

MBL 160-Ex

LED Marine Lantern

The MBL 160-Explosion Proof lantern is a LED marine flashing lantern of short and medium range, with a great optical efficiency and low consumption, fitted with LED diodes of high intensity, reaching a maximum range of 14 nautical miles.

Its luminous source consists of an innovating lens system especially designed to take the maximum profit of LED diodes, thus obtaining an output of up to 180 Cd/W.

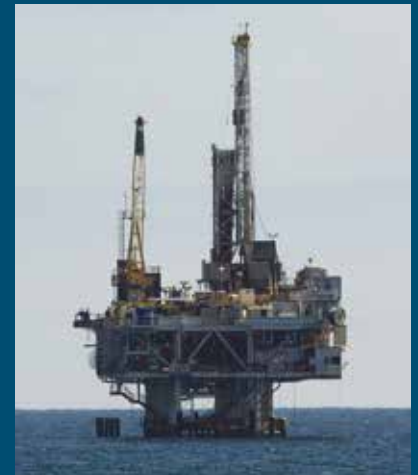
This lantern belongs to the ATEX Classification Group II, Category 2 assuring a high protection level. This allows the use of this lantern in potentially explosive atmospheres, classified for Zone 1 and Zone 2.


Designed according to IALA Recommendations.



Features:

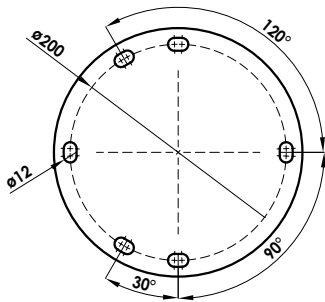
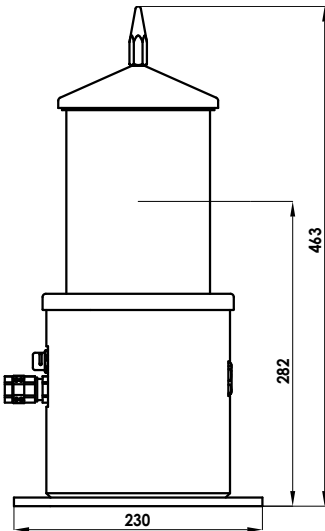
- ATEX Classification:
GROUP II: Equipment on surface (no mining).
ZONE 1: Category 2.
ATMOSPHERE: GAS.
- High-efficiency luminous system.
Up to 10 nm (T=0.74), 14 nm (T=0.85).
- Vertical divergence of 5°.
- 360° horizontal output.
- Average operation lifetime over 10 years.
- Internal photocell adjustable in lux.
- IP 68 watertightness degree (immersion resistant).
- Linear adjustment of luminous intensity.
- RS-232 serial port for setting adjustments by PC.
- Short-circuit, reverse-polarity and transient overvoltage protections.
- PATENTED OPTICAL SYSTEM.



 II 2G Ex e mb ib IIC T4 Gb

Specifications subject to change without previous notice.

MBL 160-Ex



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Optical System

Light source:	3 to 9 nos. ultra-bright LED diodes, with high-precision acrylic lens.
Luminous range:	Up to 10 nm (T=0.74) 14 nm (T=0.85).
Colours available:	White, green, red and amber.
Vertical divergence:	5° (50% Io).
LED average life:	More than 100,000 hours.
Power supply:	From 10 to 25V.
Lantern consumption:	From 1 to 18W.
Idle current:	3 mA.

MF14-Ex Electronic Flasher

Circuit based on microprocessor.	Short-circuit protection.
256 flash characters, selectable by using minidips.	Reverse-polarity and transient overvoltage protections.
Internal photocell.	RS-232 serial port for setting adjustments by PC.
Adjustable day/night threshold between 10 and 400 lux.	LED diode failure detection.
Integrated temperature sensor.	

Materials and environment

Lantern:	L6063 aluminium with 70 µm hard anodized coat.
Lens cover:	Acrylic, UV stabilised.
Watertightness degree:	IP 68.
Fixings:	3 - 4 bolts in a 200mm diameter.
Humidity resistance:	100%. Pressure-compensation valve to avoid condensation.

ATEX Certification

Group II: Equipment in surface (no mining).

Zone 1: Category 2.

Atmosphere: GAS.

Standards and Methods of Protection

General requirements: EN 6,079-0 Standard.

Equipment protection by Increased Safety: "e", EN 60079-7 Standard.

Equipment protection by Encapsulation: "mb", EN 60079-18 Standard.

Equipment protection by Intrinsic Safety: "ib", EN 60079-11 Standard.

Temperature Class: T4. 135°C.

Protection against Gas: (G).

Options

Other specifications available under request.

Vertical divergence 5° peak intensities (Cd)

Colour	Vertical divergence 5°		
	6W	12W	18W
White	537	1.010	1.515
Green	439	681	1.022
Red	380	590	895
Amber	564	662	993