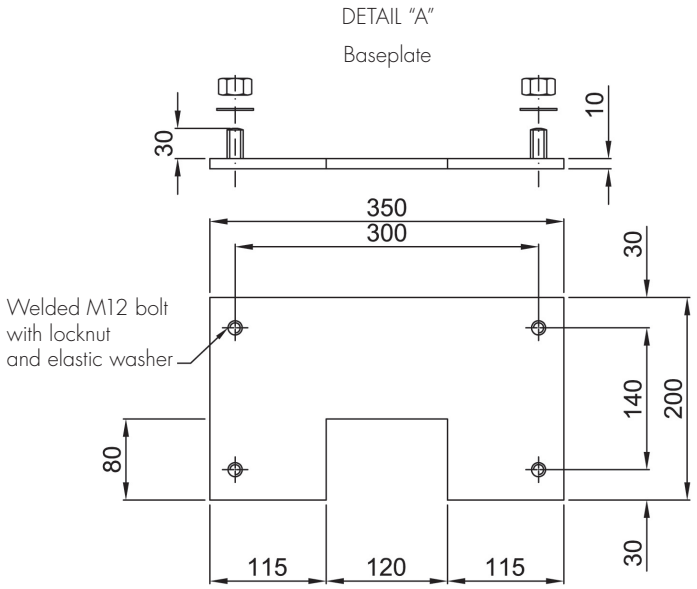
= plane 90270

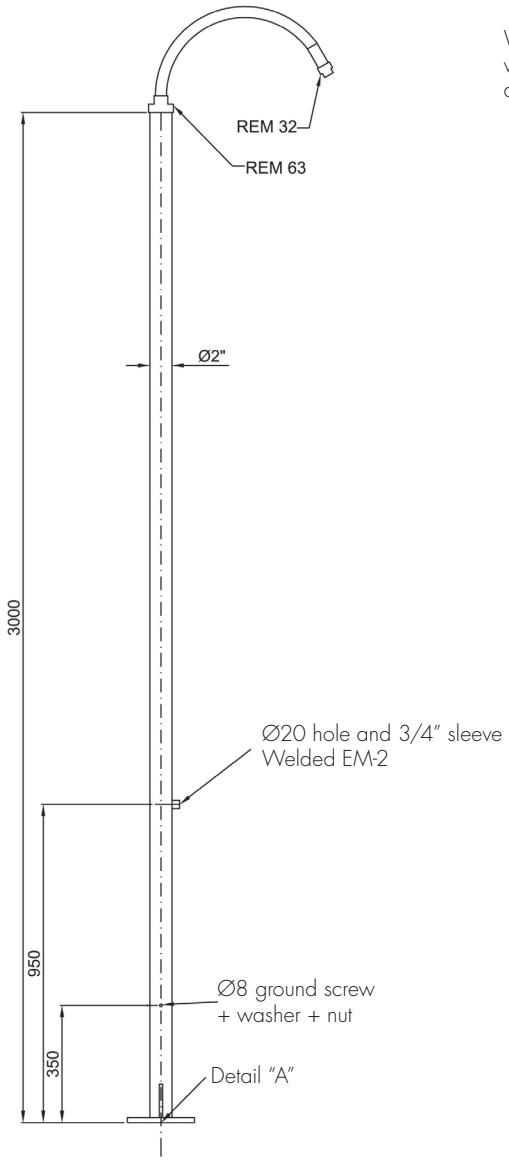
= plane C 0180

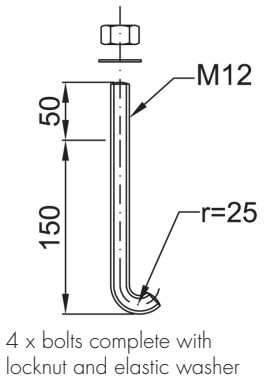
FEATURES OF POLES FOR LIGHTING FIXTURES MOUNTING

POLE FOR MOUNTING
EVA, EW, EWAT, EVEA, EVE, EWE, EWAE, EWNT SERIES LIGHTING FIXTURES









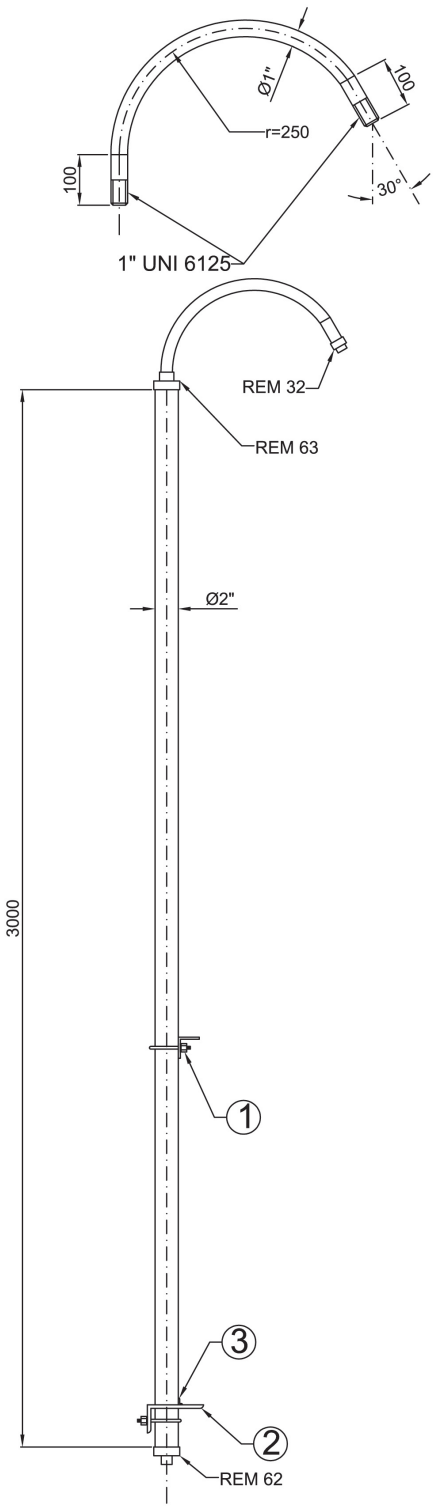
4 x bolts complete with
locknut and elastic washer

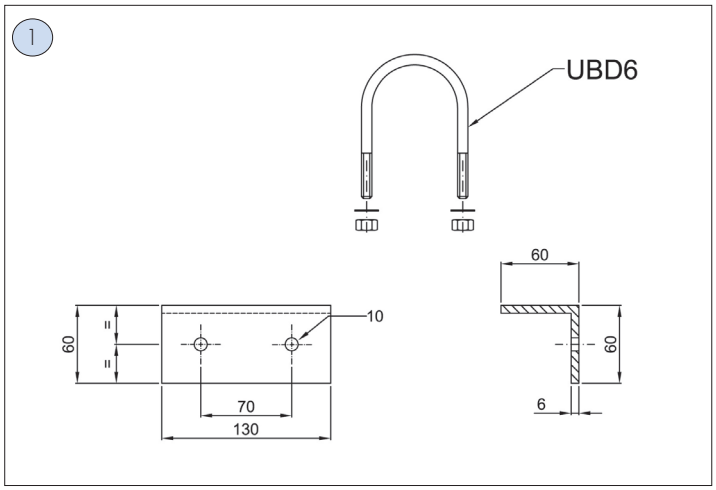
Dimensions in mm

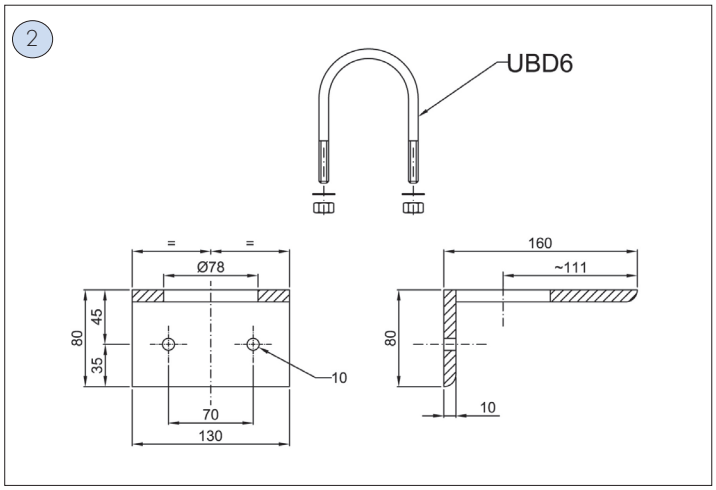
CODE	DESCRIPTION
PAL-01	Pole supplied with welded plate and baseplate
PAL-02	Pole supplied with welded plate and bolts

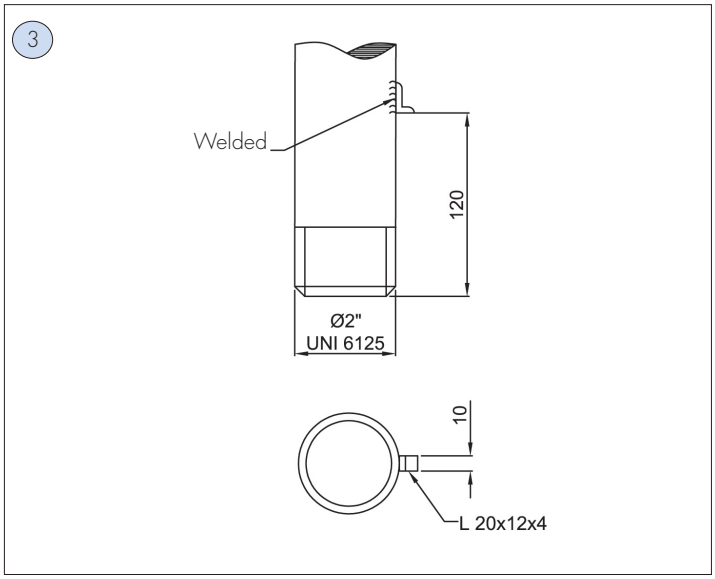
PAL-03 Pole for structure mounting

POLE FOR MOUNTING
EVA, EW, EWAT, EVEA, EVE, EWE, EWAE, EWNT SERIES LIGHTING FIXTURES





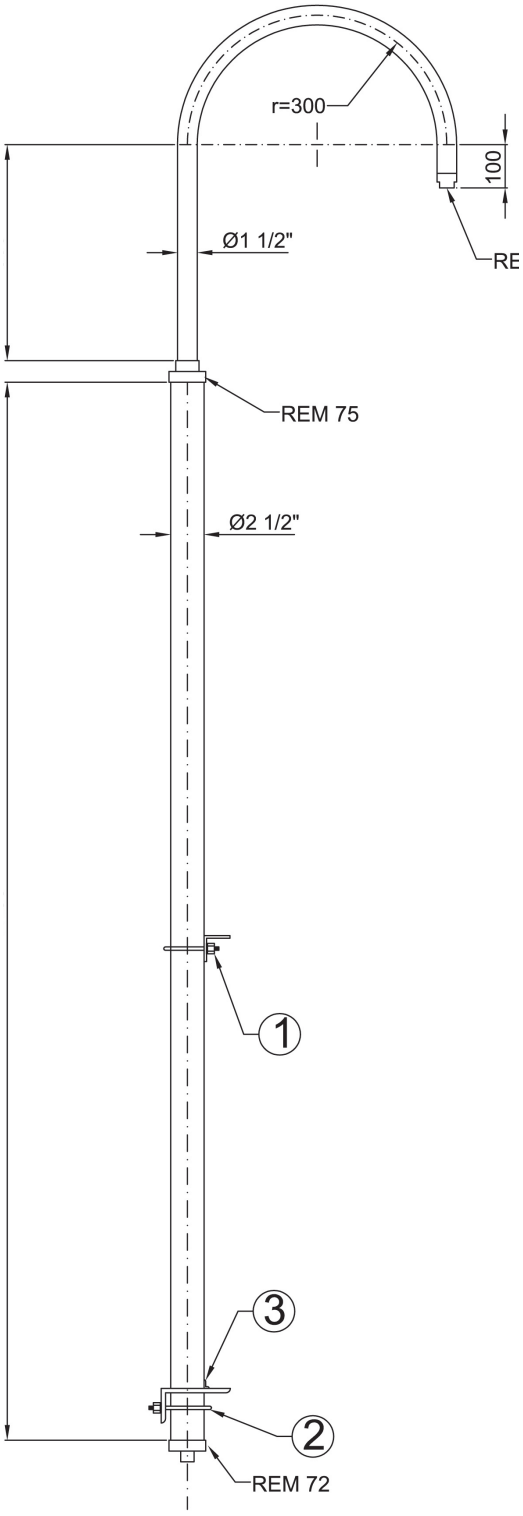


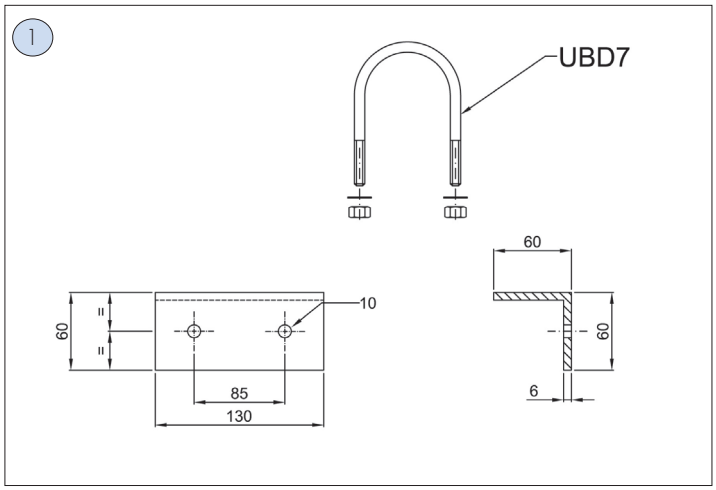


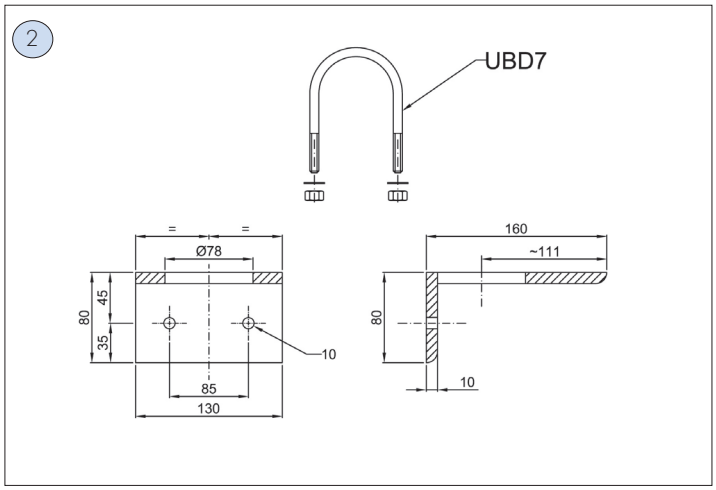
Dimensions in mm

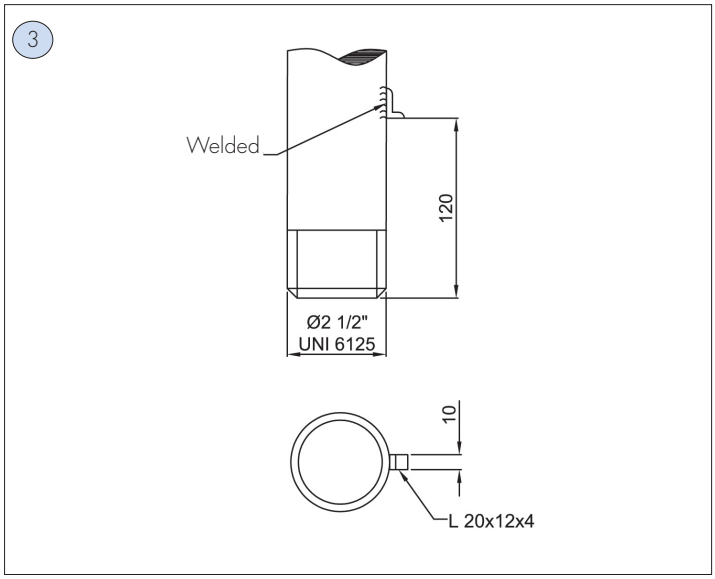
CODE	DESCRIPTION
PAL-03	Pole supplied with angled mounting (see fig.1-2-3)

POLE FOR MOUNTING
EVA, EW, EWAT, EVEA, EVE, EWE, EWAE, EWNT SERIES LIGHTING FIXTURES





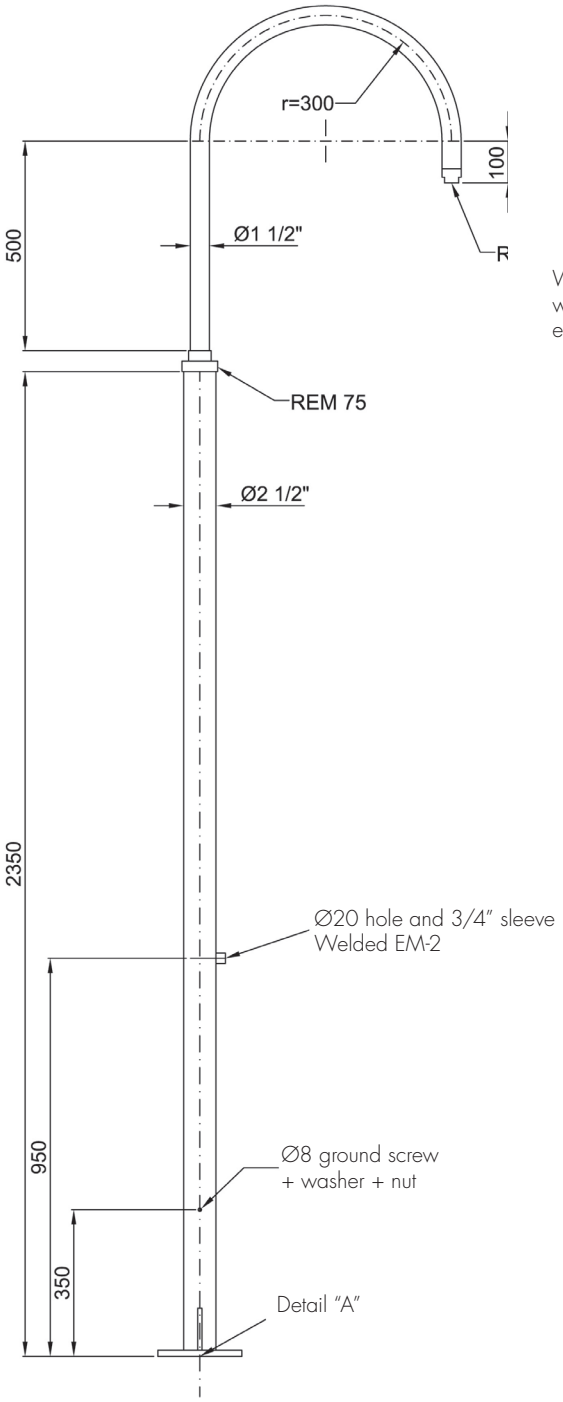


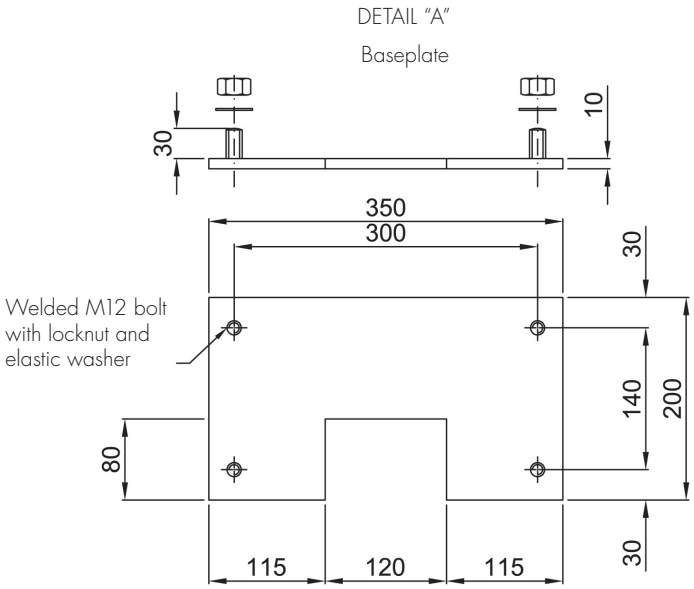


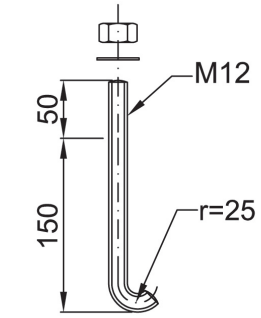
Dimensions in mm

CODE	DESCRIPTION
PAL-04	Pole supplied with angled mounting (see fig.1-2-3)

POLE FOR MOUNTING
EVA, EW, EWAT, EVEA, EVE, EWE, EWAE, EWNT SERIES LIGHTING FIXTURES





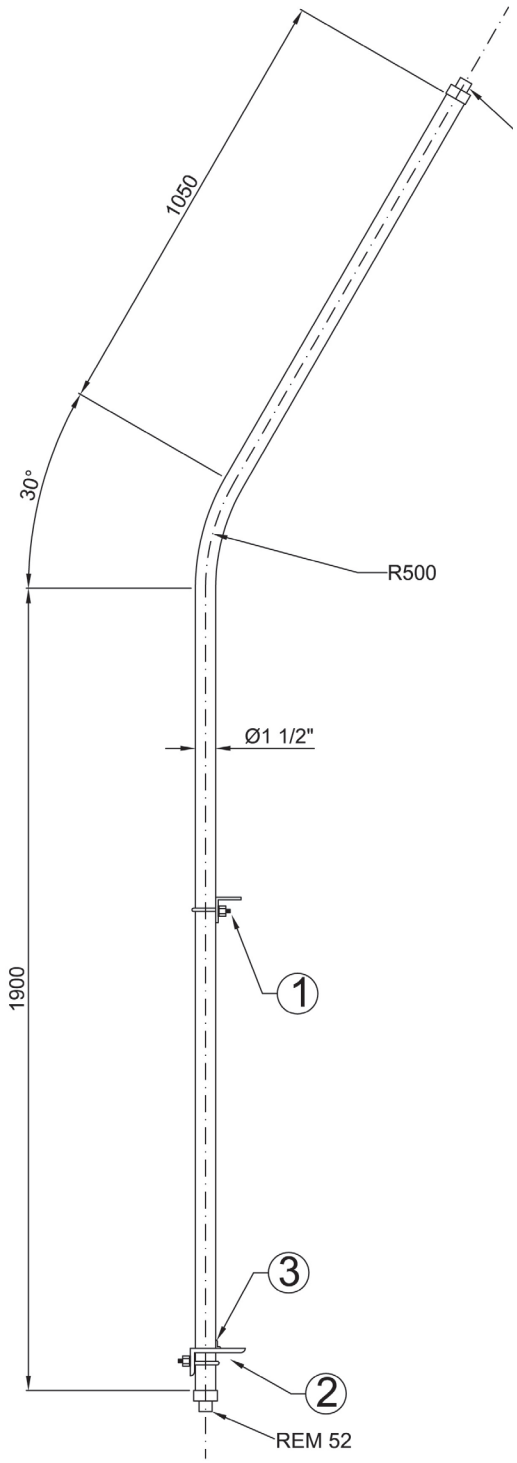


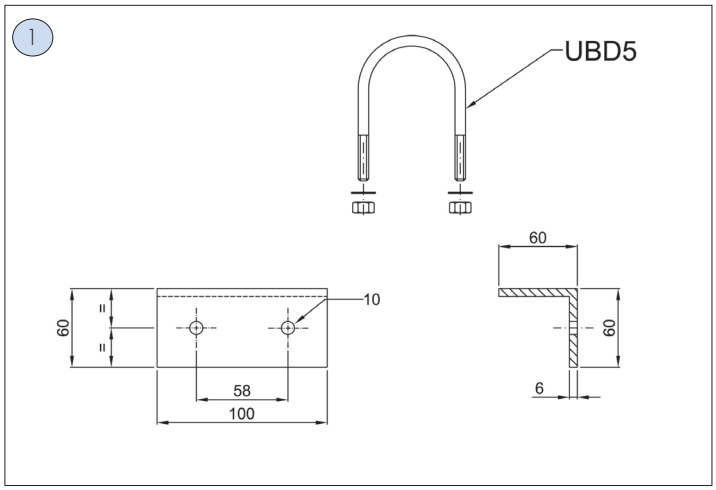
4 x bolts complete with
locknut and elastic washer

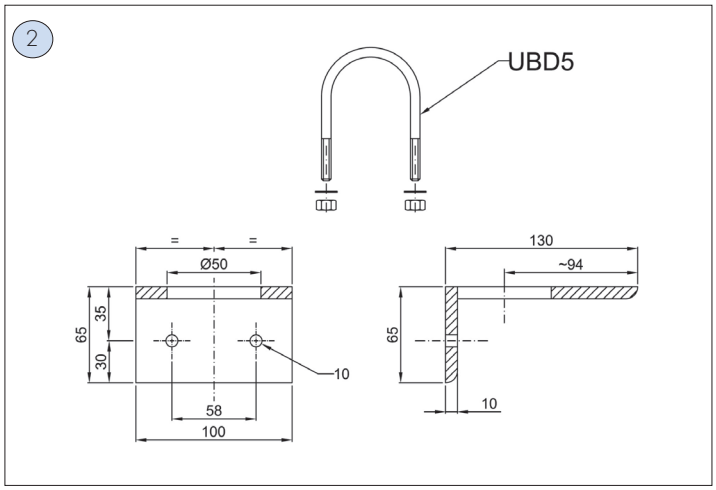
Dimensions in mm

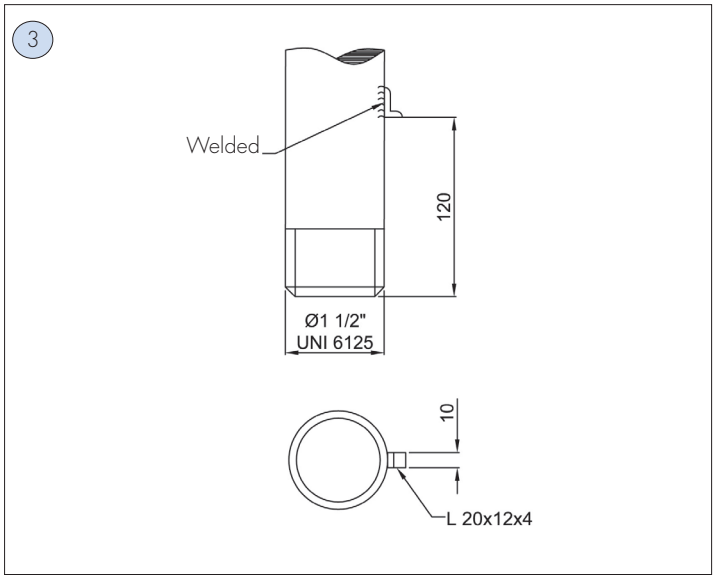
CODE	DESCRIPTION
PAL-05	Pole supplied with welded plate and baseplate
PAL-06	Pole supplied with welded plate and bolts

POLE FOR MOUNTING
FLFE, EXEN, EVF..E, EVFD, EXEL, FLF, AVN LIGHTING FIXTURES







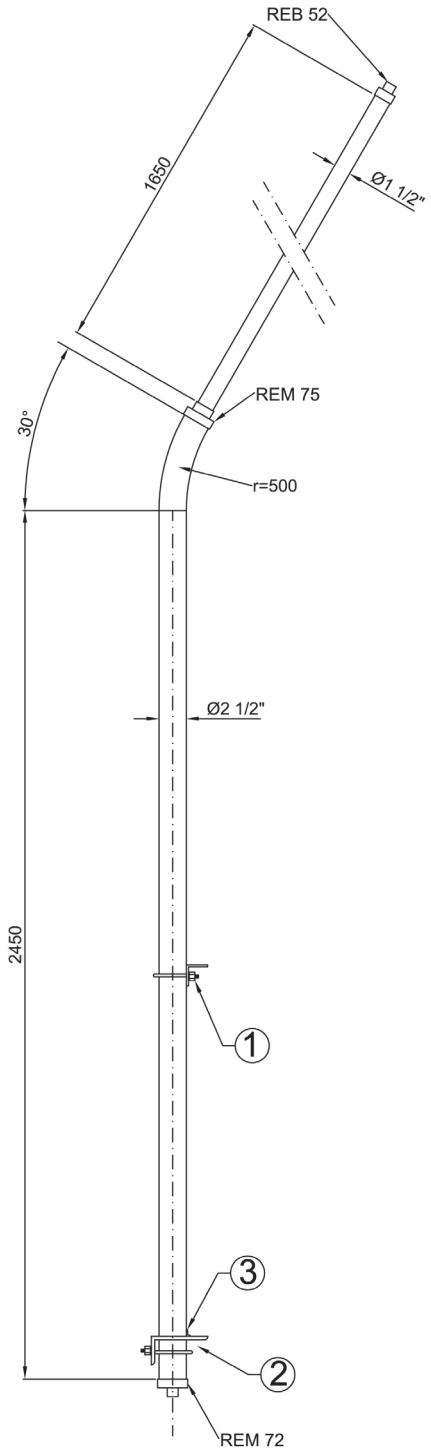


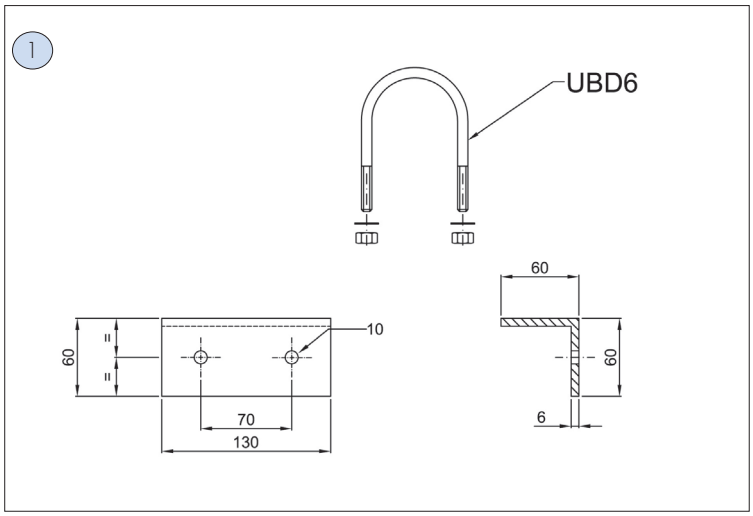
Dimensions in mm

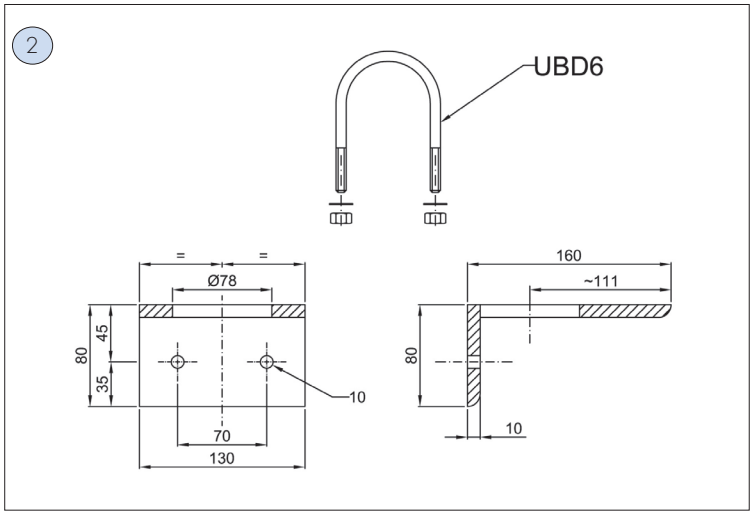
CODE	DESCRIPTION
PAL-07	Pole supplied with angled mounting (see fig.1-2-3)

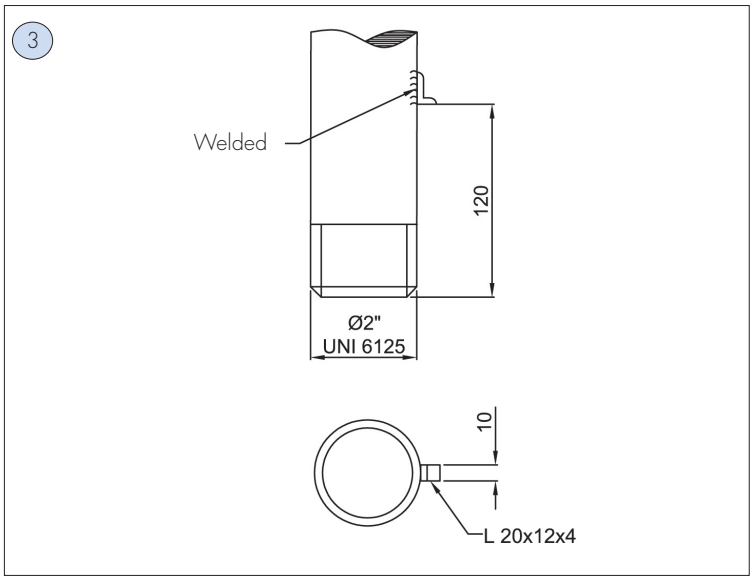
PAL-08 Pole for structure mounting

POLE FOR MOUNTING
FLFE, EXEN, EVF..E, EVFD, EXEL, FLF, AVN LIGHTING FIXTURES







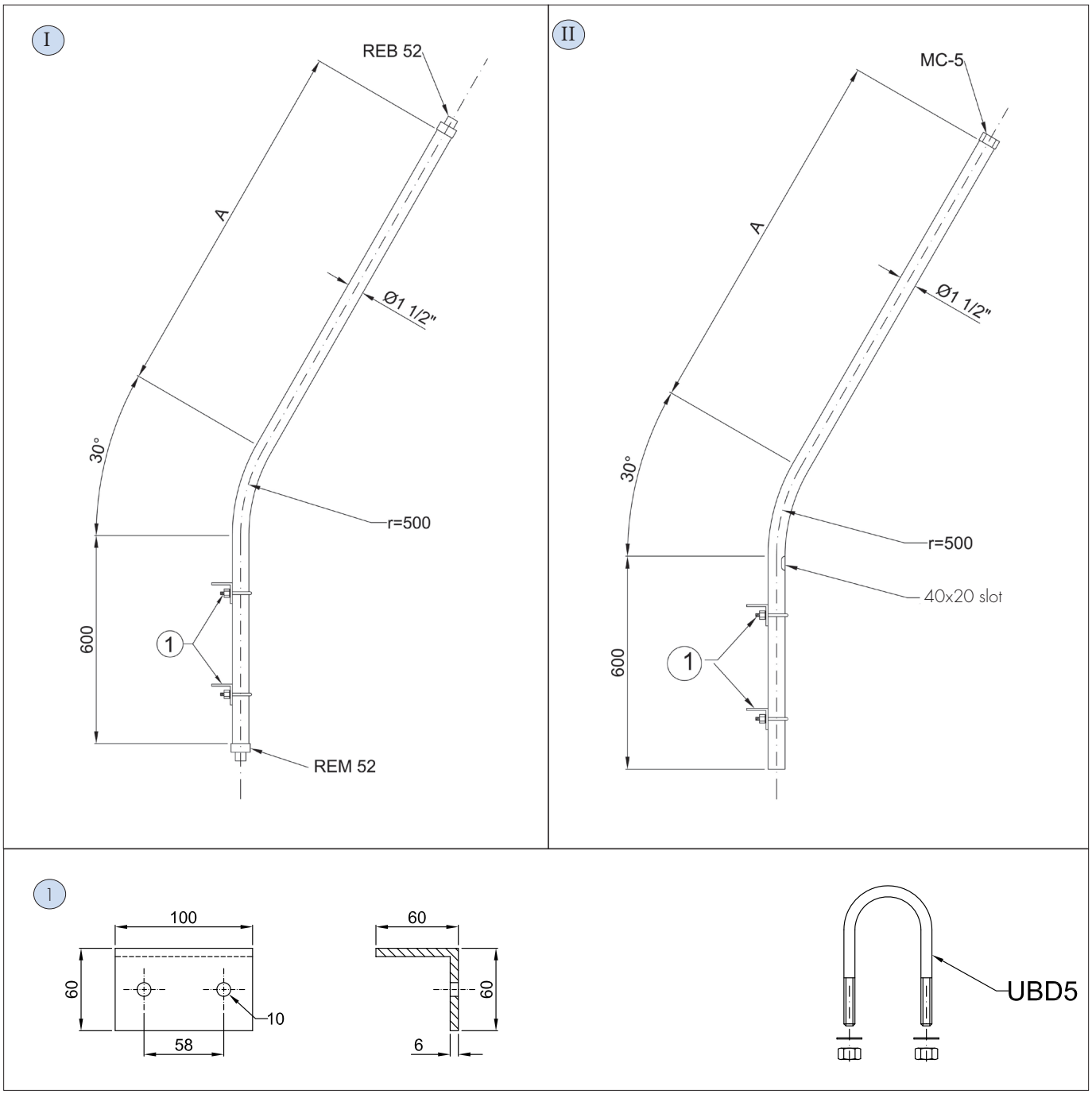


Dimensions in mm

CODE	DESCRIPTION
PAL-08	Pole supplied with angled mounting (see fig.1-2-3)

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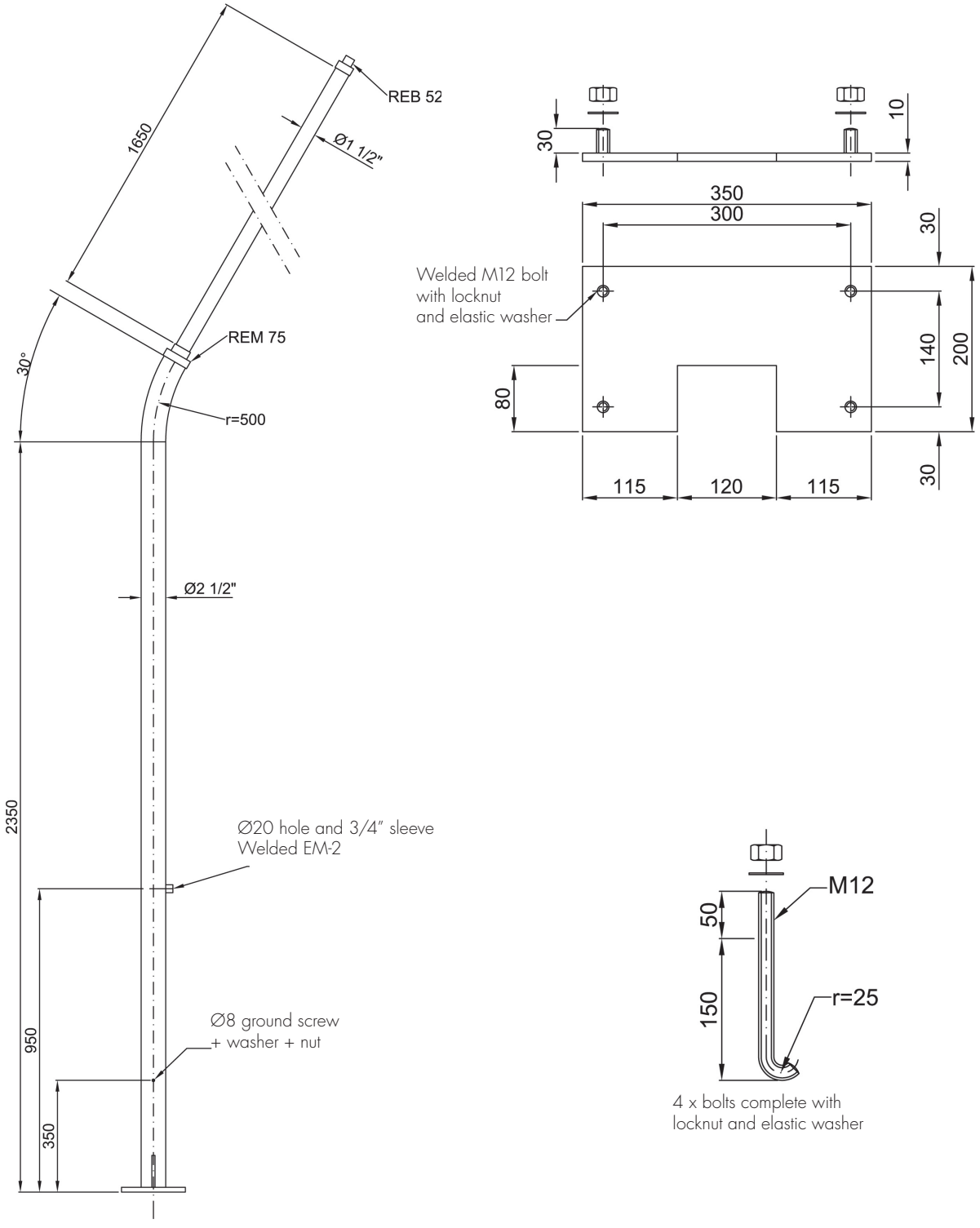
POLE FOR MOUNTING
FLFE, EXEN, EVF..E, EVFD, EXEL, FLF, AVN LIGHTING FIXTURES



Dimensions in mm

CODE	DESCRIPTION	A (mm)
PAL-09	Pole(I) supplied with angled mounting (see fig.1)	1050
PAL-10	Pole(I) supplied with angled mounting (see fig.1)	1650
PAL-15	Pole(I) supplied with angled mounting (see fig.1)	1650
PAL-16	Pole(I) supplied with angled mounting (see fig.1)	1050

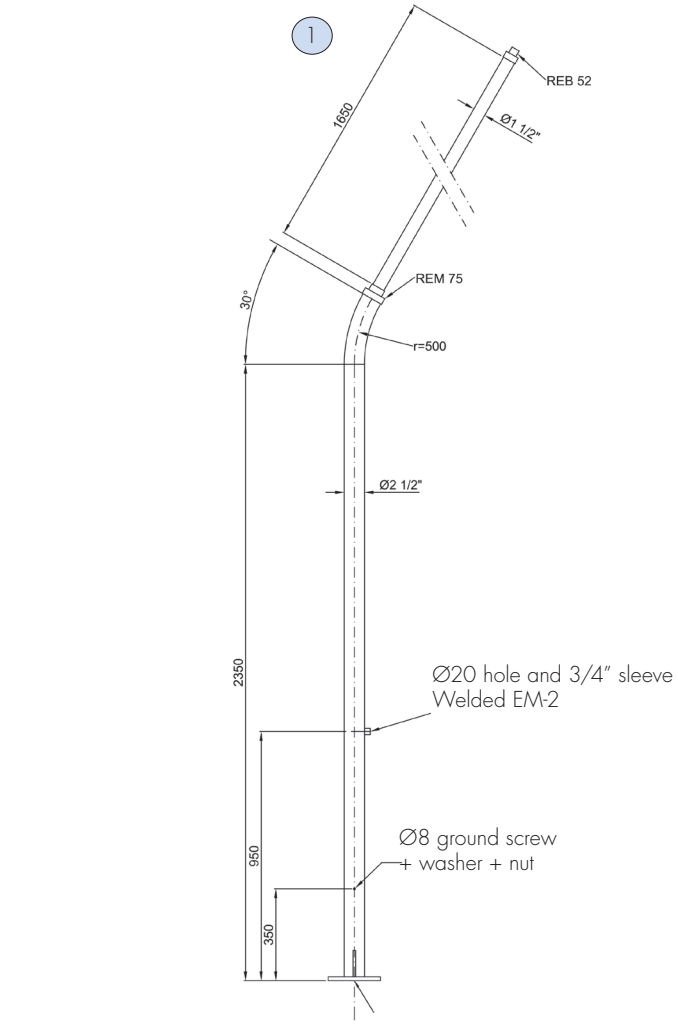
POLE FOR MOUNTING
FLFE, EXEN, EVF..E, EVFD, EXEL, FLF, AVN LIGHTING FIXTURES

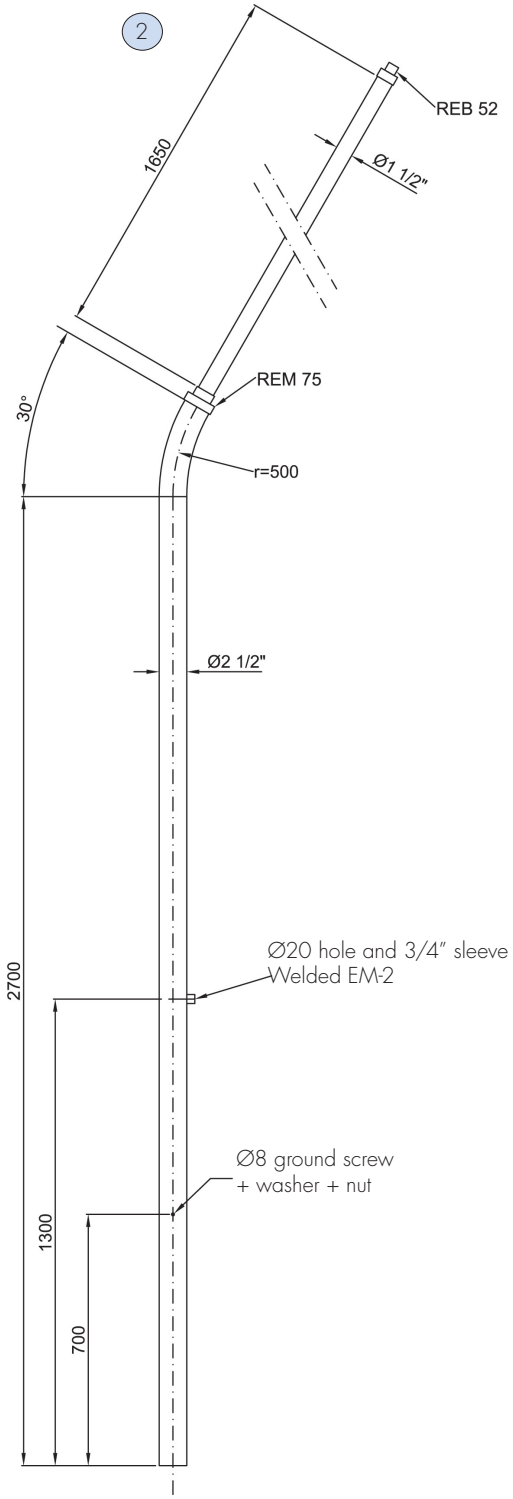


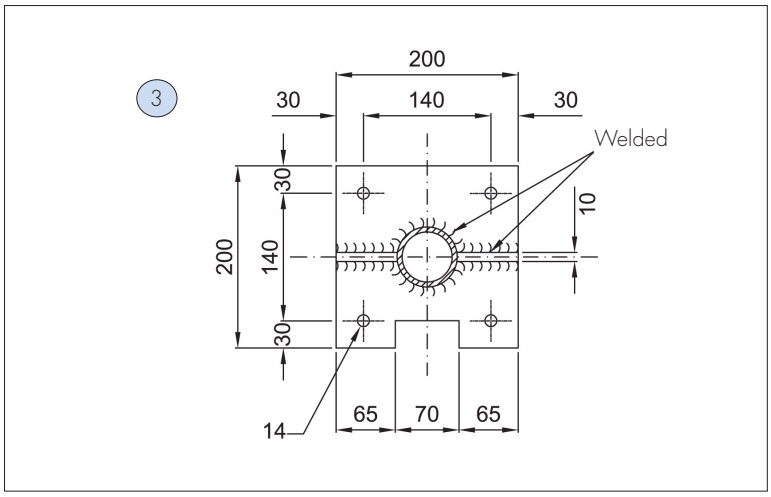
Dimensions in mm

CODE	DESCRIPTION
PAL-11	Pole supplied with welded plate and bolts
PAL-12	Pole supplied with welded plate and baseplate

POLE FOR MOUNTING
FLFE, EXEN, EVF..E, EVFD, EXEL, FLF, AVN LIGHTING FIXTURES







Dimensions in mm

CODE	DESCRIPTION
PAL-13	Pole supplied with welded plate and baseplate (see fig.1-3)
PAL-14	Pole (see fig.2)

XLF

- Zones 1, 2, 21, 22
- Obstruction warnings
- Stroboscopic lights
- Single or double fixtures
- Low wind resistance

Polycarbonate Fresnel lens

Fixture without Fresnel lens



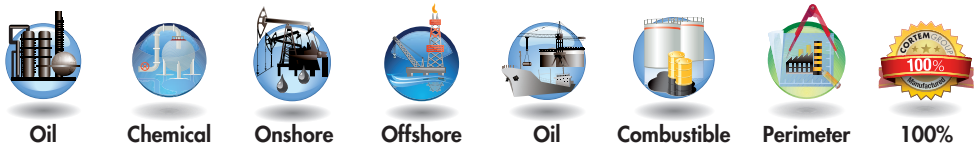
Painted aluminium body

CORTEM GROUP®

XLF series XENON obstruction lighting fixtures

XLF series Xenon obstruction lighting fixtures are ideal for chimneys, towers, smokestacks, bell towers, buildings, cranes, bridges, radio/television masts, cable car and power line pylons, wind turbines, radar and telecommunication antennas and specifically for use in the petrochemical and oil industries. Their small size, light weight, ease of installation and robustness mean that XLF series lights do not deteriorate over time especially with exposure in salty environments. They are also resistant to the wind and the deposit of industrial dusts thanks to the low profile and aerodynamic properties of the body.

Application sectors:



Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Oil loading/ unloading jetties | Combustible liquid depots | Perimeter lighting | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD			
Installazione: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)			
Marking:	CE 0722 Ex II 2GD Ex d IIC T5 Gb; Ex tb IIIC Db IP66				
Certification:	ATEX CESI 03 ATEX 046				
	IEC Ex IECEx CES 12.0020	All IEC Ex and TR CU certification data can be downloaded at www.cortemgroup.com			
	TR CU AVAILABLE				
Standards:	CENELEC EN 60079-0: 2009, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31: 2009, EN 60598-1:2008+A11:2009, EN 60598-2-1:1989 and EUROPEAN DIRECTIVE 2014/34/UE European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS				
Class temperature:	100°C (T5)				
Ambient temperature:	-20°C +55°C	Special -50°C +40°C			
Degree of protection:	IP66				

XLF series XENON obstruction lighting fixtures



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
Globe:	Shock and temperature resistant borosilicate glass sealed with aluminium shade ring
Fresnel lens:	Transparent polycarbonate, shock and UV resistant
Gaskets:	Silicone acid/hydrocarbon resistant
Mounting:	See "XLF-1-2 series dimensional drawings"
Bolts and screws:	Stainless steel
Entries:	4 x 3/4" NPT threaded entries.
Coating:	Polyester coating Ral 7035 (light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	E27 ceramic
Lamp:	Stroboscopic (about 30 flash/min.) 6J or 16J Xenon with electronic module (for further information see "EC SERIES ELECTRONIC MODULE CHARACTERISTICS")
Rated voltage:	24 VAC/DC, 110 VAC, 230 VAC
Rated frequency:	50/60 Hz
Connection:	Direct to lamp holder L, N, Pe. Max section 4mm^2 The double lighting fixtures (XLF-....2) comes supplied wired and sealed up to the junction box, the connection is made to the terminal board inside the terminal box L, N, Pe. Max section 4mm^2
Power factor:	0.96
Wiring:	Silicone rubber cables with glass braid protection against high temperatures

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

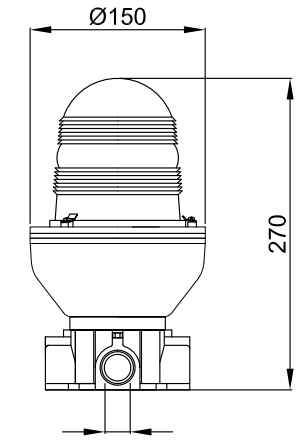
Cable gland: FGAB2NBK for armoured cable or FB2NBK for non-armoured cable
Model for conduit or pendant mounting (code: XLFS-1V1101)
Special markings in Ⓔx II 2GD Ex de IIC T5 Gb; Ex tb IIIC T.. Db IP66. (code: XLFE-1V1101)
Ex or IP66 protected control panel with electronic modules
GAS UNI ISO 7/1 thread
Other colours: blue, yellow, green

XLF series selection chart

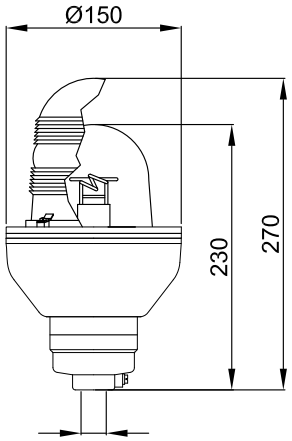
Code	Lamp	Colour	Lamp power xenon	Power supply	Weight Kg	mm
XLF-10241	1	NO FRESNEL	6 Joule	24V Ac Dc	2,15	160x150x330
XLF-10242	2	NO FRESNEL	6 Joule	24V Ac Dc	5,00	440x175x425
XLF-11101	1	NO FRESNEL	6 Joule	110V Ac	2,15	160x150x330
XLF-11102	2	NO FRESNEL	6 Joule	110V Ac	5,00	440x175x425
XLF-12301	1	NO FRESNEL	6 Joule	230V Ac	2,15	160x150x330
XLF-12302	2	NO FRESNEL	6 Joule	230V Ac	5,00	440x175x425
XLF-1R0241	1	RED	6 Joule	24V Ac Dc	2,40	160x150x330
XLF-1R0242	2	RED	6 Joule	24V Ac Dc	5,00	440x175x425
XLF-1R1101	1	RED	6 Joule	110V Ac	2,40	160x150x330
XLF-1R1102	2	RED	6 Joule	110V Ac	5,00	440x175x425
XLF-1R2301	1	RED	6 Joule	230V Ac	2,40	160x150x330
XLF-1R2302	2	RED	6 Joule	230V Ac	5,00	440x175x425
XLF-20241	1	NO FRESNEL	16 Joule	24V Ac Dc	2,15	160x150x330
XLF-20242	2	NO FRESNEL	16 Joule	24V Ac Dc	5,00	440x175x425
XLF-21101	1	NO FRESNEL	16 Joule	110V Ac	2,15	160x150x330
XLF-21102	2	NO FRESNEL	16 Joule	110V Ac	5,00	440x175x425
XLF-22301	1	NO FRESNEL	16 Joule	230V Ac	2,15	160x150x330
XLF-22302	2	NO FRESNEL	16 Joule	230V Ac	5,00	440x175x425
XLF-2R0241	1	RED	16 Joule	24V Ac Dc	2,40	160x150x330
XLF-2R0242	2	RED	16 Joule	24V Ac Dc	5,00	440x175x425
XLF-2R1101	1	RED	16 Joule	110V Ac	2,40	160x150x330
XLF-2R1102	2	RED	16 Joule	110V Ac	5,00	440x175x425
XLF-2R2301	1	RED	16 Joule	230V Ac	2,40	160x150x330
XLF-2R2302	2	RED	16 Joule	230V Ac	5,00	440x175x425

XLF series dimensional drawings

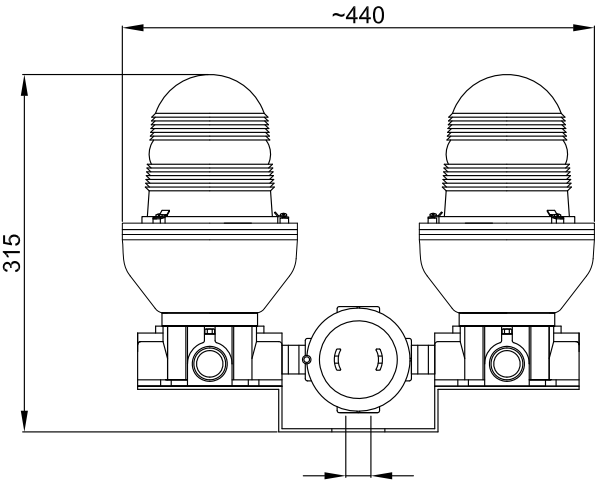
XLF-...
Structure mounting

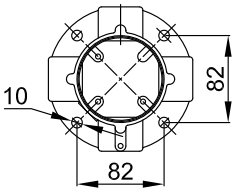


XLFS-...
Conduit or
pendant mounting



XLF-...2
Double obstuction
lighting fixture





Dimensions in mm



Close up of 6J Xenon lamp



Close up of 16J Xenon lamp

DON'T FORGET TO ORDER THE ACCESSORIES

Example: Type of lighting fixture + XLF-1R1101 | Cable gland FGAB2NBK | + other ...see key

Accessories and spare parts available on request XLF series

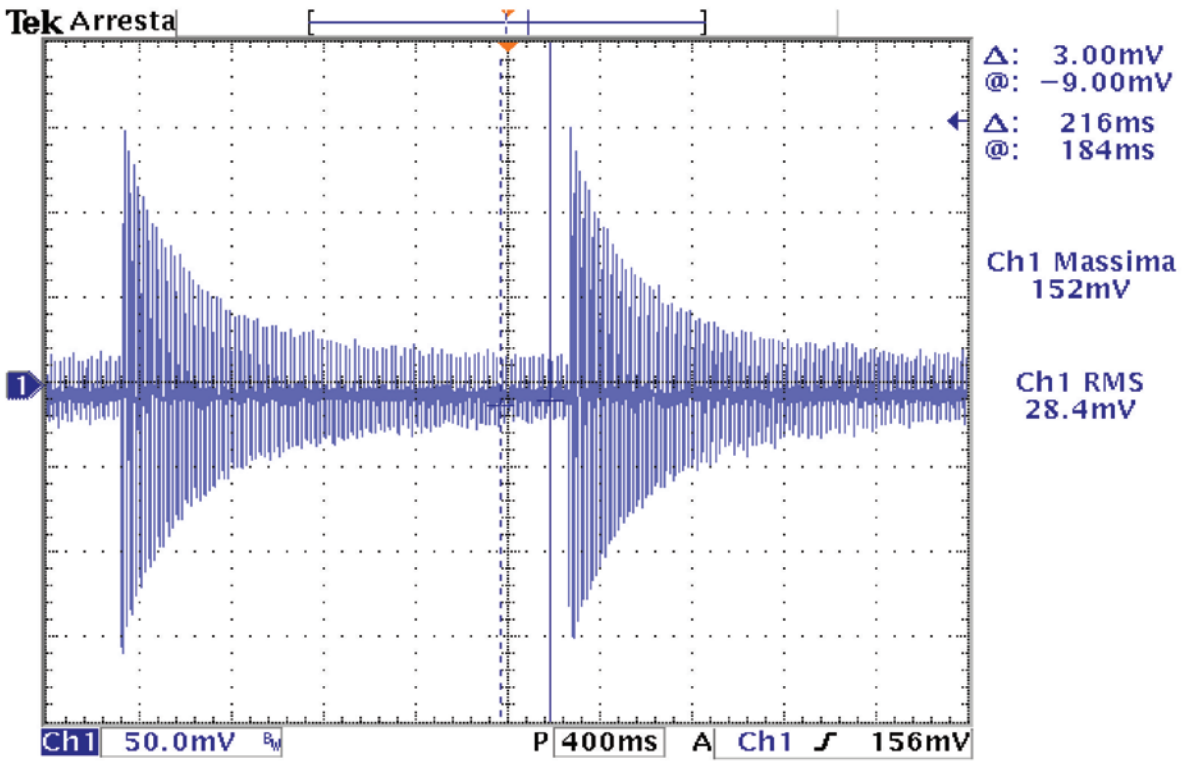
ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Globe with shade ring		Borosilicate glass globe Aluminium ring shade ring	G50-0389FCM	SPARE PART
	Polycarbonate Fresnel lens		Red	SR-1300	SPARE PART
			Green	SR-1301	
			Yellow	SR-1302	
			Blue	SR-1303	
	O-ring		Material: silicone	OR-4512SH70S	SPARE PART
	Ceramic lamp holder	E27	250V 4A	PORT E-27/X	SPARE PART
	Structure mounting		4 x 3/4" entries G	G-0214	SPARE PART
	Pendant mounting		1 x 3/4" entry	G-0213	SPARE PART
	Stroboscopic light with integrated module	6 Joule	24V ac/dc	EC-06/624V	SPARE PART
		16 Joule		EC-06/24V	
		6 Joule	110-230V ac/dc	EC-06/6	
		16 Joule	230V ac	EC-06	
		16 Joule	110V ac	EC-06/110V	
	Protective cage only for XLF without Fresnel		Material: Electro-polished stainless steel	G50-0417	ACCESSORY SPARE PART
	Cable gland		For models and codes, visit www.cortemgroup.com	FB2NBK FGAB2NBK	ACCESSORY SPARE PART

Features of EC series electronic modules for XLF

CODE	DESCRIPTION	GRAPH	VOLTAGE
EC-06/110V	Stroboscopic light 110V 16J	1	110 V ac/dc
EC-06	Stroboscopic light 230V ac 16J	2	230 V ac/dc
EC-06/6	Stroboscopic light 110-230V ac/dc 6J	3 - 4	110-255 V ac/dc
EC-06/624V	Stroboscopic light 24V ac/dc 6J	5	24 V ac/dc

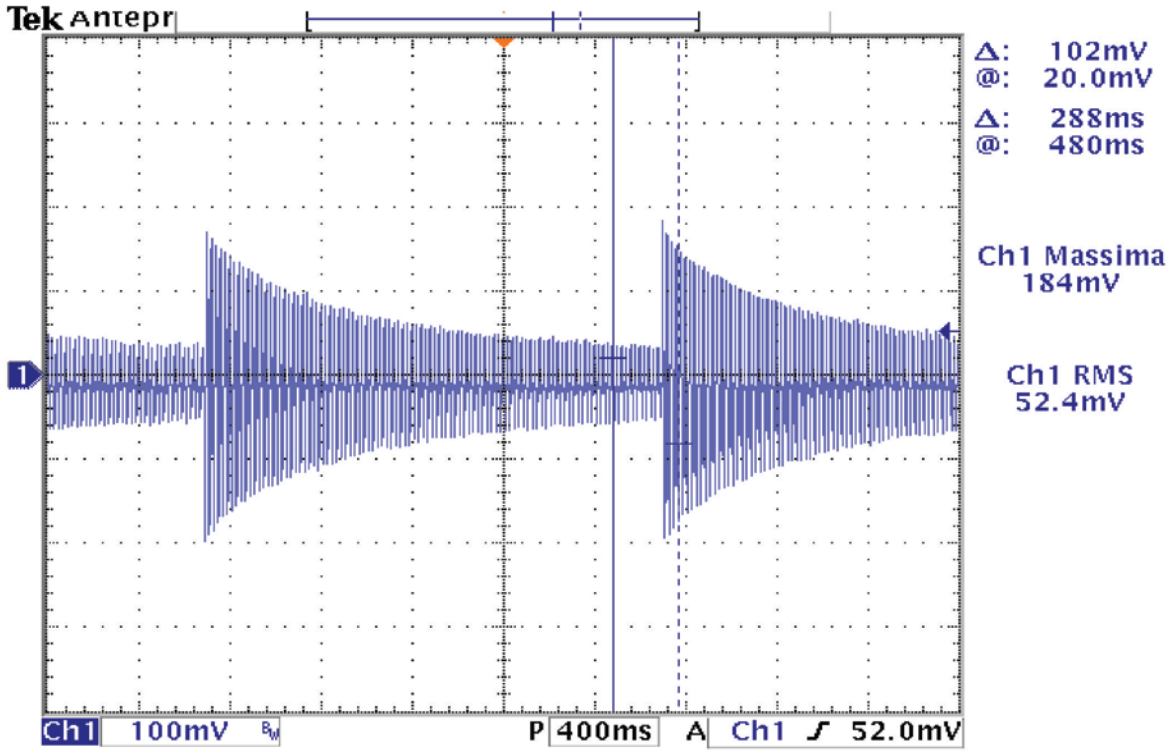
The waveforms have been designed to measure each module's exact consumption.
Tests have been carried out using a resistance of 1 Ohm connected in series with the power supply so as to make the voltage conversion immediate.

GRAPH 1 - 110 Vac

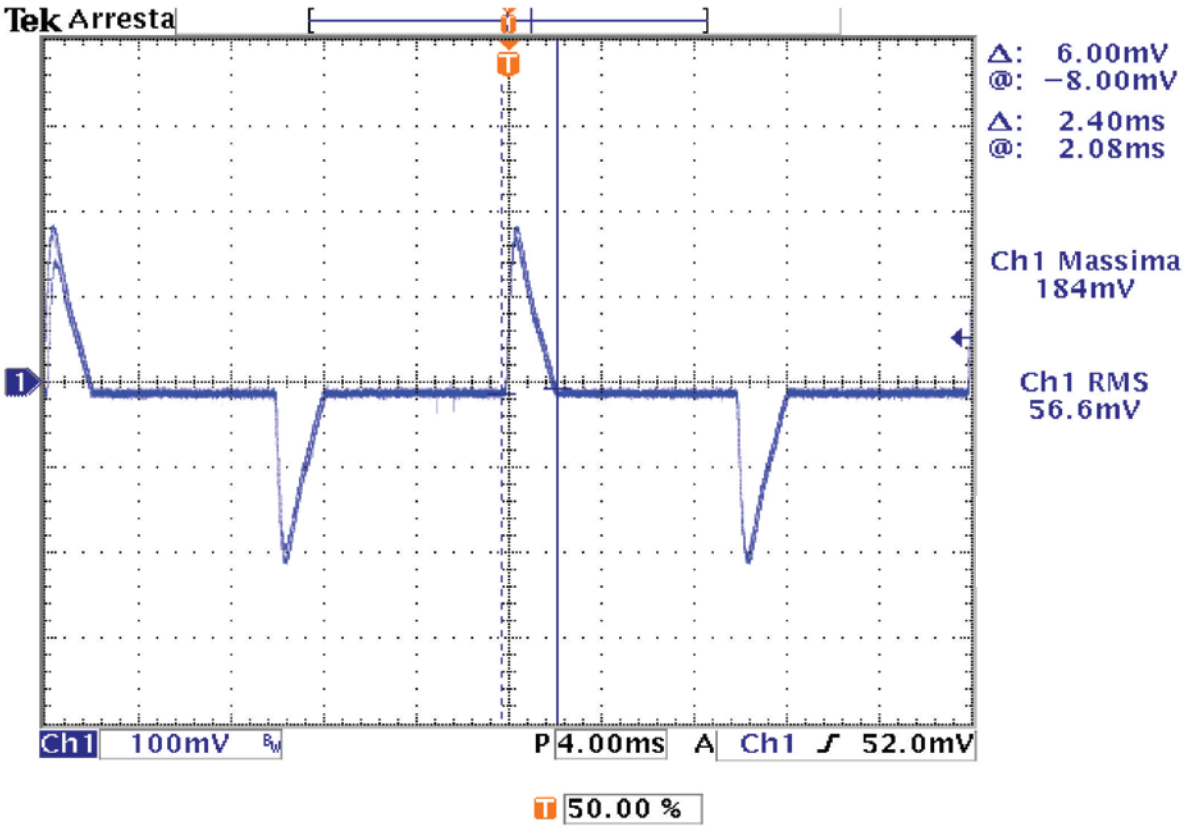


CORTEM GROUP®

GRAPH 2 - 230 Vac

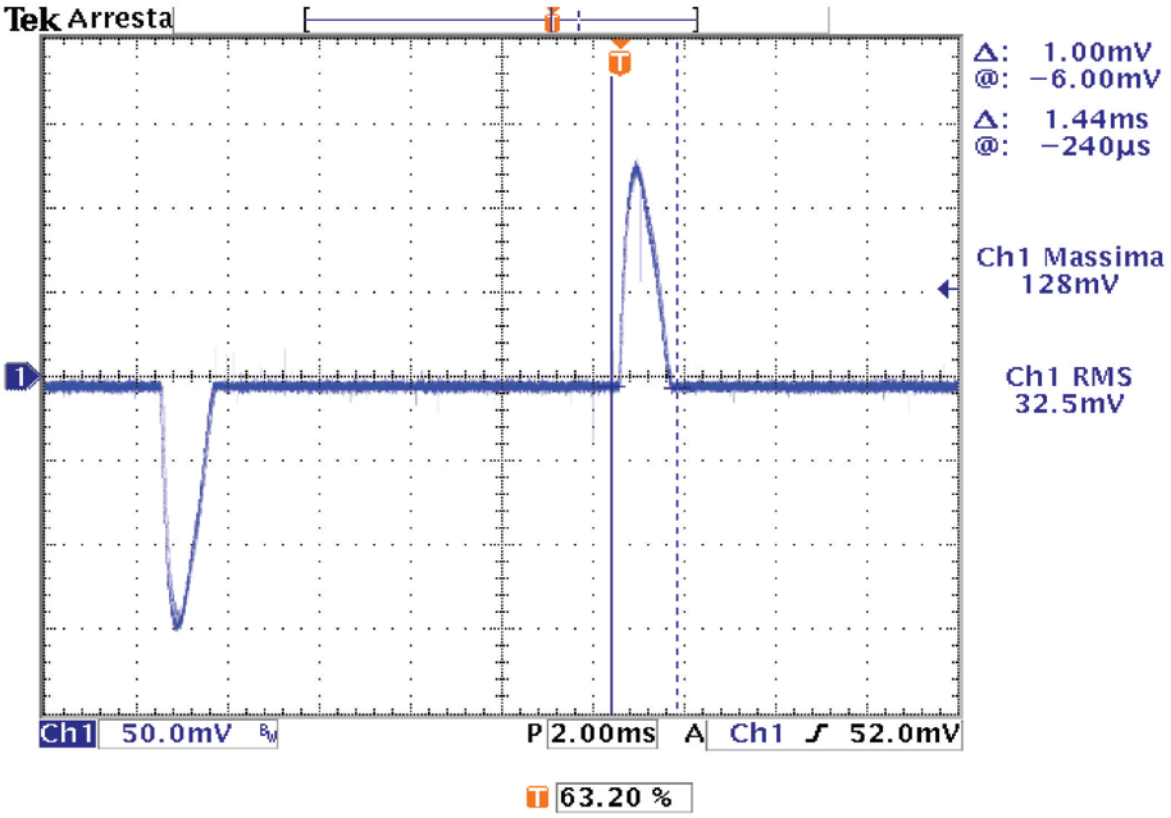


GRAPH 3 - 110 Vac

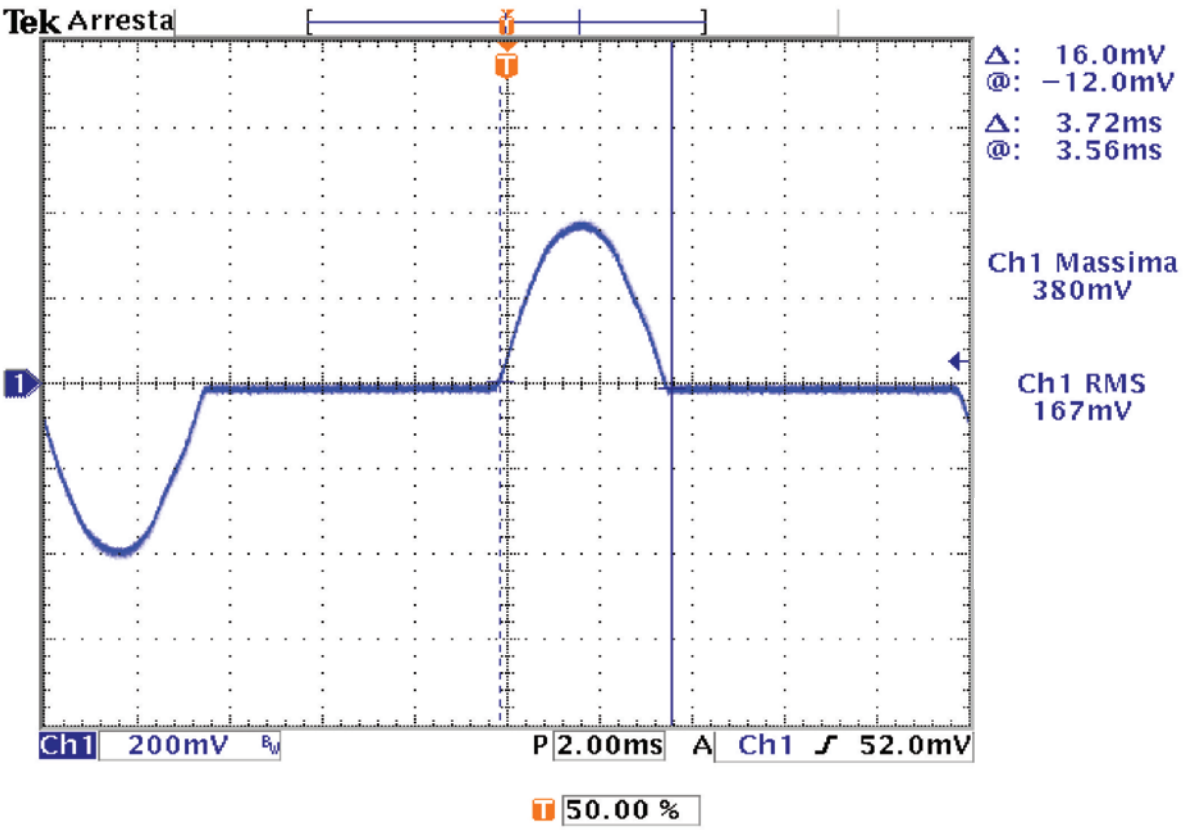


Features of EC series electronic modules for XLF

GRAPH 4 - 255 Vac



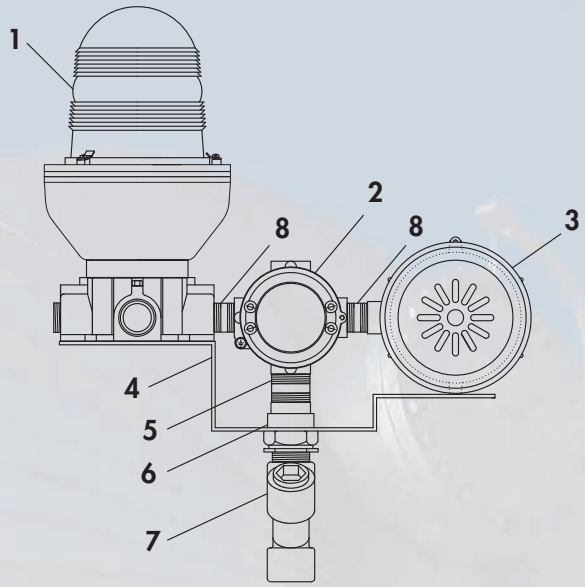
GRAPH 5 - 24 Vac



Installation and mounting methods XLF series

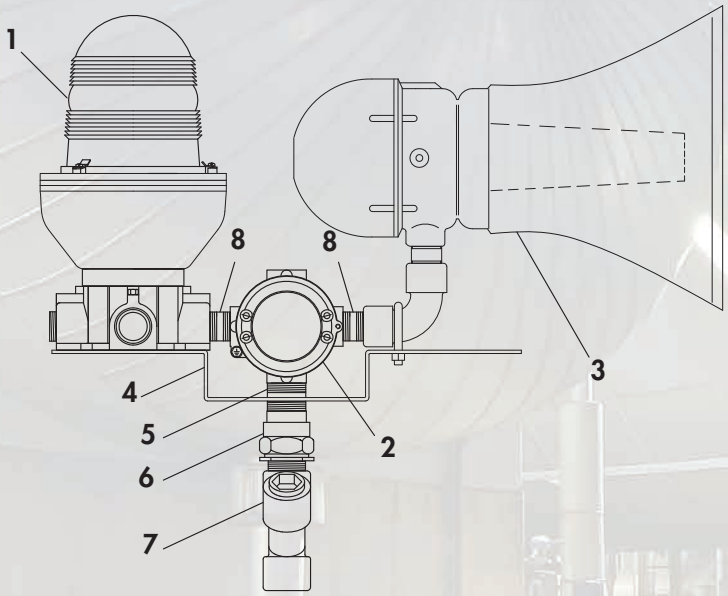
Example of XLF obstruction lighting fixture and ETS series siren installation

n	Description	Code
1	Obstruction lighting fixture	XLF-2R2301
2	Junction box	ST-26.1V
3	Rotating electromechanical siren	ETS60/109DB230V
4	Mounting plate	
5	Nipple	NP2G
6	3-piece union	RMF2G
7	Sealing fittings	EYS2
8	Sealed nipple	NPSF2



Example of XLF obstruction lighting fixture and ETH series siren installation

n	Descrizione	Code
1	Obstruction lighting fixture	XLF-2R2301
2	Junction box	ST-26.1V
3	Siren	ETS60/109DB230V
4	Mounting plate	
5	Nipple	NP2G
6	3-piece union	RMF2G
7	Sealing fittings	EYS2
8	Sealed nipple	NPSF2

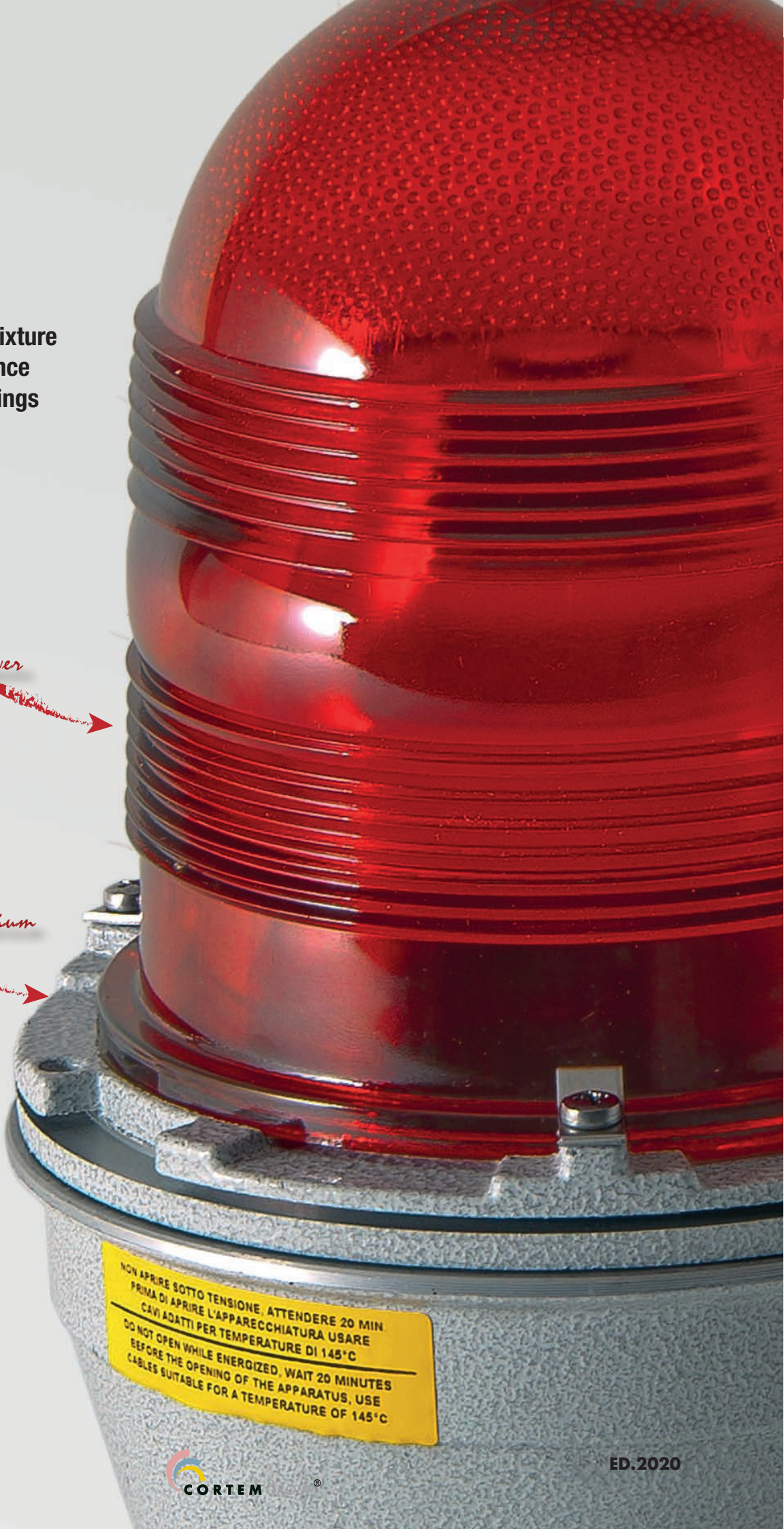


Features of EC series electronic modules.. for XLF

- **EC-05** Double XLF power supply circuit in which a 16J stroboscopic lamp is the main light and the other lamp is a spare.
  Power supply: 230VAC
  Stroboscopic power: 16 J
- **EC-10** Power supply unit for EC-... with 230 VAC power supply.
  This unit has both automatic and manual controls as well as a test button.
- **EC-13** Fixed synchroniser that turns on all the stroboscopic lamps wired with a 230 VAC power supply at the same time.

XLI

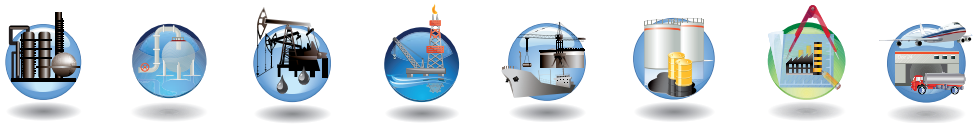
- Zones 1, 2, 21, 22
- Single or double fixture
- Low wind resistance
- Obstruction warnings
- Fixed light



XLI series fixed obstruction lighting fixture

XLI series fixed obstruction lighting fixture are ideal for chimneys, smokestacks, high buildings, cranes, bridges, radio/ television masts, power line pylons, wind turbines, radar and telecommunication antennas and specifically for use in the petrochemical and oil industries.
Their small size, light weight, ease of installation and robustness mean that XLI series fixture do not deteriorate over time especially with exposure in salty environments. They are also resistant to the wind and the deposit of industrial dusts thanks to the low profile and aerodynamic properties of the body.
The use of halogen lamps offers additional benefits in terms of energy savings, lower maintenance costs and reduced environmental impact.

Application sectors:

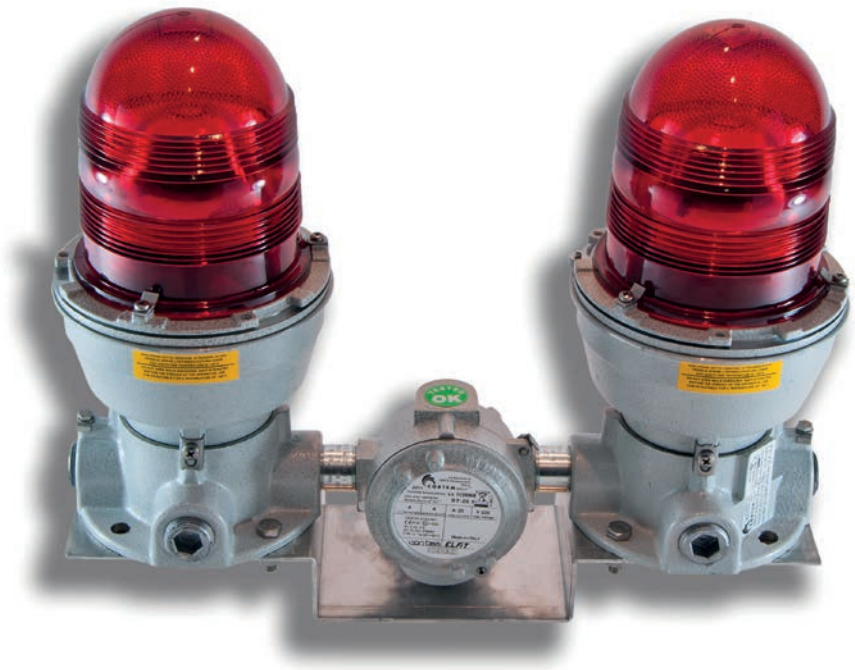


Oil refineries | Chemical and petrochemical plants | Onshore plants | Offshore plants | Oil loading/ unloading jetties | Combustible liquid depots | Perimeter lighting | Aircraft storage facilities Hangars

CERTIFICATION DATA

Classification:	Group II	Category 2GD		
Installazione: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Marking:	CE 0722 Ex II 2GD Ex d IIC T.. Gb - Ex tb IIIC T.. °C Db IP66			
Certification:	ATEX CESI 12 ATEX 006			
	IEC Ex CES 07.0004	All IEC Ex e TR CU certification data can be downloaded at www.cortemgroup.com		
	TR CU AVAILABLE			
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2011, IEC 60079-1: 2007, IEC 60079-31: 2008 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS			
Class temperature:	154°C (T3)			
Ambient temperature:	-20°C +60°C			
Degree of protection:	IP66			

XLI series fixed obstruction lighting fixture



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
Globe:	Shock and temperature resistant borosilicate glass sealed with aluminium shade ring
Fresnel lens:	Transparent polycarbonate, shock and UV resistant
Gaskets:	Silicone acid/hydrocarbon resistant
Mounting:	See "XLI series dimensional drawings"
Bolts and screws:	Stainless steel
Entries:	4 x 3/4" threaded NPT entry for XLI. 1 x 3/4" threaded NPT entry for XLIS and XLI...2
Coating:	Polyester coating Ral 7035 (light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	E27 ceramic
Rated voltage:	230 VAC
Rated frequency:	50/60 Hz
Connection:	Direct to lamp holder L, N, Pe. Max section 4mm^2 The double lighting fixture (XLI-....2) comes supplied wired and sealed up to the junction box, the connection is made at the terminal board inside the terminal box L, N, Pe. Max section 4mm^2
Wiring:	Silicone rubber cables with glass braid protection against high temperatures

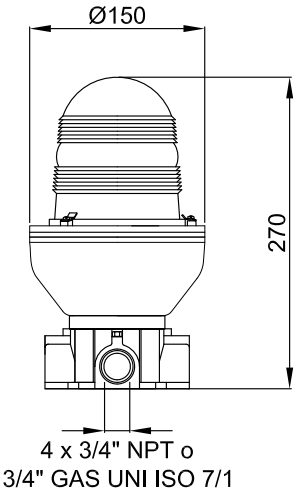
ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Model for conduit or pendant mounting (code XLIS-V2301)
Halogen lamp
Cable gland: FGAB2NBK for armoured cable or FB2NBK for non-armoured cable
GAS UNI ISO 7/1 thread
Ex or watertight protected control panel
Other colours: blue, yellow, green

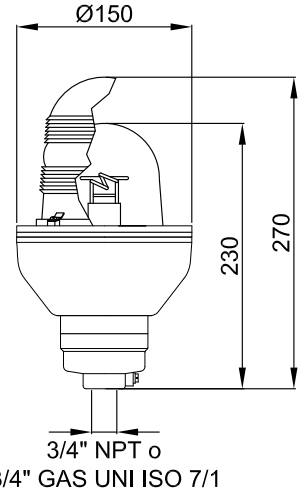
XLI series selection chart

Code	Lamp	Colour	Power supply	Weight kg	mm
XLI-R2301	1	RED	230 VAc	2,40	160x150x330
XLI-R2302	2	RED	230 VAc	5,00	440x175x425

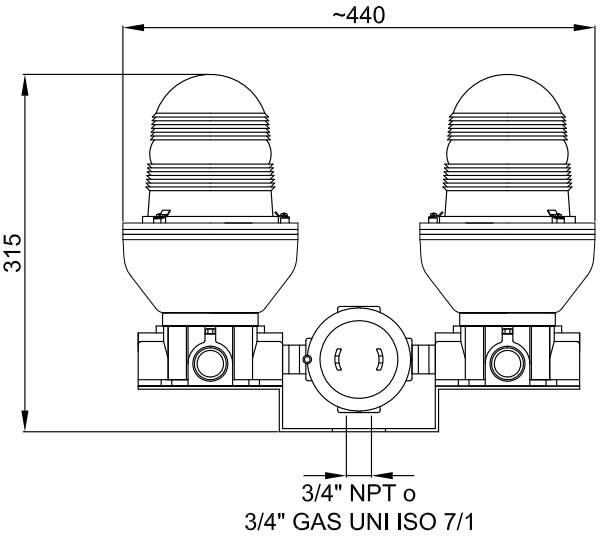
XLI-...
Structure mounting



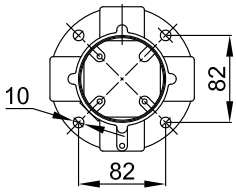
XLIS-...
Conduit or pendant mounting



XLI-...2
Double ostruction lighting fixture of obstruction



Close up of mounting



Dimensions in mm

DON'T FORGET TO ORDER THE ACCESSORIES

Example: Type of lighting fixture XLI-R1101 + Pressacavo FGAB2NBK + other ...see key

Accessories and spare parts available on request XLI series

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Globe with shade ring		Borosilicate glass globe Aluminium ring shade ring	G50-0389FCM	SPARE PART
	Polycarbonate Fresnel lens		Red	SR/1300	SPARE PART
			Green	SR/1301	
			Yellow	SR/1302	
			Blue	SR/1303	
	O-ring		Material: silicone	OR-4512SH70S	SPARE PART
	Ceramic lamp holder	E27	250V 4A	PORT E-27/X	SPARE PART
	Structure mounting		4 x 3/4" entries	G-0214	SPARE PART
	Pendant mounting		1 x 3/4" entry	G-0213	SPARE PART
	Halogen lamp	E27	105 W	LAMPAL105W	ACCESSORY SPARE PART
	Cable gland		For models and codes, visit www.cortemgroup.com	FB2NBK FGAB2NBK	ACCESSORY SPARE PART

Features of EC series electronic modules.. for XLI

GENERAL FEATURES

The Cortem designed control panels consist of aluminium or stainless steel Cortem junction boxes that are either fire-resistant or water-proof. These systems ensure that the units operate correctly as well as improving the reliability of warnings and offering alternative types of warning signals.

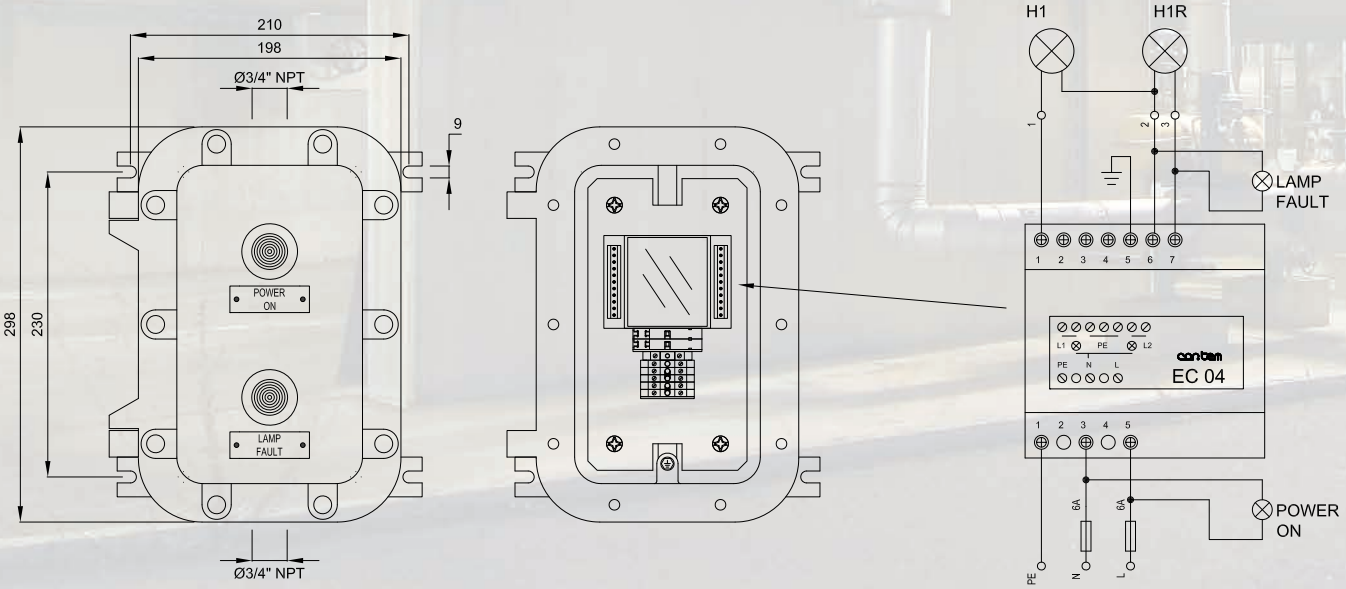
The covers of these panels can be fitted with different devices such as:

- Handle for the internal general magneto-thermal switch.
- Warning lights for faults in the main units.
- Test button for all units and warning lights.
- AUTOMATIC – MANUAL switch that in the "Manual" position switches on all the units without the consent of the "low light" switch module EC-01.

The control panel housings can contain different separated modules that, when wired in series, meet with specific customer requirements. The modules available for obstruction lighting fixtures are as follows (non ICAO - FAA) series XLI:

- **EC-01** Low light switch module. Adjustable from 1 to 150 lux. Operates with an external, integrated photocell
- **EC-03** Double XLI power supply circuit in which a halogen lamp is the main light and the other lamp is a spare. The rate of flash can be adjusted with a potentiometer and fitting of the spare lamp is instantaneous so as not to interrupt the service.
  Power supply: 230 V AC
  Time ON adjustable from: 0.6 - 1.8 sec.
  Time OFF adjustable from: 0.6 - 3.5 sec.
- **EC-04** Double XLI power supply circuit in which a halogen lamp is the main light and the other lamp is a back-up unit.
  Power supply: 230 V AC
- **EC-08** Circuit for powering a single XLI.
  Power supply: 230 V AC
  Time ON adjustable from: 0.4 - 1 sec.
  Time OFF adjustable from: 0.4 - 2.2 sec.
- **EC-10** Power supply unit for EC-... with 230 VAC power supply.
  This unit has both automatic and manual controls as well as a test button.
- **EC-12** Turns all the units ON and OFF with a an ON/OFF settings of 0.45 to 2.5 seconds.
- **EC-15** Circuit that powers a double XLI with rate of flash adjusted by potentiometer.
  Power supply: 230 V AC
  Alternate flashing: 0.3 - 3 sec.

Example of EC-04 module installation in EJB-1 model housing



EVF-18X

- Suitable for lighting escape routes and emergency exits
- LED battery monitoring
- For 8W fluorescent tubes



LED battery monitoring

Lamp cover for replacing fluorescent tubes

CORTEM GROUP®

EVF-18...X series Lighting fixtures for safety warnings

EVF-18...X series emergency lamps comply with ATEX Directive 2014/34/UE. They are certified to be installed in Zones 1, 2, 21 and 22. They also fully comply with Directive EN 60598-1 as regards the section on "emergency lamps". These lamps have been specially designed for high performance emergency lighting in areas with little overhead room especially near emergency exits or escape routes. EVF-18...X 8 Watt fluorescent tubes are fitted with electronic ballast. The red/green LED monitors battery function and warns the user in the event of a failure. In the event of a power failure, the system comes on automatically.

Application sectors:



Oil refineries | Chemical and petrochemical plants | Emergency exits | Offshore plants | Transit areas | Stairs Handrails | Farm produce applications | 100% Cortem product

CERTIFICATION DATA

Classification:	Group II	Category 2GD			
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zona 21 - zona 22 (Dust)			
Marking:	CE 0722 Ex II 2GD Ex d IIC T5 - Ex tD A21 IP 66				
Certification:	ATEX CESI 03 ATEX 098				
Standards:	CENELEC EN 60079-0: 2006, EN 60079-1: 2007, EN 61241-0: 2006, EN 61241-1: 2004, EN 60598-1:2008+A11:209, EN 60598-2-1_1989, EN 61547: 2009 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2004, IEC 60079-1: 2007, IEC 61241-0: 2004, IEC 61241-1: 2004 European Directive 2006/95 Low voltage European Directive 2004/108 Electromagnetic compatibility European Directive 2003/108 WEEE Waste electrical and electronic equipment European Directive 2011/64 RoHS				
Class temperature:	100°C (T5)				
Ambient temperature:	-20°C +55°C				
Degree of protection:	IP66				

EVF-18...X series Lighting fixtures for safety warnings





ORIGINAL PRODUCT

MECHANICAL FEATURES

Body:	Low copper content aluminium alloy
External tube:	Shock and high temperature resistant borosilicate glass
Seal:	Silicone resin between the aluminium heads and the glass tubes
Gaskets:	Acid/hydrocarbon resistant NBR
Bolts and screws:	Stainless steel
Mounting:	2 x galvanised steel brackets with Ø9 slots
Entries:	2 x 3/4" threaded NPT. Lighting fixture complete with 1 x PLG2NA aluminium plug
Coating:	Polyester coating Ral 7035 (Light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

ELECTRICAL FEATURES

Lamp holder:	Bi-pin G5
Ballast:	Electronic
Rated voltage:	230 V AC
Rated frequency:	50/60 Hz
Connection:	Direct to connectors fitted to electronic board L, N, Pe section 0.5 mm^2 terminal board with jumpers for input/output
Emergency unit:	**B**atteries Ni/Cd 2.5 Ah - 6,5 V The LED is used to monitor battery function: the green LED indicates that the lamp is charged and red indicates a faulty battery
Wiring:	Silicone rubber cables with glass braid protection against high temperatures

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

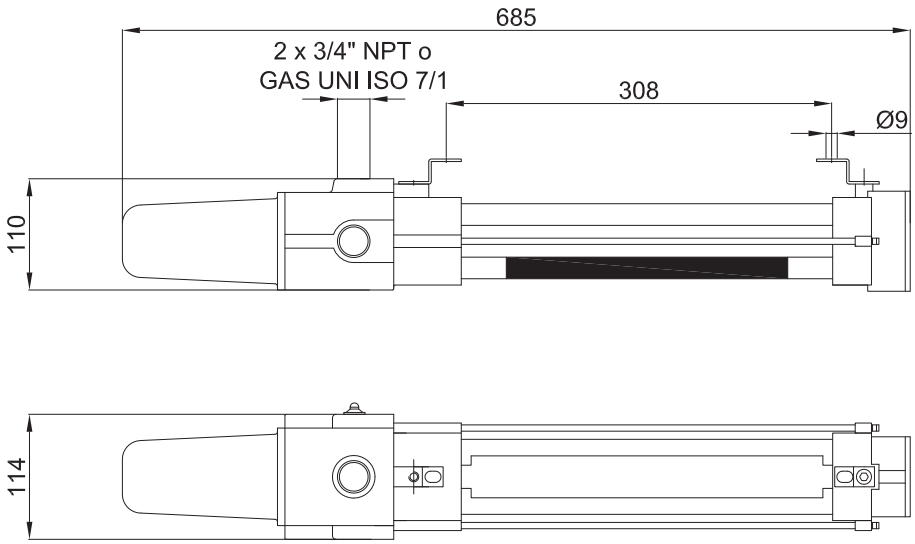
2 pin Ø16 fluorescent tubes model T5
Installation mounting brackets
Cable gland: FGAB2NBK for armoured cable or FB2NBK for non-armoured cable
Warning signs to be requested during ordering
Rated voltage: 120 V (code EVF-18ENX/**120**)
GAS UNI ISO 7/1 thread

EVF-18...X series selection chart

Code	Lamp n°	Operating type	Power supply	Watt	Discharge time of batteries	Weight kg	mm
EVF-18X	1	normal	230V 50/60Hz	8	-	3,15	1175x120x155
EVF-18EX	1	emergency only	230V 50/60Hz	8	150'	3,40	1175x120x155
EVF-18ENX	1	normal + emergency	230V 50/60Hz	8	150'	3,50	1175x120x155

DIMENSIONAL DRAWINGS

Dimensions in mm



DON'T FORGET TO ORDER THE ACCESSORIES

Example: Type of lighting fixture EVF-18EX + Fluorescent tubes LAMP-L18W233 + Installation bracket G-258 + Cable gland FB2NBK + other...see key

Standard pictograms to be applied on glass tube

Reference standard: D. LGS. 81 del 09/04/08 V, Directive 92/58/CEE, UNI EN ISO 7010



U-420/SX



U-420/S

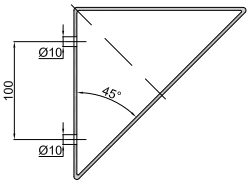
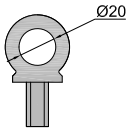
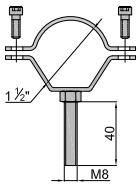
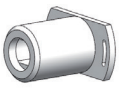
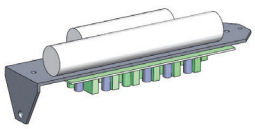


U-420/DX

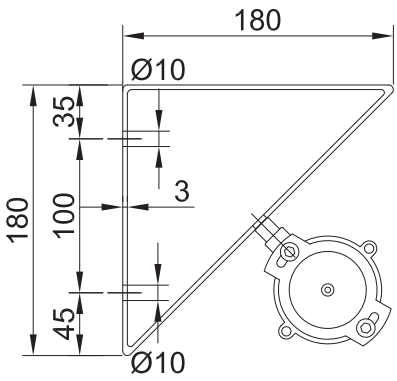


U-420/G

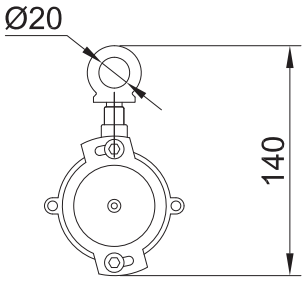
Series EVF-18...X Accessories and spare parts available on request

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Triphosphor fluorescent tubes G5 fitting	8 W (FD8W)	430 lm	LAMPL8W21	ACCESSORY SPARE PART
	Standard pictograms to be applied on glass tube		Material: Translucent film	Upon request	ACCESSORY SPARE PART
	Tige	Length: 250 mm	Material: stainless steel	BRF8MIN/250	ACCESSORY SPARE PART
	Type D bracket complete with screws		Material: bracket: galvanised steel screws: stainless steel	G-0611	ACCESSORY SPARE PART
	Type O eyebolt		Material: galvanised steel	GOF-8	ACCESSORY SPARE PART
	Type P bracket		Material: galvanised steel	G-0480	ACCESSORY SPARE PART
	Pressacavo		Per modelli e codici dei pressacavi vedi sito www.cortemgroup.com	FB2NBK FGAB2NBK	ACCESSORY SPARE PART
	External frame for warning sign upon request		For models and codes, visit www.cortemgroup.com	G1-0591	ACCESSORY SPARE PART
	Lamp holder	G5 fitting	230V 4A	G-0448	SPARE PART
	Frame with battery pack and electronic board	EVF-18X	230V 50/60Hz normal operation	G-0452	SPARE PART
		EVF-18EX	230V 50/60Hz emergency only	G-0451	
		EVF-18ENX	230V 50/60Hz normal + emergency	G-0451/1	
	Battery pack	EVF-18EX EVF-18ENX	Ni-Cd 2,5 Ah - 6,5 V	BATT2,5AH/NC	SPARE PART

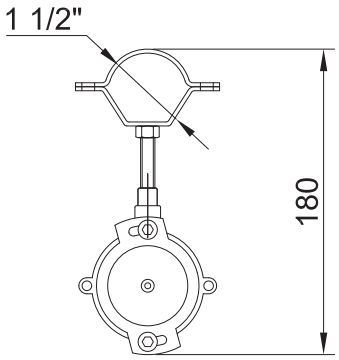
Installation and mounting methods EVF-18...X series



45° angle mounting
TYPE "D"



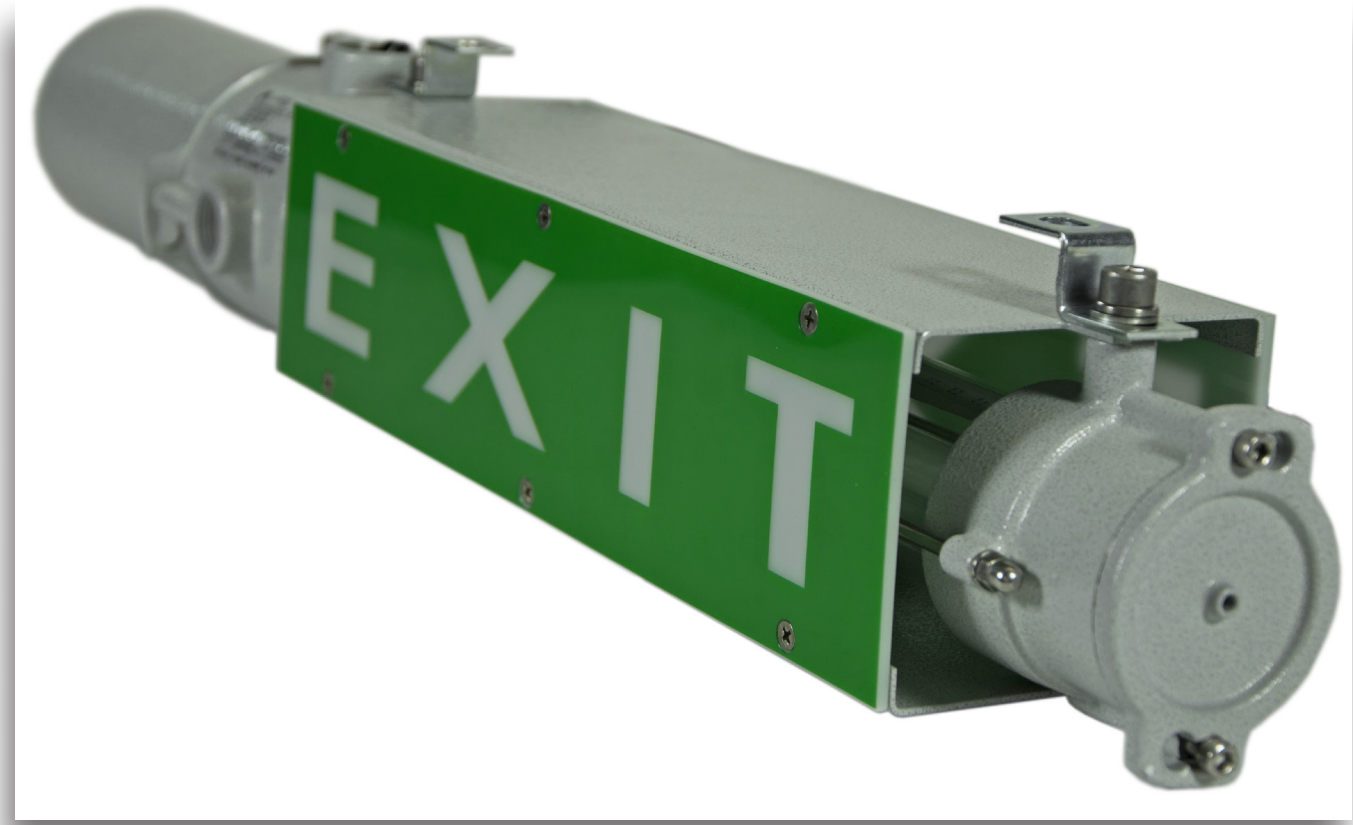
Pendant mounting
with eyebolt TYPE "O"



Mounting with
metal clamps 1.1/2" TYPE "P"

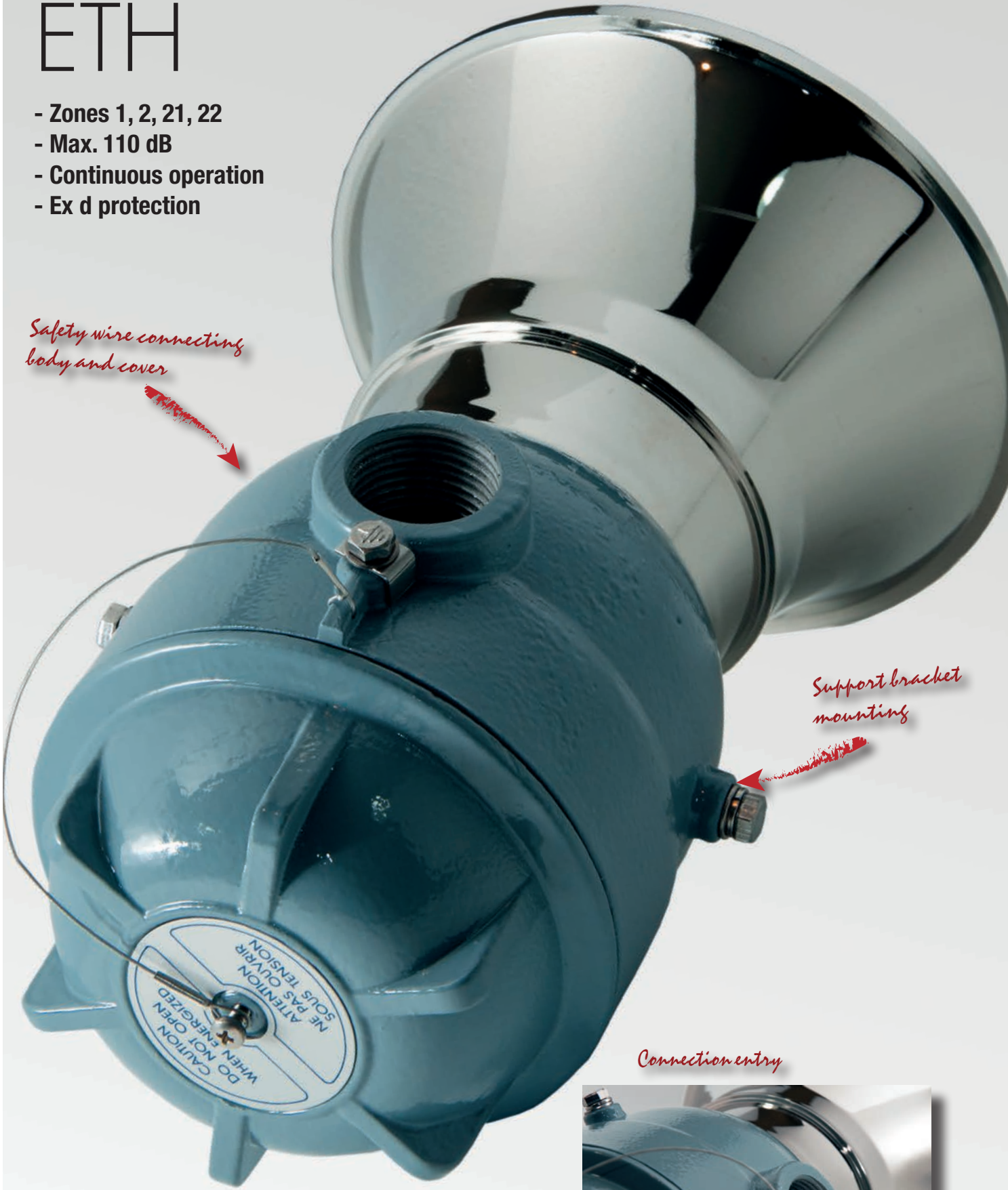
Dimensions in mm

Lighting fixture EVF-18EX with accessory G1-0591



ETH

- Zones 1, 2, 21, 22
- Max. 110 dB
- Continuous operation
- Ex d protection

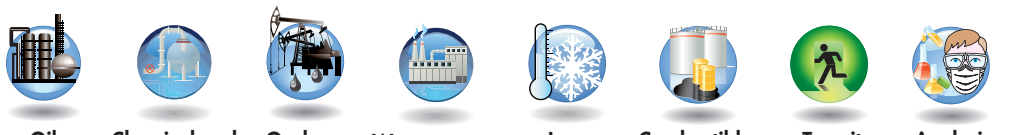


CORTEM GROUP®

ETH series Sirens

ETH series sirens are used in closed environments where a warning system is needed and where the atmosphere is potentially explosive. ETH sirens are multi-functional. The five different types of sound can be programmed to provide warning in the event of danger or evacuation in the case of fire.

Application sectors:



Oil refineries · Chemical and petrochemical plants · Onshore plants · Waste water purification · Low temperatures · Combustible liquid depots · Transit areas · Analysis laboratories

CERTIFICATION DATA

Classification:	Group II	Category 2GD		
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)	ETH12	
	zone 1 - zone 2 (Gas)		ETH20	
Marking:	CE Ex II 2 GD Ex d IIC T6 Ex tD A21 IP65		ETH12	
	CE Ex II 2 G Ex d IIC - IIB+H2 T4 Gb IP6x		ETH20	
Certification:	ATEX INERIS 02 ATEX 0074X		ETH12	
	ATEX ISSeP 11 ATEX 040X		ETH20	
	TR CU AVAILABLE	All TR CU certification data can be downloaded at www.cortemgroup.com		
Standards:	CENELEC EN 60079-0: 2006/09, EN 60079-1: 2004/07, EN 61241-0: 2006, EN 61241-1: 2004, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE			
Class temperature:	85°C (T6)	135°C (T4)	200°C (T3)	
Ambient temperature:	-20°C +55°C	ETH12		
	-50°C +60°C	ETH20		

ETH series Audible warnings



MECHANICAL FEATURES

Body and cover:	Low copper content aluminium alloy
Safety wire:	Steel
Bell housing:	Chrome coloured ABS plastic
Gasket:	Acid, hydrocarbon and high temperature resistant silicone
Bolts and screws:	Stainless steel
Mounting:	Direct to 3/4" entry or with mounting bracket (available on request)
Entries:	1 x 3/4" Rc UNI ISO 7/1
Coating:	Epoxy coating Ral 7000 (squirrel grey)

ELECTRICAL FEATURES

ETH-12 siren

Rated voltage:	12/24 - 48 - 110 - 230 V ac/dc
Frequency:	50/60/0 Hz
Driver impedance:	8 Ω
Operation:	Continuous

ETH-20 siren

Rated voltage:	12/24 - 48 - 110 - 230 V ac/dc
Frequency:	50/60/0 Hz
Driver impedance:	16 Ω
Operation:	Continuous

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Cable gland: FGAB2BK for armoured cable or FB2BK for non-armoured cable
Adjustable support bracket
Epoxy vinyl coating in different colours
NPT or ISO M25 threads
Body in cast iron EN-GJL-200 or stainless steel AISI 316L

ETH series selection chart

Code	Programmable sounds	Voltage	Rated current	Power input	Sound level		Weight kg	mm
					Frequency	Db/1m		
ETH-12MD/12-24V	32	12 - 24 V ac/dc	0,10 - 0,12 A	7 W	340 - 2000 Hz	109	1,2	230x150x150
ETH-12MD/48VCA	32	48 V ac	0,06 A	7 W	340 - 2000 Hz	107	1,4	230x150x150
ETH-12MD/48VCC	32	48 V dc	0,06 A	7 W	340 - 2000 Hz	107	1,2	230x150x150
ETH-12MD/110VCA	32	110 V ac	0,02 A	7 W	340 - 2000 Hz	109	1,4	230x150x150
ETH-12MD/110VCC	32	110 V dc	0,02 A	7 W	340 - 2000 Hz	109	1,4	230x150x150
ETH-12MD/230VCA	32	230 V ac	0,012 A	7 W	340 - 2000 Hz	109	1,4	230x150x150
ETH-20MD/12-24V	32	12 - 24 V ac/dc	0,10 - 0,12 A	10 W	340 - 2000 Hz	113	3,1	390x280x280
ETH-20MD/48VCA	32	48 V ac	0,06 A	10 W	340 - 2000 Hz	111	3,2	390x280x280
ETH-20MD/48VCC	32	48 V dc	0,06 A	10 W	340 - 2000 Hz	111	3,1	390x280x280
ETH-20MD/110VCA	32	110 V ac	0,02 A	10 W	340 - 2000 Hz	113	3,2	390x280x280
ETH-20MD/110VCC	32	110 V dc	0,02 A	10 W	340 - 2000 Hz	113	3,2	390x280x280
ETH-20MD/230VCA	32	230 V ac	0,012 A	10 W	340 - 2000 Hz	113	3,2	390x280x280

Main sounds
(32 selectable sounds, view safety maintenance and mounting instructions)

TWIN TONE: 440 Hz / 0.4 sec alternated with 554 Hz / 0.1 sec

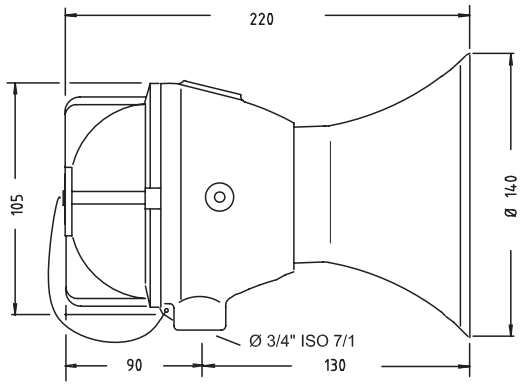
YELP: Increasing and decreasing scale. Fast from 650 to 1600 Hz

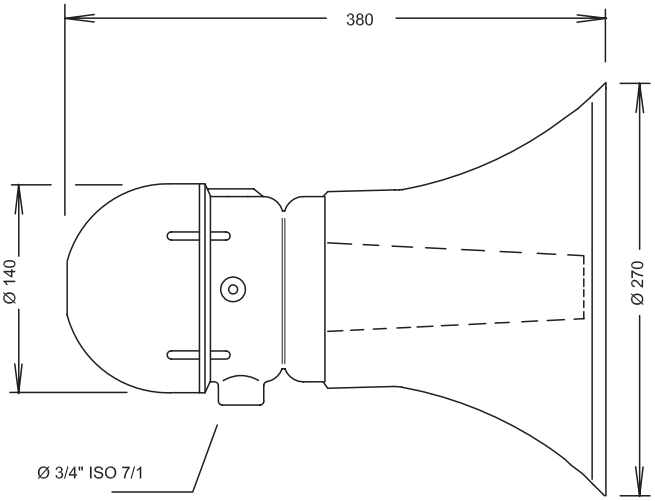
WAIL: Increasing and decreasing scale. Slow from 650 to 1600 Hz

INTERMITTENT: 554 Hz, 1 sec ON - 1 sec OFF

FIXED NOTE: 554 Hz continuous.

DIMENSIONAL DRAWINGS





Dimensions in mm

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Adjustable support bracket	ETH-12	Material: galvanised steel	K-340	ACCESSORY SPARE PART
		ETH-20		K-340/1	
	Cable gland		For cable gland models and codes see www.cortemgroup.com	FGAB2BK FB2BK	ACCESSORY SPARE PART

ETH20MDLOUD

- Zones 1, 2, 21, 22
- Output from 100 dB to 112 dB (100 V)
- Ex d protection
- IP66



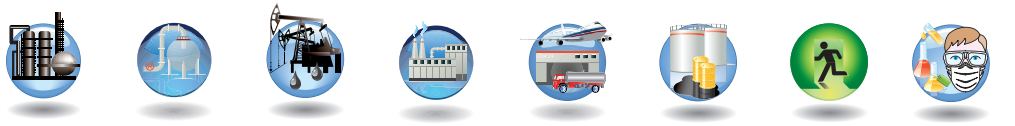
Entry for connection



ETH20MDLOUD/ series Loudspeakers

The international standards for safety in industrial environments establish the mandatory installation of suitable audible warning device that can be activated in case of alarm, emergency or danger for the safety of workers which operate at the modern manufacturing processes. The explosion-proof loudspeakers ETH20MDLOUD series have been designed for use in potentially explosive atmospheres in presence of explosive gases and dusts. They have a high degree of protection (IP66) to withstand the harsh off-shore and on-shore plants environmental conditions. They are suitable for connection to standard amplification system with output 100V, to alarm systems and for public address.
The chamber of acoustic compression is separated from the outer atmosphere through a special filter of sintering.
They are equipped with a transformer offering the possibility to adapt and select the sound level according to the real needs of the installation point.

Application sectors:



Oil refineries | Chemical and petrochemical plants | Onshore plants | Waste water purification | Aircraft storage facilities Hangars | Combustible liquid depots | Transit areas | Analysis laboratories

CERTIFICATION DATA

Classification:	Group II	Category 2G			
Installation: EN 60079.14	zone 1 - zone 2 (Gas)				
Marking:	CE Ex II 2 G - Ex db IIB+H2 T5/T6 Gb - Ex tb IIIC T85°C/T100°C Db IP66				
Certification:	ATEX INERIS 09 ATEX 0024X				
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1:2014, EN 60079-31:2014 y a la DIRECTIVA EUROPEA 2014/34/UE				
Class temperature:	85°C (T6)	100°C (T5)			
Ambient temperature:	Standard -20°C +40°C	Special -20°C +60°C			
Degree of protection:	IP66				

This equipment can be used in an environment containing explosive atmosphere and with the presence of hydrogen.

ETH20MDLOUD/TR series Loudspeaker



MECHANICAL FEATURES

Body, cover and horn cone: Light alluminium alloy
Gasket: EPDM acid, hydrocarbon resistant
Bolts and screws: Stainless steel
Mounting: Adjustable galvanized steel bracket
Entries: 1 x 3/4" Rc UNI ISO 7/1 for entries with conduit or cable gland
Coating: Epoxy coating Ral 7000 (Squirrel grey)

ELECTICAL FEATURES

Rated voltage:	100 V			
Audio line:	16 Ohm			
Output:	6 W	12 W	20 W	25 W
Sound level:	100 ÷ 102 dB	104 ÷ 106 dB	107 ÷ 108 dB	109 ÷ 112 dB
Frequency range:	650 ÷ 10000 Hz	450 ÷ 9000 Hz	400 ÷ 9000 Hz	350 ÷ 10000 Hz

Rated voltage:	24 - 48 Vdc (Loudspeaker with incorporate amplifier)			
Audio line:	8 Ohm			
Output:	1,57 W	5,4 W	21,5 W	30,4 W
Sound level:	20 dB	26 dB	32 dB	36 dB

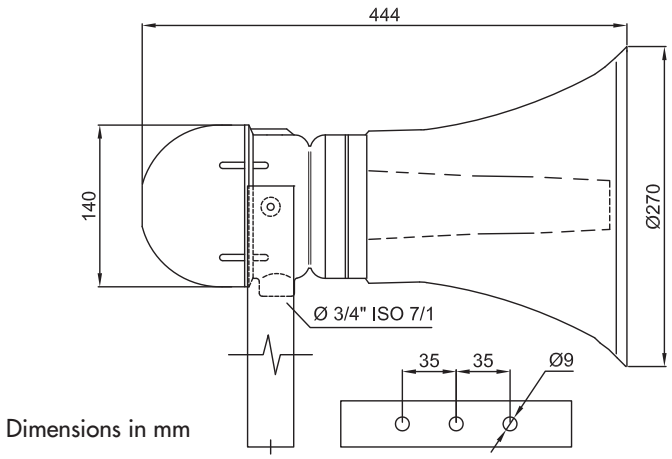
ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Mounting bracket in stainless steel
Cable gland: FGAB2BK for armoured cable or FB2BK for non-armoured cable
Epoxy vinyl coating in different colours
Special execution Ex 2GD Ex d IIC T6/T5 Gb
Different threads
Horn cone in anodized aluminium

ETH20MDLOUD/TR series selection chart

Code	Rated voltage	Output	Sound level		Weight kg	mm
			Frequency level	Db		
ETH20MDLOUD/TR	100 V	6W-12W-20W-25W	650 - 10000 Hz	100 - 112	3,5	
ETH20MDLOUD24VDC	24 - 48 Vdc	1,57W-5,4W-21,5W-30,4W	20 - 20000 Hz	20 - 36	3,5	

DIMENSIONAL DRAWING



Dimensions in mm

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Cablegland		For models and codes, visit www.cortemgroup.com	FGAB2BK FB2BK	

ETS

- Zones 1, 2, 21, 22
- Ex d protection
- Max. 114 dB

Support bracket mounting

Painted aluminium body

Chrome coloured ABS plastic protection



ETS series Rotating electromechanical siren

ETS electromechanical sirens are used in potentially explosive environments such as oil refineries and chemical and petrochemical plants or in areas where flammable dusts or substances are present. Given the high level of sound they emit, they are used outdoors in industrial environments where there is significant background noise. They are used for different applications such as fire alarms, safety alarms, for emergencies and to signal plant evacuation and intrusion.

Application sectors:



Oil refineries | Chemical and petrochemical plants | Onshore plants | Waste water purification | Offshore plants | Combustible liquid depots | Gas plants | Oil loading/ unloading jetties

CERTIFICATION DATA

Classification:	Group	Category 2GD			
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)			
Marking:	CE Ex II 2 GD Ex d IIC T6 Ex tD A21 IP65				
Certification:	ATEX INERIS 02 ATEX 0001				
	TR CU AVAILABLE	All TR CU certification data can be downloaded at www.cortemgroup.com			
Standards:	CENELEC EN 60079-0: 2006, EN 60079-1: 2004, EN 61241-0: 2006, EN 61241-1: 2004 and EUROPEAN DIRECTIVE 2014/34/UE				
Class temperature:	85°C (T6)				
Ambient temperature:	-20°C +40°C				
Degree of protection:	IP65				

ETS series Rotating electromechanical siren



MECHANICAL FEATURES

Body and cover:	Low copper content aluminium alloy
Protection:	Chrome coloured ABS plastic
Gasket:	Acid, hydrocarbon and high temperature resistant silicone
Bolts and screws:	Stainless steel
Mounting:	Direct to 3/4" entry or with mounting bracket (available on request)
Entries:	1 x 3/4" Rc UNI ISO 7/1
Coating:	Epoxy vinyl coating Ral 7000 (squirrel grey)

ELECTRICAL FEATURES

ETS60/109 signaller

Rated voltage:	Vac/dc ±10%	12	24	48	110	230
Frequency:	Hz	50/60	50/60	50/60	50/60	50/60
Current:	A	10,6	6,1	3,4	1,1	0,6
Operation:	Intermittent					

ETS60/114 signaller

Rated voltage:	Vac/dc ±10%	12	24	115	230
Frequency:	Hz	50/60	50/60	50/60	50/60
Current:	A	11,5	5,9	1,6	0,9
Operation:	Intermittent				

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

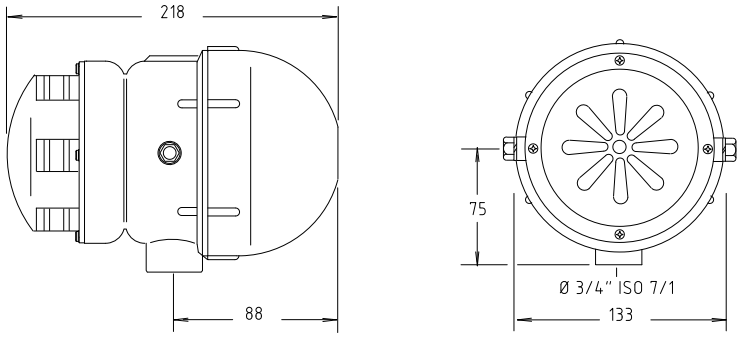
Cable gland: FGAB2BK for armoured cable or FB2BK for non-armoured cable
Adjustable support bracket
Epoxy vinyl coating in different colours
NPT or ISO M25 threads
Different rated voltages

ETS series selection chart

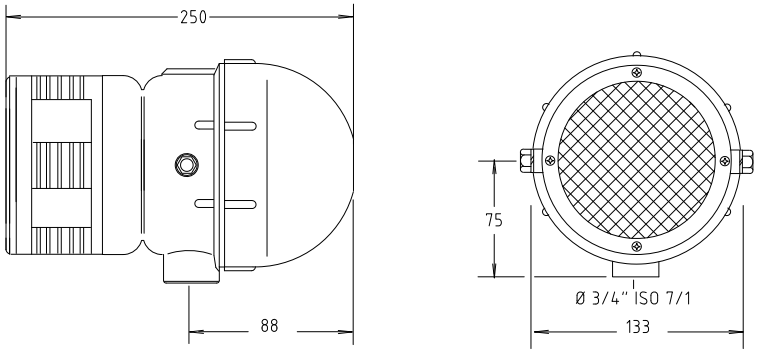
Code	Intermittent operation	Voltage	Sound level		Weight kg	mm
			Frequency	Db/m		
ETS60/109DB12V	2 Min. ON / 5 Min. OFF	12 V Ac/Dc	1150 Hz	109	2,8	230x140x140
ETS60/109DB24V	2 Min. ON / 5 Min. OFF	24 V Ac/Dc	1250 Hz	109	2,8	230x140x140
ETS60/109DB48V	2 Min. ON / 5 Min. OFF	48 V Ac/Dc	1300 Hz	109	2,8	230x140x140
ETS60/109DB115V	2 Min. ON / 5 Min. OFF	110 V Ac	1300 Hz	109	2,8	230x140x140
ETS60/109DB230V	2 Min. ON / 5 Min. OFF	230 V Ac	1300 Hz	109	2,8	230x140x140
ETS60/114DB12V	2 Min. ON / 5 Min. OFF	12 V Ac/Dc	650 Hz	114	3,4	260x140x140
ETS60/114DB24V	2 Min. ON / 5 Min. OFF	24 V Ac/Dc	650 Hz	114	3,4	260x140x140
ETS60/114DB115V	2 Min. ON / 5 Min. OFF	115 V Ac	650 Hz	114	3,4	260x140x140
ETS60/114DB230V	2 Min. ON / 5 Min. OFF	230 V Ac	650 Hz	114	3,4	260x140x140

DIMENSIONAL DRAWINGS

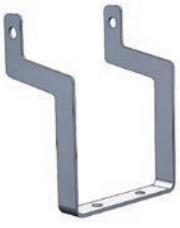
ETS60/109



ETS60/114



Dimensions in mm

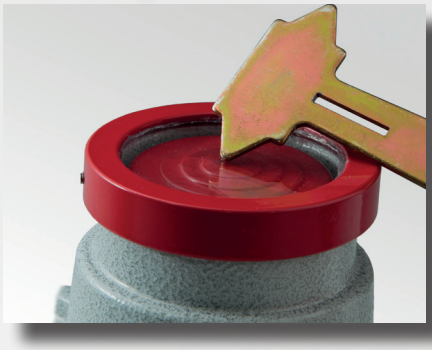
ILLUSTRATION	DESCRIPTION	FEATURES	CODE	KEY
	Adjustable support bracket	Material: galvanised steel	**K-340** **K-340/1**	ACCESSORY SPARE PART
	Cable gland	For cable gland models and codes see www.cortemgroup.com	**FGAB2BK** **FB2BK**	ACCESSORY SPARE PART

CSCPEA2

- Zones 1, 2, 21, 22
- Emergency alarm button
- Suitable for the start of alarm bell or siren



Break glass to activate button



CSCPEA2 Emergency alarm button

CSCPEA2 emergency alarm button with its glass protective cover is the ideal solution for setting off audible/visual alarms in the event of danger. The device comes complete with a hammer for breaking the glass. The emergency button is kept pressed by the actual glass. The contacts change when the glass is broken and the button is released automatically.

Application sectors:



Oil refineries · Chemical and petrochemical plants · Onshore plants · Waste water purification · Offshore plants · Combustible liquid depots · Transit areas · Analysis laboratories

CERTIFICATION DATA

Classification:	Group II	Category 2GD			
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)			
Marking:	CE Ex II 2 GD Ex d IIC T6 Ex tD A21 IP66				
Certification:	ATEX CESI 01 ATEX 092				
	ATEX TSA 06.0009				
	TR CU AVAILABLE	All TR CU certification data can be downloaded at www.cortemgroup.com			
Standards:	CENELEC EN 60079-0: 2006, EN 60079-1: 2007, EN 61241-0: 2006, EN 61241-1: 2004 and EUROPEAN DIRECTIVE 2014/34/UE IEC 60079-0: 2004, IEC60079-1: 2003, IEC61241-0: 2004, IEC 61241-1: 2004				
Class temperature:	85°C (T6)				
Ambient temperature:	Standard -20°C +60°C	Special -50°C +60°C			
Degree of protection:	IP66				

CSCPEA2 Emergency button



ORIGINAL PRODUCT

MECHANICAL FEATURES

Body and cover:	Low copper content aluminium alloy
Glass holder ring:	RAL3000 (Fire red) painted aluminium
Glass:	Transparent breakable glass
Hammer:	In brass with steel chain
Emergency button:	Resistant nylon
Gaskets:	Acid/hydrocarbon resistant NBR. For temperatures of -50°C, silicone gasket
Bolts and screws:	Stainless steel
Mounting:	Two 7x9.5 slots
Entries:	2 x 1" ISO 7/1 complete with type RE32G reduction from 1" to 3/4" ISO 7/1
Coating:	Epoxy coating Ral 7035 (light grey)
Corrosion Resistance:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

Contacts

Contact operation:	low opening
Connection:	2 x 1.5 mm2 screw terminals
Torque setting:	0.8...1.2 N.m
Type of screw head:	Grooved, flat Ø 4 mm / Grooved, flat Ø 5.5 mm Star headed, Pozidriv No 1 / Star headed, Philips No 1
Contact material:	Silver alloy (Ag/Ni)

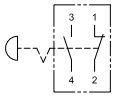
ELECTRICAL FEATURES

Rated voltage:	max. 600 V
Rated current:	max. 10 A
Rated frequency:	50/60 Hz
Operating current:	AC-15, A600 : Ue = 600 V Ie = 1.2 A AC-15, A600 : Ue = 240 V Ie = 3 A AC-15, A600 : Ue = 120 V Ie = 6 A
Board: Std contacts:	1No + 1Nc

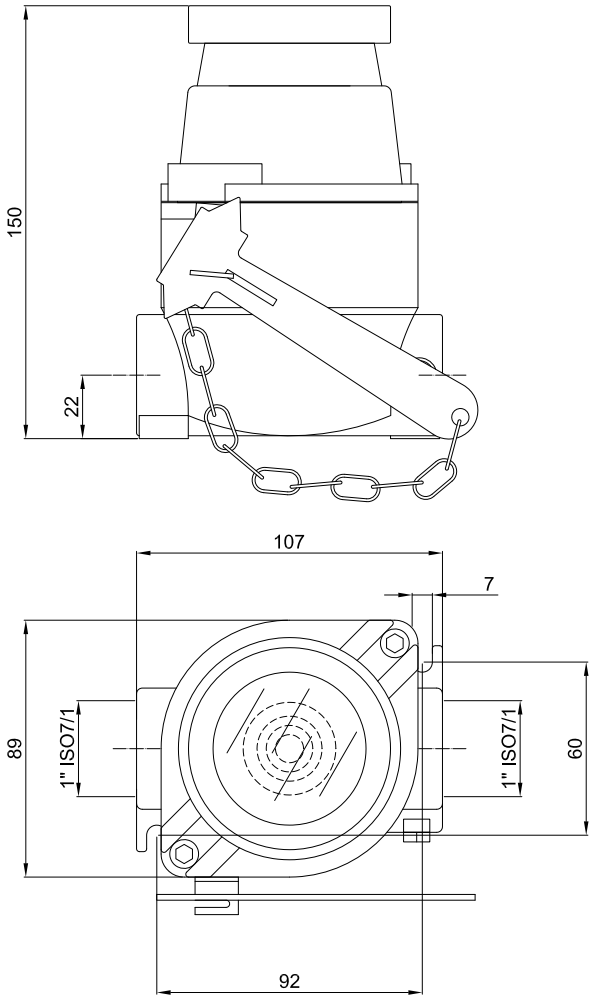
ACCESSORIES AVAILABLE / SPECIAL REQUESTS

Cable gland: FGAB2BK for armoured cable or FB2BK for non-armoured cable
Plug: PLG2B
Ex d IIB marking with CSE housing complete with glass protection, hammer and red button M-0429 with 1No + 1Nc contacts (code **CSEPEA-2M**)

CSCPEA2 Emergency button

Code	ø Glass protection mm	Board	Weight kg	mm
CSCPEA2	53		1,1	260x180x130

DIMENSIONAL DRAWINGS



Dimensions in mm

ILLUSTRATION	DESCRIPTION	MODEL	FEATURES	CODE	KEY
	Glass protection		Red painted aluminium ring Non-tempered glass	M-0521	
	Cable gland	3/4" ISO 7/1	std. range cable 12-17	FGAB2BK FB2BK	

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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CORTEM GROUP

To be sure to be safe.

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