

Product Catalogue 2016 - 2017

Light fittings, boxes & custom built control panels for hazardous areas





Light fittings, boxes and custom built control panels for hazardous areas

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Introduction

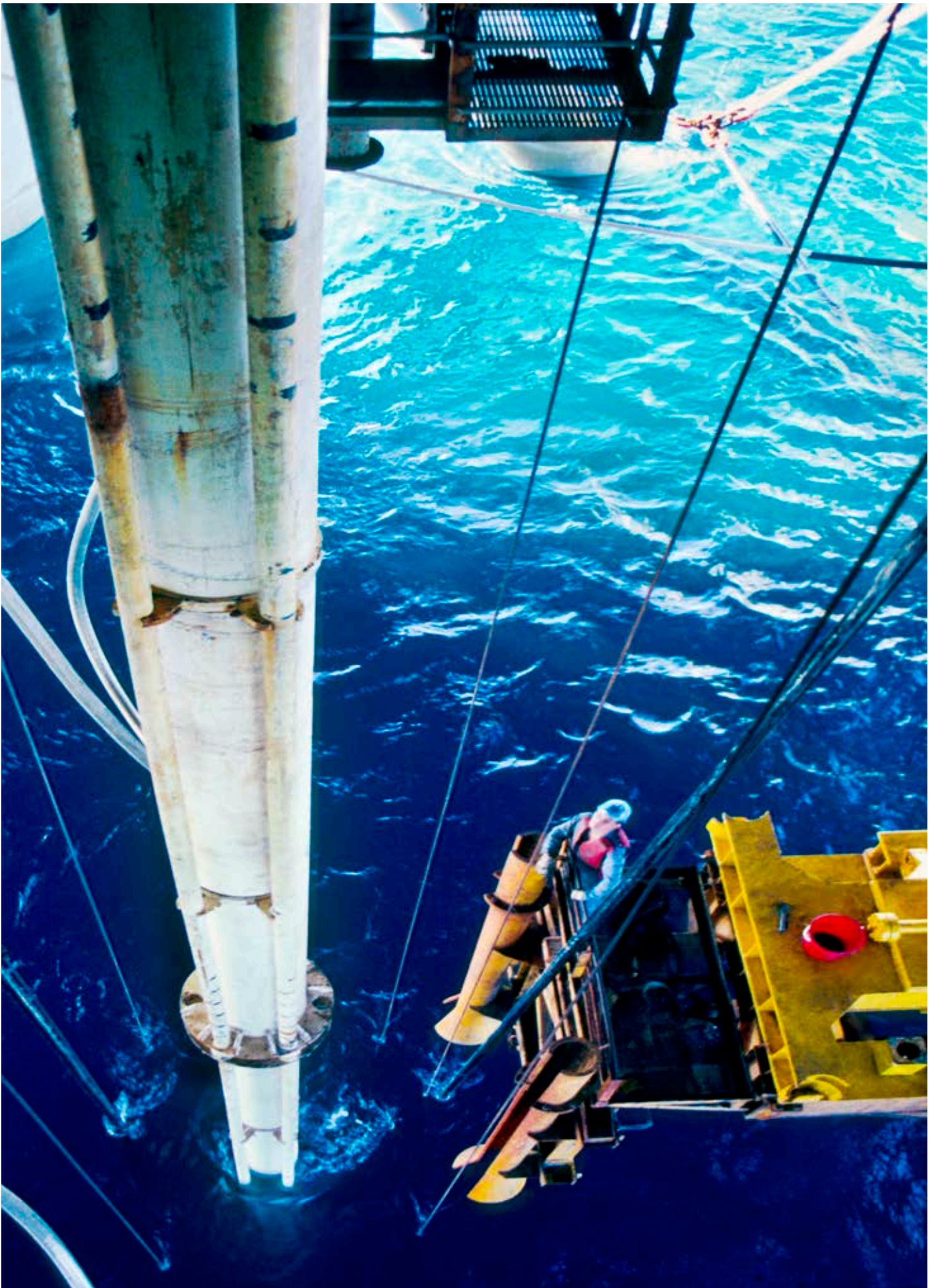
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Introduction

Low voltage products for hazardous areas

At ABB, our focus is on improving your business performance by providing practical, reliable electrical products & services. To connect & protect for life. To solve everyday problems in the area's of Wire & Cable Management, Cable Protection, Power Connection & Control and Safety.

Our extensive engineering, supply chain management and technical sales support teams are committed to understanding everything that impacts your ability to accomplish your business objectives by reducing your total cost of ownership.

Whether you are designing, installing, operating, maintaining or owning an office building, off-shore platform, hospital, or a high speed train, power generating plant, machine equipment or a manufacturing facility, ABB engineered products fit and function in your application while providing superior performance, sustainability, and value throughout the project life cycle.

All our brands are built upon four product & service solution platforms. Platforms that address you or your customers' critical electrical & lighting needs covering the protection of data, energy, processes, assets and personal safety. Beyond high performance application characteristics, ABB products, information and services facilitate and speed up your time critical assembly, installation or maintenance process.



Light fittings, boxes and enclosures. Customised control panels for hazardous areas. Ongoing R&D program for innovative and high performance products.

Introduction

Low voltage products for hazardous areas

1



Delivering value through system solutions based on engineering innovation.

About DTS

DTS is part of the ABB group and provides a complete range of explosion proof lighting, emergency lighting, enclosures, junction boxes and control panels. Our DTS range covers all zones of potential explosion gas & dust atmospheres and is compliant with most stringent national, European and international regulations including IECEx and ATEX standards, making it possible to be used in a wide variety of industries across most of the world.

What is in it for you?

With DTS we offer you lighting & enclosure solutions for:

- Hazardous Environment Protection: full range of certified lighting & enclosure solutions for Gas and Dust areas
- Corrosive & Harsh Environment Protection: we offer special materials and coating options for protection in harshest environments like seasalt, UV radiations, etc.
- Total Cost of Ownership: a smart & modular product design to reduce your installation and maintenance

- Complementary to DTS we also offer Kopex-Ex, a full range of nylon and metallic cable protection systems ATEX, IECEx, UL/CSA, EAC Ex and INMETRO approved.

About ABB

ABB is one of the largest leading power and automation technology group, active in more than 100 countries with 135.000 employees worldwide.

ABB comprises of four divisions that are in turn organized in relation to the customers and industries we serve. Four divisions including: Electrification Products, Robotics and Motion, Industrial Automation and Power Grids. Today, ABB stands as the largest supplier of industrial motors and drives, the largest provider of generators to the wind industry and the largest supplier of power grids worldwide.

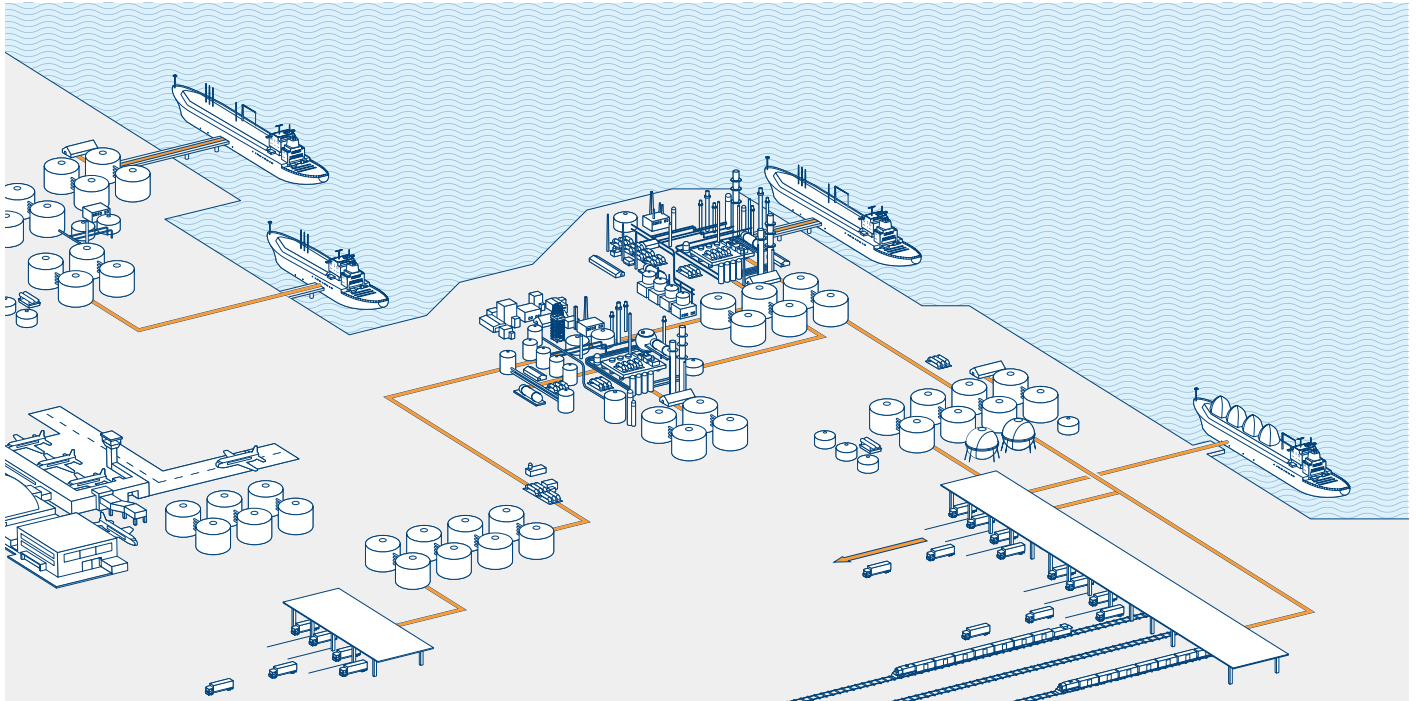
For more information, visit our website www.abb.com.



Introduction

Oil & Gas applications

1



The oil and gas market is split into three sectors Upstream, Midstream and Downstream. Upstream consists of Exploration and production. Midstream relates to the transportation, storage and partial processing of crude oil and gas from the wellheads to the refining plants. This brings another set of challenges to overcome. The term downstream relates to the processing and delivery of finished carbon related product to the end-user.

Upstream applications

First there are offshore applications such as the drilling rigs and production platforms; these are always opened to extreme weather conditions so equipment used here needs to be able to withstand a salty environment. This is achieved through either manufacturing product from stainless DTS enclosures, or by ensuring that the product is coated or painted to withstand marine environments as in the DTS XFF light fittings.

Equipment in offshore applications also needs to be hardwearing and easy to maintain as production downtime can be extremely costly for example FPSO (Floating Production Storage and Offloading) vessel can produce 200,000 barrels of crude oil per day at approx \$80 to \$90 per barrel. A breakdown would result in the vessel producing a loss of revenue of over \$700,000 per hour.

Product Selection

- Salt water corrosion (offshore platforms)
- Oil and chemical resistance (drilling rig mud)
- Extreme ambient temperature
- Protection level
- Connectivity to other pieces of equipment
- Consequence of down time
- Approval level required (Ex e, Ex d, etc.)
- Approval specification required ATEX, IECEx, EAC Ex, INMETRO, PCEC, ISO 9001
- Where product will be positioned, e.g. Zone 1 or Zone 2

Approvals / Characteristics

- ATEX Europe directives
- IECEx (International certification system)
- Zones 1, 2, 21, 22
- Minimum IP56 ingress protection

Introduction

Oil & Gas - Upstream



DTS lighting offers easy maintenance with removable gear trays allowing maintenance to be carried out quickly and safely.

In fact the XFF Exd luminaries' components such as ballasts are standard so the storage and the sourcing of spare parts is made easily. Again this is essential to an offshore vessel.

Onshore applications can also be split into exploration and production. Single onshore wells may produce as little as a few barrels per day but networking of onshore wells can result in production of millions of barrels per day.

This brings with it a whole new series of challenges to be overcome. Firstly, the drilling rigs tend to be mobile with motors and pumps often mounted on skids for easy transportation.

Secondly with so many rigs in network there is a massive monitoring operation to be done to ensure that the flow of all the rigs is ongoing and consistent. This is where the DTS range of instrumentation boxes can offer great flexibility as they can be custom built to meet exact specifications.

The need to maintain flow also leads to the need for motors and controls on the well heads themselves often referred to as "christmas trees." These are under high pressure and must be able to withstand 1400 bar. This is a critical point which has to be monitored closely to ensure that the pressure does not fluctuate. This is done by the valves within the wellhead controlled by motors. DTS EJB panels can be custom built to control these valves and at the same time monitor the pressures and relay it back to the central control point.

Introduction

Oil & Gas - Midstream

1



Midstream relates to the transportation, storage and partial processing of crude oil and gas from the wellheads to the refining plants. This brings a different set of challenges to overcome.

This all relates to the fact that what is pumped out of the well is not pure and often contains a mixture of oil, gas, water and often sand which firstly need to be separated off from each other before being shipped or piped to a storage facility. This can be done in a variety of ways depending on the type of oil or gas that the well is pumping and can often take up to 4 processes before the commodity is separated out ready for piping or shipping. These processes require energy and this energy is often created from the commodity itself by the utilisation of the gas.

Once the separating has been completed, the commodity can then be moved to storage. In the case of an offshore rig this separating is often done on shore away from the rig then pumped to the storage depots. In the case of the FPSO vessels it is all done on board and the oil transferred to tankers at sea for delivery to storage depots.

Product Selection

- Salt water corrosion (tankers)
- Extreme ambient temperature
- Protection level
- Approval level required (Ex e, Ex d, etc.)
- Approval specification required ATEX, IECEx, EAC Ex, INMETRO, PCEC, ISO 9001
- Where product will be positioned, e.g. Zone 1 or Zone 2

Approvals / Characteristics

- ATEX Europe directives
- IECEx (International certification system)
- Zones 1, 2, 21, 22
- Minimum IP56 ingress protection



This is also the point when all metering needs to take place to calculate invoices and taxes today. The amount of oil produced is sharply measured, also the density, viscosity, pressure, temperature, and in the case of gas, the amount of water vapour is also measured.

Oil is often pumped directly to the oil refinery which is where the down stream operation starts but often needs to go through a series of pumps to get the required pressure.

With DTS range of products, ABB can offer a range of products and services to meet the demands of midstream oil and gas markets. The DTS range of light fittings is manufactured to meet ATEX and IECEx standards. They are designed to be robust and to meet the vigors of the environment whether it is on oil tankers where the XFF product is ideal.

The EVS range is often chosen for warehouses. Added to this all the lighting fittings has been developed with the installer and maintenance people. Thus, removable gear trays has been thought to ensure easy and safe installation and maintenance.

DTS also offers a wide range of standard and custom built instrumentation boxes. They are often used in the monitoring equipment to relay signals from the sensors back to the central control systems as well as a range of standard configuration for control stations including "Emergency Stop" and "On-Off" to control motors etc. All of these are available in GRP (Glass Reinforced Polyester), aluminum and Stainless steel 316L therefore meeting any environmental requirement.

Introduction

Oil & Gas - Downstream

1



The term downstream relates to the processing and delivery of finished carbon related product to the end-user. This covers a whole range of applications from refining to petrol stations.

There are over 700 refineries globally all competing to supply finished carbon based products to local and international markets. Refined products include:

- Transportation fuels - LPG, gasoline, jet fuel, diesel, gas oil and bunker fuel.
- Petrochemical feedstocks - LPG, naphtha and aromatics.
- Energy sources - LPG, kerosene, heating oil and fuel oil.
- Specialities - Lubricants, bitumen, coke, solvents and waxes.
- Petrochemical feedstocks - Synthetic fibres (nylon), plastics (polyethylene, PVC).

Product Selection

- Continual Movement (CCTV)
- Extreme ambient temperature
- Protection level
- Consequence of down time
- Approval level required (Ex e, Ex d, etc.)
- Approval specification required ATEX, IECEx, EAC Ex, INMETRO, PCEC, ISO 9001
- Where product will be positioned, e.g. Zone 1 or Zone 2

Approvals / Characteristics

- ATEX Europe directives
- IECEx (International certification system)
- Zones 1, 2, 21, 22
- Minimum IP56 ingress protection



The refining process is in four stages, firstly distillation which separates it into 5 product sectors LPG, Naphtha, Kerosine, Gas, Oil, and Atmospheric residue, this is done using high temperature. The higher the temperature the higher the quality of the product.

The second stage is the upgrading or reforming. This stage is used to change the product at a molecular level for example changing the low octane version of Naphtha to high octane which can be blended into gasoline.

Stages three and four are about treating the product to remove impurities such as sulphur and blending the refined product into distinct products for the market.

The final stage of the downstream process is delivery to the market which involves storage and transportation. For example in the case of aviation fuel this can be shipped direct to airports by road or rail where it is stored, before transferring to tanker trucks for the refueling of aircraft.

All the stages in the downstream operation have different requirements to ensure safety of personnel and the quality of the end product. DTS products are used in this area whether it is the XF floodlight range or EVS fluorescent range. They are all designed for easy maintenance. There is also a range of instrumentation boxes either with standard configurations or custom built to meet the end-users' requirements, all of which are essential within a refinery where sensors play a key part on the process to ensure quality.

Introduction

Food & Beverage applications

1



1 Food manufacture - Explosion proof (Dust) | 2 Beverage manufacture - Explosion proof (Vapour)

Food Industry

ABB offers a range of products for the food processing market, including products for use in areas where stainless steel is preferred as well as areas classified as hazardous. ABB can offer stainless steel control stations for use on automated food processing and packaging machines as well as lighting specifically designed for use in dust filled atmospheres such as flour mills or other places where the risk of explosion is considered to be extremely high.

Beverage Industry

ABB has a range of products designed for being used in all beverage production sectors in the malting, brewing, wine, spirits or soft drink business. DTS can supply light fittings to reach the needs of hazardous areas where explosive gases may occur or in areas where cleanliness is required.

Introduction

Chemical & Pharmaceutical applications



3 Chemical engineering - Explosion proof | 4 Pharmaceutical production - Explosion proof

Chemical Industry

The chemical industry produces very diverse products, everything from fertilizers to explosives such as nitroglycerin. The processes used in this industry mean that there are lots of applications for the DTS lighting and box ranges. DTS can offer standard or custom built products, whether it is for a process control station or for instrumentation boxes linking sensors back to central control panels.

Pharmaceutical Industry

The ABB range of products and solutions are ideal for use in the pharmaceutical Industry. Whether it is upstream in the primary production stage or downstream in the packing stage. Many of the processes and applications used in these areas require approvals to hazardous area standards making stainless steel junction and control boxes ideal.

Standards, zone definitions & product markings

World standards & what they mean

1

World standards and what they mean.

In this section, we will outline the different standards used throughout the world and what it means for products specified for use in Hazardous Areas. Below is a map of the world which illustrates the standards that are generally used in these regions.



The ATEX Europe Directives

ATEX requires employers to eliminate or control risks from dangerous substances and to classify areas where explosive atmospheres may occur into zones, as laid down in regulations. ATEX Directives are designed to protect employees, the public and the environment from accidents owing to explosive atmospheres and since July 1st 2006 all existing sites, as well as new sites, must be fully ATEX compliant.

The directive ATEX 94/9/CE (2014/34/UE as of April 20th 2016), applies to equipment suppliers and manufacturers and ATEX 99/92/CE applies to end users. These directives compliment each other, but have different purposes. ATEX 94/9/CE covers both electrical and non-electrical products for use in hazardous areas.

Any product sold within the European Union designed for use in hazardous areas must be ATEX certified and bear the ATEX marking in conjunction with CE marking. This obligation is placed upon the manufacturer of the product is aimed at facilitating movement of goods within the EU.

UE Declaration of Conformity

This document, replacing CE Declaration as of April 20th 2016, has to be issued by the supplier with respect to any order intended to be installed in a hazardous area. It is the unique legal document testifying conformity of the supplied equipment with the current harmonized standards.



IECEx (International certification system)

The IECEx issues an international certificate of conformity for products used in a hazardous area.

This system provides:

- a) A single certification of conformity for manufacturers to comply that includes:
- b) Testing and assessment of products to IEC standards including a full test report.
- c) Ongoing surveillance of manufacturers premises.
- d) A fast-track process for countries where regulations still require the issuing of national Ex certificates or approvals.

This certification system is in the process of being worldwide adopted by all the known standards across the world but countries are all working to various time scales.



UL (America) & CSA (Canada)

The American and Canadian standards are the only ones to have different classifications and locations. ATEX & IECEx work to Groups and Zones whereas the NEC & CEC works to Classes and Divisions, there is no direct comparison between the two. This means that it is imperative that the two standards are not inter-changed within an area.



EurAsian Conformity Mark (Customs Union)

EurAsian Conformity Mark follows similar rules to that of IECEx as far as the breakdown of the zones and other criteria are concerned.

EurAsian Conformity Mark is the standard for the Customs Union which includes the Russian Federation, Kazakhstan, Belarus and Armenia.



INMETRO (Brazil)

The National Institute of Metrology, Standardization and Industrial Quality (INMETRO) is the government body responsible for the implementation of measurement, safety and quality standards for electrical and electronic products. It guides the activities of accreditation, inspection, testing and certification bodies in Brazil which issue the products' certificates.



PCEC (China)

Products placed on the Chinese market shall be certified according to the national regulations in force.

PCEC is accredited by CNAS (China National Accreditation Service for Conformity Assessment) for product testing and issuance of certificates of conformity of products used in hazardous areas.

Electrical materials for use in potentially explosive atmospheres must conform to major certification standards: IEC, EN, NEC and CEC.



Standards, zone definitions & product markings

Zone definitions - Onshore gases & vapours

1

Zones for onshore gases & vapours

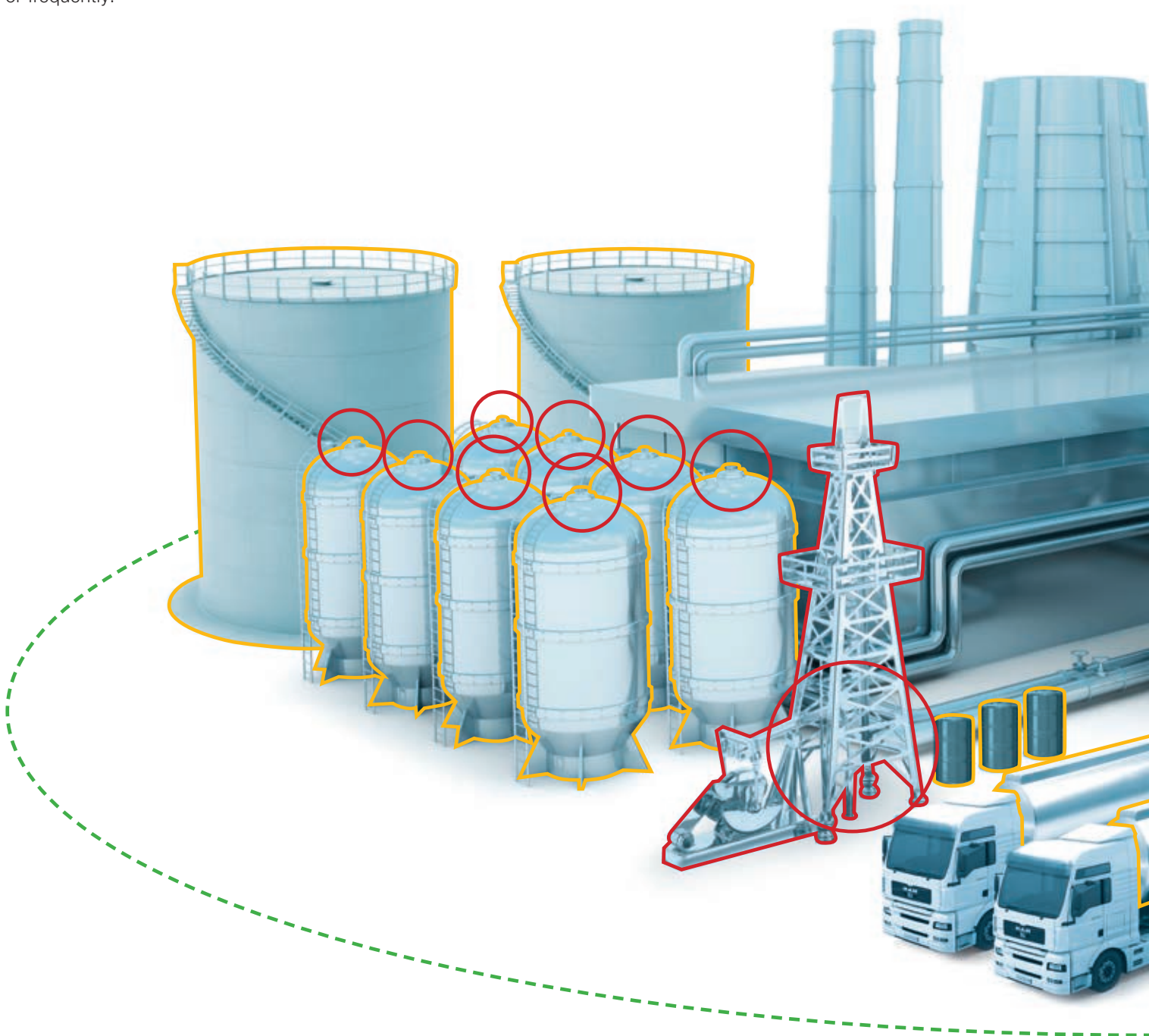
For Gases & Vapours

ZONE 0 Zone 0
Permanent / Frequent

Place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is present continuously or for long periods, or frequently.

ZONE 1 Zone 1
Occasional

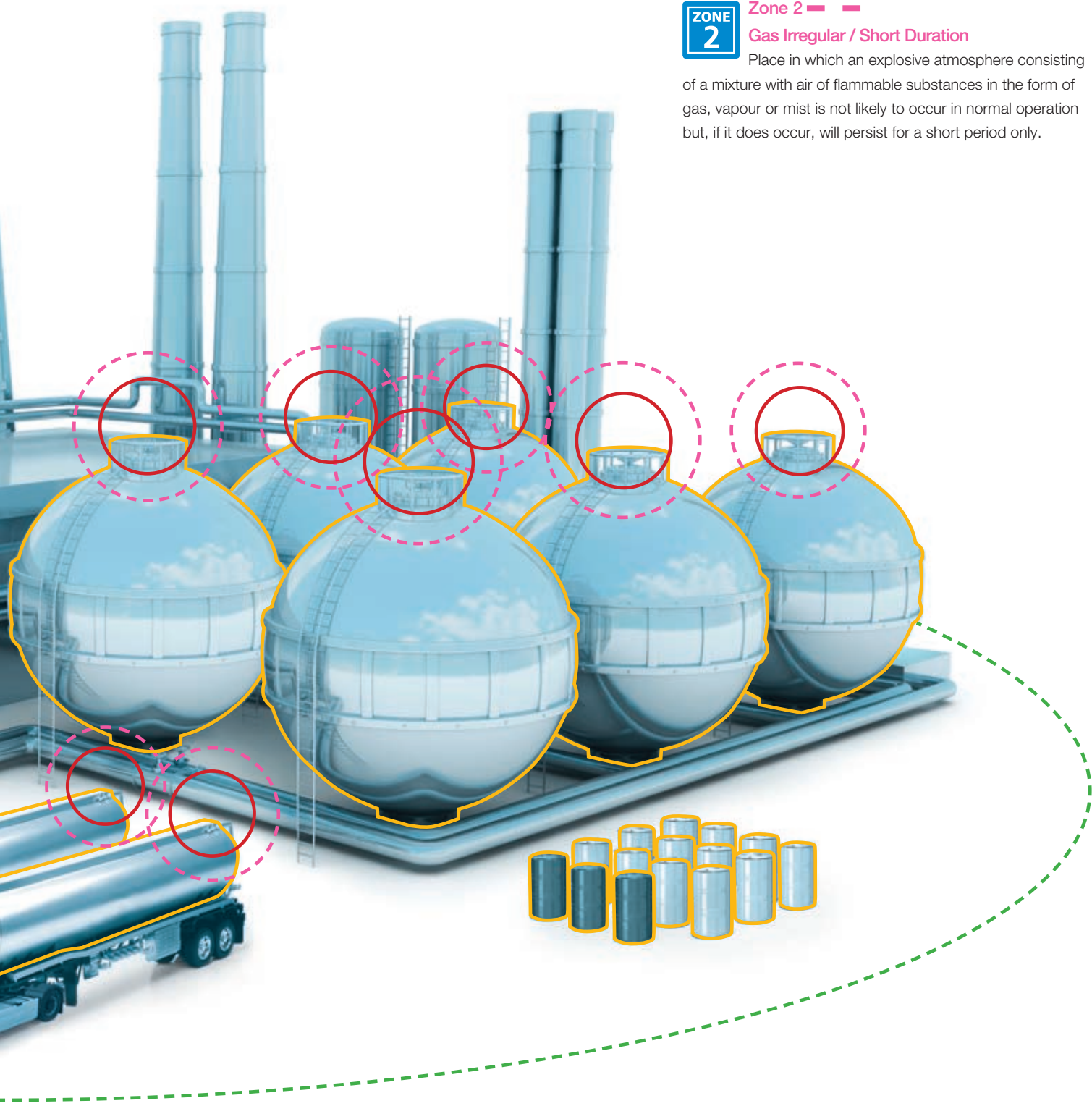
Site where an atmosphere consisting of a mixture of air and inflammable substances in the form of gas, vapour or mist is likely to arise occasionally during normal operation.



Safety Zone — —
Low Explosion Risk

ZONE 2 Zone 2 — —
Gas Irregular / Short Duration

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



Standards, zone definitions & product markings

Zone definitions - Offshore gases & vapours

1

Zones for offshore gases & vapours

For Gases & Vapours

ZONE 0 Zone 0 ———
Permanent / Frequent

Place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is present continuously or for long periods, or frequently.

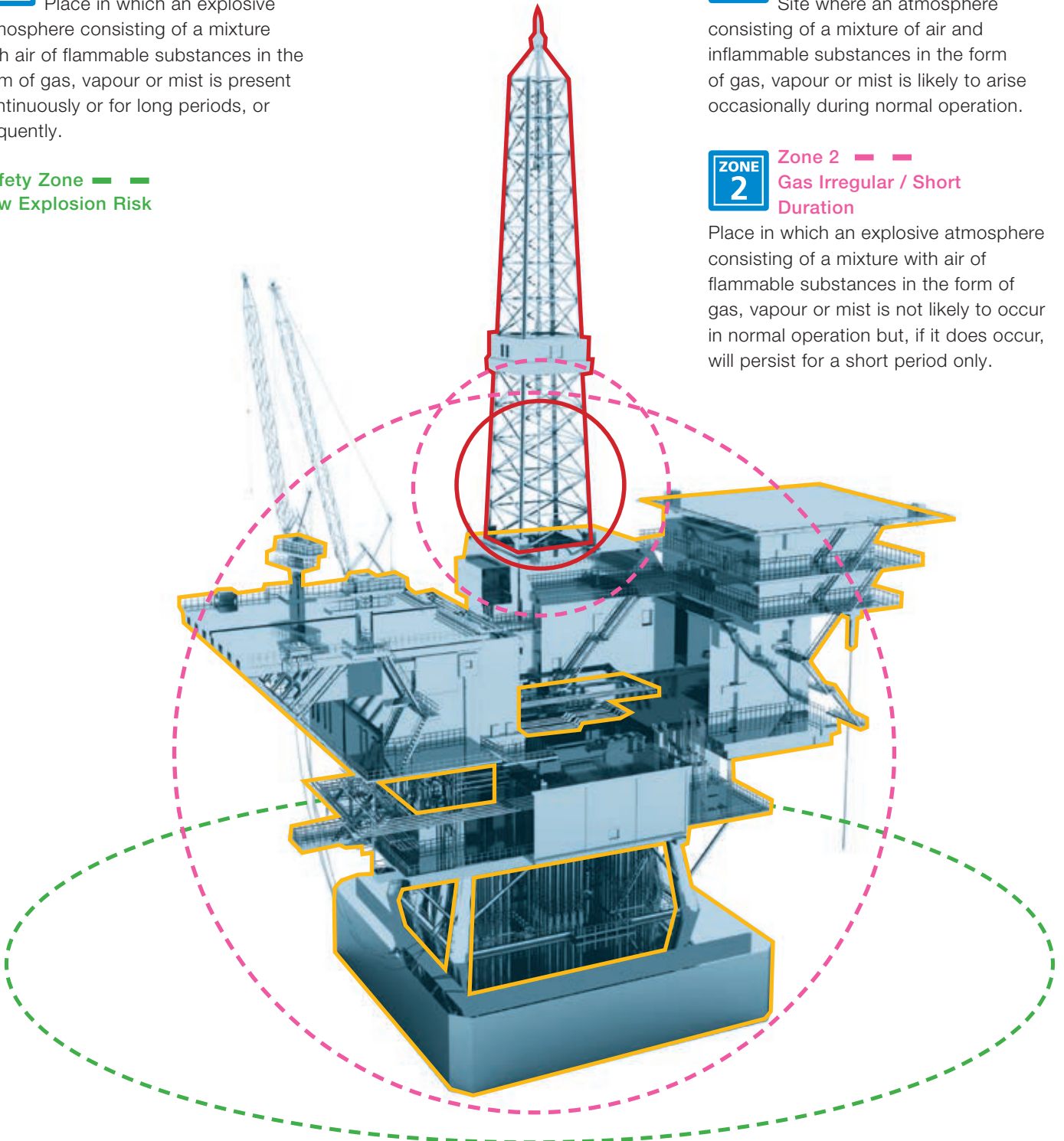
Safety Zone — — —
Low Explosion Risk

ZONE 1 Zone 1 ———
Occasional

Site where an atmosphere consisting of a mixture of air and inflammable substances in the form of gas, vapour or mist is likely to arise occasionally during normal operation.

ZONE 2 Zone 2 - - - -
Gas Irregular / Short Duration

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



Standards, zone definitions & product markings

Zone definitions - Dusts

Zones for dust areas



Zone 20 ———
Permanent / Frequent

Area in which an explosive atmosphere in the form of a cloud of combustible dust in air is present continuously, or for long periods, or frequently.



Zone 21 ———
Occasional

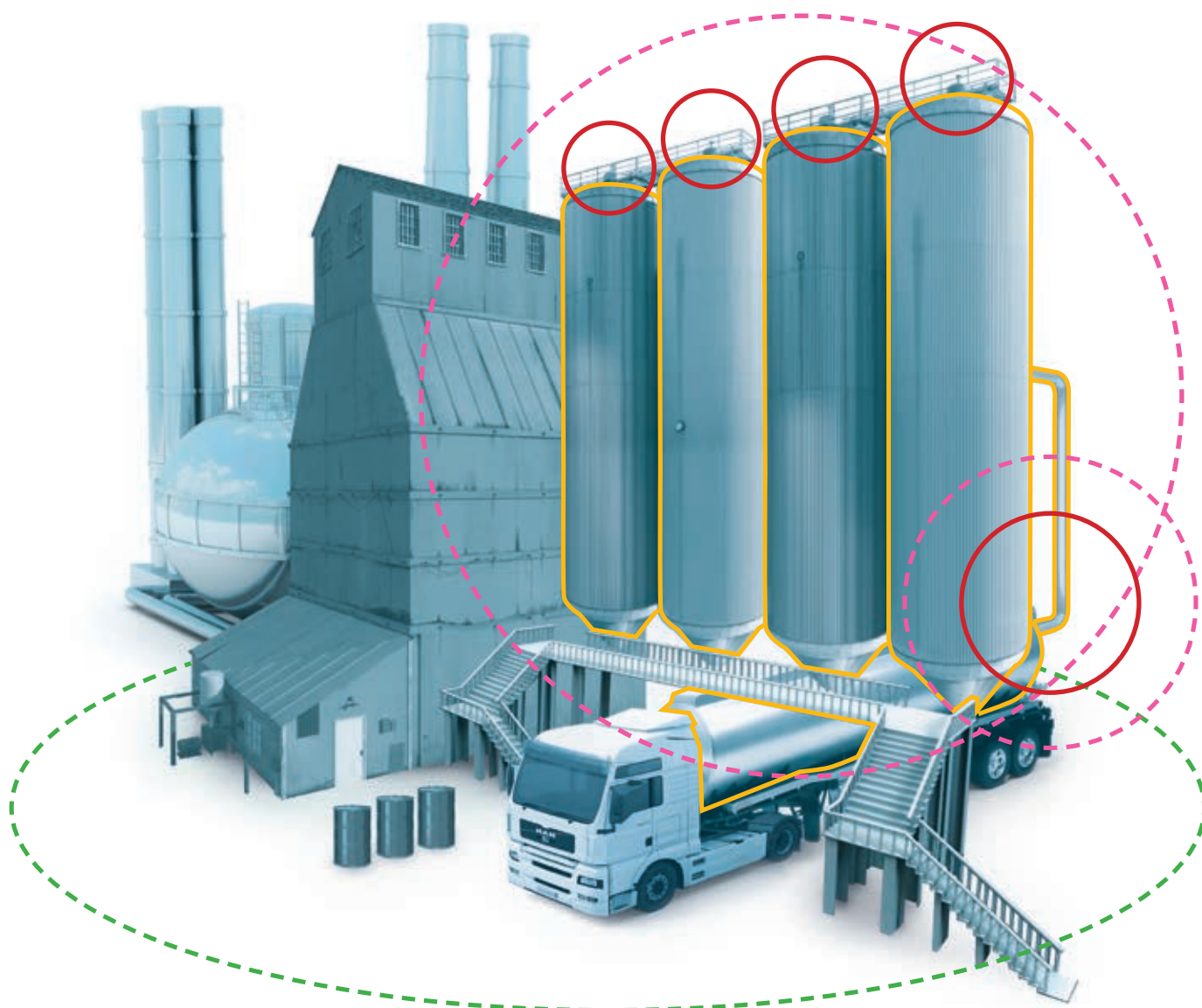
Area in which an explosive atmosphere, in the form of a cloud of combustible dust in air is likely to occur, occasionally, in normal operation, occasionally.



Zone 22 - - -
Dust Irregular / Short Duration

Area in which an explosive atmosphere, in the form of a cloud of combustible dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

Safety Zone - - -
No Explosion Risk



Standards, zone definitions & product markings

DTS - Product marking guide

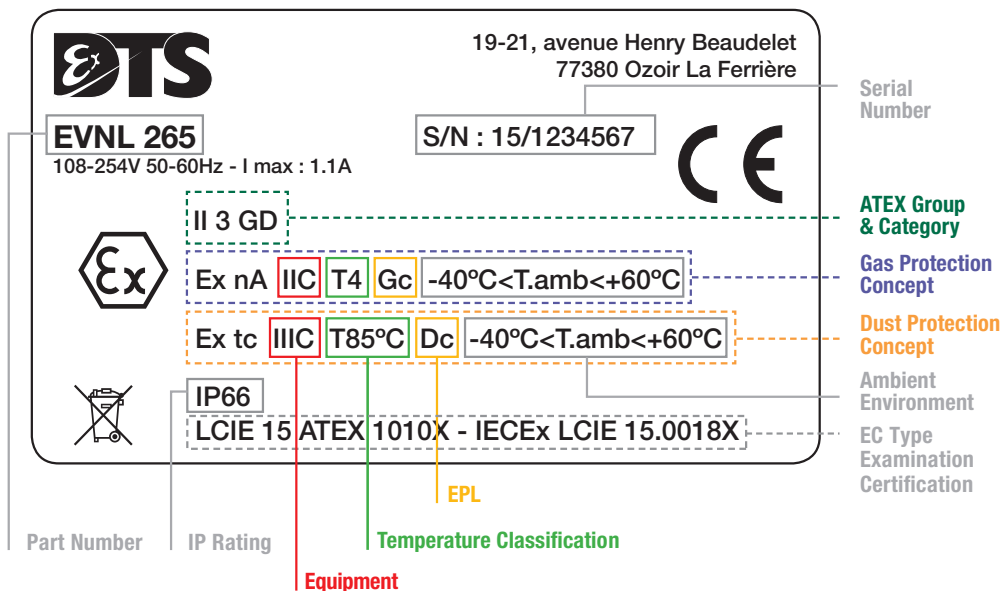
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Classification of hazardous areas		European/IEC classifications		
Flammable substances	Temporary behaviour of flammable substances in hazardous places	Typical zones	Required equipment for installation	
			equipment group	equipment protection level
Gases Vapours	is present continuously or for long periods or frequently	zone 0	II	Ga
	is likely to occur in normal operation occasionally	zone 1	II	Gb
	is not likely to occur in normal operation but, if it does occur, will persist for a short period only	zone 2	II	Gc
Dusts	is present continuously or for long periods or frequently	zone 20	III	Da
	is likely to occur in normal operation occasionally	zone 21	III	Db
	it is not likely to occur in normal operation but, if it does occur, will persist for a short period only	zone 22	III	Dc
Methane Dusts	-	mines	I	Ma
	-	mines	I	Mb

Subdivision of gases and vapours						
Apparatus may be used in group			Gases or vapours			
IIA	IIIB	IIIC	ammonia methane ethane propane	ethyl alcohol cyclohexane n-butane	galsoline n-hexane	acetaldehyde
			town gas, acrylnitril	ethylene ethylene oxide	ethylene glycol cyclohexane	ethyl-ether n-hexane
			hydrogen	ethine (acetylene)	sulphide of carbon	

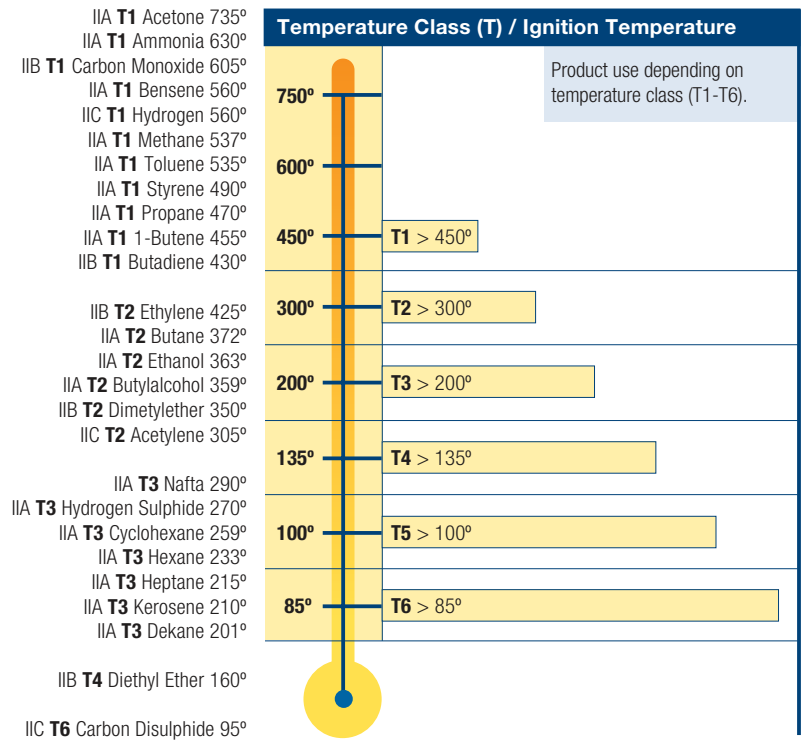
Dust	
IIIA	Combustible Flyings
IIIB	Non-Conductive Dust
IIIC	Conductive Dust

Product marking guide



Special condition of equipment	
Requirements	Marking
Equipment without special condition	-
Equipment with special condition may be noted	X
Ex component, which requires additional certification before being used in hazardous areas	U

Technical protection					
Application	Type of protection		Marking	EN/IEC standard	
All applications	General requirements		-	60079-0	
Control stations, motors, fuses, switchgear, power electronics	Flameproof enclosure		Ex d	60079-1	
Installation materials, motors, luminaries	Increased safety		Ex e	60079-7	
Measurement and control, automation technology, sensors, actuators	Intrinsic safety		Ex i	60079-11	
Switch- and control cupboards, analyse-apparatus, computers	Pressurisation		Ex p	60079-2	
Coils of motors or relays, solenoid valves	Encapsulation		Ex m	60079-18	
Transformers, relays, control stations, magnetic contactors	Oil immersion		Ex o	60079-6	
Capacitors, transformers	Powder filling		Ex q	60079-5	
See at the top - only for zone 2	'Non sparking'		Ex n	60079-15	
For use in zone 0, 1, 2 / for use in zone 1, 2	Dust atmospheres		Ex t	60079-31	



Standards, zone definitions & product markings

Index of ingress protection








1

IP Ratings

IP suitability ratings are a system for classifying the degree of protection provided by enclosures of electrical equipment.











Protection against Solid Bodies

Degree of protection for persons against access to hazardous parts inside the enclosure and/or against the ingress of solid foreign objects.

	0	No protection
	1	Objects greater than 50 mm, accidental touch by hands
	2	Objects greater than 12 mm, accidental touch by fingers
	3	Objects greater than 2.5 mm, e.g. tools/wires
	4	Objects greater than 1 mm, e.g. tools/wires/small wires
	5	Protected against dust - limited ingress (no harmful deposits)
	6	Totally protected against dust (Dust-tight)

Protection against Water

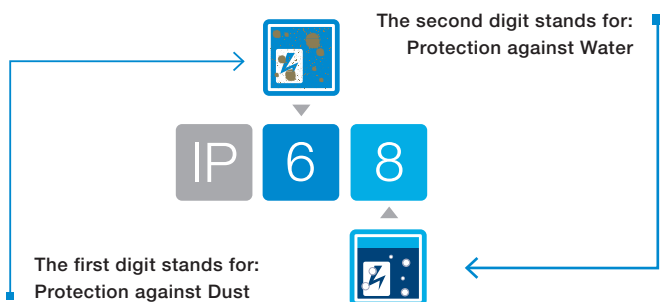
Degree of protection of equipment inside enclosures against damage from the ingress of water.

	0	No protection
	1	Protected against vertically falling drops of water
	2	Protected against direct sprays of water 15° from vertical
	3	Protected against sprays of water to 60° from vertical
	4	Protected against water sprayed from all directions - limited ingress permitted
	5	Protected against low pressure jets of water from all directions - limited ingress permitted
	6	Protected against strong pressure jets of water, heavy seas - limited ingress permitted
	7	Protection against the effects of immersion between 15cm - 1 m
	8	Protection against long periods of immersion under a quoted pressure, e.g. 2 bar at 24 hours
	9	IP69k Automotive standard DIN40050 and signifies resistance to high pressure jets of water (up to 80bar) from any angle

IP Ratings

The higher the number, the greater the degree of protection; they apply ONLY to properly installed equipment.

The numerals stand for the following:



Light fittings for all zones and industrial applications

Light fittings - Guide

Tubular, self-contained emergency & slave light fittings

Section 2

1



	Tubular fittings				
Item	XFFL - LED	XFF	XFP	FFL - LED	FF
Page	2/3	2/7	2/13	2/19	2/23



	Self-contained emergency fitting
Item	XEL-BAES-LED
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Linear fitting & Recessed fittings

Section 3



	Linear fittings						
Item	EVS	EVNL - LED	EVN	EVDL - LED	EVD	EVTL - LED	EVT
Page	3/3	3/9	3/15	3/21	3/27	3/33	3/39



	Recessed fittings	
Item	ESB	EST
Page	3/45	3/49

Floodlights, beacons, warnings, lighting column & wellglass fittings

Section 4



	Floodlights			Beacons and warnings	
Item	XLF - LED	XSF, XQF, XEF	SF, QF, EF	XFB XFL - LED	FB FL
Page	4/3	4/9	4/15	4/21	4/25



	Lighting column	Wellglass
Item	XEP404GYR0	EVH/X
Page	4/29	4/33

Light fittings for all zones and industrial applications

Experience the difference with LED

1

ABB DTS new LED lighting solutions covers all zones of potential explosion and gas atmospheres in a wide variety of industries such as: Oil & Gas, Food and Beverage, Chemical & Pharmaceutical.



1. Longer life & greater efficiency for an optimized maintenance

Higher resistance

- No filaments or glass components
- No effect on frequent switching

Energy efficiency

- 50% less on energy consumption compared to fluorescent light fitting
- High light yield: 98% for LED vs. 52% for tubular fluorescent fitting

Reduced TCO

- Longer lifespan : over 100 000 hours at 25°C

- Money saving: 50% savings means lower utility costs
- Lower maintenance costs / less frequent relamping operations considering better durability and resistance

►DTS LED solutions:

- Sealed enclosure suitable for indoor and outdoor
- Operating T° : -20°C to +55°C, T6
- Proven experience in the manufacturing

2



2. Reliability and security improved

Safety in the workplace

- No UV or IR radiation
- Instant ignition: no flicker no buzz for a ready to use maintenance area
- Improved light perception and visibility: CRI 84 & colour temperature 4 000°K

►DTS LED solutions:

- No need for a specific reflector
- All components in one gear tray for easy maintenance

3



3. Smart for the future

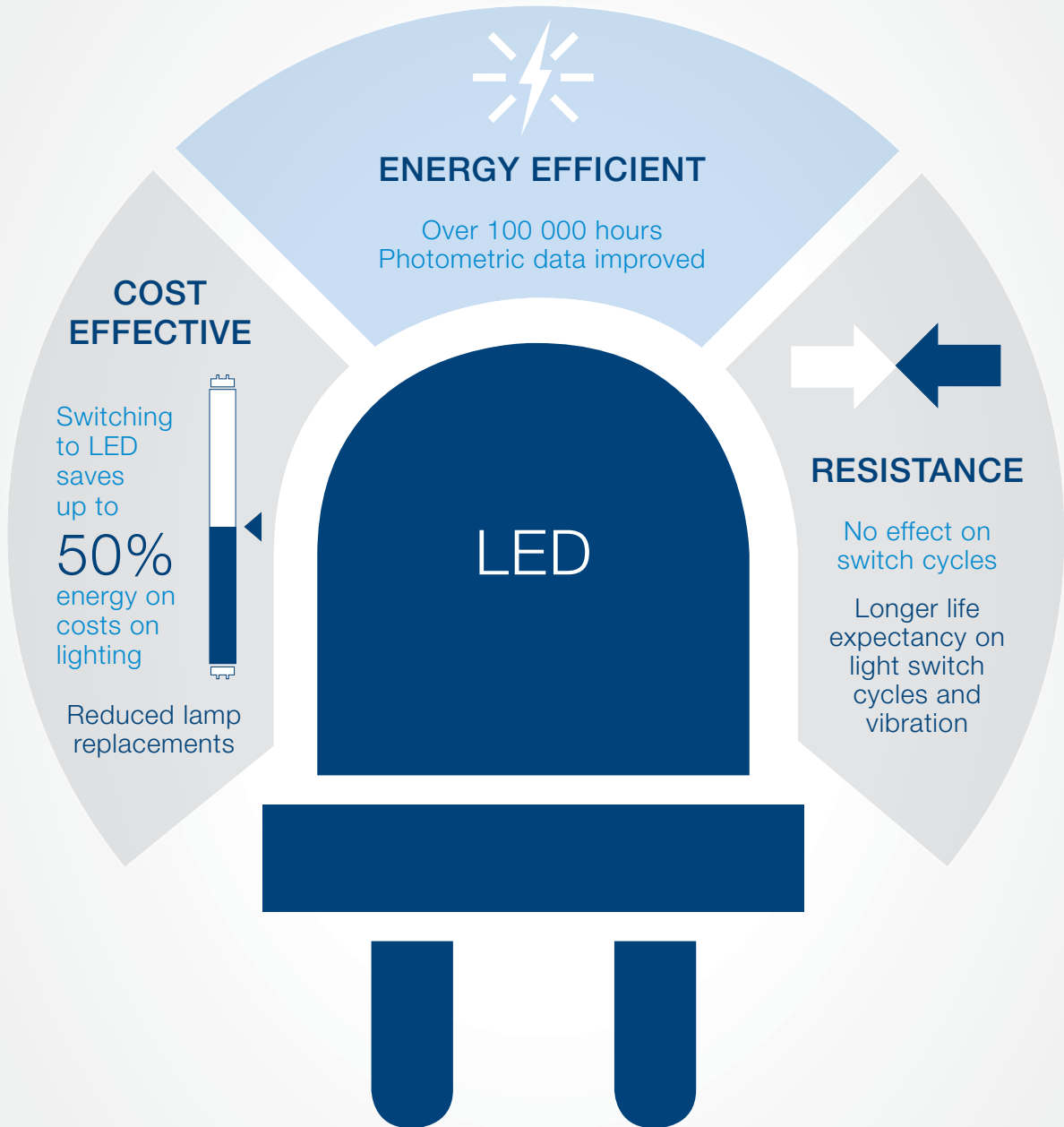
Reduce your carbon footprint

- No mercury or any other hazardous substances
- Less energy consumption

►DTS LED solutions:

- Easy retrofit of lighting fixtures from fluorescent to LED
- 4 components on a gear tray all dissociable for an optimised waste collection & sorting

Benefits of using LED





Light fittings for all zones & industrial applications

Tubular, self-contained emergency & slave light fittings

Tubular fitting

XFFL - LED - Zones 1, 2 & 21, 22	2/3
XFF - Zones 1, 2 & 21, 22	2/7
XFP - Zones 1,2 & 21, 22	2/13
FFL - LED - Industrial applications	2/19
FF - Industrial applications	2/23

Self-contained emergency fittings

XEL BAES - LED - Zones 1, 2 & 21, 22	2/29
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Tubular fittings

Tubular LED fitting

XFFL - Zones 1, 2 & 21, 22



Specifications

- Manufactured from marine grade aluminum alloy copper free
- UV protected polycarbonate tube - thickness 2.5mm or borosilicate glass - thickness 7mm
- Rated voltage 100-240Vac 50/60Hz
- Wiring configuration: 5 wires
- 2x entries 3/4" NPT

Certifications



Features

- Operating life 100 000 h (depending items)
- High lumen output - 5 000 lumens with 100% yield (depending items) - LED module with diffuser
- All components mounted on sliding gear tray for easy installation and maintenance
- Available with polycarbonate or glass
- Including accessories (cable gland, plug & fixing brackets)
- Supplied with offshore grade paint



Standards

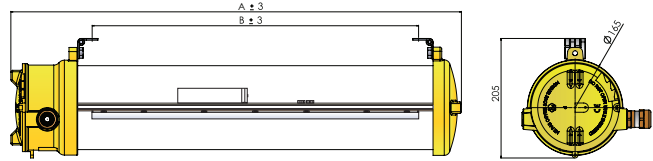
Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) INERIS 13 ATEX 0050X Ex II 2 G Ex d IIB IIC T6 Gb for -20°C to + 55°C Ex II 2 D Ex tb IIIC T80°C T70°C Db IP66 for -20°C to + 55°C
Photobiological safety	IEC62471 Exempt group
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C
IP test:	IP66 IEC 60529
Impact protection index:	IK09 (poly) IK07 (glass) according to IEC 62262

Tubular fittings

Tubular LED fitting

XFFL - Zones 1, 2 & 21, 22

2



XFFL

Dimensional drawing

Technical specifications

Type	Wiring Configuration	Light Rating W	Current A @ 230V	Lumen Output lm	Operating life		Efficiency lm/W	Diffuser	Gas	Dust	Dimensions mm		Weight kg
					at 25°C h	at 55°C h					A	B	
5 wires: Polycarbonate Diffuser Equipped with 1 cable gland & 1 plug													
XFRL120-00000	5 wires	1 x 12	0.07	1 194	100 000	45 000	95	Polycarbonate	IIC	T70°C	775	565	4.80
XFRL140-00000	5 wires	1 x 25	0.12	2 353	90 000	75 000	94	Polycarbonate	IIC	T70°C	1 390	1 170	7.60
XFRL165-00000	5 wires	1 x 31	0.16	2 450	80 000	60 000	79	Polycarbonate	IIC	T80°C	1 690	1 475	8.80
XFFL220-00000	5 wires	1 x 19	0.10	1 613	80 000	35 000	85	Polycarbonate	IIC	T70°C	775	565	4.80
XFFL240-00000	5 wires	1 x 56	0.27	4 257	70 000	50 000	76	Polycarbonate	IIC	T80°C	1 390	1 170	7.60
XFFL265-00000	5 wires	1 x 71	0.34	5 076	70 000	50 000	71	Polycarbonate	IIC	T80°C	1 690	1 475	8.80

5 wires: Glass Diffuser Equipped with 1 cable gland & 1 plug

XFRL120V-00000	5 wires	1 x 12	0.07	1 194	100 000	45 000	95	Glass	IIC	T70°C	775	565	8.00
XFRL140V-00000	5 wires	1 x 25	0.12	2 353	90 000	75 000	94	Glass	IIB	T70°C	1 390	1 170	12.50
XFRL165V-00000	5 wires	1 x 31	0.16	2 450	80 000	60 000	79	Glass	IIB	T80°C	1 690	1 475	18.80
XFFL220V-00000	5 wires	1 x 19	0.10	1 613	80 000	35 000	85	Glass	IIC	T70°C	775	565	8.00
XFFL240V-00000	5 wires	1 x 56	0.27	4 257	70 000	50 000	76	Glass	IIB	T80°C	1 390	1 170	12.50
XFFL265V-00000	5 wires	1 x 71	0.34	5 076	70 000	50 000	71	Glass	IIB	T80°C	1 690	1 475	18.80

Technical information

LED installed

Set of LED modules with integrated diffuser
Colour temperature 4 000°K
L70/B10 at 25°C (70% lumen output/ 90% active LED) according to operating life

Photometric curve

See page 6/9

Rated voltages

Electronic driver: 100- 240Vac 50/60Hz

Power factor

0.9.

CRI 84

Wiring Configuration

5 wires

Dielectrical class I

Over-current protection

The power supply shall be self-recovery when the fault condition is removed

Grounding system

TNS, TNC, TT, IT neutral system

Inrush current

for the part XFFL240
I peak = 60A @230Vac
delta t = 275µs

Max. light fittings per circuit breaker

Type	10A	16A	20A	25A
B	4	7	9	11
C	7	12	15	18

External grounding lug :

Screw M4x20 (stainless steel 316L)
(nearby cable gland)

Terminal block

(screws plug in terminal block)

10mm² (rigid wire), 6mm² (flexible wire)
Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)

Cable entries

Two entries 3/4" NPT
Included: One 3/4" nickel plated brass plug (EXN/075/SP) and one 3/4"nickel plated brass cable gland for non armoured cable, diameter 6-12mm (EXN05ASC3)

Housing

Casting Marine grade aluminum alloy according to standard: EN 1706: EN AC-AISI12 (Fe) DF or EN AC-AISI 10Mg(A) DF
UV protected extruded polycarbonate tube, thickness 2.5mm or borosilicate glass thickness 7mm

Colour of casting (standard)

● XF****-00000 - Yellow offshore, RAL 1003

Colour options:

- XF****-B0000 - Grey, RAL 7035
- XF****-C0000 - Black, RAL 9004
- XF****-D0000 - Hammered Blue, RAL 5015
- XF****-F0000 - Red, RAL 3001
- XF****-G0000 - Blue, RAL 5010
- XF****-J0000 - Green, RAL 6032
- XF****-M0000 - White, RAL 9010

Fixing (included with product)

D023- 2x zinc plated steel articulated brackets for ceiling mounting

Tubular fittings

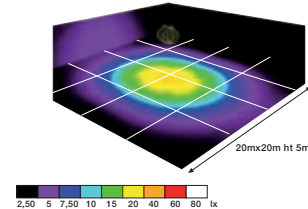
From a fluorescent fitting to a LED fitting XFFL - Zones 1, 2 & 21, 22

What are the LED benefits?

The benefits of the LED technology consist in a significant improvement in the life expectancy of your product, lower power consumption and the improvement of the photometric features.

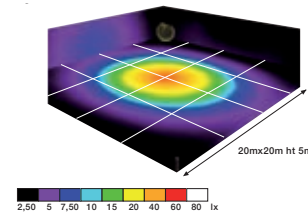
T8 fluorescent lamp - XFF240-0G000 3D view

- Lumen output (light fitting): 3 546lm
- Lumen output (lamp): 6 700lm
- Yield: 52%
- Rating per light fitting: 73,5W
- Light source: 2x L36W/840 OSRAM Lumilux
- Cool White (corrector factor 1,00)



LED module - XFFL240-00000 3D view

- Lumen output (light fitting): 4 188lm
- Lumen output (lamp): 4 257lm
- Yield: 98%
- Rating per light fitting: 58,0W
- Light source: 1x LED module (corrector factor 1,00)



MRO benefits: How can I upgrade my current light fitting?

Tubular fittings could be switched from fluorescent to LED technology by easy sliding gear tray without any specific tool. The fixture with 1 or 2 fluorescent tubes T8 could be replaced by only one LED module fixed on the new gear tray.



How is my upgraded LED light fitting certified?

The EC type (ATEX) certification, EC declaration and the installation notice of the fluorescent fitting remain valid for all the LED fittings (more details on demand).

Gear trays parts to upgrade from a "fluorescent" to a "LED" fitting - LED gear tray with driver 100-240Vac 50/60Hz:

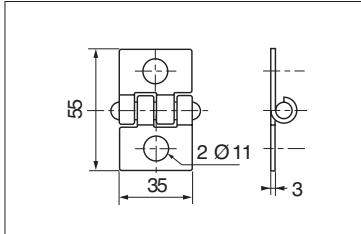
- D0051X20WEL - To upgrade XFR120 to XFRL120
- D0051X40WEL - To upgrade XFR140 to XFRL140
- D0051X65WEL - To upgrade XFR165 to XFRL165
- D0052X20WEL - To upgrade XFF220 to XFFL220
- D0052X40WEL - To upgrade XFF240 to XFFL240
- D0052X65WEL - To upgrade XFF265 to XFFL265

Tubular fittings

Accessories & spare parts

XFFL - Zones 1, 2 & 21, 22

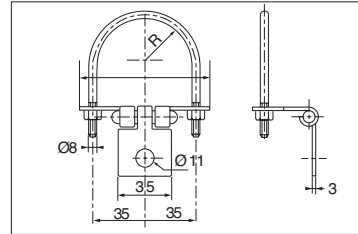
Brackets*



Hinged bracket

Type	Specifications
D023	2x zinc plated steel articulated brackets for ceiling mounting (included with product)
D024	2x stainless steel 304L articulated brackets for ceiling mounting

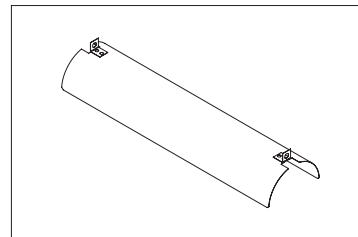
* Screws and locknuts supplied



U-bolt for pole mounting

Type	Specifications
D025	2x U-bolt and 2x zinc plated steel brackets for pole mounted 1" 1/4
D026	2x U-bolt and 2x zinc plated steel brackets for pole mounted 1" 1/2
D027	2x U-bolt and 2x zinc plated steel brackets for pole mounted 2"
D029	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 1" 1/2
D030	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 2"

Accessories



Shock proof kit

Type	Specifications
D034	Stainless steel 304L canopy & shock proof kit for XFRL120, XFFL220
D035	Stainless steel 304L canopy and shock proof kit for XFRL140, XFFL240
D036	Stainless steel 304L canopy and shock proof kit for XFRL165, XFFL265

Spare parts

Type	Specifications
D00120WC	Sealed polycarbonate tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFFL220, XFRL120 "contact us"
D00140WC	Sealed polycarbonate tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFFL240, XFRL140 "contact us"
D00165WC	Sealed polycarbonate tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFFL265, XFRL165 "contact us"
D001V20WC	Sealed glass tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFFL220, XFRL120 "contact us"
D001V40WC	Sealed glass tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFFL240, XFRL140 "contact us"
D001V65WC	Sealed glass tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFFL265, XFRL165 "contact us"
D003	Gasket
D0051X20WEL	LED replacement gear tray with universal electronic driver and LED included 100-254V, 50-60 Hz for XFRL120
D0051X40WEL	LED replacement gear tray with universal electronic driver and LED included 100-254V, 50-60 Hz for XFRL140
D0051X65WEL	LED replacement gear tray with universal electronic driver and LED included 100-254V, 50-60 Hz for XFRL165
D0052X20WEL	LED replacement gear tray with universal electronic driver and LED included 100-254V, 50-60 Hz for XFFL220
D0052X40WEL	LED replacement gear tray with universal electronic driver and LED included 100-254V, 50-60 Hz for XFFL240
D0052X65WEL	LED replacement gear tray with universal electronic driver and LED included 100-254V, 50-60 Hz for XFFL265
EXN05ASC3-01	Kit 3/4 NPT Exd Exe IIC Ex-td nickel plated cable gland for non armoured cable diameter 6-12mm

Tubular fittings

Tubular fluorescent fitting

XFF - Zones 1, 2 & 21, 22

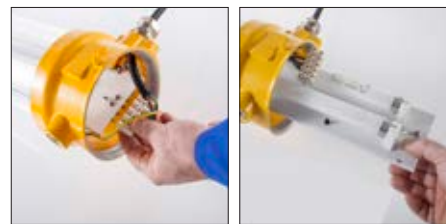


Features

- All components mounted on sliding gear tray for easy installation and maintenance
- Standard components used inside body allowing reduced maintenance costs
- Available with polycarbonate (light, high impact resistant) or glass (specific chemical environment & paint shop)
- Including accessories (cable gland, plug & fixing brackets)
- Supplied with offshore grade paint

Specifications

- Manufactured from marine grade aluminum alloy copper free
- UV protected polycarbonate tube - thickness 2.5mm or borosilicate glass - thickness 7mm
- Rated voltage 100-240Vac 50/60Hz – 110Vdc
- Wiring configuration: 5 wires
- 2x entries 3/4" NPT
- Emergency version
(Type: "EM" version 3h battery duration)



Certifications



Standards

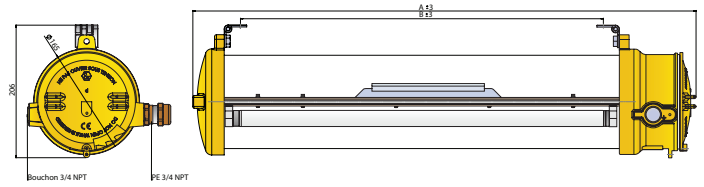
Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) INERIS 11 ATEX 0051X Ex II 2 G Ex d IIB IIC T6 Gb for -20°C to + 55°C Ex II 2D Ex tb IIIC T80°C Db IP66 for -20°C to + 55°C
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C XFF, -10°C to +50°C XFF EM
IP test:	IP66 IEC 60529
Impact protection index:	IK09 (poly) IK07 (glass) according to IEC 62262

Tubular fittings

Tubular fluorescent fitting

XFF - Zones 1, 2 & 21, 22

2



XFF

Dimensional drawing

Technical specifications

Type	Wiring Configuration	Light Rating W	Current A @ 230V	Diffuser	Gas	Dimensions mm		Weight kg
						A	B	
5 wires: Polycarbonate Diffuser Equipped with 1 cable gland & 1 plug								
XFR120-0G000	5 wires	1 x 18	0.15	Polycarbonate	IIC	775	565	5.60
XFR140-0G000	5 wires	1 x 36	0.20	Polycarbonate	IIC	1 390	1 170	8.80
XFR165-0G000	5 wires	1 x 58	0.35	Polycarbonate	IIC	1 690	1 475	10.00
XFF220-0G000	5 wires	2 x 18	0.30	Polycarbonate	IIC	775	565	5.60
XFF240-0G000	5 wires	2 x 36	0.40	Polycarbonate	IIC	1 390	1 170	8.82
XFF265-0G000	5 wires	2 x 58	0.50	Polycarbonate	IIC	1 690	1 475	10.00

5 wires: Glass Diffuser Equipped with 1 cable gland & 1 plug

XFR120V-0G000	5 wires	1 x 18	0.15	Glass	IIC	775	565	10.60
XFR140V-0G000	5 wires	1 x 36	0.20	Glass	IIB	1 390	1 170	15.00
XFR165V-0G000	5 wires	1 x 58	0.35	Glass	IIB	1 690	1 475	18.60
XFF220V-0G000	5 wires	2 x 18	0.30	Glass	IIC	775	565	10.60
XFF240V-0G000	5 wires	2 x 36	0.40	Glass	IIB	1 390	1 170	15.03
XFF265V-0G000	5 wires	2 x 58	0.50	Glass	IIB	1 690	1 475	18.60

Technical information

Lamps

Fluorescent Lamp (order separately)
T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K

Photometric curve

See page 6/9

Rated voltages

Electronic ballast:
100-240Vac 50/60Hz – 110Vdc

Power factor

0.98

CRI 80

Wiring Configuration

5 wires

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

External grounding lug :

Screw M4x20 (stainless steel 316L)
(nearby cable gland)

Terminal block

(screws plug in terminal block)

10mm² (rigid wire), 6mm² (flexible wire)
Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)

Cable entries

Two entries 3/4" NPT
Included: One 3/4" nickel plated brass plug (EXN/075/SP) and one 3/4"nickel plated brass cable gland for non armoured cable, diameter 6-12mm (EXN05ASC3)

Casting

Marine grade aluminum alloy according to standard: EN 1706: EN AC-AISi12 (Fe) DF or EN AC-AISI 10Mg(A) DF
UV protected extruded polycarbonate tube, thickness 2.5mm or borosilicate glass thickness 7mm

Colour of casting (standard)

● XF****-0G000 - Yellow offshore, RAL 1003

Colour options:

● XF****-BG000 - Grey, RAL 7035

● XF****-CG000 - Black, RAL 9004

● XF****-DG000 - Hammered Blue, RAL 5015

● XF****-FG000 - Red, RAL 3001

● XF****-GG000 - Blue, RAL 5010

● XF****-JG000 - Green, RAL 6032

○ XF****-MG000 - White, RAL 9010

Fixing (included with product)

D023 -2x zinc plated steel articulated brackets for ceiling mounting

Tubular fittings

Emergency tubular fluorescent fitting - 3h

XFF EM - Zones 1, 2 & 21, 22

Technical specifications

Type	Wiring Configuration	Light Rating W	Battery h	Current A @ 230V	Diffuser	Gas	Dimensions mm		Weight kg
							A	B	
3 wires: Polycarbonate Diffuser Equipped with 1 cable gland & 1 plug									
XFR120EM-0G000	3 wires	1 x 18	3h	0.15	Polycarbonate	IIC	775	565	7.20
XFR140EM-0G000	3 wires	1 x 36	3h	0.20	Polycarbonate	IIC	1 390	1 170	10.40
XFF220EM-0G000	3 wires	2 x 18	3h	0.30	Polycarbonate	IIC	775	565	7.20
XFF240EM-0G000	3 wires	2 x 36	3h	0.40	Polycarbonate	IIC	1 390	1 170	10.40

2

3 wires: Glass Diffuser Equipped with 1 cable gland & 1 plug

XFR120VEM-0G000	3 wires	1 x 18	3h	0.15	Glass	IIC	775	565	12.40
XFR140VEM-0G000	3 wires	1 x 36	3h	0.20	Glass	IIB	1 390	1 170	16.60
XFF220VEM-0G000	3 wires	2 x 18	3h	0.30	Glass	IIC	775	565	12.40
XFF240VEM-0G000	3 wires	2 x 36	3h	0.40	Glass	IIB	1 390	1 170	16.60

Electrical Features

Lamps

Fluorescent Lamp (order separately)
T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K

CRI 80

Wiring Configuration
3 wires

Terminal block (screws plug in terminal block)

Up to 10mm² (rigid wire), 6mm² (flexible wire)
Terminals supplied L1, 2, N, PE (looping possible with one additional cable gland).

Casting

Marine grade aluminum alloy according to standard: EN 1706: EN AC-AISI12 (Fe) DF or EN AC-AISI 10Mg(A) DF
UV protected extruded polycarbonate tube, thickness 2.5mm or borosilicate glass thickness 7mm

Photometric curve

See page 6/9

Battery

Battery NiCd 6V 4Ah for XFR120, XFF220
Battery NiCd 6V 7Ah for XFR140, XFF240, XFR165, XFF265
Lumen output in emergency mode (1 lamp lit)
3 hours: 24% for XFR120, XFF220
3 hours: 18% for XFR140, XFF240
3 hours: 14% for XFR165, XFF265
Monitored by LED

Cable entries

Two entries 3/4" NPT
Included: One 3/4" nickel plated brass plug (EXN/075/SP) and one 3/4" nickel plated brass cable gland for non armoured cable, diameter 6-12mm (EXN05ASC3)

Fixing (included with product)

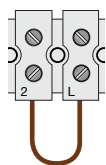
D023 -2x zinc plated steel articulated brackets for ceiling mounting

Power factor

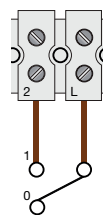
0.98

Emergency function diagrams

Wiring provided by DTS - Maintained Mode



Switch between L/2 - Non Maintained Mode *



Mains Supply	Tube	Battery
ON	Lit	Charging
OFF	Only emergency tube lit	Discharging

Mains Supply	Tube	Battery
ON	OFF	Charging
OFF	Only emergency tube lit	Discharging

* This table corresponds to the position 0 "open".

If the switch is on position 1 "close", refer to the table on the left

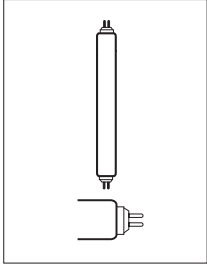
Tubular fittings

Accessories

XFF - Zones 1, 2 & 21, 22

Lamps

2



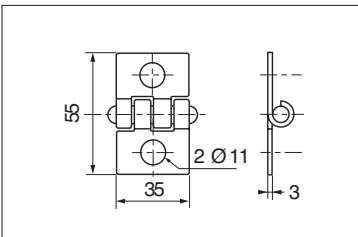
Bi-pin T8 fluorescent lamps

Specifications:

G13 - \varnothing 26mm
Colour temperature: White industry 4 000°K
CRI: > 80
lm/W: 65 to 93
Average operating life: 12 000 hours

Type	Power W	Lumen output lm	Lampholder
TL18W	18	1 250	G13
TL36W	36	3 350	G13
TL58W	58	5 200	G13

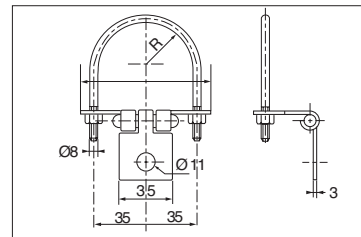
Brackets*



Hinged bracket

Type	Specifications
D023	2x zinc plated steel articulated brackets for ceiling mounting (included with product)
D024	2x stainless steel 304L articulated brackets for ceiling mounting

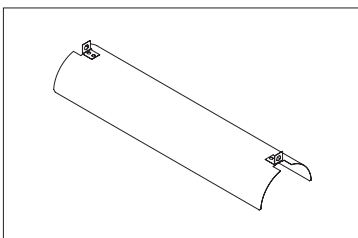
* Screws and locknuts supplied



U-bolt for pole mounting

Type	Specifications
D025	2x U-bolt and 2 x zinc plated steel brackets for pole mounted 1" 1/4
D026	2x U-bolt and 2x zinc plated steel brackets for pole mounted 1" 1/2
D027	2x U-bolt and 2 x zinc plated steel brackets for pole mounted 2"
D029	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 1" 1/2
D030	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 2"

Accessories



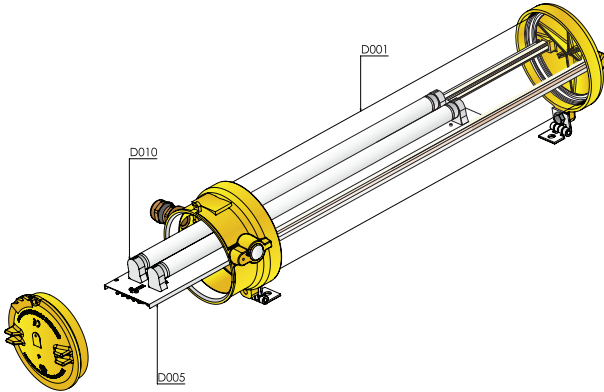
Shock proof kit

Type	Specifications
D034	Stainless steel 304L canopy and shock proof kit for XFR120, XFF220
D035	Stainless steel 304L canopy and shock proof kit for XFR140, XFF240
D036	Stainless steel 304L canopy and shock proof kit for XFR165, XFF265

Tubular fittings

Spare parts

XFF - Zones 1, 2 & 21, 22



Spare parts

Type	Specifications
D00120WC	Sealed polycarbonate tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFF220, XFR120 "contact us"
D00140WC	Sealed polycarbonate tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFF240, XFR140 "contact us"
D00165WC	Sealed polycarbonate tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFF265, XFR165 "contact us"
D001V20WC	Sealed glass tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFF220, XFR120 "contact us"
D001V40WC	Sealed glass tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFF240, XFR140 "contact us"
D001V65WC	Sealed glass tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFF265, XFR165 "contact us"
D003	Gasket
D0051X20WE	Gear tray with electronic ballast 110-260Vac/Vdc, 50-60 Hz for XFR120
D0051X20WEM	Emergency Gear tray with electronic ballast 220-240Vac/Vdc, 50-60 Hz for XFR120EM
D0051X40WE	Gear tray with electronic ballast 110-260Vac/Vdc, 50-60 Hz for XFR140
D0051X40WEM	Emergency Gear tray with electronic ballast 220-240Vac/Vdc, 50-60 Hz for XFR140EM
D0051X65WE	Gear tray with electronic ballast 110-260Vac/Vdc, 50-60 Hz for XFR165
D0052X20WE	Gear tray with electronic ballast 110-260Vac/Vdc, 50-60 Hz for XFF220
D0052X20WEM	Emergency Gear tray with electronic ballast 220-240Vac/Vdc, 50-60 Hz for XFF220EM
D0052X40WE	Gear tray with electronic ballast 110-260Vac/Vdc, 50-60 Hz for XFF240
D0052X40WEM	Emergency Gear tray with electronic ballast 220-240Vac/Vdc, 50-60 Hz for XFF240EM
D0052X65WE	Gear tray with electronic ballast 110-260Vac/Vdc, 50-60 Hz for XFF265
D010	Lampholder for T8 lamp
D016	Battery pack for XFF EM
EXN05ASC3-01	Kit 3/4 NPT Exd Exe IIC Ex-td nickel plated cable gland for non armoured cable diameter 6-12mm



Tubular fittings

Tubular fluorescent fitting with automatic switch off

XFP - Zones 1, 2 & 21, 22



Features

- Quick and easy insulation switch for safe maintenance
- Ex e integral junction box
- All components mounted on sliding gear tray for easy installation and maintenance
- Standard components used inside body allowing reduced maintenance costs
- Available with polycarbonate (lightweight, high impact resistant) or glass (specific chemical environment & paint shop)
- Including accessories (cable gland, plug & fixing brackets)
- Supplied with offshore grade paint

Specifications

- Manufactured from marine grade aluminum alloy copper free
- UV protected polycarbonate tube - thickness 2.5mm or borosilicate glass - thickness 7mm
- Rated voltage 100-240Vac 50/60Hz – 110Vdc
- Wiring configuration: 3 wires
- 1x entry M20
- Emergency version (type: "EM" version 3h battery duration)

Certifications



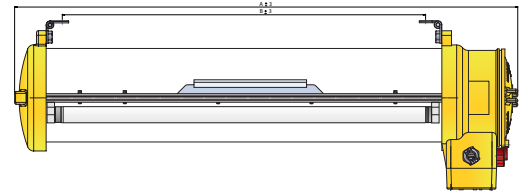
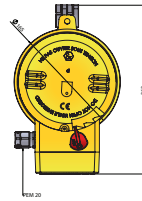
Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-31 : Enclosure "t" EN 60079-7 : Increased safety "e"
EC Type examination certificate to:	Directive 94/9/EC - (2014/34/UE) INERIS 11 ATEX 0052X Ex II 2 G Ex d IIB IIC T6 Gb for -20°C to + 55°C Ex II 2 D Ex tb IIIC T80°C Db IP66 for -20°C to + 55°C
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C XFP, -10°C to +50°C XFP EM
IP test:	IP66 IEC 60529
Impact protection index:	IK09 (poly) IK07 (glass) according to IEC 62262

Tubular fittings

Tubular fluorescent fitting with automatic switch off XFP - Zones 1, 2 & 21, 22

2

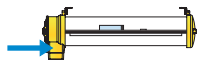


XFP

Dimensional drawing

Technical specifications

Type	Wiring Configuration	Light Rating W	Current A @ 230V	Diffuser	Gas	Dimensions mm		Weight kg
						A	B	



3 wires: Polycarbonate Diffuser Equipped with 1 cable gland & 1 plug

XFP120-0G000	3 wires	1 x 18	0.15	Polycarbonate	IIC	775	565	6.20
XFP140-0G000	3 wires	1 x 36	0.2	Polycarbonate	IIC	1 390	1 170	9.40
XFP165-0G000	3 wires	1 x 58	0.35	Polycarbonate	IIC	1 690	1 475	10.60
XFP220-0G000	3 wires	2 x 18	0.3	Polycarbonate	IIC	775	565	5.66
XFP240-0G000	3 wires	2 x 36	0.4	Polycarbonate	IIC	1 390	1 170	9.40
XFP265-0G000	3 wires	2 x 58	0.5	Polycarbonate	IIC	1 690	1 475	10.60

3 wires: Glass Diffuser Equipped with 1 cable gland & 1 plug

XFP120V-0G000	3 wires	1 x 18	0.15	Glass	IIC	775	565	10.66
XFP140V-0G000	3 wires	1 x 36	0.2	Glass	IIB	1 390	1 170	15.60
XFP165V-0G000	3 wires	1 x 58	0.35	Glass	IIB	1 690	1 475	19.20
XFP220V-0G000	3 wires	2 x 18	0.3	Glass	IIC	775	565	10.66
XFP240V-0G000	3 wires	2 x 36	0.4	Glass	IIB	1 390	1 170	15.60
XFP265V-0G000	3 wires	2 x 58	0.5	Glass	IIB	1 690	1 475	19.20

Technical information

Lamps

Fluorescent Lamp (order separately)
T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K

Photometric curve

See page 6/9

Rated voltages

Electronic ballast:
100-240Vac 50/60Hz – 110Vdc

Power factor

0.98

CRI 80

Wiring Configuration

3 wires

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

External grounding lug :

Screw M4x20 (stainless steel 316L)
(nearby cable gland)

Terminal block

(screws plug in terminal block)
6mm² (rigid wire), 4mm² (flexible wire)
Terminals supplied L, N, PE

Cable entries

One entry M20

Included: One M20 nickel plated brass cable gland for non armoured cable, diameter 10-16mm (EXN04MLC2)

Casting

Marine grade aluminum alloy according to standard: EN 1706: EN AC-AISI12 (Fe) DF or EN AC-AISI 10Mg(A) DF

UV protected extruded polycarbonate tube, thickness 2.5mm or borosilicate glass thickness 7mm

Colour of casting (standard)

● XFP****-0G000 - Yellow offshore, RAL 1003

Colour options:

● XFP****-BG000 - Grey, RAL 7035

● XFP****-CG000 - Black, RAL 9004

● XFP****-DG000 - Hammered Blue, RAL 5015

● XFP****-FG000 - Red, RAL 3001

● XFP****-GG000 - Blue, RAL 5010

● XFP****-JG000 - Green, RAL 6032

○ XFP****-MG000 - White, RAL 9010

Fixing (included with product)

D023 -2x zinc plated steel articulated brackets for ceiling mounting

Tubular fittings

Emergency tubular fluorescent fitting with automatic switch off - 3h XFP EM - Zones 1, 2 & 21, 22

Technical specifications

Type	Wiring Configuration	Light Rating W	Battery h	Current A @ 230V	Diffuser	Gas	Dimensions mm		Weight kg
							A	B	
3 wires: Polycarbonate Diffuser Equipped with 1 cable gland & 1 plug									
XFP120EM-0G000	3 wires	1 x 18	3h	0.15	Polycarbonate	IIC	775	565	7.80
XFP140EM-0G000	3 wires	1 x 36	3h	0.2	Polycarbonate	IIC	1 390	1 170	10.55
XFP220EM-0G000	3 wires	2 x 18	3h	0.3	Polycarbonate	IIC	775	565	7.80
XFP240EM-0G000	3 wires	2 x 36	3h	0.4	Polycarbonate	IIC	1 390	1 170	10.55

2

3 wires: Glass Diffuser Equipped with 1 cable gland & 1 plug

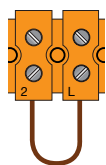
XFP120VEM-0G000	3 wires	1 x 18	3h	0.15	Glass	IIC	775	565	13.00
XFP140VEM-0G000	3 wires	1 x 36	3h	0.2	Glass	IIB	1 390	1 170	17.40
XFP220VEM-0G000	3 wires	2 x 18	3h	0.3	Glass	IIC	775	565	13.00
XFP240VEM-0G000	3 wires	2 x 36	3h	0.4	Glass	IIB	1 390	1 170	17.40

Electrical Features

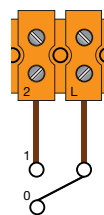
Lamps Fluorescent Lamp (order separately) T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K	CRI 80 Wiring Configuration 3 wires	Terminal block (screws plug in terminal block) 6mm ² (rigid wire), 4mm ² (flexible wire) Terminals supplied L1, 2, N, PE	Casting Marine grade aluminum alloy according to standard: EN 1706: EN AC-AISI12 (Fe) DF or EN AC-AISI 10Mg(A) DF UV protected extruded polycarbonate tube, thickness 2.5mm or borosilicate glass thickness 7mm
Photometric curve See page 6/9	Battery Battery NiCd 6V 4Ah for XFP120, XFP220 Battery NiCd 6V 7Ah for XFP140, XFP240, XFP165, XFP265 Lumen output in emergency mode (1 lamp lit) 3 hours: 24% for XFP120, XFP220 3 hours: 18% for XFP140, XFP240 3 hours: 14% for XFP165, XFP265 Monitored by LED	Cable entries One entry M20 Included: One M20 nickel plated brass cable gland for non armoured cable, diameter 10-16mm (EXN04MLC2)	Fixing (included with product) D023 - 2x zinc plated steel articulated brackets for ceiling mounting

Emergency function diagrams

Wiring provided by DTS - Maintained Mode



Switch between L/2 - Non Maintained Mode *



Mains Supply	Tube	Battery
ON	Lit	Charging
OFF	Only emergency tube lit	Discharging

Mains Supply	Tube	Battery
ON	OFF	Charging
OFF	Only emergency tube lit	Discharging

* This table corresponds to the position 0 "open".
 If the switch is on position 1 "close", refer to the table on the left

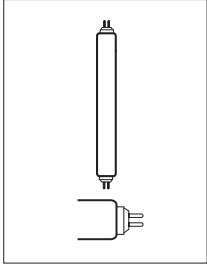
Tubular fittings

Accessories

XFP - Zones 1, 2 & 21, 22

Lamps

2



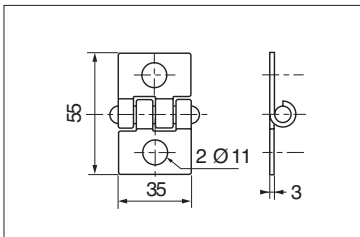
Bi-pin T8 fluorescent lamps

Specifications:

G13 - \varnothing 26mm
Colour temperature: White industry 4 000°K
CRI: > 80
lm/W: 65to 93
Average operating life: 12 000 hours

Type	Power W	Lumen output lm	Lampholder
TL18W	18	1 250	G13
TL36W	36	3 350	G13
TL58W	58	5 200	G13

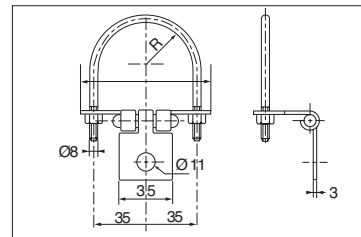
Brackets*



Hinged bracket

Type	Specifications
D023	2x zinc plated steel articulated brackets for ceiling mounting (included with product)
D024	2x stainless steel 304L articulated brackets for ceiling mounting

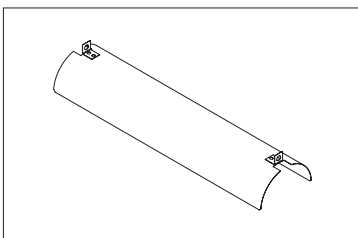
* Screws and locknuts supplied



U-bolt for pole mounting

Type	Specifications
D025	2x U-bolt and 2 x zinc plated steel brackets for pole mounted 1" 1/4
D026	2x U-bolt and 2x zinc plated steel brackets for pole mounted 1" 1/2
D027	2x U-bolt and 2x zinc plated steel brackets for pole mounted 2"
D029	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 1" 1/2
D030	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 2"

Accessories



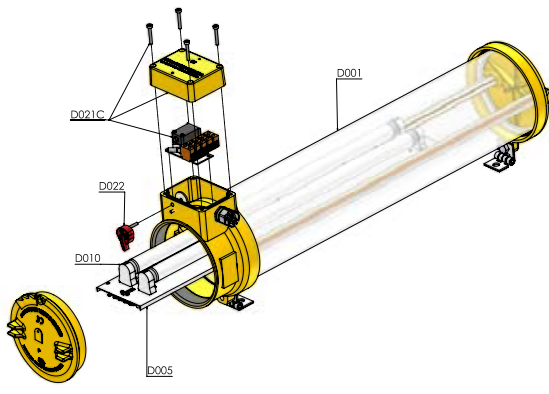
Shock proof kit

Type	Specifications
D034	Stainless steel 304L canopy and shock proof kit for XFP120, XFP220
D035	Stainless steel 304L canopy and shock proof kit for XFP140, XFP240
D036	Stainless steel 304L canopy and shock proof kit for XFP165, XFP265

Tubular fittings

Spare parts

XFP - Zones 1, 2 & 21, 22



Spare parts

Type	Specifications
D001P20WC	Sealed polycarbonate tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFP220, XFP120 "contact us"
D001P40WC	Sealed polycarbonate tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFP240, XFP140 "contact us"
D001P65WC	Sealed polycarbonate tube, cover, gasket, chain and slides- Offshore grade yellow paint RAL 1003 - XFP265, XFP165 "contact us"
D001PV20WC	Sealed glass tube, cover, gasket, chain and slides- Offshore grade yellow paint RAL 1003 - XFP220, XFP120 "contact us"
D001PV40WC	Sealed glass tube, cover, gasket, chain and slides- Offshore grade yellow paint RAL 1003 - XFP240, XFP140 "contact us"
D001PV65WC	Sealed glass tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003 - XFP265, XFP165 "contact us"
D0051X20WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for XFP120
D0051X20WEM	Emergency Gear tray with electronic ballast 220-240V, 50-60 Hz for XFP120EM
D0051X40WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for XFP140
D0051X40WEM	Emergency Gear tray with electronic ballast 220-240V, 50-60 Hz for XFP140EM
D0051X65WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for XFP165
D0052X20WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for XFP220
D0052X20WEM	Emergency Gear tray with electronic ballast 220-240V, 50-60 Hz for XFP220EM
D0052X40WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for XFP240
D0052X40WEM	Emergency Gear tray with electronic ballast 220-240V, 50-60 Hz for XFP240EM
D0052X65WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for XFP265
D010	Lampholder for T8 lamp
D016	Battery pack for XFP EM
D021C	Cover, gasket, screw, terminals, switch and interlock of junction box
D022	Interlock
D003	Gasket
EXN04MLC2-01	Kit M20 Exd Exe IIC Ex-td nickel plated cable gland for non armoured cable diameter 10-16mm, locknut, sealing gasket
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16mm locknut, sealing gasket



Tubular fittings

Weatherproof LED tubular fitting

FFL - Industrial applications



Features

- Operating life 100 000 h (depending tems)
- High lumen output - 5 000 lumens with 100% yield (depending items) - LED module with diffuser
- All components mounted on sliding gear tray for easy installation and maintenance
- Possibility to retrofit LED gear tray into existing fixtures mounted with T8 lamps
- Ingress protection IP66 ideal for wash down areas
- Tubular shape to avoid waste accumulation
- Including accessories (cable gland, plug & fixing brackets)

Specifications

- Reinforced polycarbonate black end caps
- UV protected polycarbonate tube - thickness 2.5mm
- Rated voltage 100-254Vac 50-60Hz
- Wiring configuration: 5 wires
- 2x entries M20

Certifications



Standards

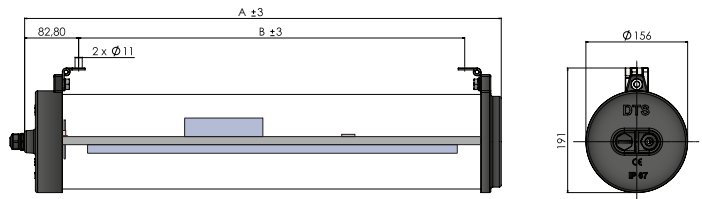
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Photobiological safety	IEC62471 Exempt group
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C
IP test:	IP66 IEC 60529
Impact protection index:	IK09 according to IEC 62262

Tubular fittings

Weatherproof LED tubular fitting

FFL - Industrial applications

2

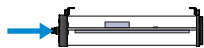


FFL

Dimensional drawing

Technical specifications

Type	Wiring Configuration	Light Rating W	Current A @ 230V	Lumen Output lm	Operating life		Efficiency lm/W	Diffuser	Dimensions mm		Weight kg
					at 25°C h	at 55°C h			A	B	



5 wires: Polycarbonate Diffuser Equipped with 1 cable gland & 1 plug

FRL120-00000	5 wires	1 x 12	0.07	1 194	100 000	45 000	95	Polycarbonate	775	565	4.61
FRL140-00000	5 wires	1 x 25	0.12	2 353	90 000	75 000	94	Polycarbonate	1 390	1 170	5.21
FRL165-00000	5 wires	1 x 31	0.16	2 450	80 000	60 000	79	Polycarbonate	1 690	1 475	9.42
FFL220-00000	5 wires	1 x 19	0.10	1 613	80 000	35 000	85	Polycarbonate	775	565	4.61
FFL240-00000	5 wires	1 x 56	0.27	4 257	70 000	50 000	76	Polycarbonate	1 390	1 170	5.21
FFL265-00000	5 wires	1 x 71	0.34	5 076	70 000	50 000	71	Polycarbonate	1 690	1 475	9.42

Technical information

LED installed

Set of LED modules with integrated diffuser
Colour temperature 4 000°K
L70/B10 at 25°C (70% lumen output/ 90% active LED) according to operating life

Photometric curve

See page 6/9

Rated voltages

Electronic driver: 100- 254Vac 50/60Hz

Power factor

0.9

CRI 84

Wiring Configuration

5 wires

Dielectrical class I

Over-current protection

The power supply shall be self-recovery when the fault condition is removed

Grounding system

TNS, TNC, TT, IT neutral system

Inrush current

for the part FFL240

I peak = 60A @230Vac

delta t = 275µs

Max. light fittings per circuit breaker

Type	10A	16A	20A	25A
B	4	7	9	11
C	7	12	15	18

Terminal block

(screws plug in terminal block)

10mm² (rigid wire), 6mm² (flexible wire)
Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)

Cable entries

Two entries M20

Included: One M20 nylon plug (EX-M20) and one M20 nylon cable gland for non armoured cable, diameter 6-12mm (EXCGM20S)

Housing

Reinforced polycarbonate black end caps
UV protected extruded polycarbonate tube, thickness 2.5mm

Fixing (included with product)

D023 - 2x zinc plated steel articulated brackets for ceiling mounting

Tubular fittings

From a fluorescent fitting to a LED fitting

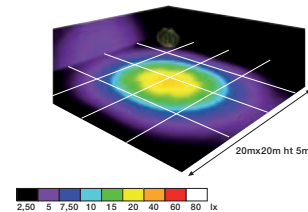
FFL - Industrial applications

What are the LED benefits?

The benefits of the LED technology consist in a significant improvement in the life expectancy of your product, lower power consumption and the improvement of the photometric features.

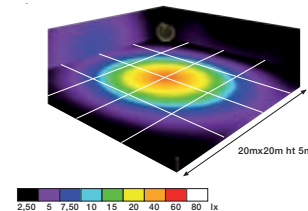
T8 fluorescent lamp - FF240-0G000 3D view

- Lumen output (light fitting): 3 546lm
- Lumen output (lamp): 6 700lm
- Yield: 52%
- Rating per light fitting: 73,5W
- Light source: 2x L36W/840 OSRAM Lumilux
- Cool White (corrector factor 1,00)



LED module - FFL240-00000 3D view

- Lumen output (light fitting): 4 188lm
- Lumen output (lamp): 4 257lm
- Yield: 98%
- Rating per light fitting: 58,0W
- Light Source: 1x LED module (corrector factor 1,00)



MRO benefits: How can I upgrade my current light fitting?

Tubular fittings could be switched from fluorescent to LED technology by easy sliding gear tray without any specific tool. The fixture with 1 or 2 fluorescent tubes T8 could be replaced by only one LED module fixed on the new gear tray.

How is my upgraded LED light fitting certified?

The installation notice of the EC type (ATEX) certification, EC declaration and the installation notice of the fluorescent fitting remain valid for all the LED fittings (more details on demand).

Spare parts to upgrade from a "fluorescent" to a "LED" fitting - LED gear tray with driver 100-254Vac 50/60Hz:

- D0051X20WEL - To upgrade FR120 to FRL120
- D0051X40WEL - To upgrade FR140 to FRL140
- D0051X65WEL - To upgrade FR165 to FRL165
- D0052X20WEL - To upgrade FF220 to FFL220
- D0052X40WEL - To upgrade FF240 to FFL240
- D0052X65WEL - To upgrade FF265 to FFL265

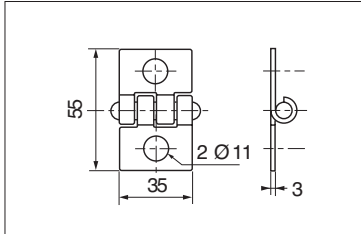
Tubular fittings

Accessories & spare parts

FFL - Industrial applications

Brackets*

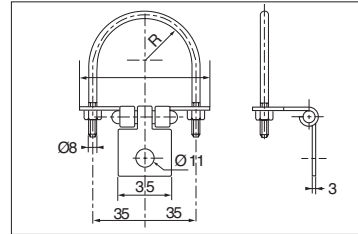
2



Hinged bracket

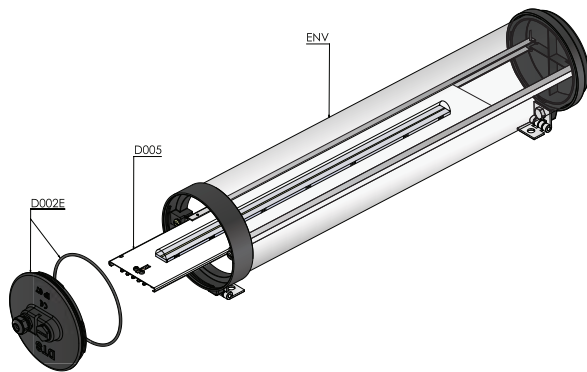
Type	Specifications
D023	2x zinc plated steel articulated brackets for ceiling mounting (included with product)
D024	2x stainless steel 304L articulated brackets for ceiling mounting

* Screws and locknuts supplied



U-bolt for pole mounting

Type	Specifications
D025	2x U-bolt and 2 x zinc plated steel brackets for pole mounted 1" 1/4
D026	2x U-bolt and 2x zinc plated steel brackets for pole mounted 1" 1/2
D027	2x U-bolt and 2x zinc plated steel brackets for pole mounted 2"
D029	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 1" 1/2
D030	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 2"



Spare parts

Type	Specifications
ENV20WC	Sealed polycarbonate tube, cover, gasket, slides for FRL120, FFL220
ENV40WC	Sealed polycarbonate tube, cover, gasket, slides for FRL140, FFL240
ENV65WC	Sealed polycarbonate tube, cover, gasket, slides for FRL165, FFL265
D002E	Cover and gasket
D0051X20WEL	LED replacement gear tray with universal electronic driver and LED included 100-254Vac, 50-60 Hz for FRL120
D0051X40WEL	LED replacement gear tray with universal electronic driver and LED included 100-254Vac, 50-60 Hz for FRL140
D0051X65WEL	LED replacement gear tray with universal electronic driver and LED included 100-254Vac, 50-60 Hz for FRL165
D0052X20WEL	LED replacement gear tray with universal electronic driver and LED included 100-254Vac, 50-60 Hz for FFL220
D0052X40WEL	LED replacement gear tray with universal electronic driver and LED included 100-254Vac, 50-60 Hz for FFL240
D0052X65WEL	LED replacement gear tray with universal electronic driver and LED included 100-254Vac, 50-60 Hz for FFL265
EXCGM20S-01	Kit M20 Exe IIC nylon cable gland for non armoured cable diameter 6-12 and locknut
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-tD double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16 locknut, sealing gasket

Tubular fittings

Weatherproof tubular fluorescent fitting

FF - Industrial applications



Features

- Ingress protection IP66 ideal for wash down areas
- All components mounted on sliding gear tray for easy installation and maintenance
- Tubular shape to avoid waste accumulation
- Including accessories (cable gland, plug & fixing brackets)

2

Specifications

- Reinforced polycarbonate black end caps
- UV protected polycarbonate tube - thickness 2.5mm
- Rated voltage 110-260Vac/Vdc 50/60Hz
- Wiring configuration: 5 wires
- 2x entries M20
- Emergency version with self-test
(type: "EMB" version 3h battery duration)

Certifications



Standards

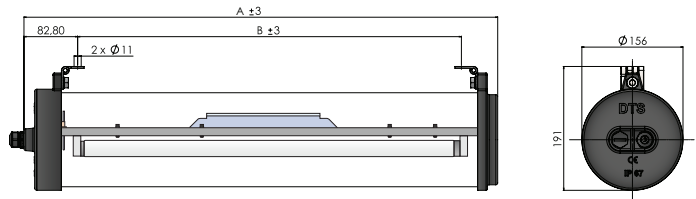
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C FF -10°C to +50°C FF EMB
IP test:	IP66 IEC 60529
Impact protection index:	IK09 according to IEC 62262

Tubular fittings

Weatherproof tubular fluorescent fitting

FF - Industrial applications

2

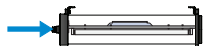


FF

Dimensional drawing

Technical specifications

Type	Wiring Configuration	Light Rating W	Current A @ 230V	Diffuser	Dimensions mm		Weight kg
					A	B	



5 wires: Polycarbonate Diffuser Equipped with 1 cable gland & 1 plug

FR120-0G000	5 wires	1 x 18	0.15	Polycarbonate	775	565	5.10
FR140-0G000	5 wires	1 x 36	0.20	Polycarbonate	1 390	1 170	6.81
FR165-0G000	5 wires	1 x 58	0.35	Polycarbonate	1 690	1 475	8.00
FF220-0G000	5 wires	2 x 18	0.30	Polycarbonate	775	565	5.10
FF240-0G000	5 wires	2 x 36	0.40	Polycarbonate	1 390	1 170	6.81
FF265-0G000	5 wires	2 x 58	0.50	Polycarbonate	1 690	1 475	8.00

Technical information

Lamps

Fluorescent Lamp (order separately)
T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K

Photometric curve

See page 6/9

Rated voltages

Electronic ballast:
110- 260Vac/Vdc, 50-60Hz

Power factor

0.98

CRI 80

Wiring Configuration

5 wires

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

Terminal block (plug in terminal block)

10mm² (rigid wire), 6mm² (flexible wire)
Terminals supplied L1, 2, N, PE (looping possible with one additional cable gland)

Cable entries

Two entries M20
Included: One M20 nylon plug (EX-M20) and one M20 nylon cable gland for non armoured cable, diameter 6-12mm (EXCGM20S)

Housing

Reinforced polycarbonate black end caps
UV protected extruded polycarbonate tube, thickness 2.5mm

Fixing (included with product)

D023 - 2x zinc plated steel articulated brackets for ceiling mounting

Tubular fittings

Emergency weatherproof fluorescent fitting with self-test - 3h FF EMB - Industrial applications

Technical specifications

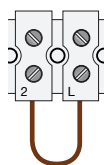
Type	Wiring Configuration	Light Rating W	Battery h	Current A @ 230V	Diffuser	Dimensions mm		Weight kg
						A	B	
3 wires: Polycarbonate Diffuser Equipped with 1 cable gland & 1 plug								
FR120EMB-0G000	3 wires	1 x 18	3h	0.15	Polycarbonate	775	565	6.70
FR140EMB-0G000	3 wires	1 x 36	3h	0.20	Polycarbonate	1 390	1 170	8.20
FR165EMB-0G000	3 wires	1 x 58	3h	0.35	Polycarbonate	1 690	1 475	9.40
FF220EMB-0G000	3 wires	2 x 18	3h	0.30	Polycarbonate	775	565	6.70
FF240EMB-0G000	3 wires	2 x 36	3h	0.40	Polycarbonate	1 390	1 170	8.20
FF265EMB-0G000	3 wires	2 x 58	3h	0.50	Polycarbonate	1 690	1 475	9.40

Electrical Features

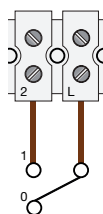
Lamps Fluorescent Lamp (order separately) T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K	CRI 80 Wiring Configuration 3 wires	Terminal block (plug in terminal block) 10mm ² (rigid wire), 6mm ² (flexible wire) Terminals supplied L1, 2, N, PE (looping possible with one additional cable gland)	Housing Reinforced polycarbonate black end caps UV protected extruded polycarbonate tube, thickness 2.5mm
Photometric curve See page 6/9	Battery Battery NiCd 6V 4Ah for FR120, FF220 Battery NiCd 6V 7Ah for FR140, FF240, FR165, FF265 Lumen output in emergency mode (1 lamp lit) 3 hours: 24% for FR120, FF220 3 hours: 18% for FR140, FF240 3 hours: 14% for FR165, FF265 Monitored by LED	Cable entries Two entries M20 Included: One M20 nylon plug (EX-M20) and one M20 nylon cable gland for non armoured cable, diameter 6-12mm (EXCGM20S)	Fixing (included with product) D023 - 2x zinc plated steel articulated brackets for ceiling mounting
Rated voltages Electronic ballast: 110-260Vac/Vdc 50/60Hz			
Power factor 0.98			

Emergency function diagrams

Wiring provided by DTS - Maintained Mode



Switch between L/2 - Non Maintained Mode *



Mains Supply	Tube	Battery
ON	Lit	Charging
OFF	Only emergency tube lit	Discharging

Mains Supply	Tube	Battery
ON	OFF	Charging
OFF	Only emergency tube lit	Discharging

* This table corresponds to the position 0 "open".

If the switch is on position 1 "close", refer to the table on the left

Preventive maintenance mode

Battery charge - 4 months
 Battery charge capacity during 3hr - quarterly
 Clear system test display by LED

Battery charge monitoring with LED - Mains ON



Green LED lit
Healthy (Test OK)



Green LED flashing
Batteries are charged



Green & red LED light up alternately (2s)
Battery test in progress



Red LED flashing
Fault (replace battery)



Yellow LED flashing
Battery Test Fault

Mains OFF



Red LED lit
Emergency mode



Red LED flashing
Battery discharged

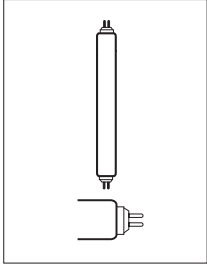
Tubular fittings

Accessories

FF - Industrial applications

Lamps

2



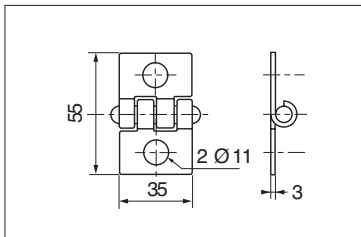
Bi-pin T8 fluorescent lamps

Specifications:

G13 - \varnothing 26mm
Colour temperature: White industry 4 000°K
CRI: > 80
lm/W: 65 to 93
Average operating life: 12 000 hours

Type	Power W	Lumen output lm	Lampholder
TL18W	18	1 250	G13
TL36W	36	3 350	G13
TL58W	58	5 200	G13

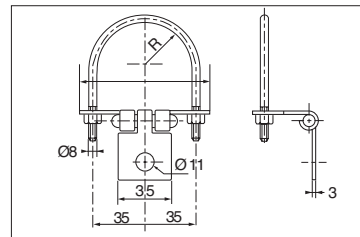
Brackets*



Hinged bracket

Type	Specifications
D023	2x zinc plated steel articulated brackets for ceiling mounting (included with product)
D024	2x stainless steel 304L articulated brackets for ceiling mounting

* Screws and locknuts supplied



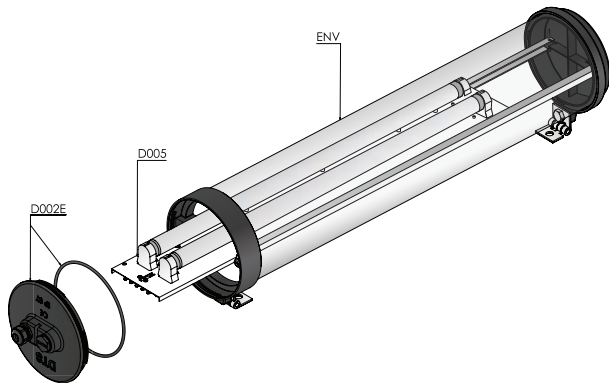
U-bolt for pole mounting

Type	Specifications
D025	2x U-bolt and 2 x zinc plated steel brackets for pole mounted 1" 1/4
D026	2x U-bolt and 2x zinc plated steel brackets for pole mounted 1" 1/2
D027	2x U-bolt and 2x zinc plated steel brackets for pole mounted 2"
D029	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 1" 1/2
D030	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 2"

Tubular fittings

Spare parts

FF - Industrial applications



Spare parts

Type	Specifications
ENV20WC	Sealed polycarbonate tube, cover, gasket, slides for FR120, FF220
ENV40WC	Sealed polycarbonate tube, cover, gasket, slides for FR140, FF240
ENV65WC	Sealed polycarbonate tube, cover, gasket, slides for FR165, FF265
D002E	Cover and gasket
D0051X20WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for FR120
D0051X20WEMB	Emergency Gear tray with electronic ballast 220-240V, 50-60 Hz for FR120EMB
D0051X40WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for FR140
D0051X40WEMB	Emergency Gear tray with electronic ballast 220-240V, 50-60 Hz for FR140EMB
D0051X65WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for FR165
D0051X65WEMB	Emergency Gear tray with electronic ballast 220-240V, 50-60 Hz for FR165EMB
D0052X20WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for FF220
D0052X20WEMB	Emergency Gear tray with electronic ballast 220-240V, 50-60 Hz for FF220EMB
D0052X40WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for FF240
D0052X40WEMB	Emergency Gear tray with electronic ballast 220-240V, 50-60 Hz for FF240EMB
D0052X65WE	Gear tray with electronic ballast 110-260V, 50-60 Hz for FF265
D0052X65WEMB	Emergency Gear tray with electronic ballast 220-240V, 50-60 Hz for FF265EMB
D010	Lampholder for T8 lamp
D016B	Battery pack for FF EMB
EXCGM20S-01	Kit M20 Exe IIC nylon cable gland for non armoured cable diameter 6-12mm and locknut
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16mm locknut, sealing gasket



Self contained emergency LED light fitting

XEL BAES - Zones 1, 2 & 21, 22



Features

- Self contained fixture with status LED indicators including: Healthy, Fault, Test in progress, main emergency LED fault
- Maintained and non-maintained mode
- Emergency battery duration 1 hour or 3 hours
- All components mounted on sliding gear tray for easy installation and maintenance
- Available in polycarbonate (light, high impact resistant) or in glass (specific chemical environment & paint shop)
- Including accessories (cable gland, plug & fixing brackets)
- Supplied with offshore grade paint

Specifications

- Manufactured from marine grade aluminum alloy copper free
- UV protected polycarbonate tube - thickness 2.5mm or borosilicate glass - thickness 7mm
- Rating: 1x 4W LED
- Supplied with pictogram stickers
- Rated voltage 230Vac 50/60Hz
- Wiring configuration: 3 wires
- 2x entries 3/4"NPT or 1 x entry M20



Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-31 : Enclosure "t" EN 60079-7 : Increased safety "e"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) Models A & AK INERIS 13 ATEX 0050X Ex II 2 G Ex d IIC T6 Gb for -20°C to + 55°C Ex II 2 D Ex tb IIIC T80°C Db IP66 for -20°C to + 55°C XEL45AI, XEL45SI INERIS 13 ATEX 0051X Ex II 2 G Ex de IIC T6 Gb for -20°C to + 55°C Ex II 2D Ex tb IIIC T80°C Db IP66 for -20°C to + 55°C
Photobiological safety	IEC62471 Exempt group
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C
IP test:	IP66 IEC 60529
Impact protection index:	IK09 (poly) IK07 (glass) according to IEC 62262

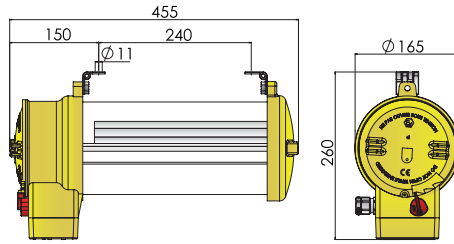
Self contained emergency LED light fitting

XEL BAES - Zones 1, 2 & 21, 22

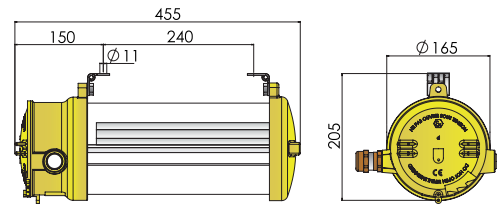
2



XEL-BAES-LED



Dimensional drawing for XEL...AI/SI



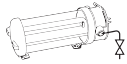
Dimensional drawing for XEL...A/AK



Technical specifications

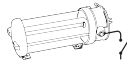
Categories of emergency lighting : Non-maintained - Luminaires operate when the mains fail in accordance with the standard EN60698-2-22

Type	Function : non-maintained	Light Rating W	Battery h	Lumen Output lm*	Operating Life at 25°C h	Diffuser	Testing Type	Dimensions mm		Weight kg
								A	B	



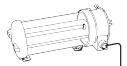
Unswitched enclosure: additional power socket needed . Fitting has to be removed. Maintenance must be done in safe area

XEL45LA-00000	Large area / Escape route	1 x 4 LED	1h	330/100	80 000	Polycarbonate	Automatic	455	240	4.61
XEL45VLA-00000	Large area / Escape route	1 x 4 LED	1h	330/100	80 000	Glass	Automatic	455	240	7.41



Switch off- Enclosure with battery: no power socket needed . External cut out required. Maintenance could be done in safe area

XEL45LAK-00000	Large area / Escape route	1 x 4 LED	1h	330/100	80 000	Polycarbonate	Automatic	455	240	4.61
XEL45VLAK-00000	Large area / Escape route	1 x 4 LED	1h	330/100	80 000	Glass	Automatic	455	240	7.41



Enclosure with combined battery & supply switch off: no power socket needed . No external cut out required. Maintenance could be done in hazardous area

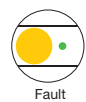
XEL45LAI-00000	Large area / Escape route	1 x 4 LED	1h	330/100	80 000	Polycarbonate	Automatic	455	240	5.41
XEL45LSI-00000	Large area / Escape route	1 x 4 LED	1h	330/100	80 000	Polycarbonate	Addressable	455	240	5.41
XEL45VLAI-00000	Large area / Escape route	1 x 4 LED	1h	330/100	80 000	Glass	Automatic	455	240	7.71
XEL45VLSI-00000	Large area / Escape route	1 x 4 LED	1h	330/100	80 000	Glass	Addressable	455	240	7.71

Note. * Lumen output: Large area 330lm / Escape route 100lm

Test

Self Test SATI
Compliant to NFC71820
Certified NF Performance Sati
Automatic test
SATI technology - all tests are done according to regulation

Safety lighting with automatic built in systems test the lamps every 7 days and the battery pack every 12 weeks. Results of the test are displayed by yellow and green LED.



Self contained emergency LED light fitting

Technical information & accessories

XEL BAES - Zones 1, 2 & 21, 22

Technical information

Lamps

LED installed
Cool white
L70/B10 at 25°C (70% lumen output/ 90% active LED) according to operating life

CRI > 70

Rated voltages

Electronic ballast: 230Vac 50/60Hz
Power 0.5W

Power factor

0.4.

Wiring Configuration

3 wires + 2 remote control unit

Dielectrical class I

Over-current protection

The power supply shall be self-recovery when the fault condition is removed

Grounding system

TNS, TNC, TT, IT neutral system

Battery

Battery NiMh 3,6V 1,1Ah
Average life time of battery 4 years
Upload charge cycle 100% 25°C - 24h

Cable entries

Model A & AK

Two entries 3/4" NPT
Included: One 3/4" NPT nickel plated brass plug (EXN/075/SP) and one 3/4" NPT nickel plated brass cable gland for non armoured cable, diameter 6-12mm (EXN05ASC3)

Model AI & SI

One entry M20
Included: One M20 nickel plated brass cable gland for non armoured cable, diameter 10-16mm (EXN04MLC2)

External grounding lug:

Screw M4x20 (stainless steel 316L)
(nearby cable gland)

Terminal block

L, N, PE, +, -
Torque for locking screw

Model A & AK Maxi 10mm² rigid wire, 6mm² flexible wire

Model AI & SI Maxi 6mm² rigid wire, 4mm² flexible wire

Pictogram :

4 adhesive pictograms (included with product)

Casting

Marine grade aluminum alloy according to standard: EN 1706: EN AC-AISI12 (Fe) DF or EN AC-AISI 10Mg(A) DF
UV protected extruded polycarbonate tube, thickness 2.5mm or borosilicate glass thickness 7mm

Colour of casting (standard)

- XEL****-00000 - Yellow offshore, RAL 1003
- Colour options:
- XEL****-B0000 - Grey, RAL 7035
- XEL****-C0000 - Black, RAL 9004
- XEL****-D0000 - Hammered Blue, RAL 5015
- XEL****-F0000 - Red, RAL 3001
- XEL****-G0000 - Blue, RAL 5010
- XEL****-J0000 - Green, RAL 6032
- XEL****-M0000 - White, RAL 9010

Fixing (included with product)

D023 - 2x zinc plated steel articulated brackets for ceiling mounting

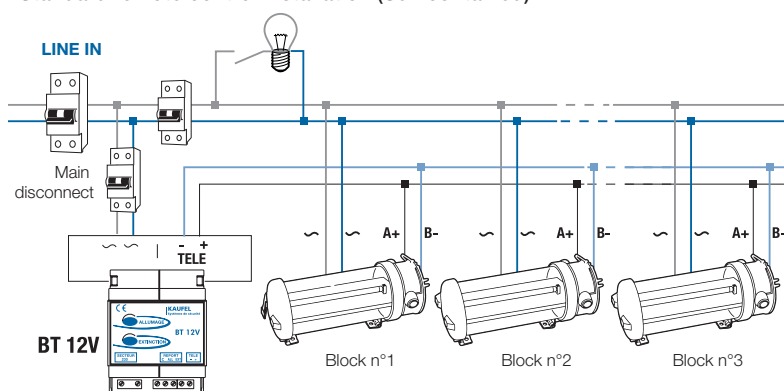


Remote control units for emergency lighting

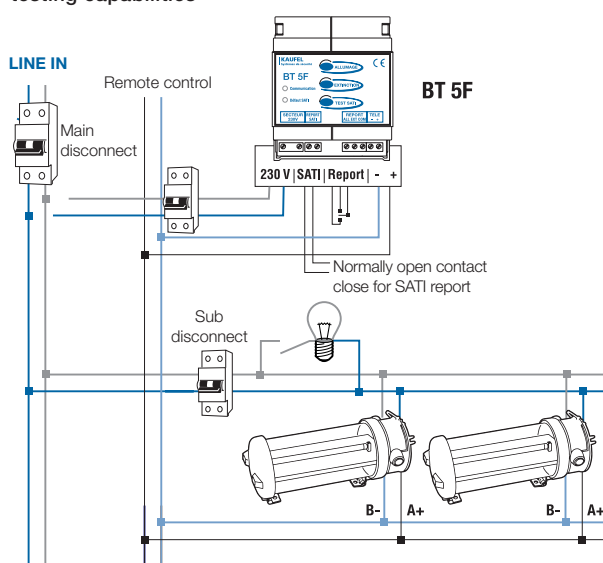
Order number	BT5F	BT12V
Type	621500	621201
Power Supply	220-240 Vac - 50/60 Hz	
Main Feature	Multi-brand compatibility ON / OFF offset	Standard ON / OFF
Testing Type	Unswitched - Switch off - combined	
Size (mm)	82 x 70 x 70	



Standard remote control installation (Self contained)



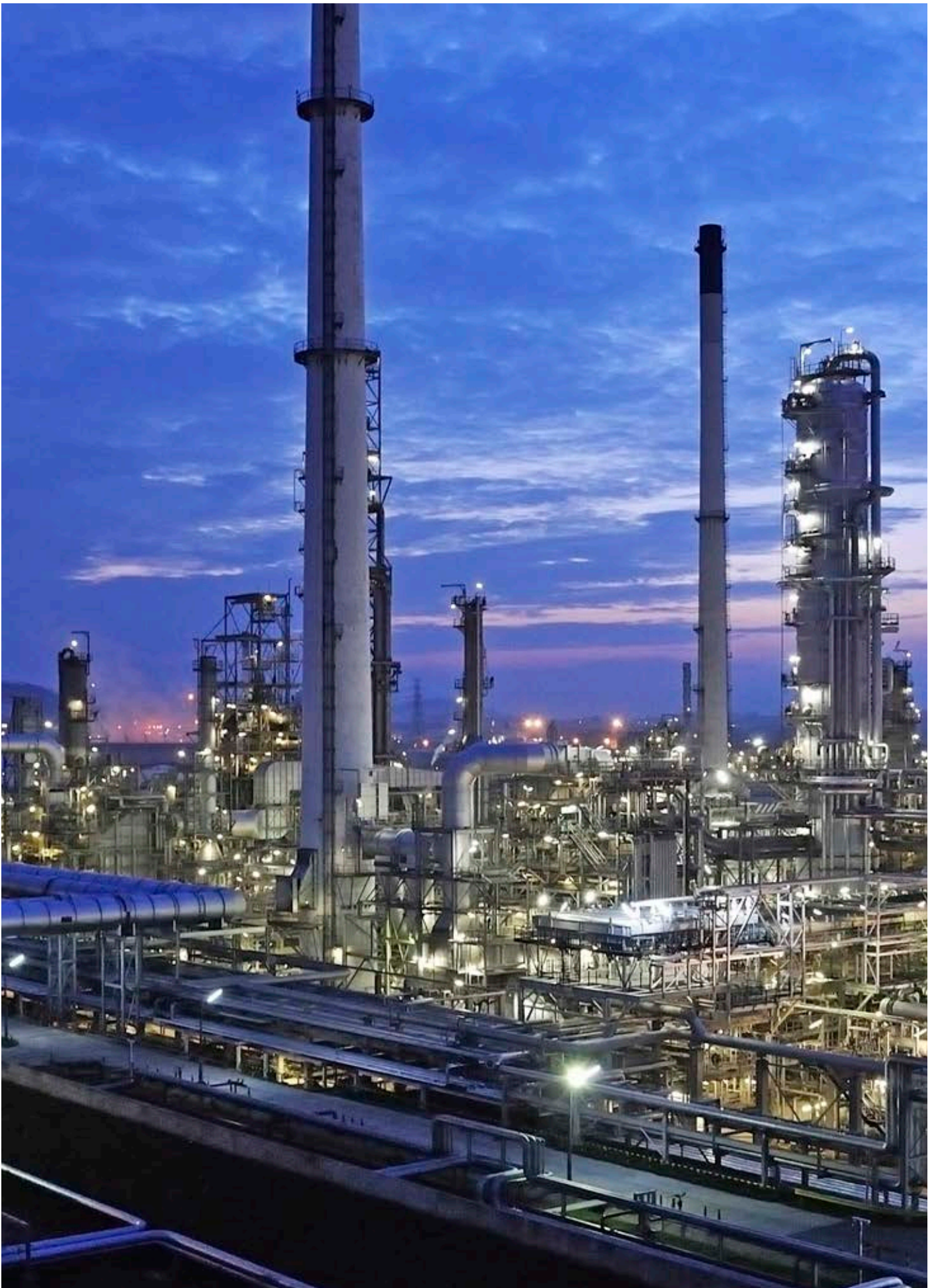
Remote control installation with integrated self testing capabilities



Regulations

Article EC 12 paragraph 6

Self-contained emergency lighting installations must have on fit one or several devices allowing centralised control. The devices must be located close to the master control unit or one sub-division control units.



Light fittings for all zones and industrial applications

Linear and recessed fittings

Linear fittings

EVS - Zones 1, 2 & 21, 22	3/3
EVNL - LED - Zones 2 & 22	3/9
EVN - Zones 2 & 22	3/15
EVDL - LED - Zones 21 & 22	3/21
EVD - Zones 21, 22	3/27
EVTL - LED - Industrial applications	3/33
EVT - Industrial applications	3/39

Recessed fluorescent fittings

ESB - Zones 1, 2	3/45
EST - Industrial applications	3/49



Linear fittings

Fluorescent fitting with easy disconnect

EVS - Zones 1, 2 & 21, 22



Features

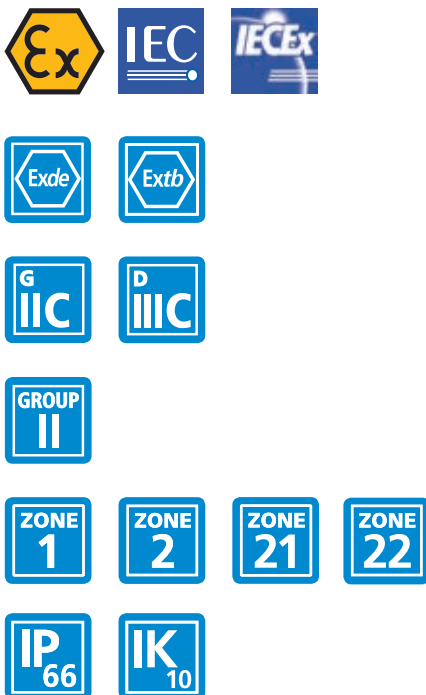
- Easy disconnect without wiring to remove the gear tray
- All components mounted on hinged and removable gear tray for easy maintenance
- Double central locking for ingress protection
- Automatic switch off on opening
- Including accessories (cable gland, plugs & fixing brackets)

Specifications

- Main body constructed of glass reinforced polyester for high impact strength
- UV protected polycarbonate diffuser to resist harsh environments
- Rated voltage 220 -240Vac/Vdc 50-60Hz
- EOL (End of life) the ballast prevents the lamp cap at the end of lamp life cycle from overheating
- Instant start
- Wiring configuration: 5 wires
- 3x entries M20
- 2x emergency versions (type: "EM" version 3h battery duration or "EMA" with 3h with automatic test and blackstart capabilities)



Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-31 : Enclosure "t" EN 60079-7 : Increased safety "e"
EC Type examination certificate to:	Directive 94/9/EC - (2014/34/UE) LCIE 11 ATEX 3065X IEC Ex LCI 11.0053X Ex II 2 G Ex de IIC T4 Gb for -40°C to +60°C Ex II 2 D Ex tb IIIC T85°C Db IP66 for -40°C to +60°C
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C EVS, -10°C to +50°C EVS EM & EVS EMA
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

Linear fittings

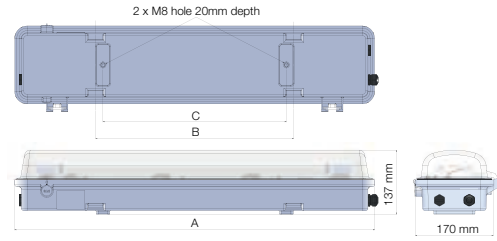
Fluorescent fitting with easy disconnect

EVS - Zones 1, 2 & 21, 22



3

EVS



Dimensional drawing

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Current A @ 230V	Dimensions mm			Weight kg
non armored cable	armored cable				A	B	C	



5 wires: Equipped with 1 cable gland & 2 plugs

EVS120-0000	EVS120-D000	5 wires*	1 x 18	0.09	785	432	400	5.81
EVS140-0000	EVS140-D000	5 wires*	1 x 36	0.17	1 370	900	700	8.60
EVS165-0000	EVS165-D000	5 wires*	1 x 58	0.26	1 670	900	700	10.40
EVS220-0000	EVS220-D000	5 wires*	2 x 18	0.17	785	432	400	5.81
EVS240-0000	EVS240-D000	5 wires*	2 x 36	0.33	1 370	900	700	8.60
EVS265-0000	EVS265-D000	5 wires*	2 x 58	0.5	1 670	900	700	10.40



5 wires through: Equipped with 2 cable glands & 1 plug

EVS120-B000	EVS120-E000	5 wires through**	1 x 18	0.09	785	432	400	5.81
EVS140-B000	EVS140-E000	5 wires through**	1 x 36	0.17	1 370	900	700	8.60
EVS165-B000	EVS165-E000	5 wires through**	1 x 58	0.26	1 670	900	700	10.40
EVS220-B000	EVS220-E000	5 wires through**	2 x 18	0.17	785	432	400	5.81
EVS240-B000	EVS240-E000	5 wires through**	2 x 36	0.33	1 370	900	700	8.60
EVS265-B000	EVS265-E000	5 wires through**	2 x 58	0.5	1 670	900	700	10.40

Note. * For armored cable with 1 continuity plate. ** For armored cable with 2 continuity plates.

Technical information

<p>Lamps Fluorescent Lamp (order separately) T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K.</p> <p>CRI 80</p> <p>Photometric curve See page 6/9</p> <p>Rated voltages Electronic ballast: 220-240Vac/Vdc 50/60Hz. EOL (End of life) the ballast prevents the lamp cap at the end of lamp life cycle from overheating</p>	<p>Dielectrical class I</p> <p>Grounding system TNS, TNC, TT, IT neutral system</p> <p>Power factor 0.98</p> <p>Terminal block (spring) Jumped bar x2 terminal blocks 4mm² (rigid wire), 2.5mm² (flexible wire) Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)</p>	<p>Cable entries Three entries M20 For non- armored cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S) For armored cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)</p>	<p>Housing Fiberglass reinforced polyester housing for high impact strength, UV protected polycarbonate diffuser to resist harsh environments, Painted steel gear tray & Stainless steel 316L insert</p> <p>Fixing (included with product) V015 - 2x Two zinc-plated steel brackets for ceiling mounting</p>
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Linear fittings

Emergency Fluorescent fitting with easy disconnect - 3h EVS EM - Zones 1, 2 & 21, 22

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Battery h	Current A @ 230V	Dimensions mm			Weight kg
non armored cable	armored cable					A	B	C	



3 wires: Equipped with 1 cable gland & 2 plugs

EVS120EME-0000	EVS120EME-C000	3 wires*	1 x 18	3h	0.09	785	432	400	8.40
EVS140EM-0000	EVS140EM-C000	3 wires*	1 x 36	3h	0.17	1 370	900	700	11.02
EVS165EM-0000	EVS165EM-C000	3 wires*	1 x 58	3h	0.26	1 670	900	700	13.40
EVS220EME-0000	EVS220EME-C000	3 wires*	2 x 18	3h	0.17	785	432	400	8.40
EVS240EM-0000	EVS240EM-C000	3 wires*	2 x 36	3h	0.33	1 370	900	700	11.02
EVS265EM-0000	EVS265EM-C000	3 wires*	2 x 58	3h	0.50	1 670	900	700	13.40

Note. * For armored cable with 1 continuity plate. For dimensional drawing, please refer to page 3/4

Electrical Features

Lamps

Fluorescent Lamp (order separately)
T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K

Rated voltages

Electronic ballast: 220-240Vac/Vdc 50/60Hz
EOL (End of life) the ballast prevents the lamp cap at the end of lamp life cycle from overheating.

Power factor

0.98.

Battery

Battery NiCd 7,2V
4Ah in flameproof case (Ex d)
Lumen output in emergency mode (1 lamp lit)
2 hours: 40% for EVS120, EVS220, 33% for EVS140, EVS240, 10% for EVS165, EVS265
3 hours: 24% for EVS120, EVS220, 18% for EVS140, EVS240, 8% for EVS165, EVS265
Monitored by one LED

Terminal block

Terminal block (screws plug in terminal block)
4mm² (rigid wire), 2,5mm² (flexible wire)
Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)

Cable entries

Three entries M20
For non- armoured cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S)
For armoured cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)

Housing

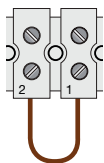
Fiberglass reinforced polyester housing for high impact strength, UV protected polycarbonate diffuser to resist harsh environments
Stainless steel 316L insert
Painted steel gear tray

Fixing

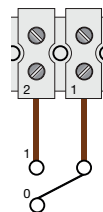
V015 - 2x Two zinc-plated steel brackets for ceiling mounting (included with product)

Emergency function diagrams

Wiring provided by DTS - Maintained Mode



Switch between 1/2 - Non Maintained Mode *



Mains Supply	Tube	Battery
ON	Lit	Charging
OFF	Only emergency tube lit	Discharging

Mains Supply	Tube	Battery
ON	OFF	Charging
OFF	Only emergency tube lit	Discharging

* This table corresponds to the position 0 "open".
If the switch is on position 1 "close", refer to the table on the left

Linear fittings

Emergency Fluorescent fitting with automatic test & blackstart capabilities. EVS EMA - Zones 1, 2 & 21, 22

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Battery h	Current A @ 230V	Dimensions mm			Weight kg
non armored cable	armored cable					A	B	C	



5 wires: Equipped with 1 cable gland & 2 plugs

EVS120EMA-0000	EVS120EMA-D000	5 wires*	1 x 18	3h	0.09	785	432	400	8.80
EVS140EMA-0000	EVS140EMA-D000	5 wires*	1 x 36	3h	0.17	1 370	900	700	11.02
EVS220EMA-0000	EVS220EMA-D000	5 wires*	2 x 18	3h	0.17	785	432	400	8.80
EVS240EMA-0000	EVS240EMA-D000	5 wires*	2 x 36	3h	0.33	1 370	900	700	11.02

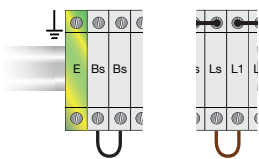
Note. * For armored cable with 1 continuity plate. For dimensional drawing please refer to page 3/4

Electrical Features

Lamps	Battery	Cable entries	Housing
Fluorescent Lamp (order separately) T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K	Battery NiCd 6V 4Ah in flameproof case (Ex"d") for EVS120, EVS220 Battery NiCd 6V 7Ah in flameproof case (Ex"d") for EVS140, EVS240 Lumen output in emergency mode (1 lamp lit) 3h: 40% for EVS120, EVS220 33% for EVS140, EVS240 Monitored by two LED	Three entries M20 For non- armored cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S) For armored cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)	Fiberglass reinforced polyester housing for high impact strength, UV protected polycarbonate diffuser to resist harsh environments Stainless steel 316L insert Painted steel geartray
Rated voltages Electronic ballast: 220-240Vac/Vdc 50/60Hz EOL (End of life) the ballast prevents the lamp cap at the end of lamp life cycle from overheating	Terminal block (spring) Jumped bar x2 terminal blocks 4mm ² (rigid wire), 2,5mm ² (flexible wire) Terminals supplied L1, L2, L3, LS, N, E, BS (looping possible with one additional cable gland)		Fixing (included with product) V015 - 2x Two zinc-plated steel brackets for ceiling mounting
Power factor 0.98			

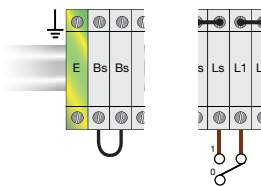
Emergency function diagrams

Wiring provided by DTS - Maintained Mode



Mains Supply	Tube	Battery
ON	Lit	Charging
OFF	Only emergency tube lit	Discharged

Switch between LS/L1 - Non Maintained Mode

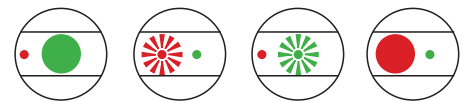


Mains Supply	Tube	Battery
ON	OFF	Charging
OFF	Only emergency tube lit	Discharged

This table corresponds to the position 1 "closed".

Preventive maintenance mode

Battery charge - daily
Emergency lamp during 1min - weekly
Battery charge capacity during 1hr - quarterly
Clear system test display
Battery charge monitored by 2 LED

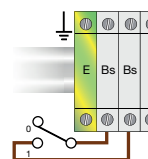


Healthy (test OK)
Emergency or Indicator Lamp Fault (must be replaced)
Test in Progress (waiting end of test)
Fault (replace battery)

Emergency function diagram - Blackstart mode

The EMA product contains 2 blackstart terminals. The **blackstart mode** consists in disconnecting the battery and so switching off the fitting. This mode is mainly used during maintenance. As soon as the maintenance is done, the main power ON and the blackstart terminals connected, the emergency fitting is ready to be used as the battery is not discharged.

Switch between BS terminals



This table corresponds to the position 0 "open".

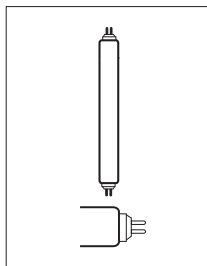
Mains supply	Tube	Battery
ON	Lit	Disconnected - not charged
OFF	OFF	Disconnected - not charged

Linear fittings

Accessories

EVS - Zones 1, 2 & 21, 22

Lamps



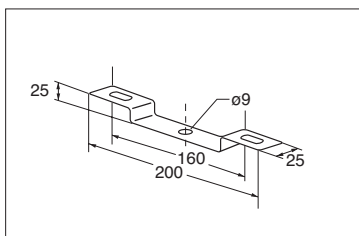
Bi-pin T8 fluorescent lamps

Specifications:

G13 - \varnothing 26mm
 Colour temperature: White industry 4 000°K
 CRI: > 80
 lm/W: 65 to 93
 Average operating life: 12 000 hours

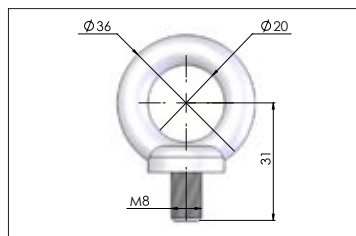
Type	Power W	Lumen output lm	Lampholder
TL18W	18	1 250	G13
TL36W	36	3 350	G13
TL58W	58	5 200	G13

Fixing accessories*



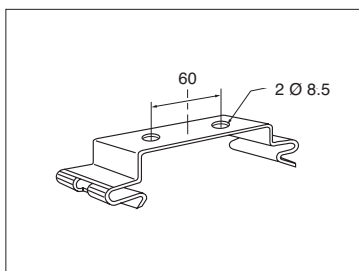
Brackets

Type	Specifications
V015	2 x pair of zinc plated steel for ceiling mounting (Included with product)
V016	stainless steel 316L brackets for ceiling mounting



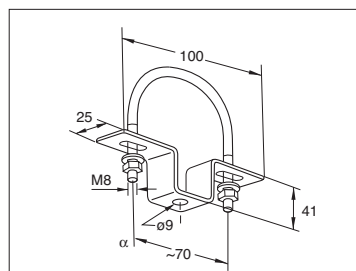
Hook

Type	Specifications
V024	2x Zinc plated steel suspension hook



Mounting bracket clip

Type	Specifications
V014	2x Rapid ceiling mounting with stainless steel clip



Fixing bracket and flange

Type	Specifications
V018	2x zinc plated steel pole mounted brackets for \varnothing 1"¼ & 1"½
V019	2x zinc plated steel pole mounted brackets for \varnothing 2"
V021	2x Stainless steel 316L pole mounted brackets for \varnothing 1"¼ & 1"½
V022	2x Stainless steel 316L pole mounted brackets \varnothing 2"

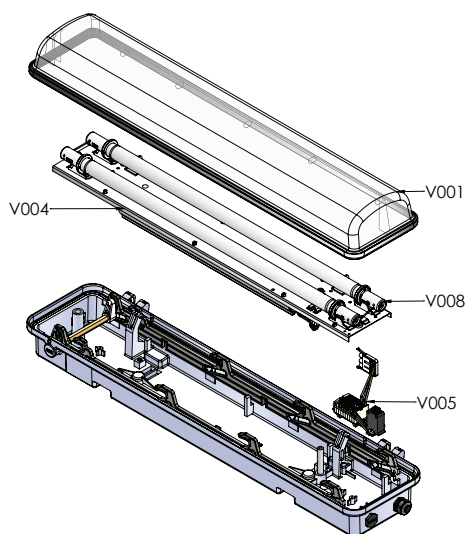
* Screws and locknuts supplied

Linear fittings

Spare parts

EVS - Zones 1, 2 & 21, 22

3



Spare parts

Type	Specifications
V00120W	20W diffuser with gasket for EV. range
V00140W	40W diffuser with gasket for EV. range
V00165W	65W diffuser with gasket for EV. range
V0041X20WS	Gear tray 1x18W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS120
V0041X40WS	Gear tray 1x36W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS140
V0041X65WS	Gear tray 1x58W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS165
V0042X20WS	Gear tray 2x18W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS220
V0042X40WS	Gear tray 2x36W with electronic ballast 220- 240Vac/Vdc 50-60Hz for EVS240
V0042X65WS	Gear tray 2x58W with electronic ballast 220- 240Vac/Vdc 50-60Hz for EVS265
V0041X20WEMS	Emergency gear tray 1x18W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS120EM
V0041X40WEMS	Emergency gear tray 1x36W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS140EM
V0042X20WEMS	Emergency gear tray 2x18W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS220EM
V0042X40WEMS	Emergency gear tray 2x36W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS240EM
V0041X65WEMS	Emergency gear tray 1x58W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS165EM
V0042X65WEMS	Emergency gear tray 2x58W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS265EM
V0041X20WEMAS	Emergency gear tray + auto test 1X18W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS120EMA
V0041X40WEMAS	Emergency gear tray + auto test 1X36W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS140EMA
V0042X20WEMAS	Emergency gear tray + auto test 2X18W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS220EMA
V0042X40WEMAS	Emergency gear tray + auto test 2X36W with electronic ballast 220-240Vac/Vdc 50-60Hz for EVS240EMA
V005S	Connection pack: XIN, terminal, track, connector
V008	Bi-pin G13 lampholder
V011	Battery pack Ni-Cd 7.2v -4Ah for EVS120EME, EVS220EME, EVS140EM, EVS240EM
V01120WEMEA	Battery for EVS120EMA, EVS220EMA
V01140WEMEA	Battery for EVS140EMA, EVS240EMA
V02520x40W	Brass continuity plate for EV. 120, EV. 220, EV. 140, EV. 240
V02565W	Brass continuity plate for EV. 165, EV. 265
EXCGM20S-01	Kit M20 Exe IIC nylon cable gland for non armoured cable diameter 6-12mm and locknut
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16mm locknut, sealing gasket

Linear fittings

LED fitting

EVNL - Zones 2 & 22



Features

- Operating life 100 000 h (depending items)
- High lumen output - 5 000 lumens with 100% yield (depending items) - LED module with diffuser
- Double central locking for ingress protection
- All components mounted on hinged and removable gear tray which gives easy access for maintenance
- Including accessories (cable gland, plugs & fixing brackets)

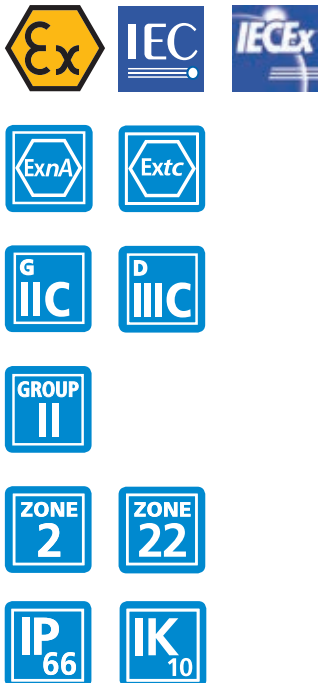
3

Specifications

- Main body constructed of glass reinforced polyester for high impact strength
- UV protected polycarbonate diffuser to resist harsh environments
- Rated voltage 100-254Vac 50-60Hz
- Wiring configuration: 5 wires
- 3x entries M20



Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-15 : Enclosure "n" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 15 ATEX 1010X IECEX LCIE 15.0018X II 3 G Ex nA IIC T4 Gc for -40°C to +60°C II 3 D Ex tc IIIC T85°C Dc IP66 for -40°C to +60°C
Photobiological safety	IEC62471 Exempt group
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

Linear fittings

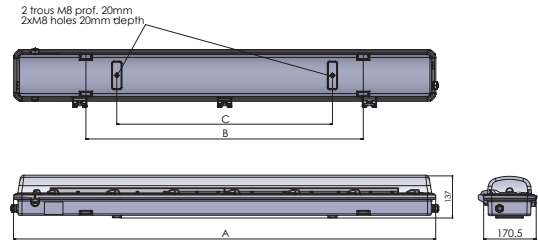
LED fitting

EVNL - Zones 2 & 22



3

EVNL



Dimensional drawing

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Current A @ 230V	Lumen Output lm	Operating Life at 25°C	Operating Life at 55°C	Efficiency Lm/W	Dimensions mm			Weight kg
non-armored cable	armored cable								A	B	C	



5 wires: Equipped with 1 cable gland & 2 plugs

EVNL120-0000	EVNL120-D000	5 wires*	1 x 12	0.07	1 194	100 000	45 000	95	785	432	400	4.00
EVNL140-0000	EVNL140-D000	5 wires*	1 x 25	0.12	2 353	90 000	75 000	94	1 370	900	700	6.80
EVNL165-0000	EVNL165-D000	5 wires*	1 x 31	0.16	2 450	80 000	60 000	79	1 670	900	700	8.20
EVNL220-0000	EVNL220-D000	5 wires*	1 x 19	0.10	1 613	80 000	35 000	85	785	432	400	4.40
EVNL240-0000	EVNL240-D000	5 wires*	1 x 56	0.27	4 257	70 000	50 000	76	1 370	900	700	7.60
EVNL265-0000	EVNL265-D000	5 wires*	1 x 71	0.34	5 076	70 000	50 000	71	1 670	900	700	8.80



5 wires: Equipped with 2 cable glands & 1 plug

EVNL120-B000	EVNL120-E000	5 wires**	1 x 12	0.07	1 194	100 000	45 000	95	785	432	400	4.00
EVNL140-B000	EVNL140-E000	5 wires**	1 x 25	0.12	2 353	90 000	75 000	94	1 370	900	700	6.80
EVNL165-B000	EVNL165-E000	5 wires**	1 x 31	0.16	2 450	80 000	60 000	79	1 670	900	700	8.20
EVNL220-B000	EVNL220-E000	5 wires**	1 x 19	0.10	1 613	80 000	35 000	85	785	432	400	4.40
EVNL240-B000	EVNL240-E000	5 wires**	1 x 56	0.27	4 257	70 000	50 000	76	1 370	900	700	7.60
EVNL265-B000	EVNL265-E000	5 wires**	1 x 71	0.34	5 076	70 000	50 000	71	1 670	900	700	8.80

Note. * For armored cable with 1 continuity plate. ** For armored cable with 2 continuity plates. For dimensional drawing please refer to page 3/10

Technical information

LED installed

Set of LED modules with integrated diffuser
Colour temperature 4 000°K
L70/B10 at 25°C (70% lumen output/ 90% active LED) according to operating life.

Photometric curve

See page 6/9

Rated voltages

Electronic driver: 100- 254Vac 50/60Hz.

Power factor

0.9

CRI 84

Wiring Configuration

5 wires

Dielectrical class I

Over-current protection

The power supply shall be self-recovery when the fault condition is removed

Grounding system

TNS, TNC, TT, IT neutral system

Inrush current

for the part EVNL240
I_{peak} = 60A @230Vac
delta t = 275µs

Max. light fittings per circuit breaker

Type	10A	16A	20A	25A
B	4	7	9	11
C	7	12	15	18

Terminal block

(screws plug in terminal block)

10mm² (rigid wire),
6mm² (flexible wire)
Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)

Cable entries

Three entries M20

For non- armored cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S)

For armored cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)

Housing

Fiberglass reinforced polyester housing for high impact strength
UV protected polycarbonate diffuser to resist harsh environments
White painted steel gear tray
2 x M8 Stainless steel 316L insert

Fixing (included with product)

V015 - 2x Two zinc-plated steel brackets for ceiling mounting

Linear fittings

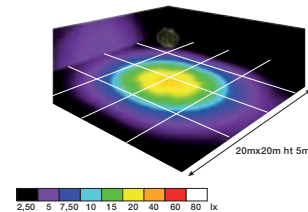
From a fluorescent fitting to a LED fitting EVNL - Zones 2 & 22

What are the LED benefits?

The benefits of the LED technology consist in a significant improvement in the life expectancy of your product and lower power consumption.

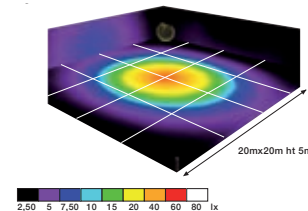
T8 fluorescent lamp - EVN240-0000 3D view

- Lumen output (light fitting): 5 005lm
- Lumen output (lamp): 6 700lm
- Yield: 74%
- Rating per light fitting: 73,5W
- Light Source: 2x L36W/840 OSRAM Lumilux
- Cool White (corrector factor 1,00)



LED module - EVNL240-0000 3D view

- Lumen output (light fitting): 4 421lm
- Lumen output (lamp): 4 433lm
- Yield: 98%
- Rating per light fitting: 58,0W
- Light Source: 1x LED module (corrector factor 1,00)



MRO benefits: How can I upgrade my current light fitting?

Linear fittings could be switched from fluorescent to LED technology without any specific tool.

The fixture with 1 or 2 fluorescent tubes T8 could be replaced by only one LED module fixed on the new gear tray.



How is my upgraded LED light fitting certified?

The EC type (ATEX) certification, EC declaration and the installation notice of the fluorescent fitting remain valid for all the LED fittings (more details on demand).

Spare parts to upgrade from a “fluorescent” to a “LED” fitting - LED gear tray with driver 100-254Vac 50/60Hz:

- V0041X20WEL - To upgrade EVN120 to EVNL120
- V0041X40WEL - To upgrade EVN140 to EVNL140
- V0041X65WEL - To upgrade EVN165 to EVNL165
- V0042X20WEL - To upgrade EVN220 to EVNL220
- V0042X40WEL - To upgrade EVN240 to EVNL240
- V0042X65WEL - To upgrade EVN265 to EVNL265

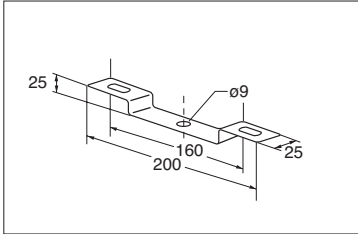
Linear fittings

Accessories

EVNL - Zones 2 & 22

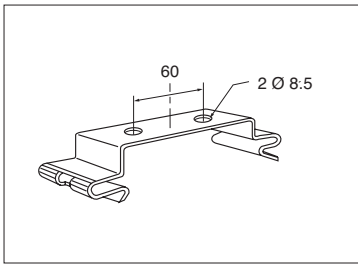
Fixing accessories*

3



Brackets

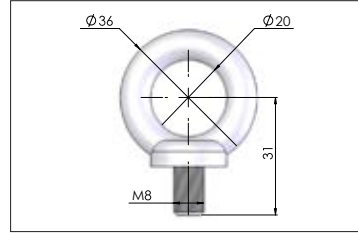
Type	Specifications
V015	2 x pair of zinc plated steel for ceiling mounting (Included with product)
V016	2 x stainless steel 316L brackets for ceiling mounting



Mounting bracket clip

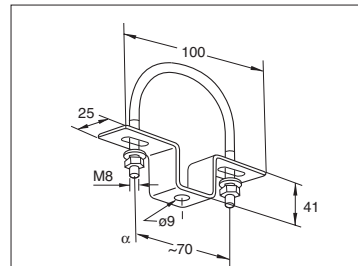
Type	Specifications
V014	2x Rapid ceiling mounting with stainless steel clip

* Screws and locknuts supplied



Hook

Type	Specifications
V024	2x Zinc plated steel ceiling suspension hook



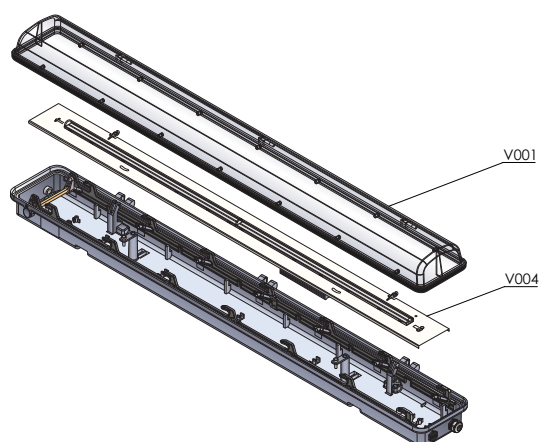
Fixing bracket and flange

Type	Specifications
V018	2x zinc plated steel pole mounted brackets for $\phi 1\frac{1}{4}$ & $1\frac{1}{2}$
V019	2x zinc plated steel pole mounted brackets for $\phi 2$ "
V021	2x Stainless steel 316L pole mounted brackets for $\phi 1\frac{1}{4}$ & $1\frac{1}{2}$
V022	2x Stainless steel 316L pole mounted brackets $\phi 2$ "

Linear fittings

Spare parts

EVNL - Zones 2 & 22



Spare parts

Type	Specifications
V00120W	20W diffuser with gasket for EV. range
V00140W	40W diffuser with gasket for EV. range
V00165W	65W diffuser with gasket for EV. range
V0041X20WEL	Gear tray 12,6W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVNL120
V0041X40WEL	Gear tray 25W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVNL140
V0041X65WEL	Gear tray 58W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVNL165
V0042X20WEL	Gear tray 19W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVNL220
V0042X40WEL	Gear tray 56W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVNL240
V0042X65WEL	Gear tray 71W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVNL265
V02520x40W	Brass continuity plate for EV. 120, EV. 220, EV. 140, EV. 240
V02565W	Brass continuity plate for EV. 165, EV. 265
EXCGM20S-01	Kit M20 Exe IIC nylon cable gland for non armoured cable diameter 6-12mm and locknut
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16mm locknut, sealing gasket



Linear fittings

Fluorescent fitting

EVN - Zones 2 & 22

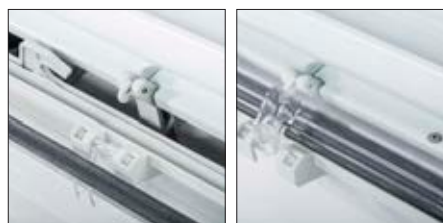


Features

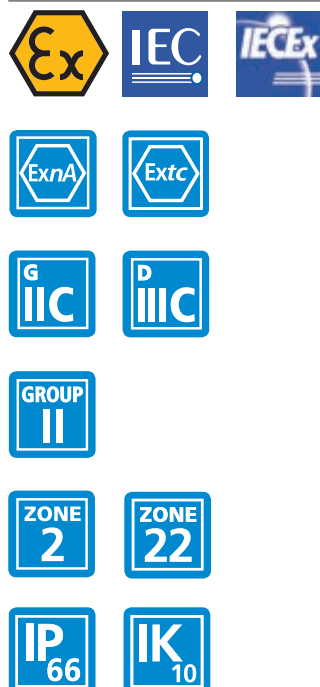
- Double central locking for ingress protection
- All components mounted on hinged and removable gear tray which gives easy access for maintenance
- Including accessories (cable gland, plugs & fixing brackets)

Specifications

- Main body constructed of glass reinforced polyester for high impact strength
- UV protected polycarbonate diffuser to resist harsh environments
- Rated voltage 110- 260Vac/Vdc 50-60Hz
- Wiring configuration: 5 wires
- 3x entries M20
- Emergency version with self- test (type: "EMB" version 3h battery duration)



Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-15 : Enclosure "n" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 15 ATEX 1010X IECEX LCIE 15.0018X II 3 G Ex nA IIC T4 Gc for -40°C to +40°C Ex nA IIC T3 Gc for -40°C to +60°C II 3 D Ex tc IIIC T65°C Dc IP66 for -40°C to +40°C Ex tc IIIC T85°C Dc IP66 for -40°C to +60°C
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C EVN, -10°C to +50°C EVN EMB
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

Linear fittings

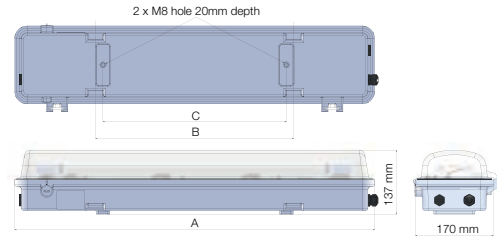
Fluorescent fitting

EVN - Zones 2 & 22



3

EVN



Dimensional drawing

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Current A @ 230V	Dimensions mm			Weight kg
non armored cable	armored cable				A	B	C	



5 wires: Equipped with 1 cable gland & 2 plugs

EVN120-0000	EVN120-D000	5 wires*	1 x 18	0.09	785	432	400	4.40
EVN140-0000	EVN140-D000	5 wires*	1 x 36	0.17	1 370	900	700	7.60
EVN165-0000	EVN165-D000	5 wires*	1 x 58	0.26	1 670	900	700	8.80
EVN220-0000	EVN220-D000	5 wires*	2 x 18	0.17	785	432	400	4.40
EVN240-0000	EVN240-D000	5 wires*	2 x 36	0.33	1 370	900	700	7.60
EVN265-0000	EVN265-D000	5 wires*	2 x 58	0.5	1 670	900	700	8.80



5 wires through: Equipped with 2 cable glands & 1 plug

EVN120-B000	EVN120-E000	5 wires through**	1 x 18	0.09	785	432	400	4.40
EVN140-B000	EVN140-E000	5 wires through**	1 x 36	0.17	1 370	900	700	7.60
EVN165-B000	EVN165-E000	5 wires through**	1 x 58	0.26	1 670	900	700	8.80
EVN220-B000	EVN220-E000	5 wires through**	2 x 18	0.17	785	432	400	4.40
EVN240-B000	EVN240-E000	5 wires through**	2 x 36	0.33	1 370	900	700	7.60
EVN265-B000	EVN265-E000	5 wires through**	2 x 58	0.5	1 670	900	700	8.80

Note. * For armored cable with 1 continuity plate. ** For armored cable with 2 continuity plates.

Technical information

<p>Lamps Fluorescent Lamp (order separately) T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K.</p> <p>CRI 80</p> <p>Photometric curve See page 6/9</p> <p>Rated voltages Electronic ballast : 110-260Vac/dc 50/60Hz</p>	<p>Dielectrical class I</p> <p>Grounding system TNS, TNC, TT, IT neutral system</p> <p>Power factor 0.98</p> <p>Terminal block (screws) 6mm² (rigid wire), 4mm² (flexible wire) Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)</p>	<p>Cable entries Three entries M20 For non- armored cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S) For armored cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)</p>	<p>Housing Fiberglass reinforced polyester housing for high impact strength, UV protected polycarbonate diffuser to resist harsh environments, Painted steel gear tray & Stainless steel 316L insert</p> <p>Fixing (included with product) V015 - 2x Two zinc-plated steel brackets for ceiling mounting</p>
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Linear fittings

Emergency Fluorescent fitting with self-test - 3h.

EVN EMB - Zones 2 & 22

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Battery h	Current A @ 230V	Dimensions mm			Weight kg
non armored cable	armored cable					A	B	C	



5 wires: Equipped with 1 cable gland & 2 plugs

EVN120EMB-0000	EVN120EMB-D000	5 wires*	1 x 18	3h	0.09	785	432	400	5.80
EVN140EMB-0000	EVN140EMB-D000	5 wires*	1 x 36	3h	0.17	1 370	900	700	9.00
EVN165EMB-0000	EVN165EMB-D000	5 wires*	1 x 58	3h	0.26	1 670	900	700	10.60
EVN220EMB-0000	EVN220EMB-D000	5 wires*	2 x 18	3h	0.17	785	432	400	5.80
EVN240EMB-0000	EVN240EMB-D000	5 wires*	2 x 36	3h	0.33	1 370	900	700	9.00
EVN265EMB-0000	EVN265EMB-D000	5 wires*	2 x 58	3h	0.50	1 670	900	700	10.60

Note. * For armored cable with continuity plate. For dimensional drawing, please refer to page 3/16

Electrical Features

Lamps

Fluorescent Lamp (order separately)
T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K.

CRI 80

Photometric curve

See page 6/9

Rated voltages

Electronic ballast : 110-260Vac/dc 50/60Hz

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

Power factor

0.98.

Battery

Battery NiCd 6V 4Ah for EVN120, EVN220
Battery NiCd 6V 7Ah for EVN140, EVN240, EVN165, EVN265
Lumen output in emergency mode (1 lamp lit)
3 hours: 24% for EVN120, EVN220
3 hours: 18% for EVN140, EVN240
3 hours: 14% for EVN165, EVN265
Monitored by LED

Terminal block (spring)

Jumped bar x2 terminal blocks
4mm² (rigid wire), 2,5mm² (flexible wire)
Terminals supplied L1, L2, L3, LS, N, E, BS (looping possible with one additional cable gland)

Cable entries

Three entries M20

For non- armored cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S)

For armored cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)

Housing

Fiberglass reinforced polyester housing for high impact strength, UV protected polycarbonate diffuser to resist harsh environments, 2 x M8 Stainless steel 316L insert
Painted steel geartray

Fixing (included with product)

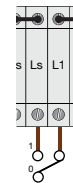
V015 - 2x Two zinc-plated steel brackets for ceiling mounting

Emergency function diagrams

Wiring provided by DTS - Maintained Mode



Switch between LS/L1 - Non Maintained Mode



Mains Supply	Tube	Battery
ON	Lit	Charging
OFF	Only emergency tube lit	Discharging

Mains Supply	Tube	Battery
ON	OFF	Charging
OFF	Only emergency tube lit	Discharging

* This table corresponds to the position 0 "open".

If the switch is on position 1 "close", refer to the table on the left

Preventive maintenance mode

Battery charge - 4 months
Battery charge capacity during 3hr - quarterly
Clear system test display by LED

Battery charge monitoring with LED - Mains ON



Green LED lit
Healthy (Test OK)



Green LED flashing
Batteries are charged



Green & red LED light up alternately (2s)
Battery test in progress



Red LED flashing
Fault (replace battery)



Yellow LED flashing
Battery Test Fault



Red LED lit
Emergency mode



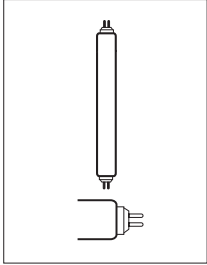
Red LED flashing
Battery discharged

Linear fittings

Accessories

EVN - Zones 2 & 22

Lamps



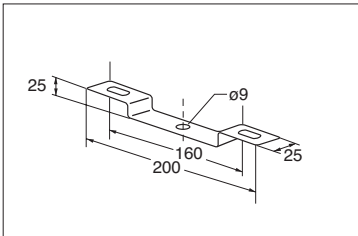
Bi-pin T8 fluorescent lamps

Specifications:

G13 - \varnothing 26mm
 Colour temperature: White industry 4 000°K
 CRI: > 80
 lm/W: 65 to 93
 Average operating life: 12 000 hours

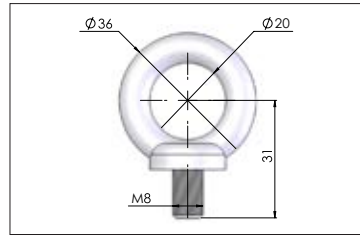
Type	Power W	Lumen output lm	Lampholder
TL18W	18	1 250	G13
TL36W	36	3 350	G13
TL58W	58	5 200	G13

Fixing accessories*



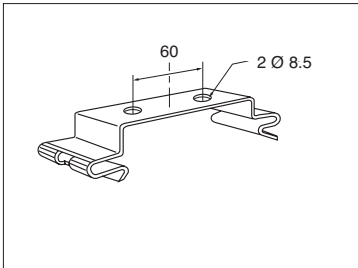
Brackets

Type	Specifications
V015	2 x pair of zinc plated steel for ceiling mounting (Included with product)
V016	2 x stainless steel 316L brackets for ceiling mounting



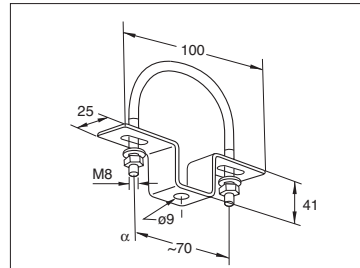
Hook

Type	Specifications
V024	2x Zinc plated steel ceiling suspension hook



Mounting bracket clip

Type	Specifications
V014	2x Rapid ceiling mounting with stainless steel clip



Fixing bracket and flange

Type	Specifications
V018	2x zinc plated steel pole mounted brackets for $\varnothing 1\frac{1}{4}$ & $1\frac{1}{2}$
V019	2x zinc plated steel pole mounted brackets for $\varnothing 2$ "
V021	2x Stainless steel 316L pole mounted brackets for $\varnothing 1\frac{1}{4}$ & $1\frac{1}{2}$
V022	2x Stainless steel 316L pole mounted brackets $\varnothing 2$ "

* Screws and locknuts supplied

Linear fittings

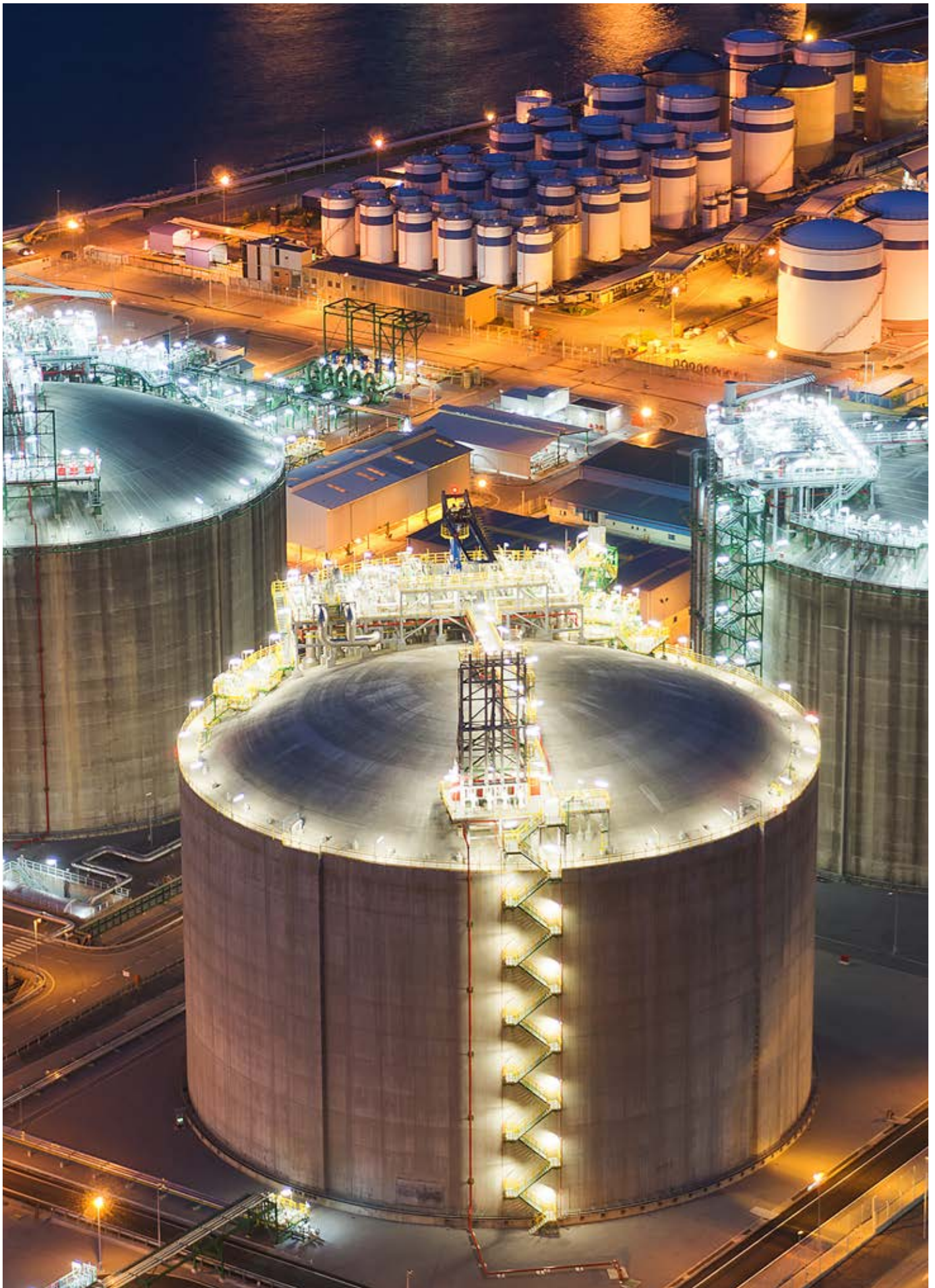
Spare parts

EVN - Zones 2 & 22



Spare parts

Type	Specifications
V00120W	20W diffuser with gasket for EV. range
V00140W	40W diffuser with gasket for EV. range
V00165W	65W diffuser with gasket for EV. range
V0041X20WE	Gear tray 1X18W with electronic ballast 110-260V 50-60Hz for EVN120
V0041X40WE	Gear tray 1X36W with electronic ballast 110-260V 50-60Hz for EVN140
V0041X65WE	Gear tray 1X58W with electronic ballast 110-260V 50-60Hz for EVN165
V0042X20WE	Gear tray 2X18W with electronic ballast 110-260V 50-60Hz for EVN220
V0042X40WE	Gear tray 2x36W with electronic ballast 220- 240V 50-60Hz for EVN240
V0042X65WE	Gear tray 2x58W with electronic ballast 220- 240V 50-60Hz for EVN265
V0041X20WEMB	Emergency gear tray 1x18W with electronic ballast 220-240V 50-60Hz for EVN120EMB
V0041X40WEMB	Emergency gear tray 1x36W with electronic ballast 220-240V 50-60Hz for EVN140EMB
V0041X65WEMB	Emergency gear tray 1x58W with electronic ballast 220-240V 50-60Hz for EVN165EMB
V0042X20WEMB	Emergency gear tray 2x18W with electronic ballast 220-240V 50-60Hz for EVN220EMB
V0042X40WEMB	Emergency gear tray 2x36W with electronic ballast 220-240V 50-60Hz for EVN240EMB
V0042X65WEMB	Emergency gear tray 2x58W with electronic ballast 220-240V 50-60Hz for EVN265EMB
V008N	Bi-pin G13 lampholder
V02520x40W	Brass continuity plate for EV. 120, EV. 220, EV. 140, EV. 240
V02565W	Brass continuity plate for EV. 165, EV. 265
EXCGM20S-01	Kit M20 Exe IIC nylon cable gland for non armoured cable diameter 6-12mm and locknut
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16mm locknut, sealing gasket



Linear fittings

LED fitting

EVDL - Zones 21 & 22



Features

- Operating life 100 000 h (depending items)
- High lumen output - 5 000 lumens with 100% yield (depending items) - LED module with diffuser
- Double central locking for ingress protection
- All components mounted on hinged and removable gear tray which gives easy access for maintenance
- Including accessories (cable gland, plugs & fixing brackets)

3

Specifications

- Main body constructed of glass reinforced polyester for high impact strength
- UV protected polycarbonate diffuser to resist harsh environments
- Rated voltage 100-254Vac50-60Hz
- Wiring configuration: 5 wires
- 3x entries M20



Certifications



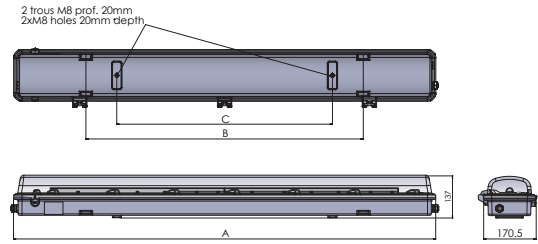
Standards

Approved to:	EN 60079-0 : General requirements EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 11 ATEX 3092X IEC Ex LCI 11.0064X Ex II 2 D Ex tb IIIC T85°C Db for -40°C to +60°C Ex tb IIIC T65°C Db for -40°C to +35°C
Photobiological safety	IEC62471 Exempt group
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

Linear fittings

LED fitting

EVDL - Zones 21 & 22



Dimensional drawing

3

EVDL

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Current A @ 230V	Lumen Output lm	Operating Life at 25°C	Operating Life at 55°C	Efficiency Lm/W	Dimensions mm			Weight kg
non-armored cable	armored cable								A	B	C	



5 wires: Equipped with 1 cable gland & 2 plugs

EVDL120-0000	EVDL120-D000	5 wires*	1 x 12	0.07	1 194	100 000	45 000	95	785	432	400	4.00
EVDL140-0000	EVDL140-D000	5 wires*	1 x 25	0.12	2 353	90 000	75 000	94	1 370	900	700	6.80
EVDL165-0000	EVDL165-D000	5 wires*	1 x 31	0.16	2 450	80 000	60 000	79	1 670	900	700	8.20
EVDL220-0000	EVDL220-D000	5 wires*	1 x 19	0.10	1 613	80 000	35 000	85	785	432	400	4.40
EVDL240-0000	EVDL240-D000	5 wires*	1 x 56	0.27	4 257	70 000	50 000	76	1 370	900	700	7.60
EVDL265-0000	EVDL265-D000	5 wires*	1 x 71	0.34	5 076	70 000	50 000	71	1 670	900	700	8.80



5 wires: Equipped with 2 cable glands & 1 plug

EVDL120-B000	EVDL120-E000	5 wires**	1 x 12	0.07	1 194	100 000	45 000	95	785	432	400	4.00
EVDL140-B000	EVDL140-E000	5 wires**	1 x 25	0.12	2 353	90 000	75 000	94	1 370	900	700	6.80
EVDL165-B000	EVDL165-E000	5 wires**	1 x 31	0.16	2 450	80 000	60 000	79	1 670	900	700	8.20
EVDL220-B000	EVDL220-E000	5 wires**	1 x 19	0.10	1 613	80 000	35 000	85	785	432	400	4.40
EVDL240-B000	EVDL240-E000	5 wires**	1 x 56	0.27	4 257	70 000	50 000	76	1 370	900	700	7.60
EVDL265-B000	EVDL265-E000	5 wires**	1 x 71	0.34	5 076	70 000	50 000	71	1 670	900	700	8.80

Note. * For armored cable with continuity plate. ** For armored cable with 2 continuity plates.

Technical information

LED installed

Set of LED modules with integrated diffuser
Colour temperature 4 000°K
L70/B10 at 25°C (70% lumen output/ 90% active LED) according to operating life.

Photometric curve

See page 6/9

Rated voltages

Electronic driver: 100- 254Vac 50/60Hz.

Power factor

0.9

CRI 84

Wiring Configuration

5 wires

Dielectrical class I

Over-current protection

The power supply shall be self-recovery when the fault condition is removed

Grounding system

TNS, TNC, TT, IT neutral system

Inrush current

for the part EVDL240
I peak = 60A @230Vac
delta t = 275µs

Max. light fittings per circuit breaker

Type	10A	16A	20A	25A
B	4	7	9	11
C	7	12	15	18

Terminal block

(screws plug in terminal block)

10mm² (rigid wire),
6mm² (flexible wire)
Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)

Cable entries

Three entries M20

For non- armored cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S)

For armored cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)

Housing

Fiberglass reinforced polyester housing for high impact strength
UV protected polycarbonate diffuser to resist harsh environments
White painted steel gear tray
2 x M8 Stainless steel 316L insert

Fixing (included with product)

V015 - 2x Two zinc-plated steel brackets for ceiling mounting

Linear fittings

From a fluorescent fitting to a LED fitting

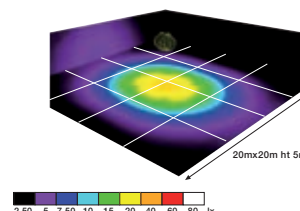
EVDL - Zones 21 & 22

What are the LED benefits?

The benefits of the LED technology consist in a significant improvement in the life expectancy of your product and lower power consumption.

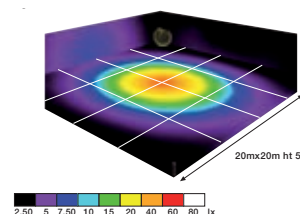
T8 fluorescent lamp - EVD240-000J0 3D view

- Lumen output (light fitting): 5 005lm
- Lumen output (lamp): 6 700lm
- Yield: 74%
- Rating per light fitting: 73,5W
- Light Source: 2x L36W/840 OSRAM Lumilux
- Cool White (corrector factor 1,00)



LED module - EVDL240-0000 3D view

- Lumen output (light fitting): 4 421m
- Lumen output (lamp): 4 433lm
- Yield: 98%
- Rating per light fitting: 58,0W
- Light Source: 1x LED module (corrector factor 1,00)



MRO benefits: How can I upgrade my current light fitting?

Linear fittings could be switched from fluorescent to LED technology without any specific tool.

The fixture with 1 or 2 fluorescent tubes T8 could be replaced by only one LED module fixed on the new gear tray.



How is my upgraded LED light fitting certified?

The EC type (ATEX) certification, EC declaration and the installation notice of the fluorescent fitting remain valid for all the LED fittings (more details on demand).

Spare parts to upgrade from a "fluorescent" to a "LED" fitting - LED gear tray with driver 100-254Vac 50/60Hz:

- V0041X20WEL - To upgrade EVD120 to EVDL120
- V0041X40WEL - To upgrade EVD140 to EVDL140
- V0041X65WEL - To upgrade EVD165 to EVDL165
- V0042X20WEL - To upgrade EVD220 to EVDL220
- V0042X40WEL - To upgrade EVD240 to EVDL240
- V0042X65WEL - To upgrade EVD265 to EVDL265

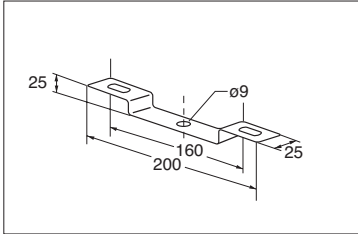
Linear fittings

Accessories

EVDL - Zones 21 & 22

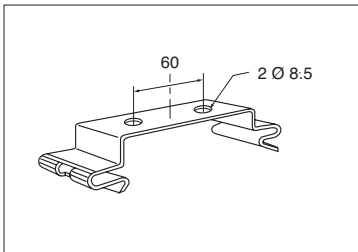
Fixing accessories*

3



Brackets

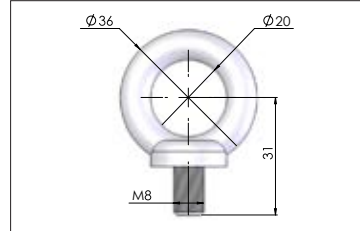
Type	Specifications
V015	2 x pair of zinc plated steel for ceiling mounting (Included with product)
V016	2 x stainless steel 316L brackets for ceiling mounting



Mounting bracket clip

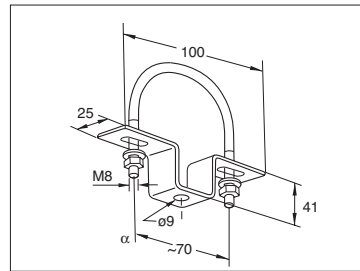
Type	Specifications
V014	2x Rapid ceiling mounting with stainless steel clip

* Screws and locknuts supplied



Hook

Type	Specifications
V024	2x Zinc plated steel ceiling suspension hook



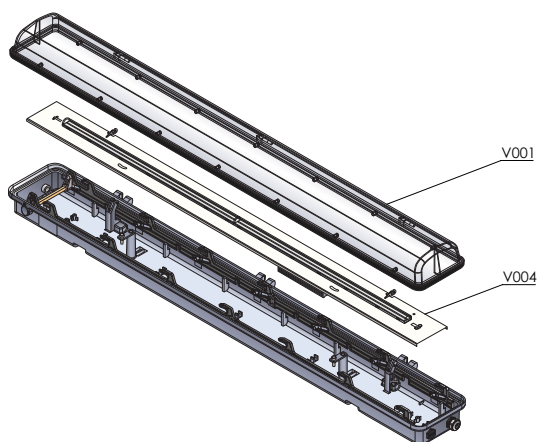
Fixing bracket and flange

Type	Specifications
V018	2x zinc plates steel pole mounted brackets for $\phi 1\frac{1}{4}$ & $1\frac{1}{2}$
V019	2x zinc plates steel pole mounted brackets for $\phi 2$
V021	2x Stainless steel 316L pole mounted brackets for $\phi 1\frac{1}{4}$ & $1\frac{1}{2}$
V022	2x Stainless steel 316L pole mounted brackets $\phi 2$

Linear fittings

Spare parts

EVDL - Zones 21 & 22



Spare parts

Type	Specifications
V00120W	20W diffuser with gasket for EV. range
V00140W	40W diffuser with gasket for EV. range
V00165W	65W diffuser with gasket for EV. range
V0041X20WEL	Gear tray 12,6W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVDL120
V0041X40WEL	Gear tray 25W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVDL140
V0041X65WEL	Gear tray 58W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVDL165
V0042X20WEL	Gear tray 19W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVDL220
V0042X40WEL	Gear tray 56W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVDL240
V0042X65WEL	Gear tray 71W with driver 100-254Vac 50-60Hz and bracket kit of gear tray for EVDL265
V02520x40W	Brass continuity plate for EV. 120, EV. 220, EV. 140, EV. 240
V02565W	Brass continuity plate for EV. 165, EV. 265
EXCGM20S-01	Kit M20 Exe IIC nylon cable gland for non armoured cable diameter 6-12mm and locknut
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16mm locknut, sealing gasket



Linear fittings

Fluorescent fitting

EVD - Zones 21 & 22

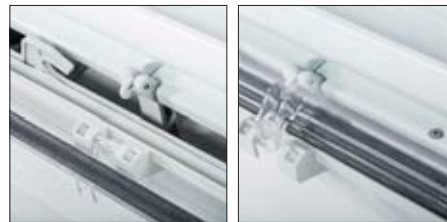


Features

- Double central locking for ingress protection
- All components mounted on hinged and removable gear tray which gives easy access for maintenance
- Including accessories (cable gland, plugs & fixing brackets)

Specifications

- Main body constructed of glass reinforced polyester for high impact strength
- UV protected polycarbonate diffuser to resist harsh environments
- Rated voltage 110-260Vac/Vdc 50-60Hz
- Wiring configuration: 5 wires
- 3x entries M20
- Emergency version with self-test (type: "EMB" version 3h battery duration)



Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 11 ATEX 3092X IEC Ex LCI 11.0064X Ex II 2 D Ex tb IIIC T85°C Db for -40°C to +60°C Ex tb IIIC T65°C Db for -40°C to +35°C
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C EVD, -10°C to +50°C EVD EMB
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

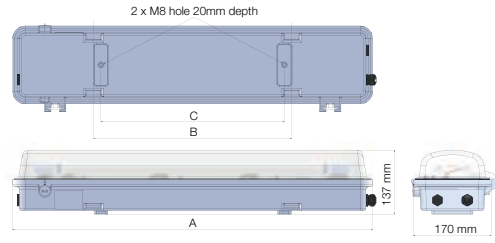
Linear fittings

Fluorescent fitting

EVD - Zones 21 & 22



EVD



Dimensional drawing

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Current A @ 230V	Dimensions mm			Weight kg
non armored cable	armored cable				A	B	C	



5 wires: equipped with 1 cable gland & 2 plugs

EVD120-00J0	EVD120-D0J0	5 wires*	1 x 18	0.09	785	432	400	4.40
EVD140-00J0	EVD140-D0J0	5 wires*	1 x 36	0.17	1 370	900	700	7.60
EVD165-00J0	EVD165-D0J0	5 wires*	1 x 58	0.26	1 670	900	700	8.80
EVD220-00J0	EVD220-D0J0	5 wires*	2 x 18	0.17	785	432	400	4.40
EVD240-00J0	EVD240-D0J0	5 wires*	2 x 36	0.33	1 370	900	700	7.60
EVD265-00J0	EVD265-D0J0	5 wires*	2 x 58	0.5	1 670	900	700	8.80



5 wires through: equipped with 2 cable glands & 1 plug

EVD120-B0J0	EVD120-E0J0	5 wires through**	1 x 18	0.09	785	432	400	4.40
EVD140-B0J0	EVD140-E0J0	5 wires through**	1 x 36	0.17	1 370	900	700	7.60
EVD165-B0J0	EVD165-E0J0	5 wires through**	1 x 58	0.26	1 670	900	700	8.80
EVD220-B0J0	EVD220-E0J0	5 wires through**	2 x 18	0.17	785	432	400	4.40
EVD240-B0J0	EVD240-E0J0	5 wires through**	2 x 36	0.33	1 370	900	700	7.60
EVD265-B0J0	EVD265-E0J0	5 wires through**	2 x 58	0.5	1 670	900	700	8.80

Note. * For armored cable with 1 continuity plate. ** For armored cable with 2 continuity plates.

Technical information

<p>Lamps Fluorescent Lamp (order separately) T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K.</p> <p>CRI 80</p> <p>Photometric curve See page 6/9</p> <p>Rated voltages Electronic ballast : 110-260Vac/dc 50-60Hz</p>	<p>Dielectrical class I</p> <p>Grounding system TNS, TNC, TT, IT neutral system</p> <p>Power factor 0.98</p> <p>Terminal block (screws) 6mm² (rigid wire), 4mm² (flexible wire) Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)</p>	<p>Cable entries Three entries M20</p> <p>For non- armored cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S)</p> <p>For armored cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)</p>	<p>Housing Fiberglass reinforced polyester housing for high impact strength, UV protected polycarbonate diffuser to resist harsh environments, Painted steel gear tray & Stainless steel 316L insert</p> <p>Fixing (included with product) V015 - 2x two zinc-plated steel brackets for ceiling mounting</p>
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Linear fittings

Emergency fluorescent fitting with self- test - 3h.

EVD EMB - Zones 21 & 22

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Battery h	Current A @ 230V	Dimensions mm			Weight kg
non armored cable	armored cable					A	B	C	



5 wires: Equipped with 1 cable gland & 2 plugs

EVD120EMB-00J0	EVD120EMB-D0J0	5 wires*	1 x 18	3h	0.09	785	432	400	5.80
EVD140EMB-00J0	EVD140EMB-D0J0	5 wires*	1 x 36	3h	0.17	1 370	900	700	9.00
EVD165EMB-00J0	EVD165EMB-D0J0	5 wires*	1 x 58	3h	0.26	1 670	900	700	10.60
EVD220EMB-00J0	EVD22EMB-D0J0	5 wires*	2 x 18	3h	0.17	785	432	400	5.80
EVD240EMB-00J0	EVD240EMB-D0J0	5 wires*	2 x 36	3h	0.33	1 370	900	700	9.00
EVD265EMB-00J0	EVD265EMB-D0J0	5 wires*	2 x 58	3h	0.50	1 670	900	700	10.60

Note. * For armored cable with continuity plate. For dimensional drawing please refer to page 3/28

Electrical Features

Lamps

Fluorescent Lamp (order separately)
T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K.

CRI 80

Photometric curve

See page 6/9

Rated voltages

Electronic ballast : 110-260Vac/dc 50-60Hz

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

Power factor

0.98.

Battery

Battery NiCd 6V 4Ah for EVD120, EVD220
Battery NiCd 6V 7Ah for EVD140, EVD240, EVD165, EVD265
Lumen output in emergency mode (1 lamp lit)
3 hours: 24% for EVD120, EVD220
3 hours: 18% for EVD140, EVD240
3 hours: 14% for EVD165, EVD265
Monitored by LED

Terminal block (spring)

Jumped bar x2 terminal blocks
4mm² (rigid wire), 2,5mm² (flexible wire)
Terminals supplied L1, L2, L3, LS, N, E, BS (looping possible with one additional cable gland)

Cable entries

Three entries M20
For non- armored cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S)
For armored cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)

Housing

Fiberglass reinforced polyester housing for high impact strength, UV protected polycarbonate diffuser to resist harsh environments, 2 x M8 Stainless steel 316L insert
Painted steel geartray

Fixing (included with product)

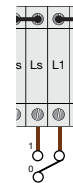
V015 - 2x Two zinc-plated steel brackets for ceiling mounting

Emergency function diagrams

Wiring provided by DTS - Maintained Mode



Switch between LS/L1 - Non Maintained Mode



Mains Supply	Tube	Battery
ON	Lit	Charging
OFF	Only emergency tube lit	Discharging

Mains Supply	Tube	Battery
ON	OFF	Charging
OFF	Only emergency tube lit	Discharging

* This table corresponds to the position 0 "open".
If the switch is on position 1 "close", refer to the table on the left

Preventive maintenance mode

Battery charge - 4 months
Battery charge capacity during 3hr - quarterly
Clear system test display by LED

Battery charge monitoring with LED - Mains ON



Green LED lit
Healthy (Test OK)



Green LED flashing
Batteries are charged



Green & red LED light up alternately (2s)
Battery test in progress



Red LED flashing
Fault (replace battery)



Yellow LED flashing
Battery Test Fault



Red LED lit
Emergency mode



Red LED flashing
Battery discharged

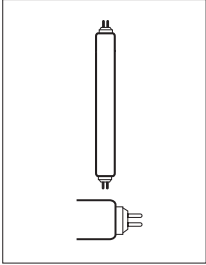
Linear fittings

Accessories

EVD - Zones 21 & 22

Lamps

3



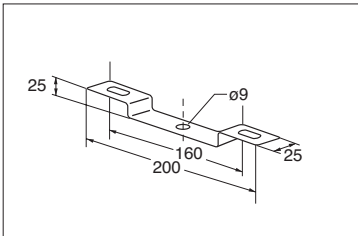
Bi-pin T8 fluorescent lamps

Specifications:

G13 - \varnothing 26mm
 Colour temperature: White industry 4 000°K
 CRI: > 80
 lm/W: 65 to 93
 Average operating life: 12 000 hours

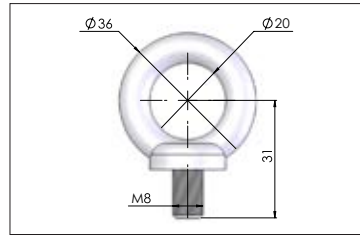
Type	Power W	Lumen output lm	Lampholder
TL18W	18	1 250	G13
TL36W	36	3 350	G13
TL58W	58	5 200	G13

Fixing accessories*



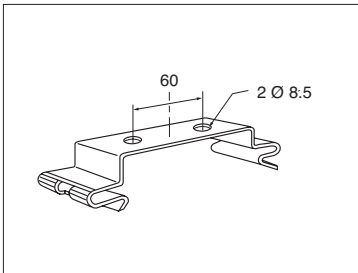
Brackets

Type	Specifications
V015	2 x pair of zinc plated steel for ceiling mounting (Included with product)
V016	2 x stainless steel 316L brackets for ceiling mounting



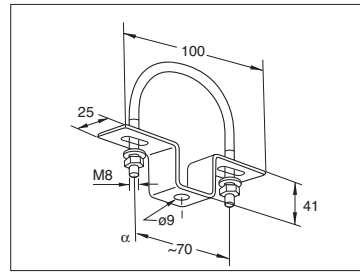
Hook

Type	Specifications
V024	2x Zinc plated steel ceiling suspension hook



Mounting bracket clip

Type	Specifications
V014	2x Rapid ceiling mounting with stainless steel clip



Fixing bracket and flange

Type	Specifications
V018	2x zinc plated steel pole mounted brackets for $\varnothing 1\frac{1}{4}$ & $1\frac{1}{2}$ "
V019	2x zinc plated steel pole mounted brackets for $\varnothing 2$ "
V021	2x Stainless steel 316L pole mounted brackets for $\varnothing 1\frac{1}{4}$ & $1\frac{1}{2}$ "
V022	2x Stainless steel 316L pole mounted brackets $\varnothing 2$ "

* Screws and locknuts supplied

Linear fittings

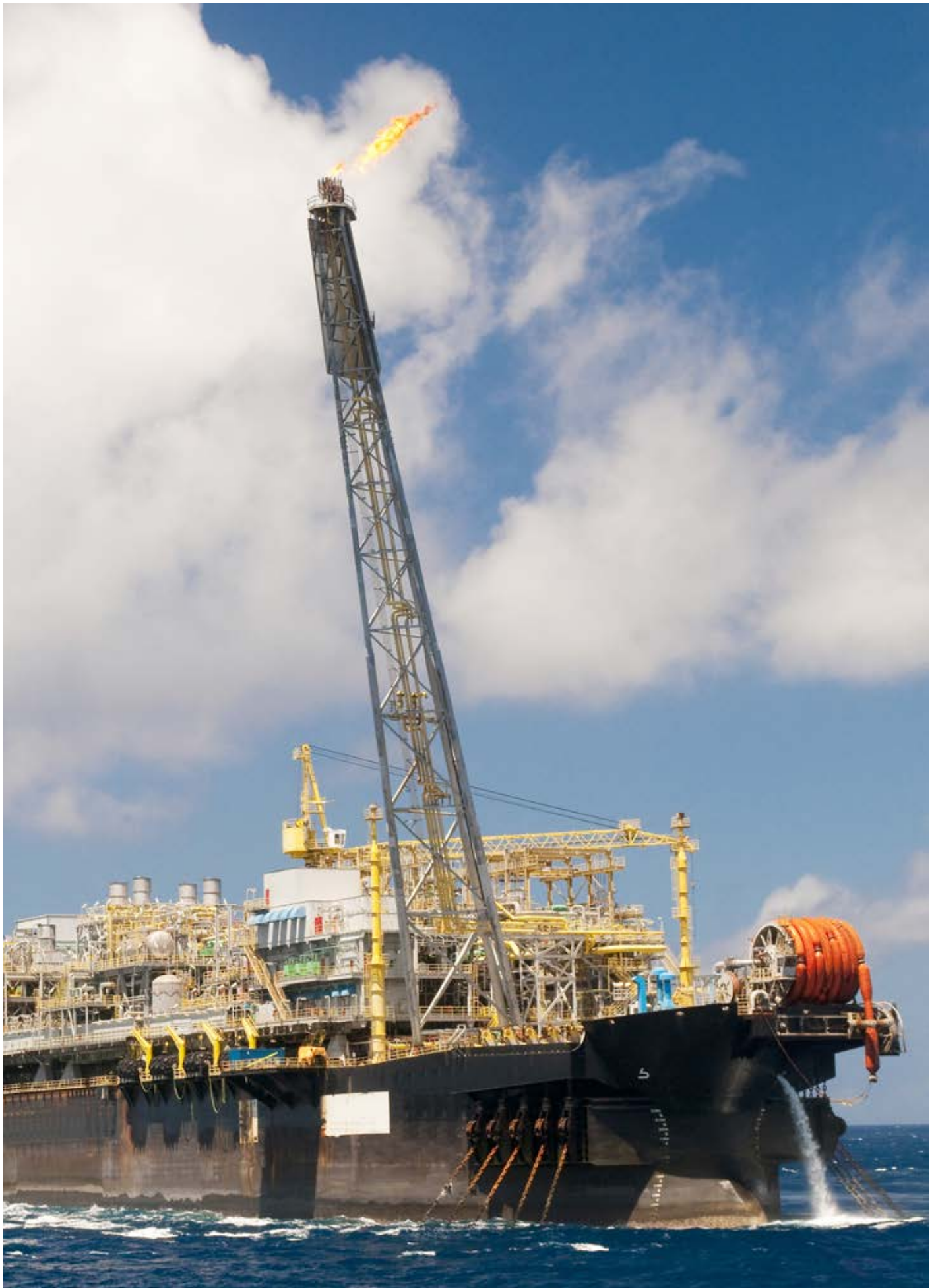
Spare parts

EVD - Zones 21 & 22



Spare parts

Type	Specifications
V00120W	20W diffuser with gasket for EV. range
V00140W	40W diffuser with gasket for EV. range
V00165W	65W diffuser with gasket for EV. range
V0041X20WE	Gear tray 1X18W with electronic ballast 110-260V 50-60Hz for EVD120
V0041X40WE	Gear tray 1X36W with electronic ballast 110-260V 50-60Hz for EVD140
V0041X65WE	Gear tray 1X58W with electronic ballast 110-260V 50-60Hz for EVD165
V0042X20WE	Gear tray 2X18W with electronic ballast 110-260V 50-60Hz for EVD220
V0042X40WE	Gear tray 2x36W with electronic ballast 220- 240V 50-60Hz for EVD240
V0042X65WE	Gear tray 2x58W with electronic ballast 220- 240V 50-60Hz for EVD265
V0041X20WEMB	Emergency gear tray 1x18W with electronic ballast 220-240V 50-60Hz for EVD120EMB
V0041X40WEMB	Emergency gear tray 1x36W with electronic ballast 220-240V 50-60Hz for EVD140EMB
V0041X65WEMB	Emergency gear tray 1x58W with electronic ballast 220-240V 50-60Hz for EVD165EMB
V0042X20WEMB	Emergency gear tray 2x18W with electronic ballast 220-240V 50-60Hz for EVD220EMB
V0042X40WEMB	Emergency gear tray 2x36W with electronic ballast 220-240V 50-60Hz for EVD240EMB
V0042X65WEMB	Emergency gear tray 2x58W with electronic ballast 220-240V 50-60Hz for EVD265EMB
V008N	Bi-pin G13 lampholder
V02520x40W	Brass continuity plate for EV. 120, EV. 220, EV. 140, EV. 240
V02565W	Brass continuity plate for EV. 165, EV. 265
EXCGM20S-01	Kit M20 Exe IIC nylon cable gland for non armoured cable diameter 6-12mm and locknut
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16mm locknut, sealing gasket



Linear fittings

Weatherproof LED fitting

EVTL - Industrial applications



Specifications

- Main body constructed of glass reinforced polyester for high impact strength
- UV protected polycarbonate diffuser to resist harsh environments
- Rated voltage 100-254Vac 50-60Hz
- Wiring configuration: 5 wires
- 3x entries M20

Certifications



Features

- Operating life 100 000 h (according to items)
- High lumen output - 5 000 lumens with 100% yield (according to items) - LED module with diffuser
- Double central locking for ingress protection
- All components mounted on hinged and removable gear tray which gives easy access for maintenance
- Including accessories (cable gland, plugs & fixing brackets)

3



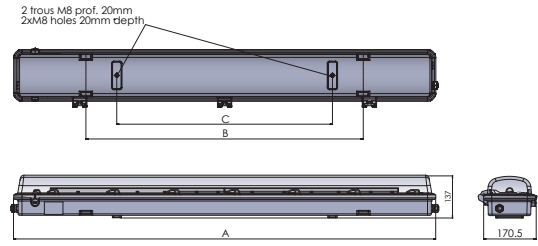
Standards

Photobiological safety	IEC62471 Exempt group
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

Linear fittings

Weatherproof LED fitting

EVTL - Industrial applications



Dimensional drawing

3

EVTL

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Current A @ 230V	Lumen Output lm	Operating Life at 25°C	Operating Life at 55°C	Efficiency Lm/W	Dimensions mm			Weight kg
non-armored cable	armored cable								A	B	C	



5 wires: Equipped with 1 cable gland & 2 plugs

EVTL120-0000	EVTL120-D000	5 wires*	1 x 12	0.07	1 194	100 000	45 000	95	785	432	400	4.00
EVTL140-0000	EVTL140-D000	5 wires*	1 x 25	0.12	2 353	90 000	75 000	94	1 370	900	700	6.80
EVTL165-0000	EVTL165-D000	5 wires*	1 x 31	0.16	2 450	80 000	60 000	79	1 670	900	700	8.20
EVTL220-0000	EVTL220-D000	5 wires*	1 x 19	0.10	1 613	80 000	35 000	85	785	432	400	4.40
EVTL240-0000	EVTL240-D000	5 wires*	1 x 56	0.27	4 257	70 000	50 000	76	1 370	900	700	7.60
EVTL265-0000	EVTL265-D000	5 wires*	1 x 71	0.34	5 076	70 000	50 000	71	1 670	900	700	8.80



5 wires: Equipped with 2 cable glands & 1 plug

EVTL120-B000	EVTL120-E000	5 wires**	1 x 12	0.07	1 194	100 000	45 000	95	785	432	400	4.00
EVTL140-B000	EVTL140-E000	5 wires**	1 x 25	0.12	2 353	90 000	75 000	94	1 370	900	700	6.80
EVTL165-B000	EVTL165-E000	5 wires**	1 x 31	0.16	2 450	80 000	60 000	79	1 670	900	700	8.20
EVTL220-B000	EVTL220-E000	5 wires**	1 x 19	0.10	1 613	80 000	35 000	85	785	432	400	4.40
EVTL240-B000	EVTL240-E000	5 wires**	1 x 56	0.27	4 257	70 000	50 000	76	1 370	900	700	7.60
EVTL265-B000	EVTL265-E000	5 wires**	1 x 71	0.34	5 076	70 000	50 000	71	1 670	900	700	8.80

Note. * For armored cable with continuity plate. ** For armored cable with 2 continuity plates.

Technical information

LED installed

Set of LED modules with integrated diffuser
Colour temperature 4 000°K
L70/B10 at 25°C (70% lumen output/ 90% active LED) according to operating life.

Photometric curve

See page 6/9

Rated voltages

Electronic driver: 100- 254Vac 50/60Hz

Power factor

0.9

CRI 84

Wiring Configuration

5 wires

Dielectrical class I

Over-current protection

The power supply shall be self-recovery when the fault condition is removed

Grounding system

TNS, TNC, TT, IT neutral system

Inrush current

for the part EVTL240
I peak = 60A @230Vac
delta t = 275µs

Max. light fittings per circuit breaker

Type	10A	16A	20A	25A
B	4	7	9	11
C	7	12	15	18

Terminal block

(screws plug in terminal block)

10mm² (rigid wire),
6mm² (flexible wire)
Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)

Cable entries

Three entries M20

For non- armored cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S)

For armored cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)

Housing

Fiberglass reinforced polyester housing for high impact strength
UV protected polycarbonate diffuser to resist harsh environments
White painted steel gear tray
2 x M8 Stainless steel 316L insert

Fixing (included with product)

V015 - 2x Two zinc-plated steel brackets for ceiling mounting

Linear fittings

From a fluorescent fitting to a LED fitting

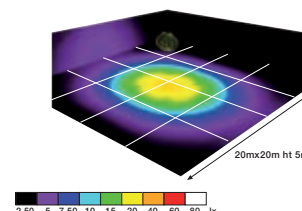
EVTL - Industrial applications

What are the LED benefits?

The benefits of the LED technology consist in a significant improvement in the life expectancy of your product and lower power consumption.

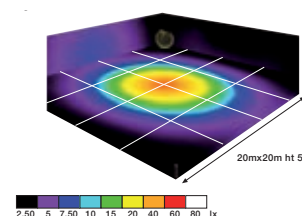
T8 fluorescent lamp - EVT240-00J0 3D view

- Lumen output (light fitting): 5 005lm
- Lumen output (lamp): 6 700lm
- Yield: 74%
- Rating per light fitting: 73,5W
- Light Source: 2x L36W/840 OSRAM Lumilux
- Cool White (corrector factor 1,00)



LED module - EVTL240-0000 3D view

- Lumen output (light fitting): 4 421lm
- Lumen output (lamp): 4 433lm
- Yield: 98%
- Rating per light fitting: 58,0W
- Light Source: 1x LED module (corrector factor 1,00)



MRO benefits: How can I upgrade my current light fitting?

Linear fittings could be switched from fluorescent to LED technology without any specific tool.

The fixture with 1 or 2 fluorescent tubes T8 could be replaced by only one LED module fixed on the new gear tray.



How is my upgraded LED light fitting certified?

The EC type (ATEX) certification, EC declaration and the installation notice of the fluorescent fitting remain valid for all the LED fittings (more details on demand).

Spare parts to upgrade from a "fluorescent" to a "LED" fitting - LED gear tray with driver 100-254Vac 50/60Hz:

- V0041X20WEL - To upgrade EVT120 to EVTL120
- V0041X40WEL - To upgrade EVT140 to EVTL140
- V0041X65WEL - To upgrade EVT165 to EVTL165
- V0042X20WEL - To upgrade EVT220 to EVTL220
- V0042X40WEL - To upgrade EVT240 to EVTL240
- V0042X65WEL - To upgrade EVT265 to EVTL265

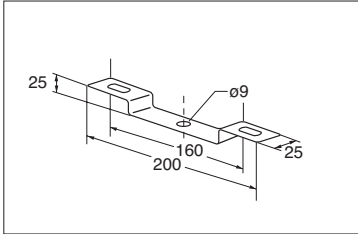
Linear fittings

Accessories

EVTL - Industrial applications

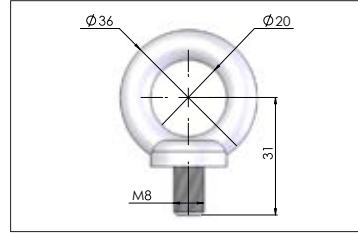
Fixing accessories*

3



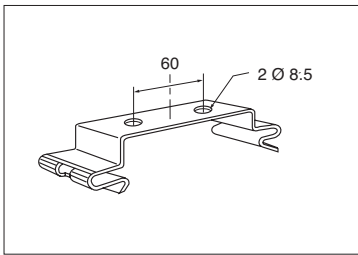
Brackets

Type	Specifications
V015	2 x pair of zinc plated steel for ceiling mounting (Included with product)
V016	2 x stainless steel 316L brackets for ceiling mounting



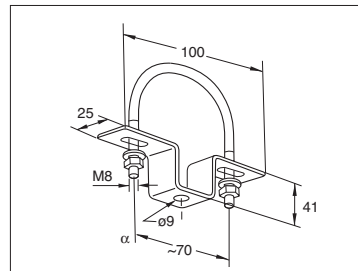
Hook

Type	Specifications
V024	2x Zinc plated steel ceiling suspension hook



Mounting bracket clip

Type	Specifications
V014	2x Rapid ceiling mounting with stainless steel clip



Fixing bracket and flange

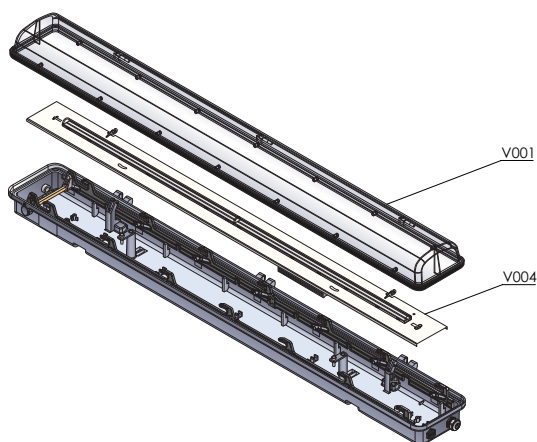
Type	Specifications
V018	2x zinc plates steel pole mounted brackets for $\varnothing 1\frac{1}{4}$ & $1\frac{1}{2}$
V019	2x zinc plates steel pole mounted brackets for $\varnothing 2$
V021	2x Stainless steel 316L pole mounted brackets for $\varnothing 1\frac{1}{4}$ & $1\frac{1}{2}$
V022	2x Stainless steel 316L pole mounted brackets $\varnothing 2$

* Screws and locknuts supplied

Linear fittings

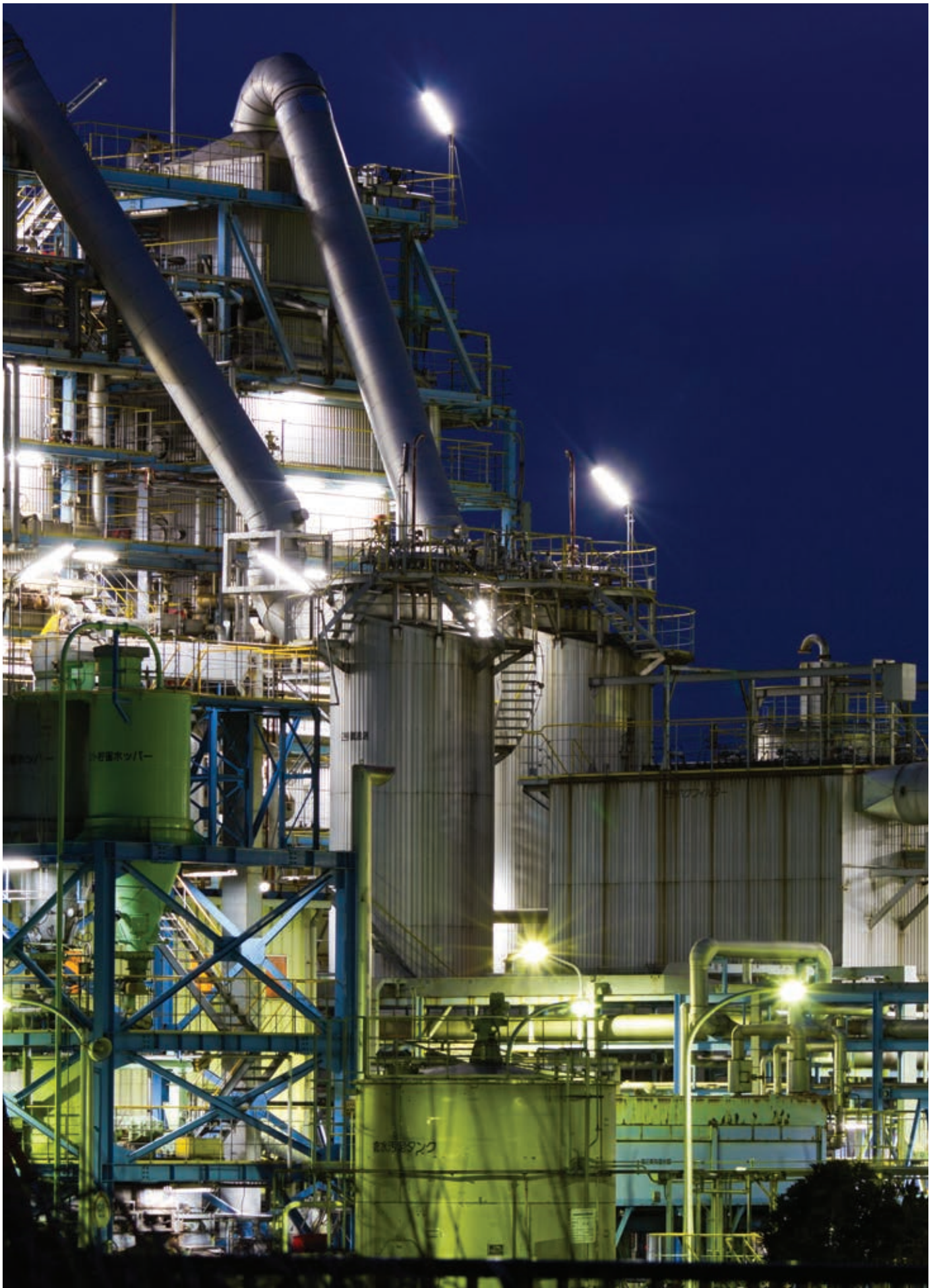
Spare parts

EVTL - Industrial applications



Spare parts

Type	Specifications
V00120W	20W diffuser with gasket for EV. range
V00140W	40W diffuser with gasket for EV. range
V00165W	65W diffuser with gasket for EV. range
V0041X20WEL	Gear tray 12,6W with driver 100-254V 50-60Hz and bracket kit of gear tray for EVTL120
V0041X40WEL	Gear tray 25W with driver 100-254V 50-60Hz and bracket kit of gear tray for EVTL140
V0041X65WEL	Gear tray 58W with driver 100-254V 50-60Hz and bracket kit of gear tray for EVTL165
V0042X20WEL	Gear tray 19W with driver 100-254V 50-60Hz and bracket kit of gear tray for EVTL220
V0042X40WEL	Gear tray 56W with driver 100-254V 50-60Hz and bracket kit of gear tray for EVTL240
V0042X65WEL	Gear tray 71W with driver 100-254V 50-60Hz and bracket kit of gear tray for EVTL265
V02520x40W	Brass continuity plate for EV. 120, EV. 220, EV. 140, EV. 240
V02565W	Brass continuity plate for EV. 165, EV. 265
EXCGM20S-01	Kit M20 Exe IIC nylon cable gland for non armoured cable diameter 6-12mm and locknut
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16mm locknut, sealing gasket



Linear fittings

Weatherproof fluorescent fitting

EVT - Industrial applications

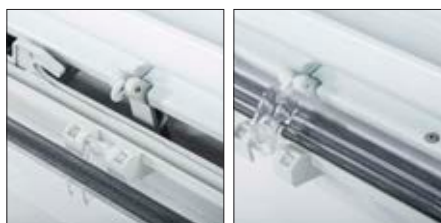


Features

- Double central locking for ingress protection
- All components mounted on hinged and removable gear tray which gives easy access for maintenance
- Including accessories (cable gland, plugs & fixing brackets)

Specifications

- Main body constructed of glass reinforced polyester for high impact strength
- UV protected polycarbonate diffuser to resist harsh environments
- Rated voltage 110-260Vac/Vdc 50-60Hz
- Wiring configuration: 5 wires
- 3x entries M20
- Emergency version with self-test (type: "EMB" version 3h battery duration)



Certifications



Standards

EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C EVT -10°C to +50°C EVT EMB
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

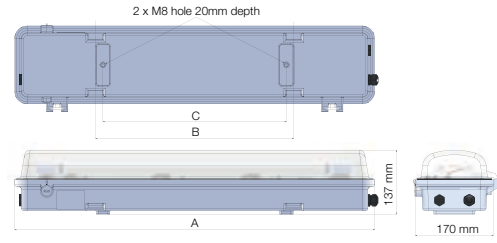
Linear fittings

Weatherproof fluorescent fitting

EVT - Industrial applications



EVT



Dimensional drawing

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Current A @ 230V	Dimensions mm			Weight kg
non armored cable	armored cable				A	B	C	



5 wires: Equipped with 1 cable gland & 2 plugs

EVT120-00J0	EVT120-D0J0	5 wires*	1 x 18	0.09	785	432	400	4.40
EVT140-00J0	EVT140-D0J0	5 wires*	1 x 36	0.17	1 370	900	700	7.60
EVT165-00J0	EVT165-D0J0	5 wires*	1 x 58	0.26	1 670	900	700	8.80
EVT220-00J0	EVT220-D0J0	5 wires*	2 x 18	0.17	785	432	400	4.40
EVT240-00J0	EVT240-D0J0	5 wires*	2 x 36	0.33	1 370	900	700	7.60
EVT265-00J0	EVT265-D0J0	5 wires*	2 x 58	0.5	1 670	900	700	8.80



5 wires through: Equipped with 2 cable glands & 1 plug

EVT120-B0J0	EVT120-E0J0	5 wires through**	1 x 18	0.09	785	432	400	4.40
EVT140-B0J0	EVT140-E0J0	5 wires through**	1 x 36	0.17	1 370	900	700	7.60
EVT165-B0J0	EVT165-E0J0	5 wires through**	1 x 58	0.26	1 670	900	700	8.80
EVT220-B0J0	EVT220-E0J0	5 wires through**	2 x 18	0.17	785	432	400	4.40
EVT240-B0J0	EVT240-E0J0	5 wires through**	2 x 36	0.33	1 370	900	700	7.60
EVT265-B0J0	EVT265-E0J0	5 wires through**	2 x 58	0.5	1 670	900	700	8.80

Note. * For armored cable with 1 continuity plate. ** For armored cable with 2 continuity plates.

Technical information

<p>Lamps Fluorescent Lamp (order separately) T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K.</p> <p>CRI 80</p> <p>Photometric curve See page 6/9</p> <p>Rated voltages Electronic ballast : 110-260Vac/dc 50-60Hz</p>	<p>Dielectrical class I</p> <p>Grounding system TNS, TNC, TT, IT neutral system</p> <p>Power factor 0.98</p> <p>Terminal block (screws) 6mm² (rigid wire), 4mm² (flexible wire) Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)</p>	<p>Cable entries Three entries M20 For non- armored cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S) For armored cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)</p>	<p>Housing Fiberglass reinforced polyester housing for high impact strength, UV protected polycarbonate diffuser to resist harsh environments, Painted steel gear tray & 2 x M8 Stainless steel 316L insert</p> <p>Fixing (included with product) V015 - 2x Two zinc-plated steel brackets for ceiling mounting</p>
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Linear fittings

Emergency fluorescent fitting with self- test - 3h.

EVT EMB - Zones 21 & 22

Technical specifications

Type - For		Wiring Configuration	Light Rating W	Battery h	Current A @ 230V	Dimensions mm			Weight kg
non armored cable	armored cable					A	B	C	



5 wires: Equipped with 1 cable gland & 2 plugs

EVT120EMB-00J0	EVT120EMB-D0J0	5 wires*	1 x 18	3h	0.09	785	432	400	5.80
EVT140EMB-00J0	EVT140EMB-D0J0	5 wires*	1 x 36	3h	0.17	1 370	900	700	9.00
EVT165EMB-00J0	EVT165EMB-D0J0	5 wires*	1 x 58	3h	0.26	1 670	900	700	10.60
EVT220EMB-00J0	EVT220EMB-D0J0	5 wires*	2 x 18	3h	0.17	785	432	400	5.80
EVT240EMB-00J0	EVT240EMB-D0J0	5 wires*	2 x 36	3h	0.33	1 370	900	700	9.00
EVT265EMB-00J0	EVT265EMB-D0J0	5 wires*	2 x 58	3h	0.50	1 670	900	700	10.60

Note. * For armored cable with 1 continuity plate. For dimensional drawing please refer to page 3/28

Electrical Features

Lamps

Fluorescent Lamp (order separately)
T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K.

CRl 80

Photometric curve

See page 6/9

Rated voltages

Electronic ballast : 110-260Vac/dc 50-60Hz

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

Power factor

0.98

Battery

Battery NiCd 6V 4Ah for EVT120, EVT220
Battery NiCd 6V 7Ah for EVT140, EVT240, EVT165, EVT265
Lumen output in emergency mode (1 lamp lit)
3 hours: 24% for EVT120, EVT220
3 hours: 18% for EVT140, EVT240
3 hours: 14% for EVT165, EVT265
Monitored by LED

Terminal block (spring)

Jumped bar x2 terminal blocks
4mm² (rigid wire), 2,5mm² (flexible wire)
Terminals supplied L1, L2, L3, LS, N, E, BS (looping possible with one additional cable gland)

Cable entries

Three entries M20

For non- armored cable: included two M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S)

For armored cable: included continuity plate - two M20 nylon plugs (EX-M20) and one M20 nickel plated brass cable gland, diameter 6-12/ 8.5-16mm (EXN04MMC1)

Housing

Fiberglass reinforced polyester housing for high impact strength, UV protected polycarbonate diffuser to resist harsh environments
Stainless steel 316L insert
Painted steel geartray

Fixing (included with product)

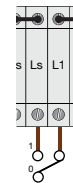
V015 - 2x Two zinc-plated steel brackets for ceiling mounting

Emergency function diagrams

Wiring provided by DTS - Maintained Mode



Switch between LS/L1 - Non Maintained Mode



Mains Supply	Tube	Battery
ON	Lit	Charging
OFF	Only emergency tube lit	Discharging

Mains Supply	Tube	Battery
ON	OFF	Charging
OFF	Only emergency tube lit	Discharging

* This table corresponds to the position 0 "open".

If the switch is on position 1 "close", refer to the table on the left

Preventive maintenance mode

Battery charge - 4 months
Battery charge capacity during 3hr - quarterly
Clear system test display by LED

Battery charge monitoring with LED - Mains ON



Green LED lit
Healthy (Test OK)



Green LED flashing
Batteries are charged



Green & red LED light up alternately (2s)
Battery test in progress



Red LED flashing
Fault (replace battery)



Yellow LED flashing
Battery Test Fault



Red LED lit
Emergency mode



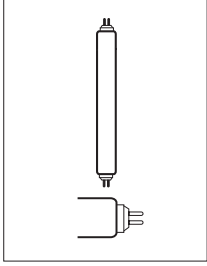
Red LED flashing
Battery discharged

Linear fittings

Accessories

EVT - Industrial applications

Lamps



Bi-pin T8 fluorescent lamps

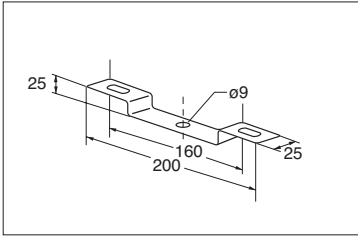
Specifications:

G13 - \varnothing 26mm
 Colour temperature: White industry 4 000°K
 CRI: > 80
 lm/W: 65 > 93
 Average operating life: 12 000 hours

Type	Power W	Lumen output lm	Lampholder
TL18W	18	1 250	G13
TL36W	36	3 350	G13
TL58W	58	5 200	G13

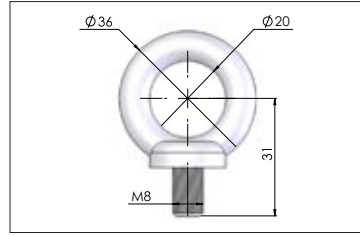
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Fixing accessories*



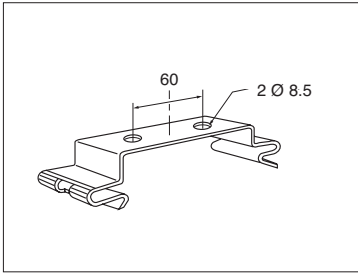
Brackets

Type	Specifications
V015	2 x pair of zinc plated steel for ceiling mounting (Included with product)
V016	2 x stainless steel 316L brackets for ceiling mounting



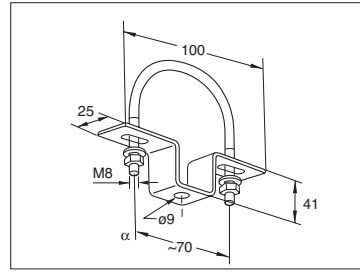
Hook

Type	Specifications
V024	2x Zinc plated steel ceiling suspension hook



Mounting bracket clip

Type	Specifications
V014	2x Rapid ceiling mounting with stainless steel clip



Fixing bracket and flange

Type	Specifications
V018	2x zinc plated steel pole mounted brackets for $\varnothing 1\frac{1}{4}$ & $1\frac{1}{2}$ "
V019	2x zinc plated steel pole mounted brackets for $\varnothing 2$ "
V021	2x Stainless steel 316L pole mounted brackets for $\varnothing 1\frac{1}{4}$ & $1\frac{1}{2}$ "
V022	2x Stainless steel 316L pole mounted brackets $\varnothing 2$ "

* Screws and locknuts supplied

Linear fittings

Spare parts

EVT Range - Industrial applications



Spare parts

Type	Specifications
V00120W	20W diffuser with gasket for EV. range
V00140W	40W diffuser with gasket for EV. range
V00165W	65W diffuser with gasket for EV. range
V0041X20WE	Gear tray 1X18W with electronic ballast 110-260V 50-60Hz for EVT120
V0041X40WE	Gear tray 1X36W with electronic ballast 110-260V 50-60Hz for EVT140
V0041X65WE	Gear tray 1X58W with electronic ballast 110-260V 50-60Hz for EVT165
V0042X20WE	Gear tray 2X18W with electronic ballast 110-260V 50-60Hz for EVT220
V0042X40WE	Gear tray 2x36W with electronic ballast 220- 240V 50-60Hz for EVT240
V0042X65WE	Gear tray 2x58W with electronic ballast 220- 240V 50-60Hz for EVT265
V0041X20WEMB	Emergency gear tray 1x18W with electronic ballast 220-240V 50-60Hz for EVT120EMB
V0041X40WEMB	Emergency gear tray 1x36W with electronic ballast 220-240V 50-60Hz for EVT140EMB
V0041X65WEMB	Emergency gear tray 1x58W with electronic ballast 220-240V 50-60Hz for EVT165EMB
V0042X20WEMB	Emergency gear tray 2x18W with electronic ballast 220-240V 50-60Hz for EVT220EMB
V0042X40WEMB	Emergency gear tray 2x36W with electronic ballast 220-240V 50-60Hz for EVT240EMB
V0042X65WEMB	Emergency gear tray 2x58W with electronic ballast 220-240V 50-60Hz for EVT265EMB
V008N	Bi-pin G13 lampholder
V02520x40W	Brass continuity plate for EV. 120, EV. 220, EV. 140, EV. 240
V02565W	Brass continuity plate for EV. 165, EV. 265
EXCGM20S-01	Kit M20 Exe IIC nylon cable gland for non armoured cable diameter 6-12mm and locknut
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16mm locknut, sealing gasket



Recessed fittings

Recessed fluorescent fitting

ESB - Zones 1 & 2



Specifications

- Steel housing and body painted with Powder paint
- 6mm clear toughened glass panel
- Rated voltage 220-240Vac/Vdc, 50/60Hz
- EOL (End of life) the ballast prevents the lamp cap at the end of lamp life cycle from overheating
- Instant start
- Wiring configuration: 5 wires
- 2x entries M20
- Emergency version (type: "EM" version 3h battery duration)

Features

- Automatic switch-off upon opening for high maintenance security level in hazardous area
- Flush ceiling mounting making it perfect for laboratories
- Including accessories (cable gland & plug)



Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-7 : Increased safety "e"
EC Type examination certificate to:	Directive 94/9/EC - (2014/34/UE) INERIS 11 ATEX 0058X Ex II 2 G Ex de IIC T4 Gb for -40°C to + 60°C
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	860°C
Operating temperature:	-20°C to +55°C ESB -10°C to +50°C ESB EM
IP test:	IP54 IEC 60529
Impact protection index:	IK08 according to IEC 62262

Recessed fittings

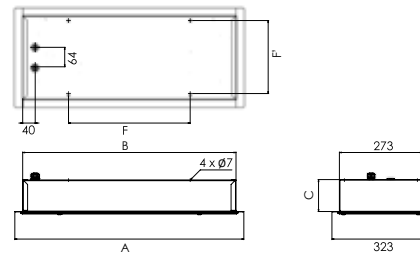
Recessed fluorescent fitting

ESB - Zones 1 & 2



3

ESB



Dimensional drawing

Technical specifications

Type	Wiring Configuration	Light Rating W	Current A @ 230V	Glass	Dimensions mm				Weight kg
					A	B	C	F x F'	
<p>5 wires: Equipped with 1 cable gland & 1 plug</p>									
ESB220-0000	5 wires	2 x 18	0.17	Toughened	753	702	105	400 x 240	13.00
ESB240-0000	5 wires	2 x 36	0.33	Toughened	1 364	1 312	105	1 000 x 240	20.05
ESB265-0000	5 wires	2 x 58	0.50	Toughened	1 664	1 612	105	1 300 x 240	25.00

Technical information

<p>Lamps Fluorescent Lamp (order separately) T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K.</p> <p>CRI 80</p> <p>Photometric curve See page 6/9</p> <p>Rated voltages Electronic ballast: 220-240Vac/Vdc, 50/60Hz EOL (End of life) the ballast prevents the lamp cap at the end of lamp life cycle from overheating Instant start</p>	<p>Dielectrical class I</p> <p>Grounding system TNS, TNC, TT, IT neutral system</p> <p>Power factor 0.98</p> <p>Terminal block (spring) Jumped bar x2 terminal blocks 4mm² (rigid wire), 2.5mm² (flexible wire) Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)</p>	<p>Cable entries Two entries M20 Included one M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S) for non armoured cable</p> <p>Housing Steel housing and body painted with powderpaint 6 mm clear toughned glass panel Neopren gasket</p>	<p>Fixing Mounting by 4 M6 threaded bolts (not supplied) joined to the main body</p>
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Recessed fittings

Emergency recessed fluorescent fitting

ESB EM - Zones 1 & 2

Technical specifications

Type	Wiring Configuration	Light Rating W	Current A @ 230V	Battery h	Glass	Dimensions mm				Weight kg
						A	B	C	F x F'	
3 wires: Equipped with 1 cable gland & 1 plug										
ESB240EM-0000	3 wires	2 x 36	0.33	3	Toughened	1 364	1 312	105	1 000 x 240	23.00

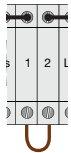
* For dimensional drawing please refer to page 3/46

Electrical Features

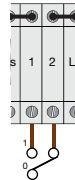
<p>Lamps</p> <p>Fluorescent Lamp (order separately) T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K</p> <p>Rated voltages</p> <p>Electronic ballast: 220-240Vac/Vdc 50/60Hz EOL (End of life) the ballast prevents the lamp cap at the end of lamp life cycle from overheating Instant start</p>	<p>Power factor</p> <p>0.98</p> <p>Battery</p> <p>Battery NiCd 7,2V 4Ah in flameproof case (Ex d) Lumen output in emergency mode (1 lamp lit) 2 hours: 33% for ESB240 3 hours: 18% for ESB240 Monitored by one red LED</p>	<p>Terminal block (spring)</p> <p>Jumped bar x2 terminal blocks 4mm² (rigid wire), 2,5mm² (flexible wire) Terminals supplied L1, N, PE,1,2 (looping possible with one additional cable gland)</p> <p>Cable entries</p> <p>Two entries M20 Included one M20 nylon plugs (EX-M20) and one M20 nnylon cable gland , diameter 6-12mm (EXCGM20S) for non armoured cable</p>	<p>Housing</p> <p>Steel housing and body painted with powderpaint 6 mm clear toughned glass panel Neopren gasket</p> <p>Fixing</p> <p>Mounting by 4 M6 threaded bolts (not supplied) joined to the main body</p>
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Emergency function diagrams

Wiring provided by DTS - Maintained Mode



Switch between 1/2 - Non Maintained Mode *



Mains Supply	Tube	Battery
ON	Lit	Charging
OFF	Only emergency tube lit	Discharging

Mains Supply	Tube	Battery
ON	OFF	Charged
OFF	Only emergency tube lit	Discharging

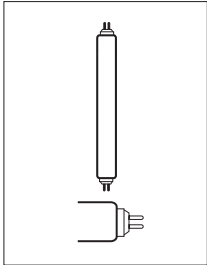
* This table corresponds to the position 0 "open".
If the switch is on position 1 "close", refer to the table on the left

Recessed fittings

Accessories & spare parts

ESB - Zones 1 & 2

Lamps



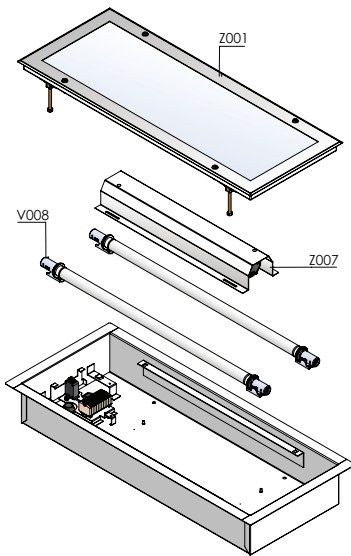
Bi-pin T8 fluorescent lamps

Specifications:

G13 - ø 26mm
 Colour temperature: White industry 4 000°K
 CRI: > 80
 lm/W: 65 to 93
 Average operating life: 12 000 hours

Type	Power W	Lumen output lm	Lampholder
TL18W	18	1 250	G13
TL36W	36	3 350	G13
TL58W	58	5 200	G13

3



Spare parts

Type	Specifications
Z001220	Transparent frame - hardened glass - for ESB220
Z001240	Transparent frame - hardened glass - for ESB240
Z001265	Transparent frame - hardened glass - for ESB265
Z0072X20WS	Ballast 220- 240Vac/Vdc 50-60Hz + cover of ballast for ESB220
Z0072X40WS	Ballast 220- 240Vac/Vdc 50-60Hz + cover of ballast for ESB240
Z0072X65WS	Ballast 220- 240Vac/Vdc 50-60Hz + cover of ballast for ESB265
V008	Bi-pin G13 lampholder
V01140WEME	Battery for ESB240EM
EXCGM20S-01	Kit M20 Exe IIC nylon cable gland for non armoured cable diameter 6-12mm and locknut
EXN04MMC1-01	Kit M20 Ex-d IIC/Ex-e II/Ex-td double compression nickel plated cable gland for non armoured cable diameter inner 6-12 outer 8.5-16mm locknut, sealing gasket

Recessed fittings

Weatherproof recessed fluorescent fitting

EST - Industrial applications



Features

- Fitting combines photometric qualities, strength and design
- Flush ceiling mounting making it perfect for laboratories
- Including accessories (cable gland & plug)

Specifications

- Steel housing and body painted with powderpaint
- 6mm clear toughened glass panel
- Rated voltage 110-260Vac/Vdc 50-60Hz
- Wiring configuration: 5 wires
- 2x entries M20
- Emergency version (type: "EM" version 3h battery duration)

Certifications



Standards

EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	860°C
Operating temperature:	-20°C to +55°C EST -10°C to +50°C EST EM
IP test:	IP64 IEC 60529
Impact protection index:	IK08 according to IEC 62262

Recessed fittings

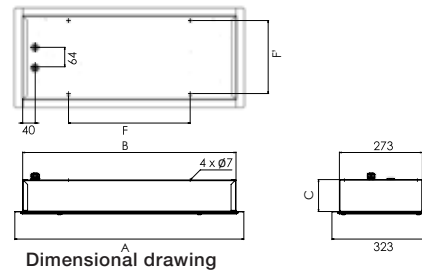
Weatherproof recessed fluorescent fitting

EST - Industrial applications



3

EST



Dimensional drawing

Technical specifications

Type	Wiring Configuration	Light Rating W	Current A @ 230V	Glass	Dimensions mm				Weight kg
					A	B	C	F x F'	
5 wires: Equipped with 1 cable gland & 1 plug									
EST220-00J0	5 wires	2 x 18	0.17	Toughened	753	702	105	400 x 240	13.00
EST240-00J0	5 wires	2 x 36	0.33	Toughened	1 364	1 312	105	1 000 x 240	20.05
EST265-00J0	5 wires	2 x 58	0.50	Toughened	1 664	1 612	105	1 300 x 240	25.00

Technical information

<p>Lamps Fluorescent Lamp (order separately) T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K.</p> <p>CRI 80</p> <p>Photometric curve See page 6/9</p> <p>Rated voltages Electronic ballast: 110- 260Vac/Vdc50-60Hz</p>	<p>Dielectrical class I</p> <p>Grounding system TNS, TNC, TT, IT neutral system</p> <p>Power factor 0.98</p> <p>Terminal block (spring) Jumped bar x2 terminal blocks 4mm² (rigid wire), 2.5mm² (flexible wire) Terminals supplied L1, L2, L3, N, PE (looping possible with one additional cable gland)</p>	<p>Cable entries Two entries M20 Included one M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S) for non armoured cable</p> <p>Housing Steel housing and body painted with powderpaint 6 mm clear toughened glass panel Neopren gasket</p>	<p>Fixing Mounting by 4 M6 threaded bolts (not supplied) joined to the main body</p>
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Recessed fittings

Emergency weatherproof recessed fluorescent fitting

EST EM - Industrial applications

Technical specifications

Type	Wiring Configuration	Light Rating W	Current A @ 230V	Battery h	Glass	Dimensions mm				Weight kg
						A	B	C	F x F'	
3 wires: Equipped with 1 cable gland & 1 plug										
EST240EM-00J0	3 wires	2 x 36	0.33	3h	Toughened	1 364	1 312	105	1 000 x 240	23.00

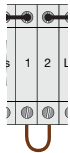
* For dimensional drawing, please refer to page 3/50

Electrical Features

<p>Lamps</p> <p>Fluorescent Lamp (order separately) T8 bi-pin tube, lampholder G13, diameter 26mm - white industry 4 000°K</p> <p>Rated voltages</p> <p>Electronic ballast: 220-240Vac/Vdc 50/60Hz</p>	<p>Power factor</p> <p>0.98.</p> <p>Battery</p> <p>Battery NiCd 7,2V Lumen output in emergency mode (1 lamp lit) 2 hours: 33% for EST240 3 hours: 18% for EST240 Monitored by one LED</p>	<p>Terminal block (spring)</p> <p>Jumped bar x2 terminal blocks 4mm² (rigid wire), 2,5mm² (flexible wire) Terminals supplied L1, N, PE,1,2 (looping possible with one additional cable gland)</p> <p>Cable entries</p> <p>Two entries M20 Included one M20 nylon plugs (EX-M20) and one M20 nylon cable gland, diameter 6-12mm (EXCGM20S) for non-armoured cable</p>	<p>Housing</p> <p>Steel housing and body painted with powderpaint 6 mm clear toughened glass panel Neopren gasket</p> <p>Fixing</p> <p>Mounting by 4 M6 threaded bolts (not supplied) joined to the main body</p>
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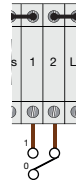
Emergency function diagrams

Wiring provided by DTS - Maintained Mode



Mains Supply	Tube	Battery
ON	Lit	Charging
OFF	Only emergency tube lit	Discharging

Switch between 1/2 - Non Maintained Mode *



Mains Supply	Tube	Battery
ON	OFF	Charged
OFF	Only emergency tube lit	Discharging

* This table corresponds to the position 0 "open".
If the switch is on position 1 "close", refer to the table on the left

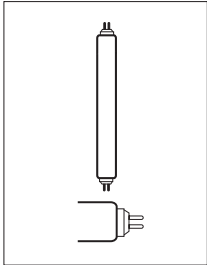
Recessed fittings

Accessories & spare parts

EST - Industrial applications

Lamps

3

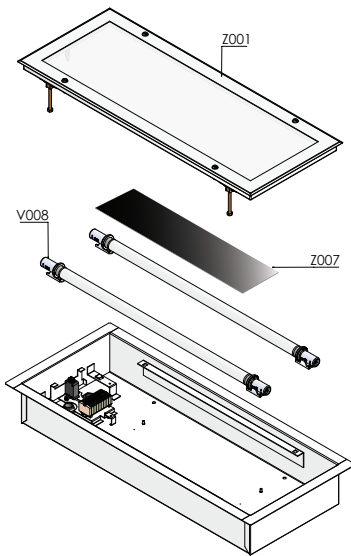


Bi-pin T8 fluorescent lamps

Specifications:

G13 - ø 26mm
Colour temperature: White industry 4 000°K
CRI: > 80
lm/W: 65 to 93
Average operating life: 12 000 hours

Type	Power W	Lumen output lm	Lampholder
TL18W	18	1 250	G13
TL36W	36	3 350	G13
TL58W	58	5 200	G13



Spare parts

Type	Specifications
Z001220	Transparent frame - hardened glass - for EST220
Z001240	Transparent frame - hardened glass - for EST240
Z001265	Transparent frame - hardened glass - for EST265
Z0072X20WE	Ballast 220- 240V 50-60Hz for EST220
Z0072X40WE	Ballast 220- 240V 50-60Hz for EST240
Z0072X65WE	Ballast 220- 240V 50-60Hz for EST265
V008	Bi-pin G13 lampholder
3COV00040S	Battery for EST240EM
EXCGM20S-01	Kit M20 Exe IIC nylon cable gland for non armoured cable diameter 6-12mm and locknut
EXN04MMC1-01	Kit M20 Ex-d IIC/Ex-e II/Ex-td double compression nickel plated cable gland for non armoured cable diameter inner 6-12 outer 8.5-16, locknut, sealing gasket

Light fittings for all zones and industrial applications

Floodlights, beacons, warnings, lighting column & wellglass fittings

Floodlights

XLF- LED - Zones 1, 2 & 21, 22	4/3
XSF, XQF, XEF - Zones 1, 2 & 21, 22	4/9
SF, QF, EF - Industrial application	4/15

Beacon & warning lights

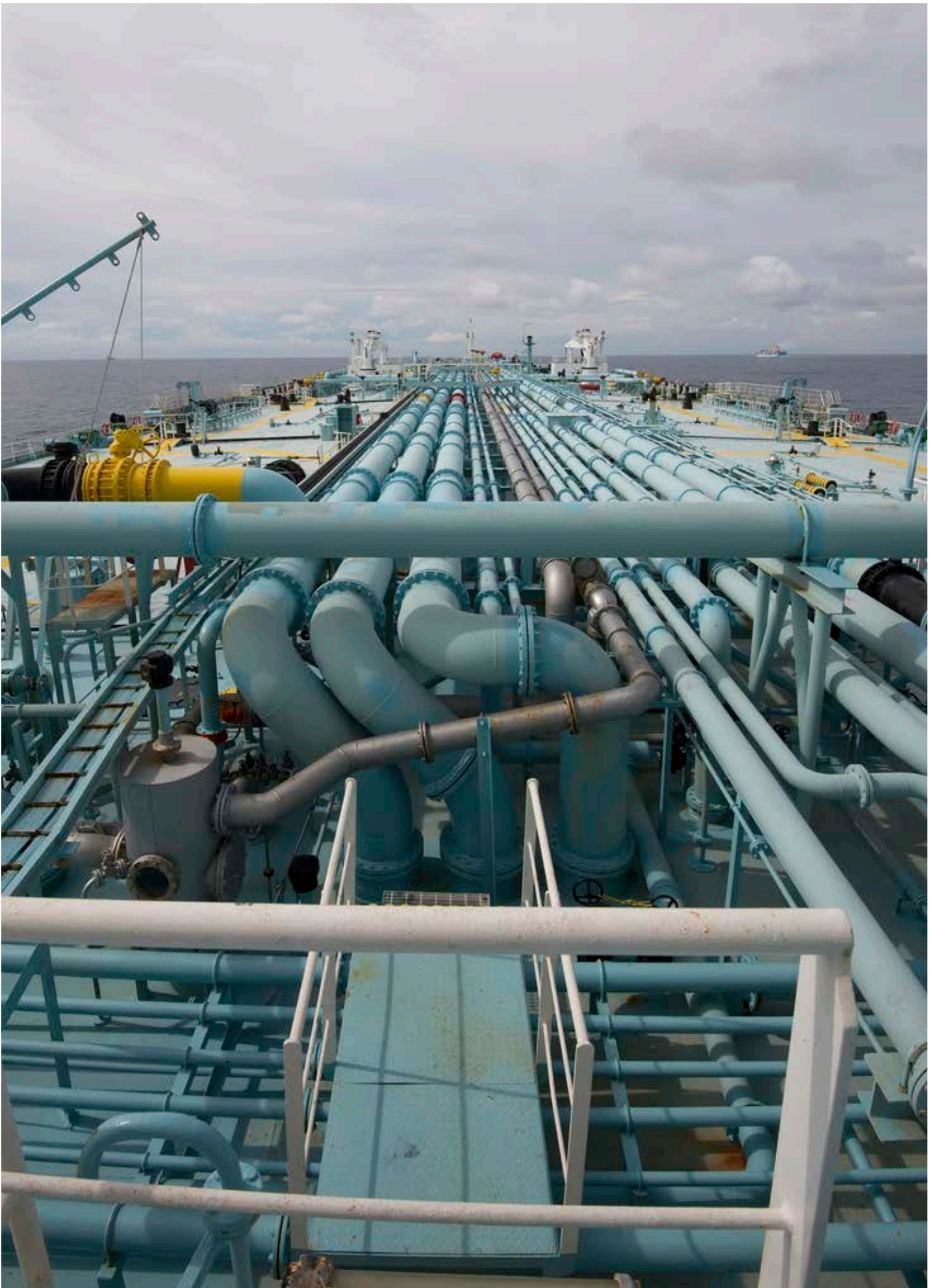
XFB, XFL - Zones 2, 22	4/21
FB, FL - Industrial applications	4/25

Lighting column

XEP404GYR0 - Zones 1, 2 & 21, 22	4/29
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Wellglass

EVH/X - Zones 1, 2, 21, 22	4/33
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Floodlight fittings

LED Floodlight fitting

XLF - Zones 1, 2 & 21, 22



Features

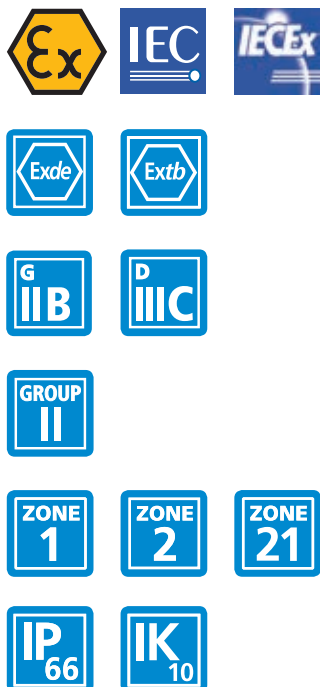
- Operating life > 50 000 h (depending on ambient temperature)
- More than 7 800 lumens output with narrow & wide beam.
- Cold temperature operation / no warm-up required
- Low power consumption
- Flat or pole mounting
- Including accessories (cable gland & plug)
- Supplied with offshore grade paint

Specifications

- Manufactured from marine grade aluminum alloy - copper free
- Toughened borosilicate glass - thickness 12mm
- Rated voltage 100-254Vac (+/- 10%) 50/60Hz
- 2x entries M20



Certifications



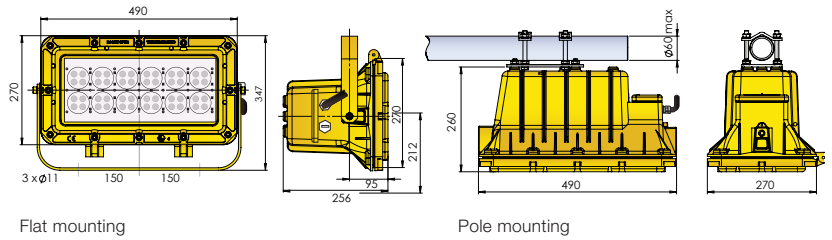
Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-31 : Enclosure "t" EN 60079-7 : Increased safety "e"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 13 ATEX 3075X IEC Ex LCIE 13.0062X Ex II 2 G Ex de IIB T6 Gb for -20°C to + 40°C Ex d IIB T5 Gb for -20°C to + 55°C Ex II 2 D Ex tb IIIC T85°C Db IP66 for -20°C to + 40°C Ex tb IIIC T100°C Db IP66 for -20°C to + 55°C
EMC Directive (2004/108/CE) - April 2016 (2014/30/UE)	EN 55015 : Conducted emission test and radiated emission test EN 61547 : CEM immunity EN 61000-3-2 : Harmonic current Emissions Class C EN 61000-3-3 : Limitation of voltage changes and flickers
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Operating temperature:	-20°C to +55°C
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

Floodlight fittings

LED Floodlight fitting

XLF - Zones 1, 2 & 21, 22



XLF

Dimensional drawing

4 Technical specifications

Type	Mounting	Efficiency lm/W	Rating W	Beam	Current (A) @230Vac	Lumen Output lm	Operating Life		Temperature class		Weight kg
							at 25°C h	at 55°C h	-20°C to +40°C	-20°C to +55°C	
XLF LED Floodlight fitting											
XLF105P-00000	Flat	73	110	Wide	0.5	7 800	50 000	40 000	T6 - T85°C	T5 - T100°C	18.64
XLF105G-00000	Pole	73	110	Wide	0.5	7 800	50 000	40 000	T6 - T85°C	T5 - T100°C	19.64
XLF105P-0A000	Flat	73	110	Narrow	0.5	7 800	50 000	40 000	T6 - T85°C	T5 - T100°C	18.64
XLF105G-0A000	Pole	73	110	Narrow	0.5	7 800	50 000	40 000	T6 - T85°C	T5 - T100°C	19.64

Technical information

LED installed

Set of 12 LED modules with integrated diffuser
 Colour temperature 6200°K
 L70/B10 at 25°C (70% lumen output/ 90% active LED) according to operating life

CRI 80

Photometric curve

See page 6/9

Rated voltages

Electronic driver: 100- 254Vac 50-60Hz.

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

Inrush current

$I_{peak} = 55A@230Vac$
 $\Delta t = 900\mu s$
 Max. light fittings per circuit breaker

Type	10A	16A	20A	25A
B	1	2	2	3
C	2	3	4	5

Power factor

0.9

Terminal block (screws)

Jumped bar x2 terminal blocks
 6mm² (rigid wire), 6mm² (flexible wire)
 Terminals supplied L, N, PE (looping possible with one additional cable gland)

External grounding lug

Screw M4x20 (stainless steel 316L) (nearby to cable gland)

Cable entries

Two entries M20

For non- armoured cable: included one M20 nickel plated brass plug (EX-M20) and one M20 nickel plated brass cable gland, diameter 10-16mm (EXN04MLC2)

Casting

Marine grade aluminum alloy according to standard : EN 1706 : EN AC-AISi7 Mg 0,6 T6
 Cathoretically treated
 Toughened glass 12mm

Colour of casting (standard)

- XLF****-00000 - Yellow offshore, RAL 1003
- Colour options:
- XLF****-B0000 - Grey, RAL 7035
- XLF****-C0000 - Black, RAL 9004
- XLF****-D0000 - Hammered Blue, RAL 5015
- XLF****-F0000 - Red, RAL 3001
- XLF****-G0000 - Blue, RAL 5010
- XLF****-J0000 - Green, RAL 6032
- XLF****-M0000 - White, RAL 9010

Fixing (included with product)

Galvanised steel flat mounting bracket yellow paint RAL1003
 Pole mounted: diameter 40 to 60mm

Floodlight fittings

From a fluorescent fitting to a LED fitting

XLF - Zones 1, 2 & 21, 22

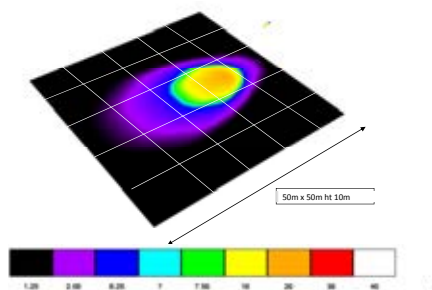
What are the LED benefits?

The benefits of the LED technology consists in a significant improvement in the life expectancy of your product, lower power consumption and the improvement of the photometric features.

The 3D view of the LED floodlight shows better photometric data than the floodlight with the 150W discharged high pressure sodium lamp (XSF150). The depth of the lumen output of the LED narrow version fitting could be comparable of 250W high pressure sodium lamp (XSF250), for any corridor area.

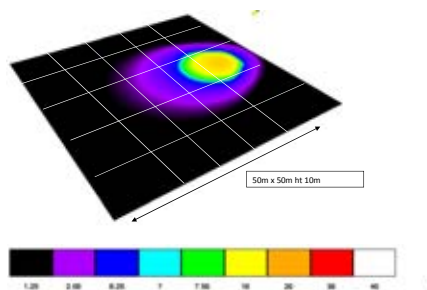
The difference of energy consumption in lumen/W between LED version and high pressure sodium lamp is significant: 73lm/W for the LED version, only 45lm/W for 150W HPS (XSF150) and 66lm/W for 250W HPS (XSF250).

LED Floodlight



XLF105 (LED) – narrow beam (walkways, corridors)

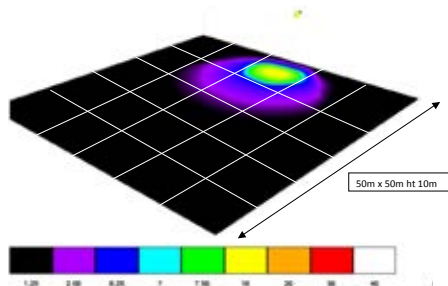
- Lumen output (fitting): 7 887lm
- Lumen output (lamp): 7 728lm
- Yield: 100%
- Rating per fitting: 108W – 73lm/W



XLF105 (LED) – wide beam

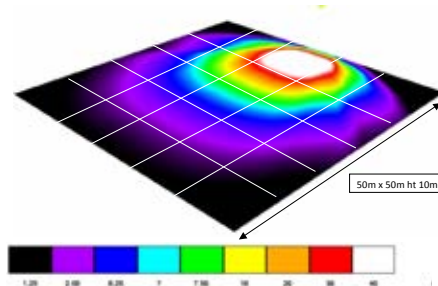
- Lumen output (fitting): 7 887m
- Lumen output (lamp): 7 800lm
- Yield: 100%
- Rating per fitting: 107W – 73lm/W

High Pressure Sodium Floodlight



XSF150 (HPS) –wide beam

- Lumen output (fitting): 7 073lm
- Lumen output (lamp): 15 000lm
- Yield: 47%
- Rating per fitting: 174W – 45lm/W



XSF250 (HPS) –wide beam

- Lumen output (fitting): 16 884lm
- Lumen output (lamp): 28 000
- Yield: 60%
- Rating per fitting: 293W – 66lm/W

Floodlight fittings

Accessories

XLF - Zones 1, 2 & 21, 22

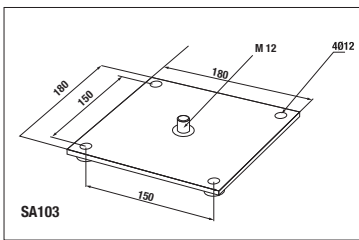
Brackets*



4

Forks

Type	Specifications
P017C	Galvanised steel mounting bracket forks with screws, yellow painting RAL1003
P017INOXC	Stainless steel 316L flat mounting bracket forks with screws
P017FC	Galvanised steel U-shaped mounting bracket forks with screws, yellow painting RAL1003



Mounting bracket clip

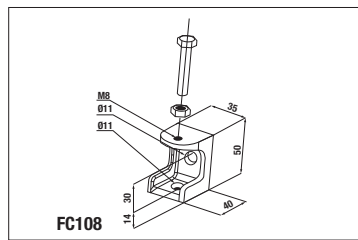
Type	Specifications
SA103	Galvanised steel plate for floodlight

* Screws and locknuts supplied



Sling for floodlight

Type	Specifications
SC100ELINGUE	Sling for floodlight



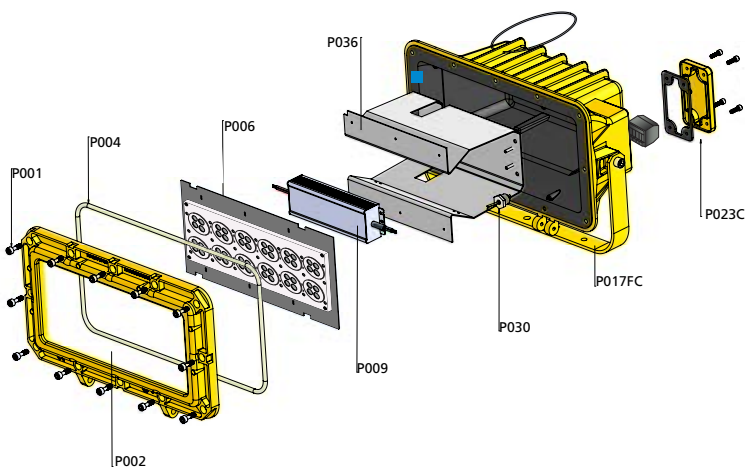
Mounting clamp

Type	Specifications
FC108	Clamp for beam mounting

Floodlight fittings

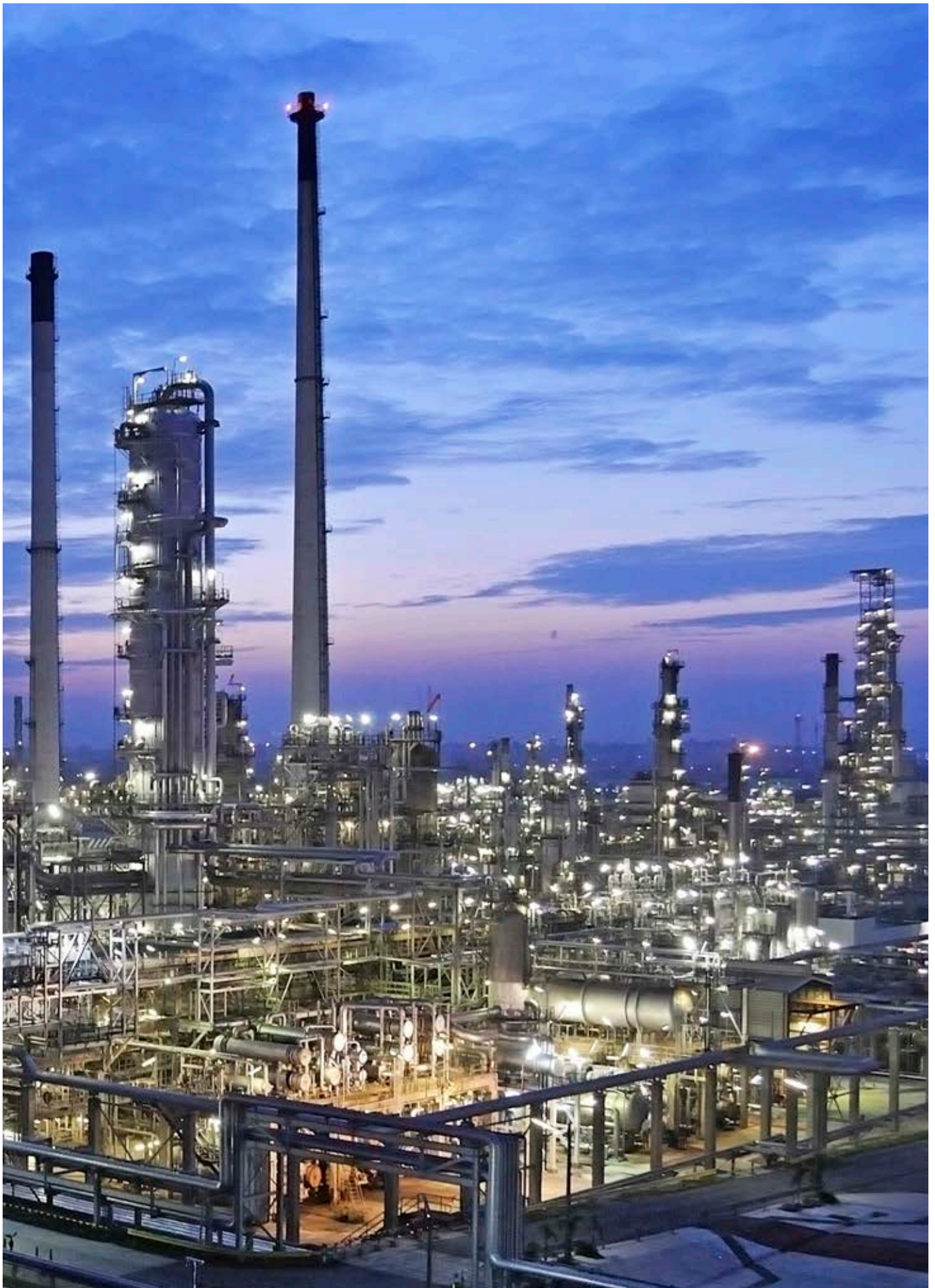
Spare parts

XLF - Zones 1, 2 & 21, 22



Spare parts

Type	Specifications
P001	Closing Screw for Floodlight (per 12)
P004	Gasket
P006	Gear tray with LED module and thermic adhesive - wide beam
P006A	Gear tray with LED module and thermic adhesive - narrow beam
P009	Driver for XLF
P023C	Accessories for junction box in floodlight: terminal 2x6mm ² + earthing terminal + cover gasket + cover + screw of cover
P036	Thermic heat dissipator
EXN04MLC2-01	Kit M20 Exd Exe IIC Ex-td nickel plated cable gland for non armoured cable diameter 10-16mm, locknut, sealing gasket
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16, locknut, sealing gasket



Floodlight fittings

HPS, MH or Halogen Floodlight fitting

XSF, XQF, XEF - Zones 1, 2 & 21,22



Features

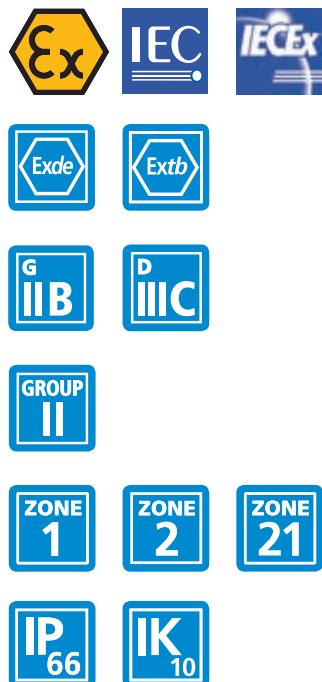
- Ex e integral junction box
- Flat or pole mounting
- Supplied with lamp installed
- Including accessories (cable gland & plug)
- Supplied with offshore grade paint

Specifications

- Manufactured from marine grade aluminum alloy - copper free
- Toughened borosilicate glass - thickness 12mm
- Rated voltage standard: 230Vac 50Hz - option: 220Vac 60Hz or 120Vac 60Hz depending on models - ferromagnetic ballast
- 2x entries M20



Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-31 : Enclosure "t" EN 60079-7 : Increased safety "e"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 00 ATEX 6019X IEC Ex LCIE 11.0062X Ex II 2 G Ex de IIB T3 or T5 Gb for -20°C to + 40°C Ex d IIB T3 or T4 Gb for -20°C to + 55°C Ex II 2 D Ex tb IIIC T200°C or T100°C Db IP66 for -20°C to + 40°C Ex tb IIIC T200°C or T135°C Db IP66 for -20°C to + 55°C
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Operating temperature:	-20°C to +55°C
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

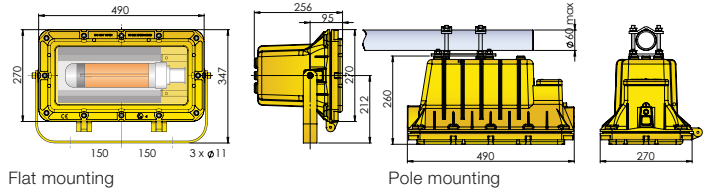
Floodlight fittings

HPS, MH or Halogen Floodlight fitting

XSF, XQF, XEF - Zones 1, 2 & 21,22



XSF



Dimensional drawing

4

Technical specifications

Type	Mounting	Light Rating W	Beam	Rated Voltage V	Current A @ 230V	Temperature class		Weight kg
						-20°C to +40°C	-20°C to +55°C	
XSF floodlight - High Pressure Sodium - wide beam - 230V 50Hz								
XSF150P-00000	Flat	1 x 150 HP Sodium	Wide	230Vac 50HZ	0.80	T4 - T135°C	T3 - T200°C	17.00
XSF150G-00000	Pole	1 x 150 HP Sodium	Wide	230Vac 50HZ	0.80	T4 - T135°C	T3 - T200°C	18.00
XSF250P-00000	Flat	1 x 250 HP Sodium	Wide	230Vac 50HZ	1.30	T3 - T200°C	T3 - T200°C	19.00
XSF250G-00000	Pole	1 x 250 HP Sodium	Wide	230Vac 50HZ	1.30	T3 - T200°C	T3 - T200°C	20.00
XSF400P-00000	Flat	1 x 400 HP Sodium	Wide	230Vac 50HZ	2.10	T3 - T200°C	T3 - T200°C	21.00
XSF400G-00000	Pole	1 x 400 HP Sodium	Wide	230Vac 50HZ	2.10	T3 - T200°C	T3 - T200°C	22.00
XSF floodlight - High Pressure Sodium - wide beam - 220V 60Hz								
XSF150P-0D000	Flat	1 x 150 HP Sodium	Wide	220Vac 60Hz	0.80	T4 - T135°C	T3 - T200°C	17.04
XSF150G-0D000	Pole	1 x 150 HP Sodium	Wide	220Vac 60Hz	0.80	T4 - T135°C	T3 - T200°C	18.04
XSF250P-0D000	Flat	1 x 250 HP Sodium	Wide	220Vac 60Hz	1.30	T3 - T200°C	T3 - T200°C	19.00
XSF250G-0D000	Pole	1 x 250 HP Sodium	Wide	220Vac 60Hz	1.30	T3 - T200°C	T3 - T200°C	20.00
XSF400P-0D000	Flat	1 x 400 HP Sodium	Wide	220Vac 60Hz	2.10	T3 - T200°C	T3 - T200°C	21.00
XSF400G-0D000	Pole	1 x 400 HP Sodium	Wide	220Vac 60Hz	2.10	T3 - T200°C	T3 - T200°C	22.00
XSF floodlight - High Pressure Sodium - wide beam - 120V 60Hz								
XSF400P-0F000	Flat	1 x 400 HP Sodium	Wide	120Vac 60Hz	2.10	T3 - T200°C	T3 - T200°C	20.00
XSF400G-0F000	Pole	1 x 400 HP Sodium	Wide	120Vac 60Hz	2.10	T3 - T200°C	T3 - T200°C	21.00

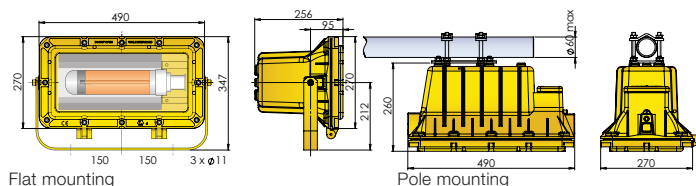
Floodlight fittings

HPS, MH or Halogen Floodlight fitting

XSF, XQF, XEF - Zones 1, 2 & 21,22



XQF - XEF



Dimensional drawing

Technical specifications

Type	Mounting	Light Rating W	Beam	Rated Voltage V	Current A @ 230V	Temperature class		Weight kg
						-20°C to +40°C	-20°C to +55°C	
XQF floodlight - Metal Halide - wide beam - 230V 50Hz								
XQF250P-00000	Flat	1 x 250 Metal Halide	Wide	230Vac 50Hz	1.30	T3 - T200°C	T3 - T200°C	19.00
XQF250G-00000	Pole	1 x 250 Metal Halide	Wide	230Vac 50Hz	1.30	T3 - T200°C	T3 - T200°C	20.00
XQF400P-00000	Flat	1 x 400 Metal Halide	Wide	230Vac 50Hz	2.10	T3 - T200°C	T3 - T200°C	21.00
XQF400G-00000	Pole	1 x 400 Metal Halide	Wide	230Vac 50Hz	2.10	T3 - T200°C	T3 - T200°C	22.00
XQF floodlight - Metal Halide - wide beam - 220V 60Hz								
XQF250P-0D000	Flat	1 x 250 Metal Halide	Wide	220Vac 60Hz	1.30	T3 - T200°C	T3 - T200°C	19.00
XQF250G-0D000	Pole	1 x 250 Metal Halide	Wide	220Vac 60Hz	1.30	T3 - T200°C	T3 - T200°C	20.00
XQF400P-0D000	Flat	1 x 400 Metal Halide	Wide	220Vac 60Hz	2.10	T3 - T200°C	T3 - T200°C	21.00
XQF400G-0D000	Pole	1 x 400 Metal Halide	Wide	220Vac 60Hz	2.10	T3 - T200°C	T3 - T200°C	22.00
XQF floodlight - Metal Halide - wide beam - 120V 60Hz								
XQF400P-0F000	Flat	1 x 400 Metal Halide	Wide	120Vac 60Hz	2.10	T3 - T200°C	T3 - T200°C	20.00
XQF400G-0F000	Pole	1 x 400 Metal Halide	Wide	120Vac 60Hz	2.10	T3 - T200°C	T3 - T200°C	21.00
XEF floodlight - Halogen - wide beam - 24Vdc 60Hz								
XEF140P-00000	Flat	2 x 70 Halogen	Wide	24Vac / Vdc	5.80	T5 - T100°C	T4 - T135°C	16.00
XEF140G-00000	Pole	2 x 70 Halogen	Wide	24Vac / Vdc	5.80	T5 - T100°C	T4 - T135°C	17.00

Technical information

Lamp installed

Tubular lamp, lampholder E40 or E27 for sodium and metal halide and H3 for Halogen version

Photometric curve

See page 6/9

Rated voltages

Ferromagnetic ballast: 230Vac 50Hz or 220Vac 60Hz or 120Vac 60Hz

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

Power factor

0.85 with compensated ballast

Terminal block (screws)

Jumped bar x2 terminal blocks
6mm² (rigid wire), 6mm² (flexible wire)
Terminals supplied L, N, PE (looping possible with one additional cable gland)

External grounding lug

Screw M4x20 (stainless steel 316L) (nearby cable gland)

Cable entries

Two entries M20

For non- armoured cable: included one M20 nickel plated brass plug (EX-M20) and one M20 nickel plated brass cable gland, diameter 10-16mm (EXN04MLC2)

Casting

Marine grade aluminum alloy according to standard : EN 1706 : EN AC-AISI7 Mg 0,6 T6
Cathodically treated
Thougtened glass 12mm

Colour of casting (standard)

● X.F****-00000 - Yellow offshore, RAL 1003

Colour options:

- X.F****-B0000 - Grey, RAL 7035
- X.F****-C0000 - Black, RAL 9004
- X.F****-D0000 - Hammered Blue, RAL 5015
- X.F****-F0000 - Red, RAL 3001
- X.F****-G0000 - Blue, RAL 5010
- X.F****-J0000 - Green, RAL 6032
- X.F****-M0000 - White, RAL 9010

Fixing (included with product)

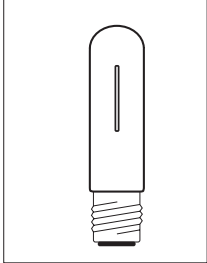
Galvanised steel flat mounting bracket yellow paint RAL1003
Pole mounted: diameter 40 to 60mm

Floodlight fittings

Accessories

XSF, XQF, XEF - Zones 1, 2 & 21,22

Lamps



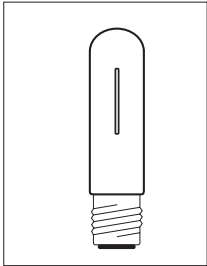
High pressure sodium tubular lamps

Specifications:

Colour temperature 2 100°K
 CRI: 100 > 120 - lm/W: 100 to 120
 Average operating life: 15 000 to 20 000 hours
 Minimum starting temperature: -30°C
 Time to full power: 1 to 10mm with control gear & ignitor

Type	Power W	Lumen output lm	Lampholder
P006150SHP	150	15 000	E40
P006250SHP	250	28 000	E40
P006400SHP	400	48 000	E40

4

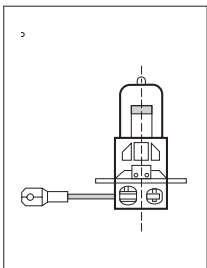


Metal halide tubular lamps

Specifications:

Colour temperature 4 300 to 4 600°K
 CRI: 65 - lm/W: 100 to 120
 Average operating life: 3 000 to 6 000 hours
 Minimum starting temperature: -25°C
 Time to full power: 5 to 10mm with control gear & ignitor

Type	Power W	Lumen output lm	Lampholder
P006150IM	150	14 500	E40
P006250IM	250	20 000	E40
P006400IM	400	42 000	E40



Halogen lamps

Specifications:

Colour temperature 3 000°K
 CRI: 100 - lm/W: 25
 Average operating life: 1000 hours

Type	Power W	Lumen output lm	Lampholder
E007	70	1 770	H3

Brackets*



Forks

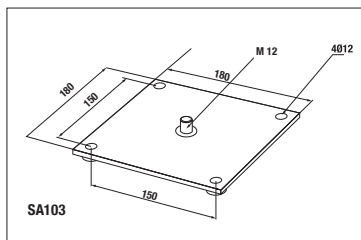
Type	Specifications
P017C	Galvanised steel mounting bracket forks with screws, yellow painting RAL1003
P017INOXC	Stainless steel 316L flat mounting bracket forks with screws
P017FC	Galvanised steel U-shaped mounting bracket forks with screws, yellow painting RAL1003

* Screws and locknuts supplied

Floodlight fittings

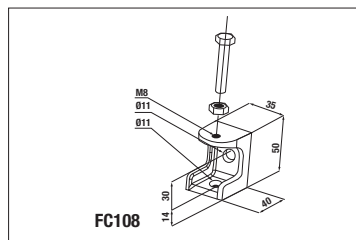
Accessories & spare parts

XSF, XQF, XEF - Zones 1, 2 & 21,22



Mounting bracket clip

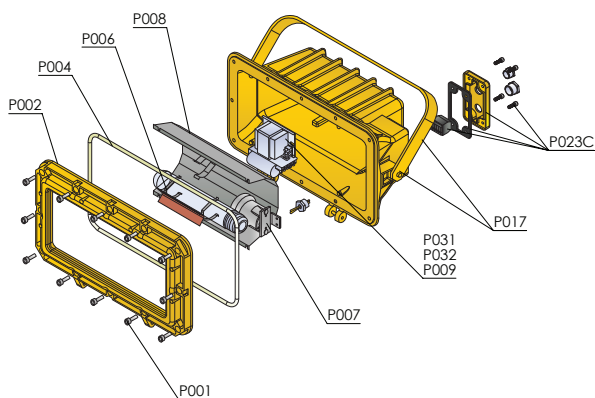
Type	Specifications
SA103	Galvanised steel plate for floodlight



Mounting clamp

Type	Specifications
FC108	Clamp for beam mounting

4



Sling for floodlight

Type	Specifications
SC100ELINGUE	Sling for floodlight

Spare parts

Type	Specifications
P001	Closing Screw for Floodlight (per 12)
P004	Gasket
P007	Lampholder E40 for floodlight
P008	Reflector for floodlight wide beam
P031150W23050	Ferromagnetic ballast 230Vac 50Hz - 1 capacitor - ignitor - fixing plate for floodlight XSF150
P031250W23050	Ferromagnetic ballast 230Vac 50Hz - 1 capacitor - ignitor - fixing plate for floodlight XSF250, XQF250
P031400W23050	Ferromagnetic ballast 230Vac 50Hz - 1 capacitor - ignitor - fixing plate for floodlight XSF400, XQF400
P009150W60	Ferromagnetic ballast 220Vac 60Hz for floodlight XSF150, XQF150
P032S15060	1 capacitor 18UF cable support - 220Vac 60Hz - for floodlight XSF150, XQF150
P009250W60	Ferromagnetic ballast 220Vac 60Hz for floodlight XSF250, XQF250
P032S25060	1 capacitor 25UF cable support - 220Vac 60Hz -for floodlight XSF250, XQF250
P004000W60	Ferromagnetic ballast 220Vac 60Hz for floodlight XSF400, XQF400
P032S40060	2 capacitors 20UF cable support - 220Vac 60Hz -for floodlight XSF400, XQF400
P010	Ferromagnetic ballast and capacitor 120Vac 60Hz for floodlight XSF400, XQF400
E008C	Gear tray support with fixing for optic and optic for floodlight XEF
P023C	Accessories for junction box in floodlight: terminal 2x6mm ² + earthing terminal + cover gasket + cover + screw of cover
EXN04MLC2-01	Kit M20 Exd Exe IIC Ex-td nickel plated cable gland for non armoured cable diameter 10-16mm, locknut, sealing gasket
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16mm, locknut, sealing gasket



Floodlight fittings

Weatherproof floodlight fitting

SF, QF, EF - Industrial applications

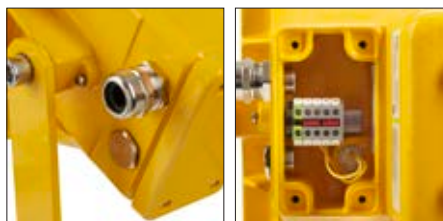


Features

- Integral junction box
- Flat or pole mounting
- Supplied with lamp installed
- Including accessories (cable gland & plug)
- Offshore grade paint

Specifications

- Manufactured from marine grade aluminum alloy - copper free
- Toughened borosilicate glass - thickness 12mm
- Rated voltage standard: 230Vac 50Hz - option: 220Vac -60Hz or 120V 60Hz depending on models - ferromagnetic ballast
- 2x entries M20



Certifications



Standards

Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Operating temperature:	-20°C to +55°C
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

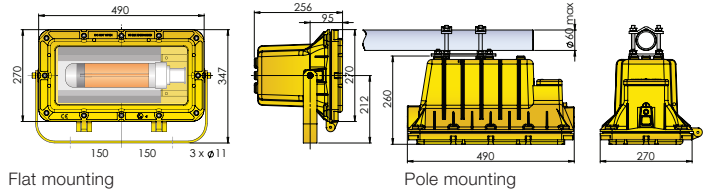
Floodlight fittings

Weatherproof floodlight fitting

SF, QF, EF - Industrial applications



SF



Flat mounting

Pole mounting

Dimensional drawings

4

Technical specifications

Type	Mounting	Light Rating W	Beam	Rated Voltage V	Current A @ 230V	Weight kg
SF floodlight - High Pressure Sodium - wide beam - 230V 50Hz						
SF150P-00000	Flat	1 x 150 HP Sodium	Wide	230Vac 50HZ	0.80	17.00
SF150G-00000	Pole	1 x 150 HP Sodium	Wide	230Vac 50HZ	0.80	18.00
SF250P-00000	Flat	1 x 250 HP Sodium	Wide	230Vac 50HZ	1.30	19.00
SF250G-00000	Pole	1 x 250 HP Sodium	Wide	230Vac 50HZ	1.30	20.00
SF400P-00000	Flat	1 x 400 HP Sodium	Wide	230Vac 50HZ	2.10	21.00
SF400G-00000	Pole	1 x 400 HP Sodium	Wide	230Vac 50HZ	2.10	22.00
SF floodlight - High Pressure Sodium - wide beam - 220V 60Hz						
SF150P-0D000	Flat	1 x 150 HP Sodium	Wide	220Vac 60Hz	0.80	17.04
SF150G-0D000	Pole	1 x 150 HP Sodium	Wide	220Vac 60Hz	0.80	18.04
SF250P-0D000	Flat	1 x 250 HP Sodium	Wide	220Vac 60Hz	1.30	19.00
SF250G-0D000	Pole	1 x 250 HP Sodium	Wide	220Vac 60Hz	1.30	20.00
SF400P-0D000	Flat	1 x 400 HP Sodium	Wide	220Vac 60Hz	2.10	21.00
SF400G-0D000	Pole	1 x 400 HP Sodium	Wide	220Vac 60Hz	2.10	22.00
SF floodlight - High Pressure Sodium - wide beam - 120V 60Hz						
SF400P-0F000	Flat	1 x 400 HP Sodium	Wide	120Vac 60Hz	2.10	20.00
SF400G-0F000	Pole	1 x 400 HP Sodium	Wide	120Vac 60Hz	2.10	21.00

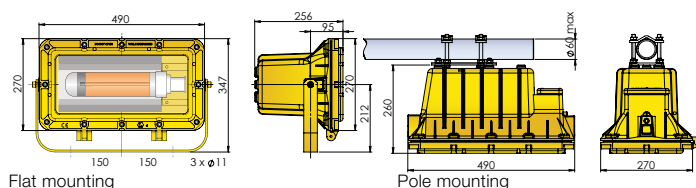
Floodlight fittings

Weatherproof floodlight fitting

SF, QF, EF - Industrial applications



QF -EF



Dimensional drawing

Technical specifications

Type	Mounting	Light Rating W	Beam	Rated Voltage V	Current A @ 230V	Weight kg
QF floodlight - Metal Halide - wide beam - 230V 50Hz						
QF250P-00000	Flat	1 x 250 Metal Halide	Wide	230Vac 50Hz	1.30	19.00
QF250G-00000	Pole	1 x 250 Metal Halide	Wide	230Vac 50Hz	1.30	20.00
QF400P-00000	Flat	1 x 400 Metal Halide	Wide	230Vac 50Hz	2.10	21.00
QF400G-00000	Pole	1 x 400 Metal Halide	Wide	230Vac 50Hz	2.10	22.00
QF floodlight - Metal Halide - wide beam - 220V 60Hz						
QF250P-0D000	Flat	1 x 250 Metal Halide	Wide	220Vac 60Hz	1.30	19.00
QF250G-0D000	Pole	1 x 250 Metal Halide	Wide	220Vac 60Hz	1.30	20.00
QF400P-0D000	Flat	1 x 400 Metal Halide	Wide	220Vac 60Hz	2.10	21.00
QF400G-0D000	Pole	1 x 400 Metal Halide	Wide	220Vac 60Hz	2.10	22.00
QF floodlight - Metal Halide - wide beam - 120V 60Hz						
QF400P-0F000	Flat	1 x 400 Metal Halide	Wide	120Vac 60Hz	2.10	20.00
QF400G-0F000	Pole	1 x 400 Metal Halide	Wide	120Vac 60Hz	2.10	21.00
EF floodlight - Halogen - wide beam - 24Vdc 60Hz						
EF140P-00000	Flat	2 x 70 Halogen	Wide	24Vac / Vdc	5.80	16.00
EF140G-00000	Pole	2 x 70 Halogen	Wide	24Vac / Vdc	5.80	17.00

Technical information

Lamp installed

Tubular lamp, lampholder E40 or E27 for sodium and metal halide and H3 for Halogen version

Photometric curve

See page 6/9

Rated voltages

Ferromagnetic ballast: 230Vac 50Hz or 220Vac 60Hz or 120Vac 60Hz

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

Power factor

0.85 with compensated ballast

External grounding lug

Screw M4x20 (stainless steel 316L) (nearby cable gland)

Terminal block (screws)

Jumped bar x2 terminal blocks
6mm² (rigid wire), 6mm² (flexible wire)
Terminals supplied L, N, PE (looping possible with one additional cable gland)

Cable entries

Two entries M20

For non- armoured cable: included one M20 nickel plated brass plug (EX-M20) and one M20 nickel plated brass cable gland, diameter 10-16mm (EXN04MLC2)

Casting

Marine grade aluminum alloy according to standard : EN 1706 : EN AC-AISI7 Mg 0,6 T6
Cataphoretically treated
Thougtened glass 12mm

Colour of casting (standard)

● SF/QF****-00000 - Yellow offshore, RAL 1003

Colour options:

- SF/QF****-B0000 - Grey, RAL 7035
- SF/QF****-C0000 - Black, RAL 9004
- SF/QF****-D0000 - Hammered Blue, RAL 5015
- SF/QF****-F0000 - Red, RAL 3001
- SF/QF****-G0000 - Blue, RAL 5010
- SF/QF****-J0000 - Green, RAL 6032
- SF/QF****-M0000 - White, RAL 9010

Fixing (included with product)

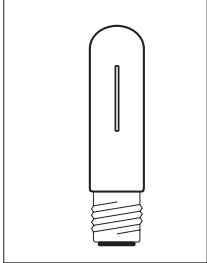
Galvanised steel flat mounting bracket yellow paint RAL1003
Pole mounted: diameter 40 to 60mm

Floodlight fittings

Accessories & spare parts

SF, QF, EF - Industrial applications

Lamps



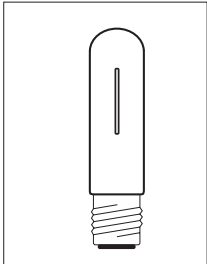
High pressure sodium tubular lamps

Specifications:

Colour temperature 2 100°K
 CRI: 100 > 120 - lm/W: 100to 120
 Average operating life: 15 000 to 20 000 hours
 Minimum starting temperature: -30°C
 Time to full power: 1 to 10mm with control gear & ignitor

Type	Power W	Lumen output lm	Lampholder
P006150SHP	150	15 000	E40
P006250SHP	250	28 000	E40
P006400SHP	400	48 000	E40

4

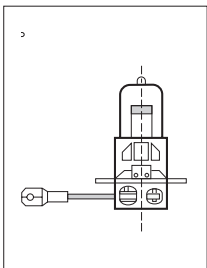


Metal halide tubular lamps

Specifications:

Colour temperature 4 300 to 4 600°K
 CRI: 65 - lm/W: 100to 120
 Average operating life: 3 000 to 6 000 hours
 Minimum starting temperature: -25°C
 Time to full power: 5 to 10mm with control gear & ignitor

Type	Power W	Lumen output lm	Lampholder
P006150IM	150	14 500	E40
P006250IM	250	20 000	E40
P006400IM	400	42 000	E40



Halogen lamps

Specifications:

Colour temperature 3 000°K
 CRI: 100 - lm/W: 25
 Average operating life: 1000 hours

Type	Power W	Lumen output lm	Lampholder
E007	70	1770	H3

Brackets*



Forks

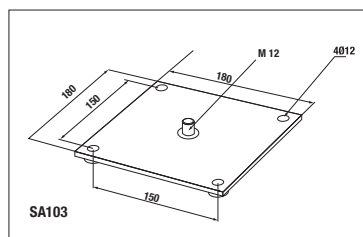
Type	Specifications
P017C	Galvanised steel mounting bracket forks with screws, yellow painting RAL1003
P017INOXC	Stainless steel 316L flat mounting bracket forks with screws
P017FC	Galvanised steel U-shaped mounting bracket forks with screws, yellow painting RAL1003

* Screws and locknuts supplied

Floodlight fittings

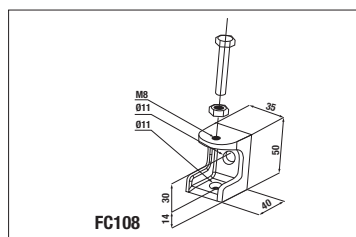
Accessories & spare parts

SF, QF, EF - Industrial applications



Mounting bracket clip

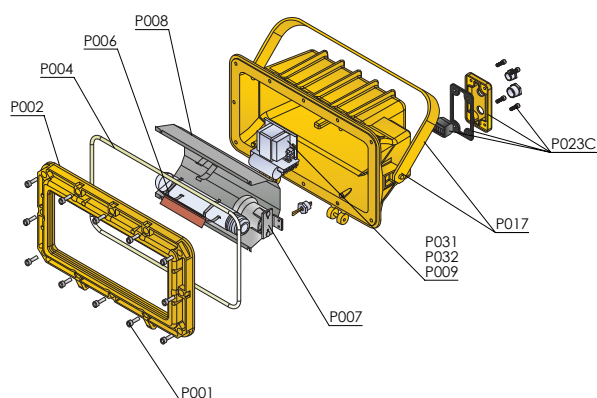
Type	Specifications
SA103	Galvanised steel plate for floodlight



Mounting clamp

Type	Specifications
FC108	Clamp for beam mounting

4



Sling for floodlight

Type	Specifications
SC100ELINGUE	Sling for floodlight

Spare parts

Type	Specifications
P001	Closing Screw for Floodlight (per 12)
P004	Gasket
P007	Lampholder E40 for floodlight
P008	Reflector for floodlight wide beam
P031150W23050	Ferromagnetic ballast 230Vac 50Hz - 1 capacitor - ignitor - fixing plate for floodlight SF150
P031250W23050	Ferromagnetic ballast 230Vac 50Hz - 1 capacitor - ignitor - fixing plate for floodlight SF250, QF250
P031400W23050	Ferromagnetic ballast 230Vac 50Hz - 1 capacitor - ignitor - fixing plate for floodlight SF400, QF400
P009150W60	Ferromagnetic ballast 220Vac 60Hz for floodlight SF150, QF150
P032S15060	1 capacitor 18UF cable support - 220Vac 60Hz - for floodlight SF150, QF150
P009250W60	Ferromagnetic ballast 220Vac 60Hz for floodlight SF250, QF250
P032S25060	1 capacitor 25UF cable support - 220Vac 60Hz -for floodlight SF250, QF250
P004000W60	Ferromagnetic ballast 220Vac 60Hz for floodlight SF400, QF400
P032S40060	2 capacitors 20UF cable support - 220Vac 60Hz -for floodlight SF400, QF400
P010	Ferromagnetic ballast and capacitor 120Vac 60Hz for floodlight SF400, QF400
P023C	Accessories for junction box in floodlight: terminal 2x6mm ² + earthing terminal + cover gasket + cover + screw of cover
EXN04MLC2-01	Kit M20 Exd Exe IIC Ex-td nickel plated cable gland for non armoured cable diameter 10-16mm, locknut, sealing gasket
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16, locknut, sealing gasket



Beacons & warning lights

LED, Halogen and Xenon beacon & warning light

XFB, XFL - Zones 2 & 22



Features

- Lightweight and robust for easy installation
- Static LED, halogen or flashing xenon versions available
- Supplied with lamp installed
- Including accessories (cable gland & plug)

Specifications

- Manufactured from marine grade aluminum alloy - copper free
- UV protected extruded polycarbonate globe, thickness 3mm
- 2x entries M20

Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-15 : Enclosure "n" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) Ex II 3 G Ex nA IIC T5 Gc for -20°C to +60°C Ex II 3 D Ex tc IIIC T100°C Dc IP6X for -20°C to +60°C
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Operating temperature:	-20°C to +60°C
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

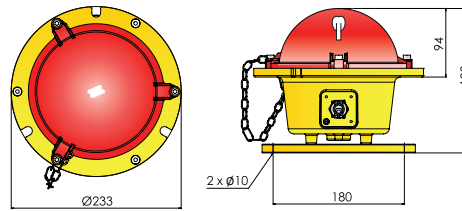
Beacons & warning lights

LED, Halogen and Xenon beacon & warning light

XFB, XFL - Zones 2 & 22



XFB, XFL



Dimensional drawing

4 Technical specifications

Type	Light Rating W	Version	Rated Voltage V	Globe Colour	Weight kg
XFB, XFL Beacon					
XFB30-00000	1 x 28	Halogen	230Vac 50-60Hz	● Red	2.60
XFB70-00000	1 x 8	LED	220-240Vac 50-60Hz	● Red	2.60
XFL30P-00000	1 x 30 joules	Xenon flash	230Vac 50-60Hz	● Red	2.60

Technical information

Lamps (installed)

For LED or Halogen, lampholder E27
For Xenon: flashing rate 45 to 60 per minute

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

External grounding lug

Screw M4x20 (stainless steel 316L)
(nearby cable gland)

Terminal block (screws)

Jumped bar x2 terminal blocks
6mm² (rigid wire), 6mm² (flexible wire)
Terminals supplied L, N, PE (looping possible with one additional cable gland).

Cable entries

Included: One M20 nickel plated brass plug (EX-M20) and one M20 nickel plated brass cable gland for non armoured cable, diameter 10-16mm (EXN04MLC2)

Casting

Marine grade aluminum alloy according to standard: EN 1706: EN AC-AISi12 (Fe) DF or EN AC-AISi 10Mg(A) DF
Polycarbonate globe, thickness 3mm

Colour of casting (standard)

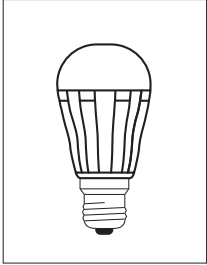
- XF****-00000 - Yellow offshore, RAL 1003
- Colour options:
- XF****-B0000 - Grey, RAL 7035
- XF****-C0000 - Black, RAL 9004
- XF****-D0000 - Hammered Blue, RAL 5015
- XF****-F0000 - Red, RAL 3001
- XF****-G0000 - Blue, RAL 5010
- XF****-J0000 - Green, RAL 6032
- XF****-M0000 - White, RAL 9010

Beacons & warning lights

Accessories

XFB, XFL - Zones 2 & 22

Lamps

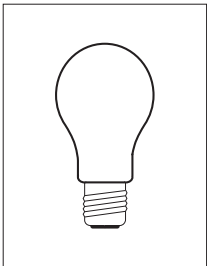


LED lamps

Specifications:

Colour temperature 3 000°K
 CRI=80 - lm/W: 55
 Average operating life: 25 000 hours

Type	Power W	Lumen output lm	Lampholder
L021L	6	470	E27

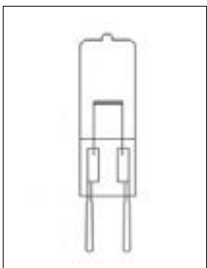


Halogen lamps

Specifications:

Colour temperature 2 700°K
 CRI=100 - lm/W: 10 to 17
 Average operating life: 1000 hours

Type	Power W	Lumen output lm	Lampholder
L021H	28	345	E27



Xenon lamps

Specifications:

Flashing 45 to 60 per minute

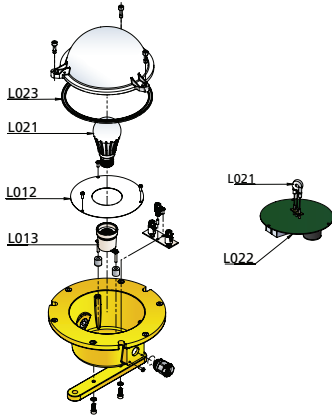
Type	Power
L021	30 joules

Beacons & warning lights

Spare parts

XFB, XFL - Zones 2 & 22

4



Spare parts

Type	Specifications
L002A	Red polycarbonate globe with gasket for XFB, XFL
L012	Reflector for beacon XFB
L013	Lampholder E27 for beacon XFB
L022220VAC	Gear tray -220-230Vac/Vdc 50Hz - 60Hz - for XFL30P, XFL230P, XFL330P
L023	Gasket for XFB, XFL
EXN04MLC2-01	Kit M20 Exd Exe IIC Ex-td nickel plated cable gland for non armoured cable diameter 10-16mm, locknut, sealing gasket
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16, locknut, sealing gasket

Beacons & warning lights

Weatherproof beacon & warning light FB, FL - Industrial applications



Features

- Lightweight and robust for easy installation
- Static LED, halogen or flashing xenon versions available
- Supplied with lamp installed
- Including accessories (cable gland & plug)

Specifications

- Manufactured from marine grade aluminum alloy - copper free
- UV protected extruded polycarbonate globe, thickness 3mm
- 2x entries M20

Certifications



Standards

Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Operating temperature:	-20°C to +60°C
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

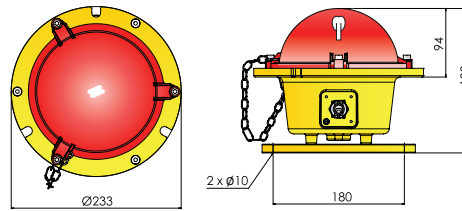
Beacons & warning lights

Weatherproof beacon & warning light

FB, FL - Industrial applications



FB, FL



Dimensional drawing

4

Technical specifications

Type	Light Rating W	Version	Rated Voltage V	Globe Colour	Weight kg
FB, FL Beacon					
FB30-00000	1 x 28	Halogen	230Vac 50-60Hz	● Red	2.60
FB70-00000	1 x 6	LED	220 - 240Vac 50-60Hz	● Red	2.60
FL30P-00000	1 x 30 joules	Xenon flash	230Vac 50-60Hz	● Red	2.60

Technical information

Lamps (installed)

For LED or Halogen: lampholder E27
If other voltage needed, another lamp could be installed (LED: max. 8W, Halogen: max. 28W) - Not supplied
For Xenon: flashing rate 45 to 60 per minute

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

External grounding lug

Screw M4x20 (stainless steel 316L)
(nearby cable gland)

Terminal block (screws)

Jumped bar x2 terminal blocks
6mm² (rigid wire), 6mm² (flexible wire)
Terminals supplied L, N, PE (looping possible with one additional cable gland).

Cable entries

Included: One M20 nickel plated brass plug (EX-M20) and one M20 nickel plated brass cable gland for non armoured cable, diameter 10-16mm (EXN04MLC2)

Casting

Casting Marine grade aluminum alloy according to standard: EN 1706: EN AC-AISI12 (Fe) DF or EN AC-AISI 10Mg(A) DF
Polycarbonate globe, thickness 3mm

Colour of casting (standard)

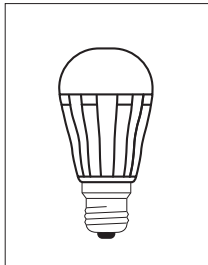
- FB****-00000 - Yellow offshore, RAL 1003
- Colour options:
- FB****-B0000 - Grey, RAL 7035
- FB****-C0000 - Black, RAL 9004
- FB****-D0000 - Hammered Blue, RAL 5015
- FB****-F0000 - Red, RAL 3001
- FB****-G0000 - Blue, RAL 5010
- FB****-J0000 - Green, RAL 6032
- FB****-M0000 - White, RAL 9010

Beacons & warning lights

Accessories

FB, FL - Industrial applications

Lamps



LED lamps

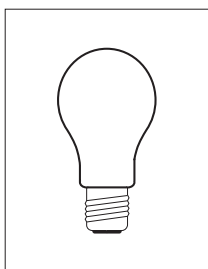
Specifications:

Colour temperature 3 000°K

CRI=80 - lm/W: 55

Average operating life: 25 000 hours

Type	Power W	Lumen output lm	Lampholder
L021L	6	470	E27



Halogen lamps

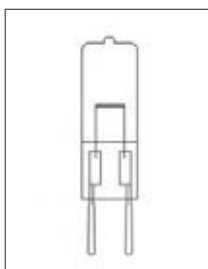
Specifications:

Colour temperature 2 700°K

CRI=100 - lm/W: 10 to 17

Average operating life: 1000 hours

Type	Power W	Lumen output lm	Lampholder
L021H	28	345	E27



Xenon lamps

Specifications:

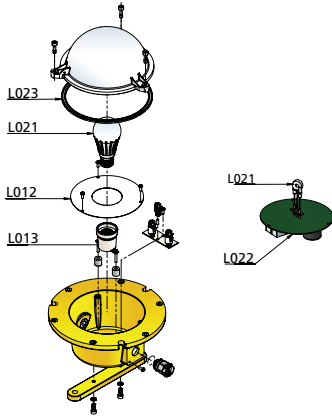
Flashing 45 to 60 per minute

Type	Power
L021	30 joules

Beacons & warning lights

Spare parts

FB, FL - Industrial applications



4

Spare parts

Type	Specifications
L002A	Red polycarbonate globe with gasket for FB, FL
L012	Reflector for beacon FB
L013	Lampholder E27 for beacon FB
L022220VAC	Gear tray -220-230Vac/Vdc 50Hz - 60Hz - for FL30P, FL230P, FL330P
L023	Gasket for FB, FL
EXN04MLC2-01	Kit M20 Exd Exe IIC Ex-td nickel plated cable gland for non armoured cable diameter 10-16mm, locknut, sealing gasket
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16, locknut, sealing gasket

Lighting column

XEP404GYR0- Zones 1, 2 & 21, 22

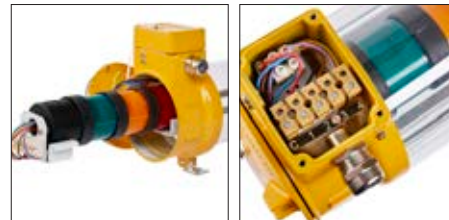


Specifications

- Manufactured from marine grade aluminum alloy copper free
- UV protected polycarbonate tube - thickness 2.5mm
- Rating: 1x 4W LED max 4x 4W
standard configuration - green / orange / red
- Rated voltage 230Vac 110Vac 50-60Hz, 24Vdc, 48Vdc
- 1x entry M20

Features

- Static triple indicator as warning
- Suitable in hazardous locations where audible signals cannot be heard.
- Three separately controlled colored modules
- Quick and easy insulation switch for safe maintenance
- Ex e integral junction box
- Available in polycarbonate (light, high impact resistant)
- Including accessories (cable gland, plug & fixing brackets)
- Supplied with offshore grade paint



Certifications

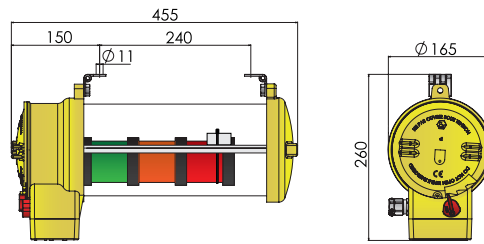


Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-7 : Increased safety "e" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) INERIS 13 ATEX 0051X Ex II 2 G Ex de IIC T6 Gb for -20°C to + 55°C Ex II 2D Ex tb IIIC T80°C Db IP66 for -20°C to + 55°C
Low voltage Directive (2006/95/CE) - April 2016 (2014/35/UE)	EN 60598-1 : Luminaire general requirements and tests, including dielectric strength and isolation resistance
Glow wire test:	960°C
Operating temperature:	-20°C to +55°C
IP test:	IP66 IEC 60529
Impact protection index:	IK09 (poly) IK07 (glass) according to IEC 62262

Lighting column

XEP404GYR0- Zones 1, 2 & 21, 22




XEP404GYR0

Dimensional drawing for XEP404GYR0

4

Technical specifications

Type	Function	Light Rating W	Module				Rated Voltage	Diffuser	Dimensions mm		Weight kg
			1st	2nd	3rd	4th			A	B	
	Static	4x3 W	Green	Orange	Red	Nothing	230Vac 50-60Hz	Polycarbonate	455	240	4.61

Technical information

Lamps

max 4x4W - standard configuration - green / orange / red signalisation up to 50m supplied with three colored interchangeable modules
Multi LED lamps

Rated voltages

Electronic ballast: 230Vac 110Vac 50-60Hz, 24Vdc, 48Vdc

Dielectrical class I

Grounding system

TNS, TNC, TT, IT neutral system

Cable entries

Two entries 3/4" NPT
Included: One 3/4" NPT nickel plated brass plug (EXN/075/SP) and one 3/4" NPT nickel plated brass cable gland for non armoured cable, diameter 6-12mm (EXN05ASC3)

External grounding lug

Screw M4x20 (stainless steel 316L) (nearby cable gland)

Terminal block

(screws plug in terminal block)
6mm² (rigid wire), 4mm² (flexible wire)

Casting

Marine grade aluminum alloy according to standard: EN 1706: EN AC-AISi12 (Fe) DF or EN AC-AISi 10Mg(A) DF
UV protected extruded polycarbonate tube, thickness 2.5mm or borosilicate glass thickness 7mm

Colour of casting (standard)

● XEP****-00000 - Yellow offshore, RAL 1003

Colour options:

● XEP****-B0000 - Grey, RAL 7035

● XEP****-C0000 - Black, RAL 9004

● XEP****-D0000 - Hammered Blue, RAL 5015

● XEP****-F0000 - Red, RAL 3001

● XEP****-G0000 - Blue, RAL 5010

● XEP****-J0000 - Green, RAL 6032

○ XEP****-M0000 - White, RAL 9010

Fixing (included with product)

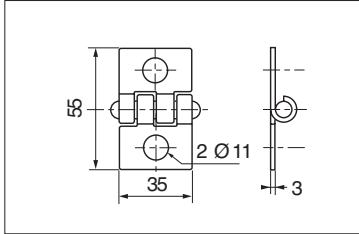
D023 - 2x zinc plated steel articulated brackets for ceiling mounting

Lighting column

Accessories & Spare Parts

XEP404GYR0- Zones 1, 2 & 21, 22

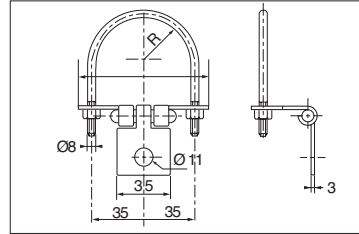
Brackets*



Hinged bracket

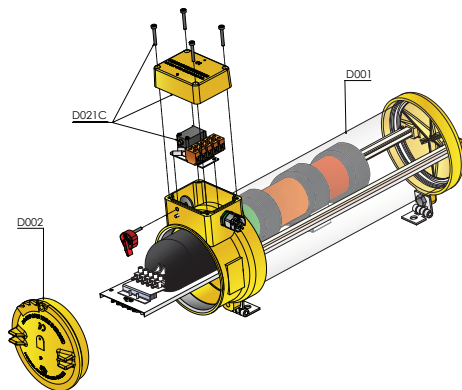
Type	Specifications
D023	2x zinc plated steel articulated brackets for ceiling mounting (included with product)
D024	2x stainless steel 304L articulated brackets for ceiling mounting

* Screws and locknuts supplied



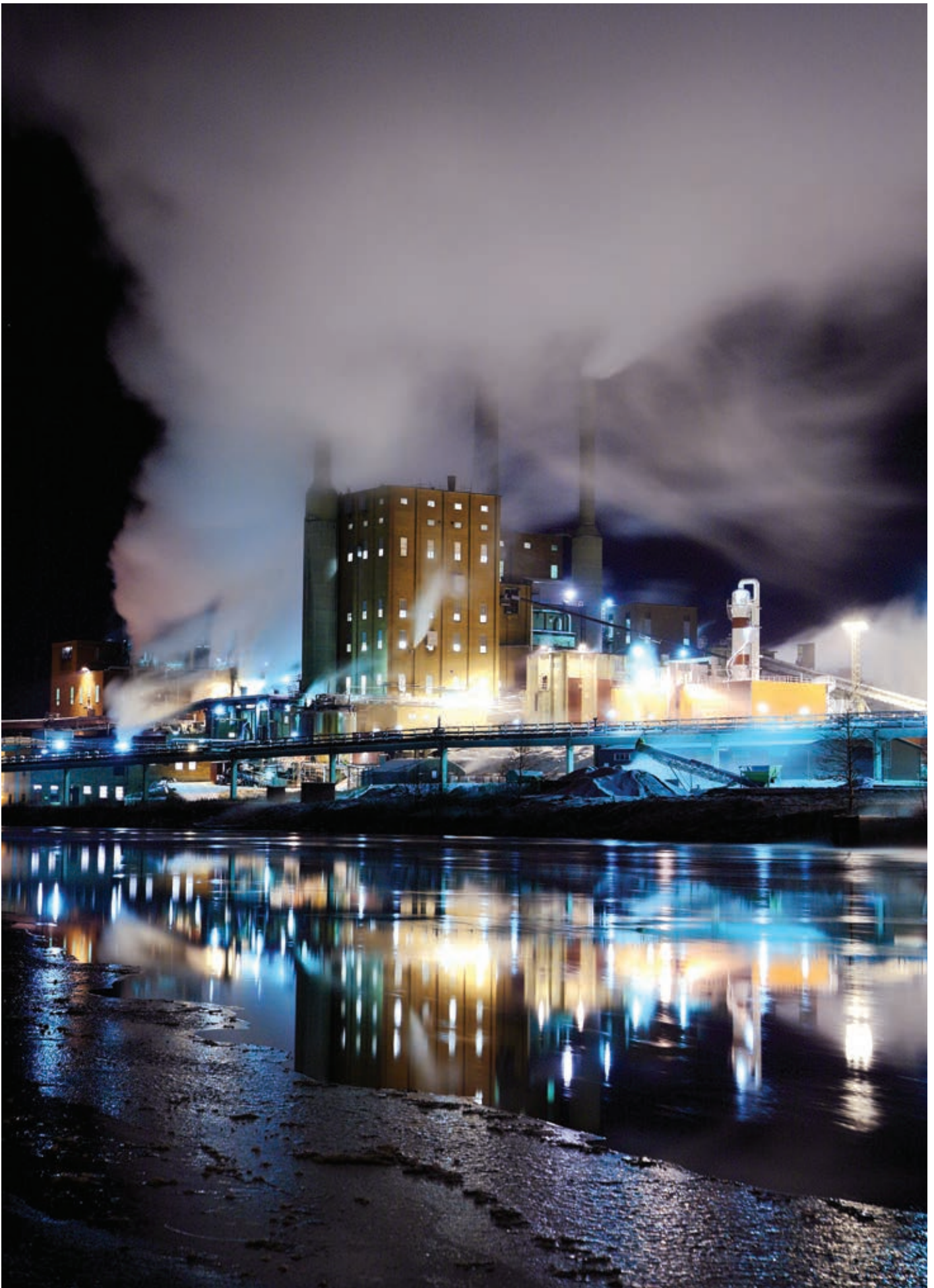
U-bolt for pole mounting

Type	Specifications
D025	2x U-bolt and 2 x zinc plated steel brackets for pole mounted 1" 1/4
D026	2x U-bolt and 2x zinc plated steel brackets for pole mounted 1" 1/2
D027	2x U-bolt and 2x zinc plated steel brackets for pole mounted 2"
D029	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 1" 1/2
D030	2x U-bolts and 2x stainless steel brackets (304L) for pole mounted 2"



Spare parts

Type	Specifications
B002C	Sealed polycarbonate tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003
B002VC	Sealed glass tube, cover, gasket, chain and slides - Offshore grade yellow paint RAL 1003
D003	Gasket
B004	Slides for gear tray
D021C	Cover, gasket, screw, terminals, switch and interlock of junction box
D022	Interlock
EXN04MLC2-01	Kit M20 Exd Exe IIC Ex-td nickel plated cable gland for non armoured cable diameter 10-16mm, locknut, sealing gasket
EXN04MMC1-01	Kit M20 Ex-d IIC Ex-e II Ex-td double compression nickel plated cable gland for armoured cable diameter inner 6-12 outer 8.5-16mm locknut, sealing gasket



Wellglass

Wellglass fitting all zones

EVH, EVX - Zones 1, 2 & 21, 22



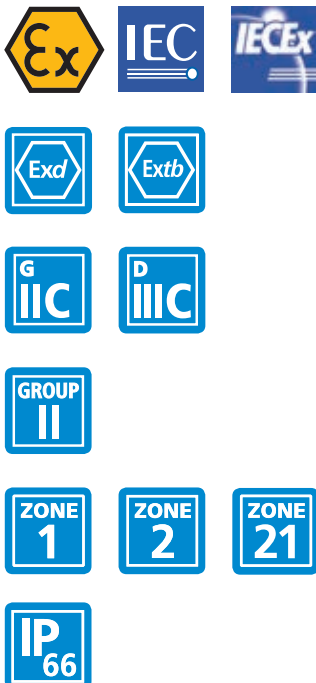
Features

- Compact design for easy installation
- For diffuse or ambient light
- Compatible with energy saving lamps or discharge lamp according to models

Specifications

- Manufactured from marine grade aluminum alloy
- Borosilicate glass globe
- Rated voltage standard: 230Vac 50Hz
- 4x entries 3/4 NPT - equipped with 2 nickel plated brass plugs

Certifications



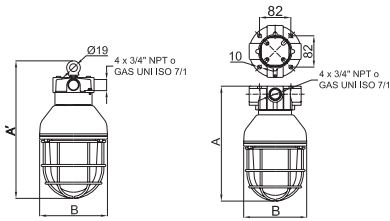
Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) IECEx CES 07.0004 CESI 12 ATEX 006 GOST R II 2 GD Ex d IIC T...°C Gb Ex tb IIIIC T...°C Db IP66
Glow wire test:	960°C
Operating temperature:	-20°C to +60°C
IP test:	IP66 IEC 60529

Wellglass

Wellglass fitting all zones

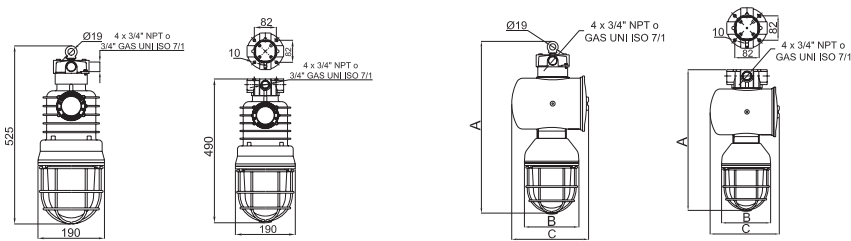
EVH, EVX - Zones 1, 2 & 21, 22



EVH, EVX

4 Technical specifications

Type	Mounting	Light Rating W	Current A @ 230V	Temperature class		Dimensions mm		Weight kg
				-20°C to +40°C	-20°C to +60°C	A	B	
EVH, EVX Wellglass fitting								
EVH100-00000	suspension ring	1 x 70 Halogen	0.45	T4 -103°C	T4 -123°C	311	150	16.50
EVX100-00000	ceiling mounted	1 x 70 Halogen	0.45	T4 -103°C	T4 -123°C	266	150	16.50
EVH200-00000	suspension ring	1 x 140 Halogen	0.90	T4 -134°C	T3 -154°C	367	170	16.50
EVX200-00000	ceiling mounted	1 x 140 Halogen	0.90	T4 -134°C	T3 -154°C	325	170	16.50
EVH300-00000	suspension ring	1 x 250 Mixed light	1.30	T4 -134°C	T3 -154°C	478	220	16.50
EVX300-00000	ceiling mounted	1 x 250 Mixed light	1.30	T4 -134°C	T3 -154°C	433	220	16.50



EVHNA20, EVXNA20

EVHNA30/40/50, EVXNA30/40/50

Technical specifications

Type	Mounting	Light Rating W	Current A @ 230V	Temperature class		Dimensions mm		Weight kg
				-20°C to +40°C	-20°C to +60°C	A	B	
EVH Na, EVX Na Wellglass fitting								
EVHNA20-00000	suspension ring	1 x 70 HP Sodium	0.40	T5 -95°C	T4 -115°C	520	200	16.50
EVXNA20-00000	ceiling mounted	1 x 70 HP Sodium	0.40	T5 -95°C	T4 -115°C	476	200	16.50
EVHNA30-00000	suspension ring	1 x 150 HP Sodium	0.80	T3 -139°C	T3 -159°C	655	220	16.50
EVXNA30-00000	ceiling mounted	1 x 150 HP Sodium	0.80	T3 -139°C	T3 -159°C	610	220	16.50
EVHNA40-00000	suspension ring	1 x 250 HP Sodium	1.30	T3 -139°C	T3 -159°C	655	220	16.50
EVXNA40-00000	ceiling mounted	1 x 250 HP Sodium	1.30	T3 -139°C	T3 -159°C	610	220	16.50
EVHNA50-00000	suspension ring	1 x 400 HP Sodium	2.10	T3 -144°C	T3 -164°C	722	280	16.50
EVXNA50-00000	ceiling mounted	1 x 400 HP Sodium	2.10	T3 -144°C	T3 -164°C	677	280	16.50

Technical information

Lamps (order separately)

High pressure sodium elliptical lamp - lampholder E40 - colour temperature 2000 to 2200°K

Metal Halides elliptical lamp - lampholder E40 or E27 - colour temperature 3900 to 4300°K

Rated voltages

For EV.NA, EV.IM
230Vac 50Hz compensated wirewound ferromagnetic ballast

Power factor

For EV.NA, EV.IM's ballast
0.85 (HP Sodium and metal halide)

Terminal block

6mm² (rigid wire), 4mm² (flexible wire)
Terminals supplied L, N, PE

Cable entries

Four 3/4" NPT entries - fitted with 2 nickel plated plugs

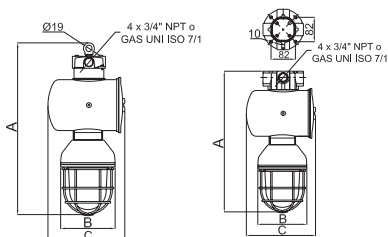
Casting

Marine grade aluminum alloy (CU<0.05%)
Yellow polyurethane paint RAL1003
Borosilicate glass globe
Galvanised steel protection grill
Neoprene ingress gasket
Stainless steel screws

Wellglass

Wellglass fitting all zones

EVH, EVX - Zones 1, 2 & 21, 22



EVH IM, EVX IM

Technical specifications

Type	Mounting	Light Rating W	Current A @ 230V	Temperature class		Dimensions mm		Weight kg
				-20°C to +40°C	-20°C to +60°C	A	B	
EVH Im, EVX Im Wellglass fitting								
EVHIM30-00000	suspension ring	1 x 150 Metal Halide	0.80	T4 - T112°C	T4 - T132°C	655	220	16.50
EVXIM30-00000	ceiling mounted	1 x 150 Metal Halide	0.80	T4 - T112°C	T4 - T132°C	610	220	16.50
EVHIM40-00000	suspension ring	1 x 250 Metal Halide	1.30	T3 -139°C	T3 -159°C	655	220	16.50
EVXIM40-00000	ceiling mounted	1 x 250 Metal Halide	1.30	T3 -139°C	T3 -159°C	610	220	16.50
EVHIM50-00000	suspension ring	1 x 400 Metal Halide	2.10	T3 -144°C	T3 -164°C	722	280	16.50
EVXIM50-00000	ceiling mounted	1 x 400 Metal Halide	2.10	T3 -144°C	T3 -164°C	677	280	16.50

Technical information

Lamps (order separately)

High pressure sodium elliptical lamp - lampholder E40 - colour temperature 2000 to 2200°K
Metal Halides elliptical lamp - lampholder E40 or E27 - colour temperature 3900 to 4300°K

Rated voltages

For EV.NA, EV.IM
230Vac 50Hz compensated wirewound ferromagnetic ballast

Power factor

For EV.NA, EV.IM's ballast
0.85 (HP Sodium and metal halide)

Terminal block

6mm² (rigid wire), 4mm² (flexible wire)
Terminals supplied L, N, PE

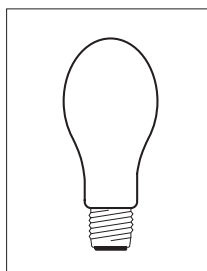
Cable entries

Four 3/4" NPT entries - fitted with 2 nickel plated plugs

Casting

Marine grade aluminum alloy (CU<0.05%)
Yellow polyurethane paint RAL1003
Borosilicate glass globe
Galvanised steel protection grill
Neoprene ingress gasket
Stainless steel screws

Lamps

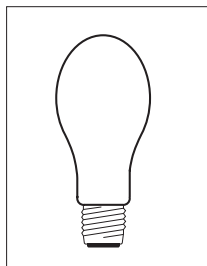


High pressure sodium elliptical lamps

Specifications:

colour temperature 2000 > 2200°K
CRI: 33 > 49, lm/W: 80 to 125
Average operating life: 34 000 hours
Minimum starting temperature: -25°C
Time to full power: 1 to 10mm with control gear & ignitor

Type	Power W	Lumen output lm	Lampholder
3LAM00003S	150	17 000	E40
3LAM00006S	250	31 100	E40
3LAM00060S	400	55 500	E40
3LAM00129S	70	6 300	E27



Metal Halides elliptical lamps

Specifications:

colour temperature 3900 > 4300°K
CRI: 33 > 49, lm/W: 50 to 60
Average operating life: 15 000 > 20 000 hours
Minimum starting temperature: -25°C
Time to full power: 5 to 10mm with control gear & ignitor

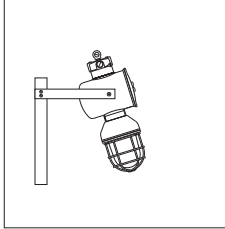
Type	Power W	Lumen output lm	Lampholder
3LAM00190S	150	11000	E27
3LAM00106S	250	17 000	E40
3LAM00097S	400	22 000	E40

Wellglass

Accessories & spare parts

EVH, EVX - Zones 1, 2 & 21, 22

Fixing accessories



4 R011 - R012
Bracket for pole mounting

Brackets

Type	Specifications
R006	External White painted aluminum reflector for EV 100
R007	External White painted aluminum reflector for EV 200
R008	External White painted aluminum reflector for EV NA 20
R009	External White painted aluminum reflector for EV 300, EV.NA 30, EV.NA 40, EV.IM40
R010	External White painted aluminum reflector for EV.NA 50, EV. IM 50
R018	30° angle wall mounting arm for wellglass
R011A	Bracket for 1"1/4 pole mounting - Hot deep galvanised for EV 30, EV 40
R012A	Bracket for 1"1/4 pole mounting - Hot deep galvanised for EV 50
R011B	Bracket for 1"1/2 pole mounting - Hot deep galvanised for EV 30, EV 40
R012B	Bracket for 1"1/2 pole mounting - Hot deep galvanised for EV 50
R011C	Bracket for 2" pole mounting - Hot deep galvanised for EV 30, EV 40
R012C	Bracket for 2" pole mounting - Hot deep galvanised for EV 50
R011D	Bracket for 2"1/2 pole mounting - Hot deep galvanised for EV 30, EV 40
R012D	Bracket for 2"1/2 pole mounting - Hot deep galvanised for EV 50

Spare parts

Type	Specifications
R001	Sealed globe, Electro-polished stainless steel protective guard and gasket for wellglass EV 100
R002	Sealed globe, Electro-polished stainless steel protective guard and gasket for wellglass EV 200
R003	Sealed globe, Electro-polished stainless steel protective guard and gasket for wellglass EV NA20
R004	Sealed globe, Electro-polished stainless steel protective guard and gasket for wellglass EV 300, EV NA30, EV NA40, EV IM40
R005	Sealed globe, Electro-polished stainless steel protective guard and gasket for wellglass EV NA50, EV IM50

Enclosures for all zones

Junction box

GUV - Zones 1, 2	5/3
XB100 - Zones 1, 2 & 21, 22	5/5

Control station

EFDC, SRC, XMC - Zones 1, 2	5/7
XBLA - polyester - Zones 1, 2 & 21, 22	5/11
XBIA - stainless steel - Zones 1, 2 & 21, 22	5/15
XBA - aluminum - Zones 1, 2 & 21, 22	5/19

One need, one control panel

Custom-built control panels	5/22
EJB - Zones 1, 2 & 21, 22	5/25
GUB - Zones 1, 2 & 21, 22	5/27

Instrumentation box

XBL -polyester Zones 1, 2 & 21, 22	5/31
XBI - stainless steel Zones 1, 2 & 21, 22	5/33
XB - aluminum Zones 1, 2 & 21, 22	5/35

Polyester/ Aluminium Plug & socket (safe disconnect)

DPX/DRX - 1, 2 & 21, 22	5/37
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Junction boxes

Cast aluminum junction box

GUV - Zones 1, 2



Features

- External mounting points allow junction boxes to be mounted without removing the lid
- Manufactured from cast aluminum and machined with a cylindrical spigot joint flame path
- Supplied with yellow grade paint RAL 1003 for high visibility

Specifications

- Marine grade aluminum alloy EN1706 AC - 43100KF- AISI 10Mg copper free
- 3 or 4x entries 3/4"NPT or 1"NPT
- Stainless steel screw
- Terminal ordered separately for flexibility

Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 00 ATEX 6022X Ex II 2 G Ex d IIC T6 Gb for -20°C to + 40°C* Ex d IIC T4 Gb for -20°C to + 60°C Ex d IIC T5 Gb for -20°C to + 55°C
IP test:	IP56 IEC 60529
Impact protection index:	IK09 according to IEC 62262

* Models with pilot lights

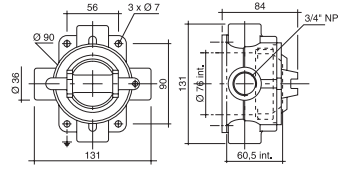
Junction boxes

Cast aluminum junction box

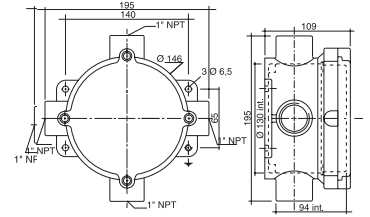
GUV - Zones 1, 2



GUV



Dimensional drawing GUV 26



Dimensional drawing GUV 36

Technical specifications

Type	Number of Entries	Number of Terminals (optional)	Weight kg
GUV Junction box			
GUVT26-00000	3T -3/4"NPT	4x2,5 to 6mm ²	0.80
GUVX26-00000	4X -3/4"NPT	4x2,5 to 6mm ²	0.80
GUVT36-00000	3T -3/4"NPT	Max. 8x25mm ² or 6x35mm ²	1.50
GUVT36-00A00	3T -1"NPT	Max. 8x25mm ² or 6x35mm ²	1.50
GUVX36-00000	4X -3/4"NPT	Max. 8x25mm ² or 6x35mm ²	1.50
GUVX36-00A00	4X -1"NPT	Max. 8x25mm ² or 6x35mm ²	1.50

Spare parts

Type	Specifications
G03	Rose terminal 4x6 mm ² for GUV26
G005	Terminal 6x4 mm ² (5 poles + 1 earth) for GUV36
G006	Terminal 10x4 mm ² (8 poles + 2 earth) for GUV36
G009	Terminal 4x10 mm ² (3 poles + 1 earth) for GUV36
G010	Terminal 5x10 mm ² (4 poles + 1 earth) for GUV36
G011	Terminal 4x16 mm ² (3 poles + 1 earth) for GUV36
G015	Terminal 8x16 mm ² (6 poles + 2 earth) for GUV36
G071	Terminal 6x6 mm ² (4 poles + 2 earth) for GUV36

Junction boxes

Polyester junction box

XB100 - Zones 1, 2 & 21, 22



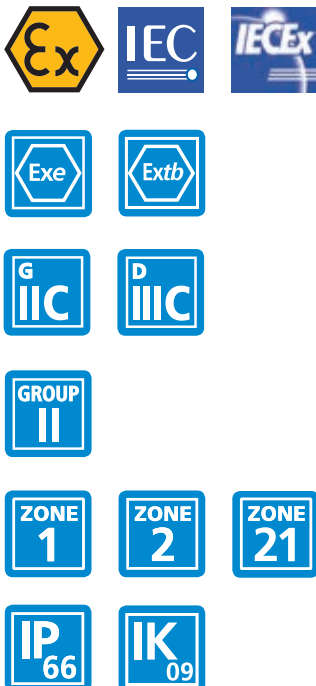
Features

- External mounting points allow for junction boxes to be mounted without removing the lid
- Robust design
- Manufactured from anti static glass reinforced polyester GRP so eliminating any chance of static build up
- Supplied complete with terminals and glands so all on site combinations are covered
- Stainless steel captive screws

Specifications

- 4x M20 entries - fitted with 4 cable glands and 1 plug, for armored cable and non armored cable
- Size 121 x 121 x 75,5mm
- Number of connectors: 6
- Type of terminal: 2 + 2 jumped terminals + 2 ground (for L1, N, PE)

Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 11 ATEX 3049X IEC Ex LCI 11.0045X Ex II 2 G Ex e IIC T6 Gb for -20°C to +40°C Ex e IIC T5 Gb for -20°C to +55°C Ex e IIC T4 Gb for -20°C to +90°C Ex II 2 D Ex tb IIIC T85°C Db IP66 for -20°C to +40°C Ex tb IIIC T100°C Db IP66 for -20°C to +55°C Ex tb IIIC T135°C Db IP66 for -20°C to +90°C
IP test:	IP66 IEC 60529
Impact protection index:	IK09 according to IEC 62262

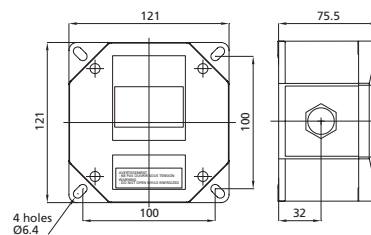
Junction boxes

Polyester junction box

XB100 - Zones 1, 2 & 21, 22



XB100



Dimensional drawing

Technical specifications

Type	Cable gland Material	Cable gland Size mm	Number of Terminals	Terminal Section mm ²	Connection	Plate bonding conductor	Weight kg
XB100 Junction box							
XB100-6BV	Polyamide	6-12	6	6	Screw/Screw	-	0.68
XB100-6BR	Polyamide	6-12	6	4	Spring/Spring	-	0.68
XB100A-6BV	Nickel Plated Brass	6-12Int. / 8.5-16 ext.	6	6	Screw/Screw	1	0.80
XB100A-6BR	Nickel Plated Brass	6-12Int. / 8.5-16 ext.	6	4	Spring/Spring	1	0.80

5

Control station

Cast aluminum control station

EFDC, SRC, XMC - Zones 1, 2



Features

- Manufactured from cast aluminum and machined with a cylindrical spigot joint flame path
- External mounting points allow junction boxes to be mounted without removing the lid
- Supplied with yellow grade paint RAL 1003 for high visibility (Except the emergency version - red)
- Includes one nickel-plated brass plug

Specifications

- 2x entries 3/4"NPT fitted with one plug
- Marine grade aluminum alloy EN1706 AC - 43100KF- AISI 10Mg copper free
- Stainless steel screws
- Volume <math><2\text{dm}^3</math>

Maximum operating power

- 400Vac for the indicator lamp
- 6A max for the push button
- 40A max for the rotary switches



5

Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 00 ATEX 6022 Ex II 2 G Ex d IIC T6 Gb for -20°C to + 40°C Ex d IIC T5 Gb for -20°C to + 55°C
IP test:	IP56 IEC 60529
Impact protection index:	IK09 according to IEC 62262

Control station

Cast aluminum control station

EFDC, SRC, XMC - Zones 1, 2



EFDC, SRC, XMC

Spare parts

Type	Specifications
BP01PC	Contacts NO+NC for push button switches
BP02	Head of green push switch
BP03	Head of red push switch
BP04	Head of black push switch
BP05	Head of mushroom push,pull switch
BP05V	Head of key operated mushroom push switch
BPN10PC	Black push-button NO+NC- Contact 6A max with 120Vac, 3A with 240Vac, 1,2A with 500Vac
BPR10PC	Red push-button NO+NC - Contact 6A max with 120Vac,, 3A with 240Vac, 1,2A with 500Vac
BPV10PC	Green push-button NO+NC - Contact 6A max with 120Vac,, 3A with 240Vac, 1,2A with 500Vac
BCP30PC	Simple emergency stop push button NO+NC- Contact 6A max with 120Vac, 3A with 240Vac, 1,2A with 500Vac
BCP40PC	Push,Pull button Emergency Stop NO+NC - Contact 6A max with 120Vac, 3A with 240Vac, 1,2A with 500Vac
BCP50PC	Push button NO+NC, unlockable by key n°455 - Contact 6A max with 120Vac, 3A with 240Vac, 1,2A with 500Vac
PRC10PC	Switch - 0-1 2, NO 16A
PRC20PC	Rotary switch operated by key n°455, 0-1, 2NO 16A
PRC30PC	Switch - 1-2, NO+NC 16A
PRC40PC	Switch - 1-0-2, NO-0-NC 16A
PRC50PC	Switch 0-1-2, 0-NO-NO 16A
PRC60PC	Rotary switch 0-1, 4NO 16A
PRC70PC	Lockable rotary switch 3NO 25A
VAB10PC	Blue indicator lamp - 230Vac
VAC10PC	White indicator lamp - 230Vac
VAJ10PC	Yellow indicator lamp - 230Vac
VAR10PC	Red indicator lamp - 230Vac
VAV10PC	Green indicator lamp - 230Vac
DE01	Green indicator lamp lens
DE02	Red indicator lamp lens
DE03	White indicator lamp lens
DE04	Amber indicator lamp lens
DE05	Blue indicator lamp lens

Control station

Polyester control station

XBL A - Zones 1, 2 & 21, 22



Features

- Wide variety of sizes and functions, available as standard products for quick supply and as custom built parts to meet the users' exact requirement
- Manufactured from anti static glass reinforced polyester GRP to eliminate static build up
- Stainless steel captive screws

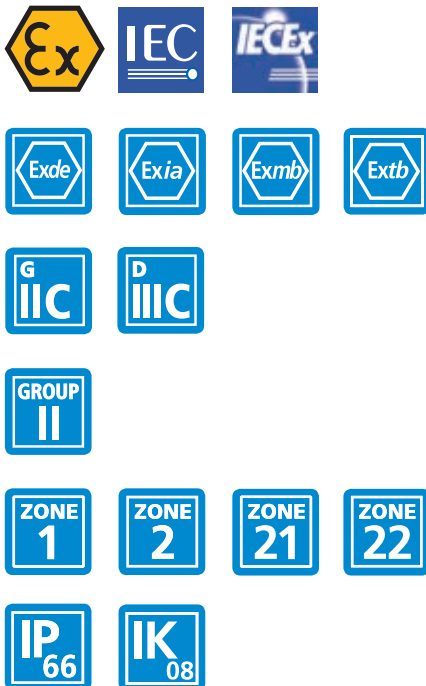
Specifications

- 2x entries M20 fitted with one plug

Maximum operating power

- AC: $U_{max}=415V$, $I=1,75A$
- AC: $U_{max}=240V$, $I=3A$
- AC: $U_{max}=120V$, $I=6A$
- DC: $U_{max}=415V$, $I=0,165A$
- DC: $U_{max}=250V$, $I=0,27A$
- DC: $U_{max}=125V$, $I=0,55A$
- All LED indicator lamp with voltage 24V- 254 Vac/Vdc

Certifications



5

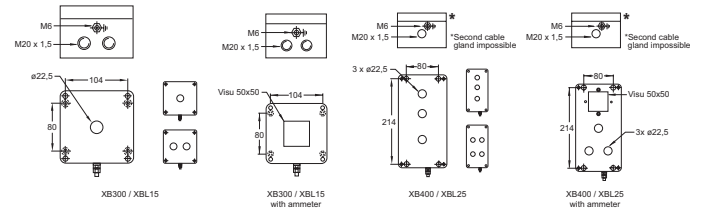
Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-7 : Increased safety "e" EN 60079-11 : Intrinsic safety "i" EN 60079-18 : Encapsulation "m" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 11 ATEX 3049X IEC Ex LCI 11.0045X Ex II 2 G Ex d e ia [ia] mb IIC T6 Gb for -20°C to +40°C Ex d e ia [ia] mb IIC T5 Gb for -20°C to +55°C Ex d e ia [ia] mb IIC T4 Gb for -20°C to +90°C Ex II 2 D Ex tb IIIC T85°C Db IP66 for -20°C to +40°C Ex tb IIIC T100°C Db IP66 for -20°C to +55°C Ex tb IIIC T135°C Db IP66 for -20°C to +90°C
IP test:	IP66 IEC 60529
Impact protection index:	IK08 according to IEC 62262

Control station

Polyester control station

XBL A - Zones 1, 2 & 21, 22



XBL A

Dimensional drawing

Technical specifications

Type	3D View	Wiring Diagram	Description	Weight kg
XBL Control station				
XBL215A			1x switch 0-1, 2 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBL215VA			1x switch with key n°455- 0-1, 1 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBL21A			1x green push-button 1 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBL21FA			1x emergency stop push-button push:pull 1 NC Contact 6A max with - 120V, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBL21VA			1x emergency stop push-button push:pull 1 NC with key n°455 - Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBL22A			1x green push-button 1 NO +1x red push-button 1 NC Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBL22AMP			1x green push-button 1 NO +1x red push-button 1 NC Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac +1x Ammeter TC:IA graduate scale 0-In-3In dilo IN= to be indicated + 1x front plug	2.20
XBL23A			1x green push-button 1 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac +1x green indicator lamp - 24-254Vac/Vdc	1.20
XBL41A			1x green push-button 1 NO +1x red push-button 1 NC Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac +1x green indicator lamp - 24-254Vac/Vdc	2.20

Control station

Spare parts

XBL A - Zones 1, 2 & 21, 22



XBL A

Spare parts

Type	Specifications
PB01EXNO	Contacts NO for push button switches
PB01EXNC	Contacts NC for push button switches
BPN10EX	Black push-button NO- Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A with 380Vac
BPR10EX	Red push-button NC- Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A with 380Vac
BPV10EX	Green push-button NO- Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A with 380Vac
BCP30EX	Simple emergency stop push button NC- Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
BCP40EX	Push,Pull button Emergency Stop NC - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
BCP50EX	Push button NC, unlockable by key n°455 - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
PRC10EX	Switch 0-1, NO - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
PRC20EX	Rotary switch operated by key n° 455 - 0-1, NO 16A
PRC40EX	Switch - 1-0-2 NO-0-NO - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
VAB10EX	Blue indicator lamp - 24-254Vac/Vdc
VAC10EX	White indicator lamp - 24-254Vac/Vdc
VAJ10EX	Yellow indicator lamp - - 24-254Vac/Vdc
VAR10EX	Red indicator lamp - 24-254Vac/Vdc
VAV10EX	Green indicator lamp - 24-254Vac/Vdc



Control station

Stainless steel 316L control station

XBI A - Zones 1, 2 & 21, 22



Features

- Wide variety of sizes and functions, available as standard products for quick supply and as custom built parts to meet the users' exact requirement
- Manufacture from stainless steel 316L, ideal for offshore applications
- Stainless steel captive screws

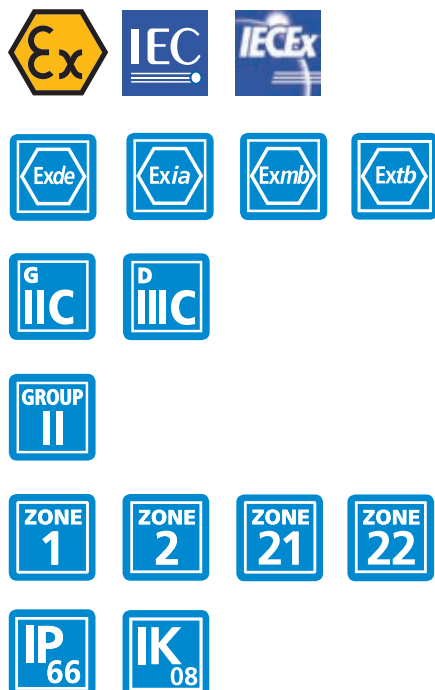
Specifications

- 2x entries M20 fitted with one plug

Maximum operating power

- AC: $U_{max}=415V$, $I=1,75A$
- AC: $U_{max}=240V$, $I=3A$
- AC: $U_{max}=120V$, $I=6A$
- DC: $U_{max}=415V$, $I=0,165A$
- DC: $U_{max}=250V$, $I=0,27A$
- DC: $U_{max}=125V$, $I=0,55A$
- All LED indicator lamp with voltage 24V- 254 Vac/Vdc

Certifications



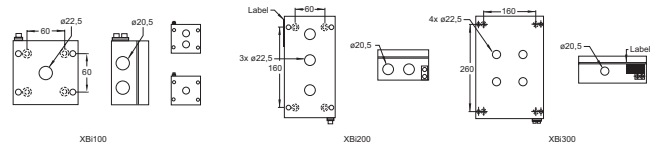
Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-7 : Increased safety "e" EN 60079-11 : Intrinsic safety "i" EN 60079-18 : Encapsulation "m" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 11 ATEX 3050X IEC Ex LCI 11.0044X Ex II 2 G Ex d e ia [ia] mb IIC T6 Gb for -20°C to +40°C Ex d e ia [ia] mb IIC T5 Gb for -20°C to +55°C Ex d e ia [ia] mb IIC T4 Gb for -20°C to +90°C Ex II 2 D Ex tb IIIC T85°C Db IP66 for -20°C to +40°C Ex tb IIIC T100°C Db IP66 for -20°C to +55°C Ex tb IIIC T135°C Db IP66 for -20°C to +90°C
IP test:	IP66 IEC 60529
Impact protection index:	IK08 according to IEC 62262

Control station

Stainless steel 316L control station

XBI A -Zones 1, 2 & 21, 22



XBI A

Dimensional drawing

Technical specifications

Type	3D View	Wiring Diagram	Description	Weight kg
XBI Control station				
XBI215A			1x switch 0-1, 2 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBI215VA			1x switch with key n°455- 0-1, 1 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBI21A			1x green push-button 1 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBI21FA			1x emergency stop push-button push:pull 1 NC Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBI21VA			1x emergency stop push-button push:pull 1 NC with key n°455 - Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBI22A			1x green push-button 1 NO +1x red push-button 1 NC Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XBI23A			1x green push-button 1 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac +1x green indicator lamp - 24-254Vac/Vdc	1.20
XBI41A			1x green push-button 1 NO +1x red push-button 1 NC Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac +1x green indicator lamp - 24-254Vac/Vdc	2.20

Control station

Spare parts

XBI A - Zones 1, 2 & 21, 22



XBI A

Spare parts

Type	Specifications
PB01EXNO	Contacts NO for push button switches
PB01EXNC	Contacts NC for push button switches
BPN10EX	Black push-button NO- Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A with 380Vac
BPR10EX	Red push-button NC- Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A with 380Vac
BPV10EX	Green push-button NO- Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A with 380Vac
BCP30EX	Simple emergency stop push button NC- Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
BCP40EX	Push,Pull button Emergency Stop NC - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
BCP50EX	Push button NC, unlockable by key n°455 - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
PRC10EX	Switch 0-1, NO - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
PRC20EX	Rotary switch operated by key n° 455 - 0-1, NO 16A
PRC40EX	Switch - 1-0-2 NO-0-NO - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
VAB10EX	Blue indicator lamp - 24-254Vac/Vdc
VAC10EX	White indicator lamp - 24-254Vac/Vdc
VAJ10EX	Yellow indicator lamp - 24-254Vac/Vdc
VAR10EX	Red indicator lamp - 24-254Vac/Vdc
VAV10EX	Green indicator lamp - 24-254Vac/Vdc



Control station

Aluminium control station

XB A - Zones 1, 2 & 21, 22



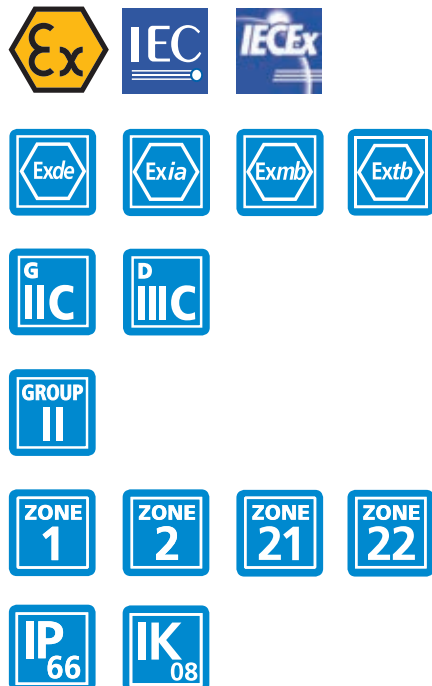
Specifications

- 2x entries M20 fitted with one plug

Maximum operating power

- AC: $U_{max}=415V$, $I=1,75A$
- AC: $U_{max}=240V$, $I=3A$
- AC: $U_{max}=120V$, $I=6A$
- DC: $U_{max}=415V$, $I=0,165A$
- DC: $U_{max}=250V$, $I=0,27A$
- DC: $U_{max}=125V$, $I=0,55A$
- All LED indicator lamp with voltage 24V-254 Vac/Vdc

Certifications



Features

- Wide variety of sizes and functions, available as standard products for quick supply and as custom built parts to meet the users' exact requirement
- Aluminium paint finish ideal for marine applications
- Stainless steel captive screws



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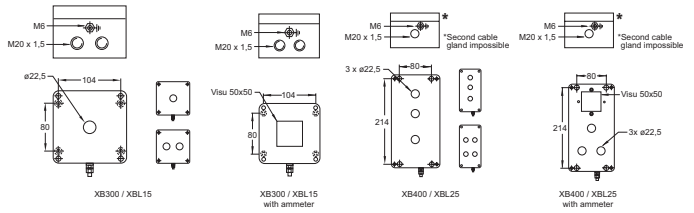
Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-7 : Increased safety "e" EN 60079-11 : Intrinsic safety "i" EN 60079-18 : Encapsulation "m" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 11 ATEX 3051X IEC Ex LCI 11.0046X Ex II 2 G Ex d e ia [ia] mb IIC T6 Gb for -20°C to +40°C Ex d e ia [ia] mb IIC T5 Gb for -20°C to +55°C Ex d e ia [ia] mb IIC T4 Gb for -20°C to +90°C Ex II 2 D Ex tb IIIIC T85°C Db IP66 for -20°C to +40°C Ex tb IIIIC T100°C Db IP66 for -20°C to +55°C Ex tb IIIIC T135°C Db IP66 for -20°C to +90°C
IP test:	IP66 IEC 60529
Impact protection index:	IK08 according to IEC 62262

Control station

Aluminium control station

XB A - Zones 1, 2 & 21, 22



XB A

Dimensional drawing

Technical specifications

Type	3D View	Wiring Diagram	Description	Weight kg
XB Control station				
XB215A			1x switch 0-1, 2 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XB215VA			1x switch with key n°455- 0-1, 1 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XB21A			1x green push-button 1 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XB21FA			1x emergency stop push-button push:pull 1 NC Contact 6A max with - 120V, 3A with - 220Vac, 1,90A - 380Vac	1.20
XB21VA			1x emergency stop push-button push:pull 1 NC with key n°455 - Contact 6A max with - 120Vac, 3A with - 240V, 1,90A - 380Vac	1.20
XB22A			1x green push-button 1 NO +1x red push-button 1 NC Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac	1.20
XB22AMP			1x green push-button 1 NO +1x red push-button 1 NC Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac +1x Ammeter TC:IA graduate scale 0-In-3In dilo IN= to be indicated + 1x front plug	2.20
XB23A			1x green push-button 1 NO Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac +1x green indicator lamp - 24-254Vac/Vdc	1.20
XB41A			1x green push-button 1 NO +1x red push-button 1 NC Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A - 380Vac +1x green indicator lamp - 24-254Vac/Vdc	2.20

Control station

Spare parts

XB A - Zones 1, 2 & 21, 22



XB A

Spare parts

Type	Specifications
PB01EXNO	Contacts NO for push button switches
PB01EXNC	Contacts NC for push button switches
BPN10EX	Black push-button NO- Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A with 380Vac
BPR10EX	Red push-button NC- Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A with 380Vac
BPV10EX	Green push-button NO- Contact 6A max with - 120Vac, 3A with - 240Vac, 1,90A with 380Vac
BCP30EX	Simple emergency stop push button NC- Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
BCP40EX	Push,Pull button Emergency Stop NC - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
BCP50EX	Push button NC, unlockable by key n°455 - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
PRC10EX	Switch 0-1, NO - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
PRC20EX	Rotary switch operated by key n° 455 - 0-1, NO 16A
PRC40EX	Switch - 1-0-2 NO-0-NO - Contact 6A max with 120Vac, 3A with 240Vac, 1,90A with 380Vac
VAB10EX	Blue indicator lamp - 24-254Vac/Vdc
VAC10EX	White indicator lamp - 24-254Vac/Vdc
VAJ10EX	Yellow indicator lamp - - 24-254Vac/Vdc
VAR10EX	Red indicator lamp - 24-254Vac/Vdc
VAV10EX	Green indicator lamp - 24-254Vac/Vdc

Custom-built control panels

One need, one control panel

5



Ex d control panels

DTS control panels are designed, manufactured and tested according to the ATEX protection type Ex d. (Ex d type of protection: Flameproof enclosure)

They can be composed of a wide variety of standard components which are switches, contactors and relays for instance. These components can be mounted into explosion proof enclosures built to keep internal explosions from igniting the surrounding atmosphere.

Our value commitment

DTS is committed to helping you meet the challenges of corrosion prevention with electrical solutions, services and systems that deliver value.

DTS helps to make your life easier by the practicality of its designs by providing effective advice and by being responsive to your need.

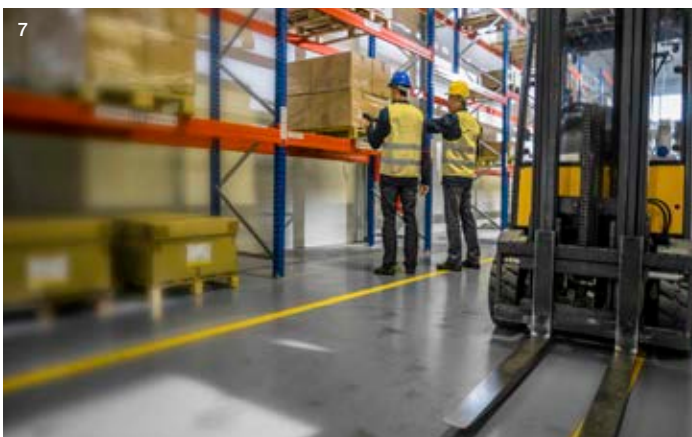
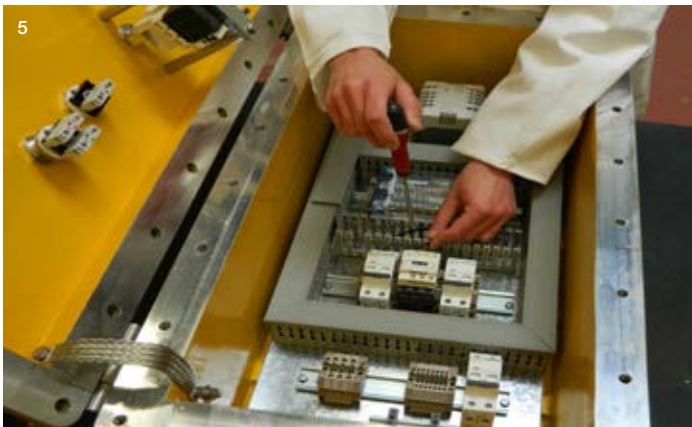
Stages to create a custom-built control panel

1. **Brief:** Understand the customer's requirements
2. **Design:** Control panel's drawing by the R&D team
3. **Testing:** Drill and realise pressure test
4. **Specification:** Customise the control panel
5. **Production:** Assemble and populate
6. **Quality:** Control by the quality team
7. **Logistics:** Ship
8. **Installation:** Ready to be installed



Custom-built control panels

One need, one control panel





Custom-built control panels

Cast aluminum custom-built control panels

EJB - Zones 1, 2 & 21, 22



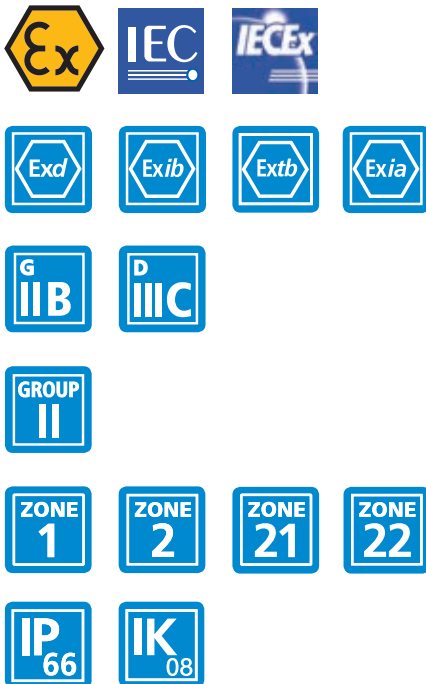
Features

- Robust construction
- Wide variety of sizes
- Large choice of electrical components
- Customised to user's specification

Specifications

- Marine grade aluminum alloy EN1706 AC - 43100KF- AISI 10Mg copper free
- Stainless steel external earth & screws
- Hinged door if command buttons are on the panel (except EJB0)
- 4 threaded holes on the back plate
- Frame or supporting feet on request

Certifications



5

Standards

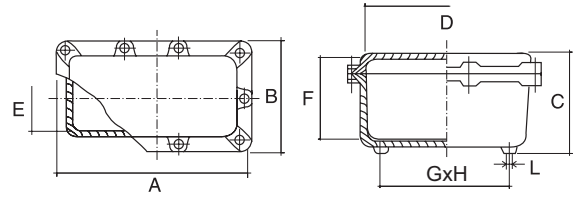
Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-11 : Intrinsic safety "i" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE)
Models EJB12, EJB13, EJB with or without window	INERIS 11 ATEX 0050X Ex II 2 G : Ex d IIB T5 or T6 Gb Ex II 2 (1) G : Ex d [ja IIC Ga] or [ib] or [ib IIC] or [ja Ga] IIB T6 Gb
Models EJB4 to EJB11	LCIE 00 ATEX 6021X, IEC Ex LCIE 13.0069X Ex II 2 G Ex d IIB T5 or T6 Gb for -40°C to + 40°C* Ex d IIB T4 or T5 Gb for -40°C to + 60°C* Ex II 2 D Ex tb IIIC T80°C or T95°C Db for -40°C to + 40°C* Ex tb IIIC T95°C or T130°C Db for -40°C to + 60°C* Ex II 2(1) G : Ex d [ib IIC or IIB Gb] IIB T6 Gb Ex II 2(2) G : Ex d [ib IIC or IIB Gb] IIB T6 Gb
Models EJB0, EJB1, EJB2	LCIE 00 ATEX 6021X, IEC Ex LCIE 13.0069X Ex 2 G Ex d IIB+H ² T5 or T6 Gb for -40°C to + 40°C* Ex d IIB+H ² T4 or T5 Gb for -40°C to + 60°C* Ex II 2 D Ex tb IIIC T80°C or T95°C Db for -40°C to + 40°C* Ex tb IIIC T95°C or T130°C Db for -40°C to + 60°C* Ex II 2 (1) G : Ex d [ja IIC or IIB Ga] IIB + H ² T6 Gb Ex II 2 (2) G : Ex d [ib IIC or IIB Gb] IIB + H ² T6 Gb
IP test:	IP66 IEC 60529
Impact protection index:	IK08 according to IEC 62262

* For -40°C, the actuators are not permitted

Custom-built control panels

Cast aluminum custom-built control panels

EJB - Zones 1, 2 & 21, 22



EJB

Dimensional drawing

Technical specifications

Type	Dimensions mm			Internal dimensions mm			Mounting dimensions mm			Internal Plate mm	Weight kg
	A	B	C	D	E	F	G	H	L		
EJB Custom built control panels											
EJB0	200	145	130	145	90	90	140	85	M6	138 x 85	4
EJB1	302	190	170	225	115	130	200	100	M6	215 x 110	8
EJB2	295	230	165	225	165	132	185	130	M6	220 x 160	9
EJB4	410	300	167	340	220	127	290	190	M8	320 x 210	16
EJB5	475	295	220	390	207	179	335	178	M8	380 x 200	18
EJB8	625	360	250	525	260	195	480	210	M8	510 x 250	33
EJB11	595	505	275	485	395	207	436	335	M10	470 x 380	55
EJB12	805	435	315	690	345	246	605	262	M12	675 x 325	75
EJB13	832	612	323	720	435	252	628	405	M12	690 x 470	110

Options

- Boxes provided with load-break switch
- Visible breaking
- Switch off and on under load



Custom-built control panels

Cast aluminum custom-built control panels

GUB - Zones 1, 2 & 21, 22



Features

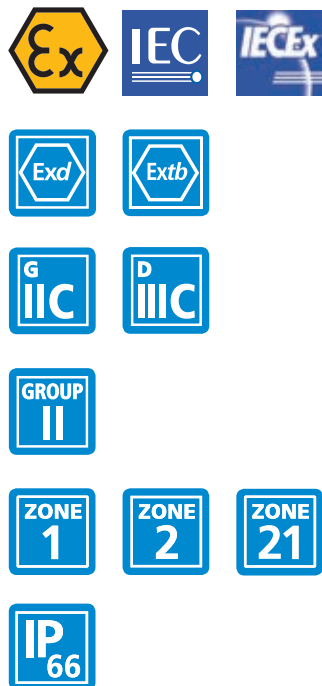
- IIC boxes
- Anti-corrosion and marine protection
- Large internal volume
- Quick and easy opening and closing

Specifications

- Marine grade aluminum alloy copper free
- Stainless steel screws
- Fixing lugs incorporated to the panel



Certifications



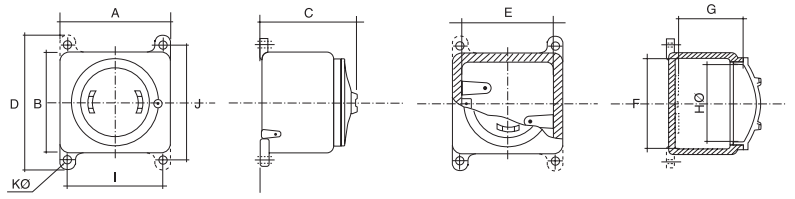
Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) CESI 01 ATEX 036 Ex II 2 G / D Ex d IIC T6 to T5 Gb Ex tb IIIC T85°C to T100°C Gb IP66 T6: -20°C à +40°C T5: -20°C à +55°C
IP test:	IP66 IEC 60529

Custom-built control panels

Cast aluminium custom-built control panels

GUB - Zones 1, 2 & 21, 22



GUB
Custom built control panels

Dimensional drawing

Technical specifications

Type	Dimensions mm				Internal dimensions mm						Fixing KØ mm	Weight kg
	A	B	C	D	E	F	G	H	I	J		
GUB0AS	120	120	116	166	96	96	54	75	100	145	9	2
GUB0BS	150	150	130	205	126	126	68	115	126	174	10	3
GUB01CS	174	174	140	218	146	146	75	115	150	195	10	4
GUB02DS	230	230	165	302	204	204	85	175	196	267	14	7
GUB03ES	276	276	217	346	274	256	134	220	236	316	14	12
GUB04FS	430	430	290	522	398	398	155	360	390	480	14	30

Custom-built control panels

Spare parts

EJB & GUB - Zones 1, 2 & 21, 22



EJB

GUB

Spare parts

Type	Specifications
PB01	Contacts NO+NC for push button switches
BP02	Head of green push switch
BP03	Head of red push switch
BP04	Head of black push switch
BP05	Head of mushroom push,pull switch
BP05V	Head of key n°455 operated mushroom push switch
BPN10	Black push-button NO+NC- contact 6A max with 120Vac, 3A with 240Vac, 1.2A with 500Vac
BPR10	Red push-button NO+NC- Contact 6A max with 120Vac, 3A with 240Vac, 1.2A with 500Vac
BPV10	Green push-button NO+NC- Contact 6A max with 120Vac, 3A with 240Vac, 1.2A with 500Vac
REA20	Reset button
BCP30	Simple emergency stop push button NO+NC- Contact 6A max with 120Vac, 3A with 240Vac, 1.2A with 500Vac
BCP40	Push,Pull button Emergency Stop NO+NC - Contact 6A max with 120Vac, 3A with 240Vac, 1.2A with 500Vac
BCP50	Push button NO+NC, unlockable by key N 455 - Contact 6A max with 120Vac, 3A with 240Vac, 1.2A with 500Vac
PR01	Rotary switch unit 0-1 2NO 16A
PR02	Rotary switch unit 1-2 NO+NC 16A
PR03	Rotary switch unit 1-0-2 NO-0-NO 16A
PR04	Rotary switch unit 0-1-2, 0-NO-NO 16A
PR05	Rotary switch unit 0-1 4 NO 16A
PR06	Rotary switch unit 0-1 3NO 25A
PR07	Rotary switch top
PR07V	Key n°455 operated switch top
PRC10	Switch 0-1 2NO 16A
PRC20	Rotary switch operated by key No 455 0-1 2NO 16A
PRC30	Switch - 1-2 NO+NC 16A
PRC40	Switch - 1-0-2 NO-0-NC 16A
PRC50	Switch 0-1-2, 0-NO-NO 16A
PRC60	Rotary switch 0-1 4NO 16A
PRC70	Lockable rotary switch 3NO 25A
VAB10	Blue indicator lamp - 230Vac
VAB1012-24V	Blue indicator lamp 12-24Vac
VAB10400V	Blue indicator lamp 400Vac
VAB1048V	Blue indicator lamp 48Vac
VAC10	White indicator lamp - 230Vac
VAC1012-24V	White indicator lamp 12-24Vac
VAC10400V	White indicator lamp 400Vac
VAC1048V	White indicator lamp 48Vac
VAJ10	Yellow indicator lamp - 230Vac
VAJ1012-24V	Yellow indicator lamp 12-24Vac
VAJ10400V	Yellow indicator lamp 400Vac
VAJ1048V	Yellow indicator lamp 48Vac

Custom-built control panels

Spare parts

EJB & GUB - Zones 1, 2 & 21, 22



EJB



GUB

Spare parts

5

Type	Specifications
VAJ10	Yellow indicator lamp - 230Vac
VAJ1012-24V	Yellow indicator lamp 12-24Vac
VAJ10400V	Yellow indicator lamp 400Vac
VAJ1048V	Yellow indicator lamp 48Vac
VAR10	Red indicator lamp - 230Vac
VAR1012-24V	Red indicator lamp 12-24Vac
VAR10400V	Red indicator lamp 400Vac
VAR1048V	Red indicator lamp 48Vac
VAV10	Green indicator lamp - 230Vac
VAV1012-24V	Green indicator lamp 12-24Vac
VAV10400V	Green indicator lamp 400Vac
VAV1048V	Green indicator lamp 48Vac
DE01	Green indicator lamp lens
DE02	Red indicator lamp lens
DE03	White indicator lamp lens
DE04	Amber indicator lamp lens
DE05	Blue indicator lamp lens

Instrumentation boxes

Polyester instrumentation box

XBL - Zones 1, 2 & 21, 22



Features

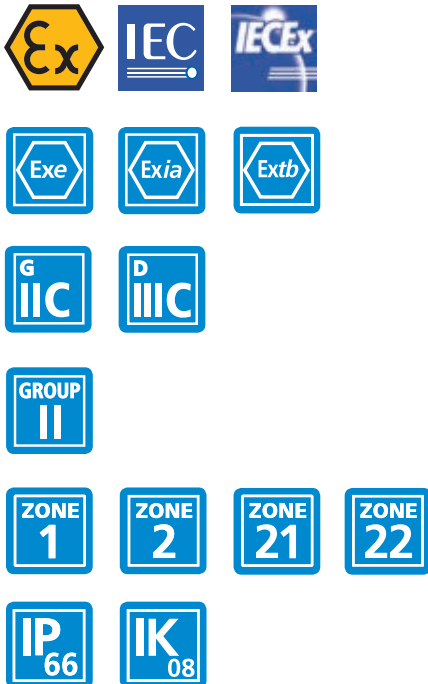
- Robust design
- Manufactured from anti static glass reinforced polyester GRP to eliminate static build up
- Can be supplied complete with terminals and glands so all on site combinations are covered

Specifications

- ISO entries and threads
- Stainless steel captive screws
- Optional hinges



Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-7 : Increased safety "e" EN 60079-11 : Intrinsic safety "i" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 11 ATEX 3049X IEC Ex LCI 11.0045X Ex II 2 G Ex e ia [ia] IIC T6 Gb for -20°C to +40°C Ex e ia [ia] IIC T5 Gb for -20°C to +55°C Ex e ia [ia] IIC T4 Gb for -20°C to +90°C Ex II 2 D Ex tb IIIC T85°C Db IP66 for -20°C to +40°C Ex tb IIIC T100°C Db IP66 for -20°C to +55°C Ex tb IIIC T135°C Db IP66 for -20°C to +90°C LCIE 11 ATEX 3035 U IEC Ex LCIE 11.0028U Ex II 2 G Ex e IIC Gb Ex II 2 D Ex tb IIIC Db IP66
IP test:	IP66 IEC 60529
Impact protection index:	IK08 according to IEC 62262

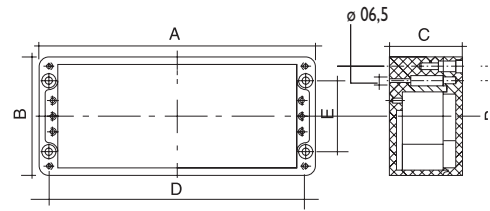
Instrumentation boxes

Polyester instrumentation box

XBL - Zones 1, 2 & 21, 22



XBL



Dimensional drawing

Technical specifications

Type	Material	Dimensions mm					Weight kg
		A	B	C	D	E	
XBL Instrumentation box							
XBL15	Polyester	122	120	91	106	82	0.78
XBL20	Polyester	110	75	75	98	45	0.40
XBL25	Polyester	220	120	91	204	82	1.10
XBL35	Polyester	360	160	91	340	110	2.27
XBL40	Polyester	405	400	121	380	355	5.76
XBL45	Polyester	400	250	121	380	200	3.74
XBL50	Polyester	255	250	121	380	200	2.82
XBL55	Polyester	400	250	161	380	200	4.80
XBL65	Polyester	600	250	121	580	200	5.52
XBL75	Polyester	605	405	252	370	570	8.30
XBL165	Polyester	160	160	91	140	110	1.30
XBL260	Polyester	260	160	91	240	110	1.80
XBL400	Polyester	405	400	201	380	355	7.40



Instrumentation boxes

Stainless steel 316L instrumentation box

XBI - Zones 1, 2 & 21, 22



Features

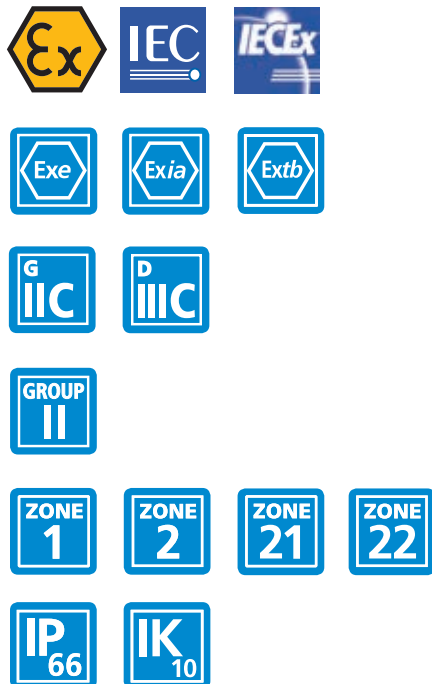
- Robust design
- Manufactured from stainless steel 316L so ideal for offshore applications
- Can be supplied complete with terminals and glands so all on site combinations are covered

Specifications

- ISO entries and threads
- Stainless steel captive screws
- Optional hinges



Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-7 : Increased safety "e" EN 60079-11 : Intrinsic safety "i" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 11 ATEX 3050X IEC Ex LCI 11.0044X Ex II 2 G Ex e ia [ia] IIC T6 Gb for -20°C to +40°C Ex e ia [ia] IIC T5 Gb for -20°C to +55°C Ex e ia [ia] IIC T4 Gb for -20°C to +90°C Ex II 2 D Ex tb IIIC T85°C Db IP66 for -20°C to +40°C Ex tb IIIC T100°C Db IP66 for -20°C to +55°C Ex tb IIIC T135°C Db IP66 for -20°C to +90°C LCIE 11 ATEX 3045 U IEC Ex LCIE 11.0041U Ex II 2 G Ex e IIC Gb Ex II 2 D Ex tb IIIC Db IP66
IP test:	IP66 IEC 60529
Impact protection index:	IK10 according to IEC 62262

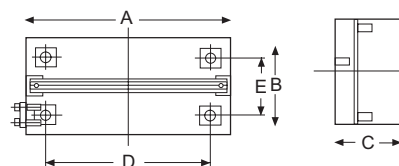
Instrumentation boxes

Stainless steel 316L instrumentation box

XBI - Zones 1, 2 & 21, 22



XBI
Instrumentation box



XBI
Dimensional drawing

Technical specifications

Type	Material	Dimensions mm					Weight kg
		A	B	C	D	E	
XBI Instrumentation box							
XBI100	Inox	100	100	61	60	60	0.58
XBI150	Inox	150	150	81	110	110	1.20
XBI200	Inox	200	100	61	160	110	0.93
XBI300	Inox	300	200	81	260	160	2.39
XBI316	Inox	300	300	161	260	260	4.10
XBI400	Inox	400	300	161	360	260	5.29
XBI500	Inox	500	400	161	460	360	7.35
XBI600	Inox	600	200	121	560	360	5.82

Instrumentation boxes

Aluminium instrumentation box

XB - Zones 1, 2 & 21, 22



Features

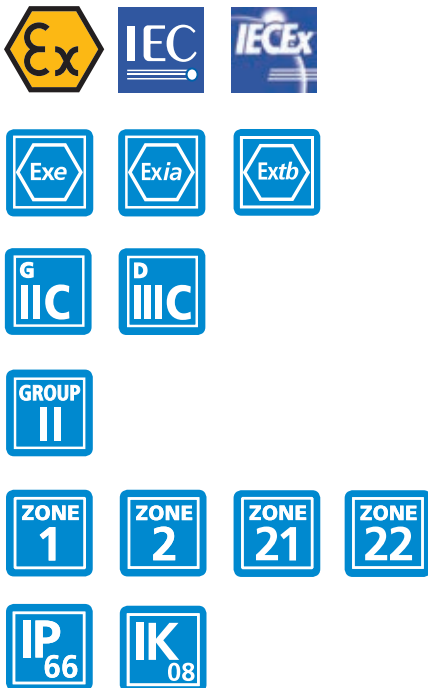
- Robust design
- Aluminium paint finish ideal for marine applications
- Can be supplied complete with terminals and glands so all on site combinations are covered

Specifications

- ISO entries and threads
- Stainless steel captive screws
- Optional hinges



Certifications



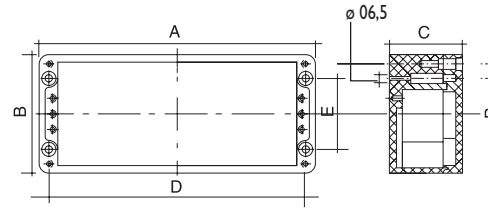
Standards

Approved to:	EN 60079-0 : General requirements EN 60079-7 : Increased safety "e" EN 60079-11 : Intrinsic safety "i" EN 60079-31 : Enclosure "t"
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE) LCIE 11 ATEX 3051X IEC Ex LCI 11.0046X Ex II 2 G Ex e ia [ia] IIC T6 Gb for -20°C to +40°C Ex e ia [ia] IIC T5 Gb for -20°C to +55°C Ex e ia [ia] IIC T4 Gb for -20°C to +90°C Ex II 2 D Ex tb IIIC T85°C Db IP66 for -20°C to +40°C Ex tb IIIC T100°C Db IP66 for -20°C to +55°C Ex tb IIIC T135°C Db IP66 for -20°C to +90°C LCIE 11 ATEX 3046 U IEC Ex LCIE 11.0043U Ex II 2 G Ex e IIC Gb Ex II 2 D Ex tb IIIC Db IP66
IP test:	IP66 IEC 60529
Impact protection index:	IK08 according to IEC 62262

Instrumentation boxes

Aluminium instrumentation box

XB - Zones 1, 2 & 21, 22



XB

Dimensional drawing

Technical specifications

Type	Material	Dimensions mm					Weight kg
		A	B	C	D	E	
XBI Instrumentation box							
XB300	Aluminium	122	120	81	106	82	0.94
XB330	Aluminium	330	230	181	310	180	5.30
XB400	Aluminium	220	120	91	204	82	1.43
XB510	Aluminium	160	160	91	140	110	1.50
XB520	Aluminium	260	160	91	240	110	2.37
XB570	Aluminium	232	202	111	180	180	2.44
XB605	Aluminium	600	310	181	580	260	9.00
XB700	Aluminium	360	160	91	340	110	2.54
XB710	Aluminium	330	230	111	310	180	4.05
XB750	Aluminium	403	312	141	382	262	7.00
XB760	Aluminium	404	313	181	382	262	12.00
XB950	Aluminium	600	230	111	580	260	6.95
XB960	Aluminium	600	600	202	555	525	26.50

5



Plug & socket

Polyester/ Aluminium Plug & socket (safe disconnect)

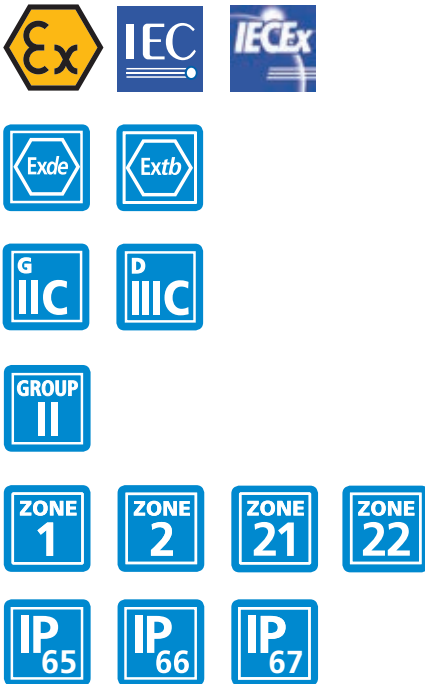
DPX/ DRX - Zones 1,2 & 21, 22



Features

- Robust design
- Manufactured from anti static glass reinforced polyester GRP (for version 20 or 32 A) to eliminate static build up or aluminum (version 125A)

Certifications



Standards

Approved to:	EN 60079-0 : General requirements EN 60079-1 : Flameproof enclosure "d" EN 60079-7 : Increased safety "e" EN 60079-31 : Enclosure "t" EN 600309-1 : General requirements EN 60309-4 (with or without interlock)
EC Type examination certificate to:	Directive 94/9/EC - April 2016 (2014/34/UE)
Versions 20 A:	LCIE 99 ATEX 6027X, IECEx LCI09.005X, -40 °C to +60 °C T5 T90°C, -40 °C to +40 °C T6 T70°C
Versions 32 A:	LCIE 05 ATEX 6149, IECEx LCI09.0006, -40 °C to +60 °C T4 T98°C, -40 °C to +40 °C T6 T78°C
Versions 63 A:	LCIE 05 ATEX 6150, IECEx LCI09.0007, -40 °C to +60 °C T4 T107°C, -40 °C to +40 °C T5 T87°C
Versions 125 A:	LCIE 04 ATEX 6038, IECEx LCI09.0015, -40 °C to +60 °C T5 T90°C, -40 °C to +50 °C T6 T80°C
IP test:	Ex II 2 G Ex de IIC T...°C Gb Ex II 2 D Ex tb IIIC T...°C Db IP66/67 IP66/67 (PBT), IP65 (aluminum) according to IEC60529

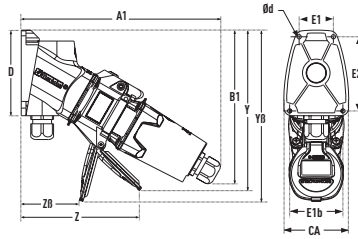
Plug & socket

Polyester/ Aluminium Plug & socket (safe disconnect)

DPX/ DRX - Zones 1,2 & 21, 22



GRP plug & socket - 20A



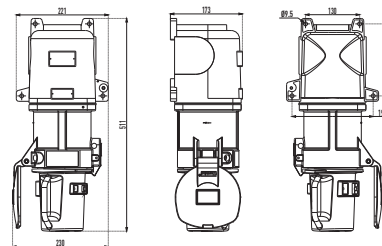
Dimensional drawing

Technical specifications

Type	Version	Poles	Rated Voltage V	Current A @ 230V	Cable Gland	Dimensions mm								Weight kg
						A1	B1	CA	D	E1	E2	L	ø	
GRP plug & socket - 20A														
DPX116E250	Plug	1P+N+PE	220-250V	20	M20 - 8-13	209	162	68	90	36	78	-	4.5	0.16
DRX116E250	Socket	1P+N+PE	220-250V	20	M20 - 8-13	-	-	-	-	-	-	-	-	0.16
DPX216E24	Plug	2P+PE	24V	20	M20 - 8-13	209	162	68	90	36	78	-	4.5	0.16
DRX216E24	Socket	2P+PE	24V	20	M20 - 8-13	-	-	-	-	-	-	-	-	0.16
DPX216X24	Plug	2P	20-24V	20	M20 - 8-13	209	162	68	90	36	78	-	4.5	0.16
DRX216X24	Socket	2P	20-24V	20	M20 - 8-13	-	-	-	-	-	-	-	-	0.16
DPX216E250	Plug	2P+PE	220-250V	20	M20 - 8-13	209	162	68	90	36	78	-	4.5	0.16
DRX216E250	Socket	2P+PE	220-250V	20	M20 - 8-13	-	-	-	-	-	-	-	-	0.16
DPX216E415	Plug	2P+PE	380-440V	20	M20 - 8-13	209	162	68	90	36	78	-	4.5	0.16
DRX216E415	Socket	2P+PE	380-440V	20	M20 - 8-13	-	-	-	-	-	-	-	-	0.16
DPX316E250	Plug	3P+PE	220-250V	20	M20 - 8-13	209	162	68	90	36	78	-	4.5	0.16
DRX316E250	Socket	3P+PE	220-250V	20	M20 - 8-13	-	-	-	-	-	-	-	-	0.16
DPX316E415	Plug	3P+PE	380-440V	20	M20 - 8-13	209	162	68	90	36	78	-	4.5	0.16
DRX316E415	Socket	3P+PE	380-440V	20	M20 - 8-13	-	-	-	-	-	-	-	-	0.16
DPX416E250	Plug	3P+N+PE	220-250V	20	M20 - 8-13	209	162	68	90	36	78	-	4.5	0.16
DRX416E250	Socket	3P+N+PE	220-250V	20	M20 - 8-13	-	-	-	-	-	-	-	-	0.16
DPX416E415	Plug	3P+N+PE	380-440V	20	M20 - 8-13	209	162	68	90	36	78	-	4.5	0.16
DRX416E415	Socket	3P+N+PE	380-440V	20	M20 - 8-13	-	-	-	-	-	-	-	-	0.16



Aluminium plug & socket - 125A



Dimensional drawing

Technical specifications

Type	Version	Poles	Rated Voltage V	Current A @ 230V	Cable Gland	Dimensions mm								Weight kg
						A1	B1	CA	D	E1	E2	L	ø	
Aluminium plug & socket - 125A														
DPX3125E415	Plug	3P+T	380-440V	125	M50 -27-41	173	511	221	195	130	173	-	9.5	2.60
DRX3125E415	Socket	3P+T	380-440V	125	M50 -27-41	-	-	-	-	-	-	-	-	2.60
DPX4125E415	Plug	3P+N+T	380-440V	125	M50 -27-41	173	511	221	195	130	173	-	9.5	2.60
DRX4125E415	Socket	3P+N+T	380-440V	125	M50 -27-41	-	-	-	-	-	-	-	-	2.60

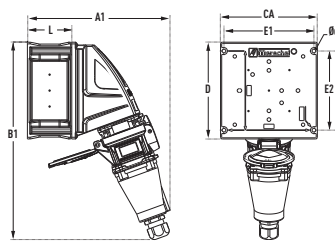
Plug & socket

Polyester/ Aluminium Plug & socket (safe disconnect)

DPX/ DRX - Zones 1,2 & 21, 22



GRP plug & socket - 32A & 63A



Dimensional drawing

Technical specifications

Type	Version	Poles	Rated Voltage V	Current A @ 230V	Cable Gland	Dimensions mm								Weight kg
						A1	B1	CA	D	E1	E2	L	Ø	
GRP plug & socket - 32A & 63A														
DPX132E250	Plug	1P+N+PE	220-250V	32	M25 -13-19	219	277	128	128	116	96	78	6.5	0.24
DRX132E250	Socket	1P+N+PE	220-250V	32	M25 -13-19	—	—	—	—	—	—	—	—	0.24
DPX232E24	Plug	2P+PE	24V	32	M25 -13-19	219	277	128	128	116	96	78	6.5	0.24
DRX232E24	Socket	2P+PE	24V	32	M25 -13-19	—	—	—	—	—	—	—	—	0.24
DPX232X24	Plug	2P	20-24V	32	M25 -13-19	219	277	128	128	116	96	78	6.5	0.24
DRX232X24	Socket	2P	20-24V	32	M25 -13-19	—	—	—	—	—	—	—	—	0.24
DPX232E250	Plug	2P+PE	220-250V	32	M25 -13-19	219	277	128	128	116	96	78	6.5	0.24
DRX232E250	Socket	2P+PE	220-250V	32	M25 -13-19	—	—	—	—	—	—	—	—	0.24
DPX232E415	Plug	2P+PE	380-440V	32	M25 -13-19	219	277	128	128	116	96	78	6.5	0.24
DRX232E415	Socket	2P+PE	380-440V	32	M25 -13-19	—	—	—	—	—	—	—	—	0.24
DPX332E250	Plug	3P+PE	220-250V	32	M25 -13-19	219	277	128	128	116	96	78	6.5	0.24
DRX332E250	Socket	3P+PE	220-250V	32	M25 -13-19	—	—	—	—	—	—	—	—	0.24
DPX332E415	Plug	3P+PE	380-440V	32	M25 -13-19	219	277	128	128	116	96	78	6.5	0.24
DRX332E415	Socket	3P+PE	380-440V	32	M25 -13-19	—	—	—	—	—	—	—	—	0.24
DPX432E250	Plug	3P+N+PE	220-250V	32	M25 -13-19	219	277	128	128	116	96	78	6.5	0.24
DRX432E250	Socket	3P+N+PE	220-250V	32	M25 -13-19	—	—	—	—	—	—	—	—	0.24
DPX432E415	Plug	3P+N+PE	380-440V	32	M25 -13-19	219	277	128	128	116	96	78	6.5	0.24
DRX432E415	Socket	3P+N+PE	380-440V	32	M25 -13-19	—	—	—	—	—	—	—	—	0.42
DPX163E250	Plug	1P+N+PE	220-250V	63	M32 -17-25	251	347	170	170	158	139	78	6.5	0.42
DRX163E250	Socket	1P+N+PE	220-250V	63	M32 -17-25	—	—	—	—	—	—	—	—	0.42
DPX263X24	Plug	2P	20-24V	63	M32 -17-25	251	347	170	170	158	139	78	6.5	0.42
DRX263X24	Socket	2P	20-24V	63	M32 -17-25	—	—	—	—	—	—	—	—	0.42
DPX363E415	Plug	3P+PE	380-440V	63	M32 -17-25	251	347	170	170	158	139	78	6.5	0.42
DRX363E415	Socket	3P+PE	380-440V	63	M32 -17-25	—	—	—	—	—	—	—	—	0.42
DPX463E415	Plug	3P+N+PE	380-440V	63	M32 -17-25	251	347	170	170	158	139	78	6.5	0.42
DRX463E415	Socket	3P+N+PE	380-440V	63	M32 -17-25	—	—	—	—	—	—	—	—	0.42

Index & useful information

Index & useful information

Order code classification	6/2
Photometric data	6/9

Index & useful information

Order code classification

Part No.	GID Code	Page No.	Part No.	GID Code	Page No.	Part No.	GID Code	Page No.
3LAM00003S	7TCA119020R0061	4/35	D00165WC	7TCA119050R0071	2/6	DE03	7TCA132750R0002	5/10
3LAM00006S	7TCA119020R0001	4/35	D001P20WC	—	2/17	DE04	7TCA132890R0149	5/10
3LAM00060S	7TCA119020R0005	4/35	D001P40WC	—	2/17	DE05	7TCA132750R0003	5/10
3LAM00097S	7TCA119020R0007	4/35	D001P65WC	—	2/17	DPX116E250	7TCA132510R0005	5/38
3LAM00106S	7TCA119020R0059	4/35	D001PV20WC	—	2/17	DPX132E250	7TCA132510R0007	5/39
3LAM00129S	7TCA119020R0009	4/35	D001PV40WC	7TCA119050R0068	2/17	DPX163E250	7TCA132510R0008	5/39
3LAM00190S	7TCA119020R0062	4/35	D001PV65WC	—	2/17	DPX216E24	7TCA132510R0009	5/38
B001C	7TCA119050R0065	2/34	D001V20WC	7TCA119050R0066	2/6	DPX216E250	7TCA132510R0010	5/38
B001VC	7TCA119050R0060	2/34	D001V40WC	7TCA119050R0063	2/6	DPX216E415	7TCA132510R0011	5/38
B002C	—	2/34	D001V65WC	7TCA119050R0067	2/6	DPX216X24	7TCA132510R0012	5/38
B002VC	—	2/34	D002E	—	2/27	DPX232E24	7TCA132510R0013	5/39
B004	7TCA119090R0034	2/34	D003	7TCA119090R0046	2/6	DPX232E250	7TCA132510R0014	5/39
B005C	7TCA119040R0133	2/34	D0051X20WE	7TCA119040R0123	2/11	DPX232E415	7TCA132510R0015	5/39
B005D	7TCA119040R0141	2/34	D0051X20WE	—	2/27	DPX232X24	7TCA132510R0016	5/39
B005E	7TCA119040R0155	2/34	D0051X20WEL	—	2/6	DPX263X24	7TCA132510R0017	5/39
B009B	7TCA119060R0016	2/34	D0051X20WEM	—	2/11	DPX3125E415	—	5/38
B009C	—	2/34	D0051X20WEMB	—	2/27	DPX316E250	7TCA132510R0018	5/38
B013L	—	2/38	D0051X40WE	7TCA119040R0125	2/11	DPX316E415	7TCA132510R0019	5/38
B013L1A	—	2/34	D0051X40WE	—	2/27	DPX332E250	7TCA132510R0020	5/39
B013L1SI	—	2/34	D0051X40WEL	—	2/6	DPX332E415	7TCA132510R0021	5/39
B013LB	—	2/38	D0051X40WEM	—	2/11	DPX363E415	7TCA132510R0023	5/39
B013LBG	—	2/38	D0051X40WEMB	—	2/27	DPX4125E415	7TCA132510R0037	5/38
B013LBU	—	2/38	D0051X65WE	7TCA119040R0124	2/11	DPX416E250	7TCA132510R0025	5/38
B013LK	—	2/38	D0051X65WE	—	2/27	DPX416E415	7TCA132510R0026	5/38
B013LPA	—	2/34	D0051X65WEL	—	2/6	DPX432E250	7TCA132510R0027	5/39
B013LPAB	—	2/34	D0052X20WE	7TCA119040R0111	2/11	DPX432E415	7TCA132510R0028	5/39
B013LPSI	—	2/34	D0052X20WE	—	2/27	DPX463E415	7TCA132510R0029	5/39
B019T	7TCA119090R0037	2/34	D0052X20WEL	7TCA119040R0146	2/6	DRX116E250	7TCA132520R0000	5/38
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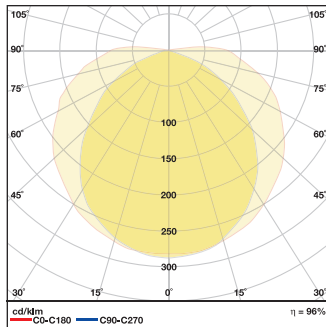
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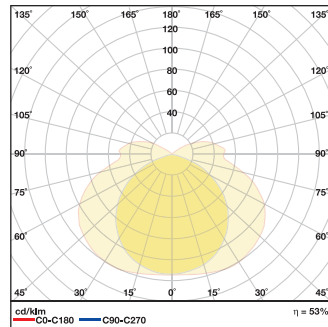


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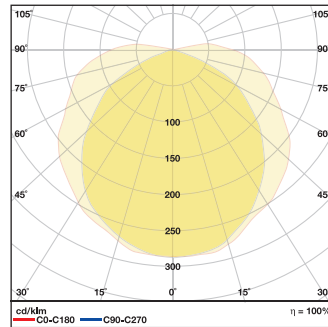
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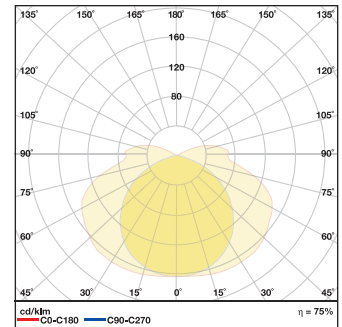
Tubular LED fitting
XFFL, XFPL or FFL – 1x56W



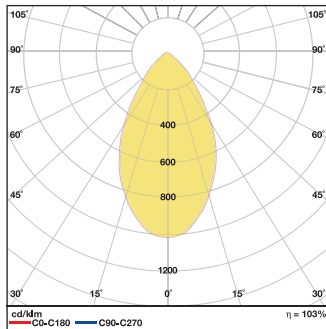
Tubular fluorescent fitting
XFF, XFP or FF – 2x36W



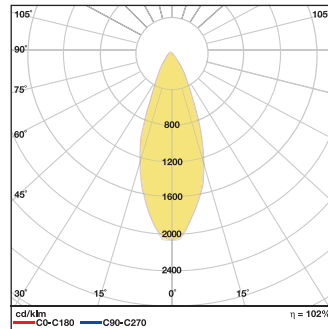
LED linear fitting
EVNL, EVDL or EVTL – 1x56W



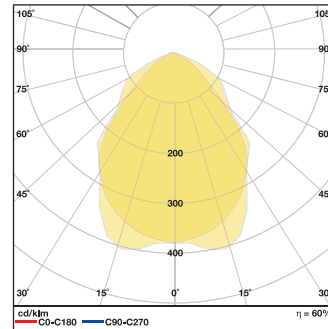
Fluorescent linear fitting
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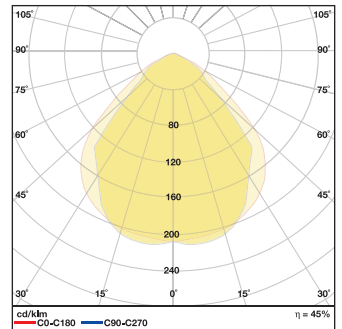
LED floodlight fitting
XLF wide beam – 110W



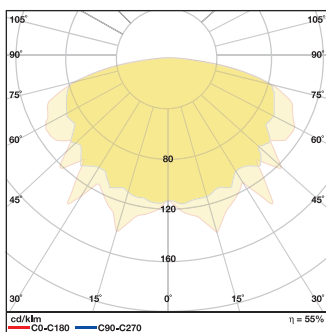
LED floodlight fitting
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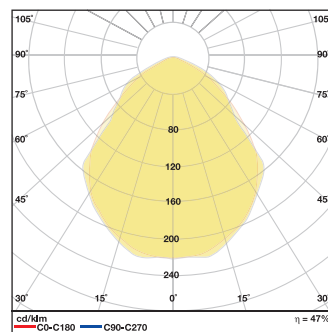
HP Sodium floodlight fitting
XSF wide beam – 250W



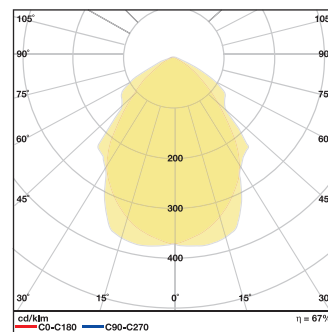
Metal Halide floodlight fitting
XQF wide beam – 250W



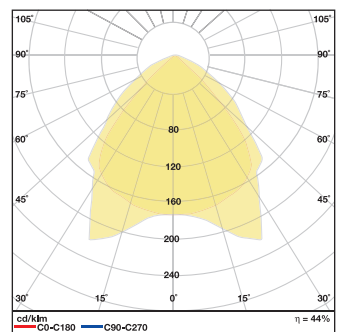
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Floodlight fitting
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HP Sodium floodlight fitting
XSF wide beam – 400W



Metal Halide floodlight fitting
XQF wide beam – 400W

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