

Abtech Exodus Luminaire

CML 16ATEX3345(Zone 1) CML 17ATEX3151(Zone 2)

IECEX CML 16.0120X

Installation, Operation and Maintenance Instructions

Description

The Abtech Exodus is a Zone 1 and/or Zone 2 emergency bulkhead luminaire which can also be used as an emergency exit sign . The luminaire is manufactured from an epoxy powder painted aluminium enclosure with a toughened glass window. LED arrays are used as the light source and self-contained battery backup system is enclosed within the luminaire.

Application

The luminaire is suitable for use in a Zone 1 & 2 areas, gas and dust hazards, and reference should be made to the rating table below in respect of T rating and ambient temperature considerations. A zone 2 only version is also available and the instructions for use are the same as those for the zone 1 version.

The luminaire is designed for use in areas not subject to levels of vibration or shock above those considered normal for fixed installations and the panel should not be exposed to moisture or liquids.

Care should be taken, not to expose the gasket(s) to high concentrations of hydrocarbon vapours.

The Exodus uses an external non-metallic coating (paint). To avoid the build up of an electrostatic charge, clean only with a damp cloth.

Refer to apparatus certificates (supplied with luminaire and available at www.abtech.eu) for details of certification, coding, conditions for safe use, etc.

Refer to apparatus label for warnings

Luminaire Ratings

Product Reference	Colour Temperature (K)	Ambient Temp	Power (W)	Temp Class and Surface Temp	Weight (kg)
				Tamb 55 °C	
LX1EXOEXX	3000/ 5700	-40°C to +55°C	20	T4/T85°C	0.5
LX2EXOEXX	3000/ 5700	-40°C to +55°C	20	T4/T85°C	0.75

(XX - warm white (WW) 3000k, pure white (PW) 5700k)

Operating Parameters

Product Reference	Lamp Power	LED Current	Input Voltage	Input Frequency
LX1EXOEXX	20W	1.5A max	110 to 254 Vac	50/60Hz
LX2EXOEXX	20W	1.5A max	110 to 254 Vac	50/60Hz

Installation

1. General

The Exodus Emergency Bulkhead Luminaire is certified to the ATEX directive, certificate number: CML 16ATEX3345(zone 1)/ CML 17ATEX3151(zone 2) and also the IECEx standards, certificate number: IECEx CML 16.0120X.

The product may be supplied with individual ATEX or IECEx certification or dual ATEX and IECEx certification applicable. The relevant certificate should be used in conjunction with the installation, operation and maintenance of the product.

Installation and electrical connections must be carried out in accordance with EN/IEC60079-14 and local or national standards and/or codes of practice as applicable.

The Exodus Bulkhead Luminaire is class 1 apparatus and must be suitably earthed. An external earth stud is provided adjacent to the cable entry points. It is the installer /user's responsibility to ensure that the luminaire and the relevant ratings are suitable for the application, zone and environment and ensure the materials as stated will not be attacked by existing or foreseeable aggressive substances. It should be noted that this equipment may be provided with an external non-metallic coating (paint finish). In this case and to avoid the build up of an electrostatic charge, clean only with a damp cloth.

The Exodus Bulkhead Luminaire is manufactured in die cast aluminium which may be epoxy painted. It is sealed using a closed cell silicone sponge gasket. Fasteners are stainless steel grade A4 (316). The light transmitting parts are manufactured from toughened glass. The user must determine the suitability of these materials with respect to their chemical compatibility with likely contaminants in the intended location.

2. Supply Voltages

For voltage refer to rating plate. The supply voltage must be within the Vac range specified in the operational parameters.

Note: it is important that the frequency of the supply matches the frequency stated on the driver rating label.

Supply voltage variation must not exceed $\pm 6\%$ and the luminaire should not be operated continuously beyond this limit.

In any case the voltage variation must NEVER exceed $\pm 10\%$ as this will invalidate the certification and could lead to the product being unsafe. If in doubt, advice should be sought from Abtech technical department.

3. Mounting Luminaire

The luminaire can be surface mounted, on a frame or structure which is not prone to excessive levels of vibration or shock. The luminaire should be fixed in position in accordance with lighting design parameters and secured using appropriate fixings. (see catalogue for details or refer to sales@abtech.eu)

4. Wiring

Mains connections are directly to the luminaire and this is suitable for use with cable with insulation rated for a minimum temperature of 70°C. Terminals are suitable for looping up to 4mm² conductors. Access to the terminals is via the NDU cover which can be removed by undoing the four cover screws.

All electrical connections and components should be inspected for security of wiring and cracks in insulation and stray conductor strands. The conductors should be fitted into the terminal block ensuring that conductors are not stretched or stressed. When terminating the conductor into the terminal block this must be carried out in an ambient temperature of between -10°C and 40°C, also it is vital that no more than 1mm of bare conductor protrudes from the terminal throat.

Maximum current rating of the mains terminal block is 28A continuous. Only one conductor may be fitted in each terminal way. Tighten all used and unused terminal screws. Refit the cover, ensuring that the gasket is clean and undamaged. As an option the terminals may be of the cage clamp type and these can be loosened by pressing on the tab above the conductor entry. The conductor is securely clamped by removing pressure from the tab.

5. Cable Glands

The Exodus Bulkhead Luminaire is an increased safety enclosure and the cable glands & stopping plugs must be suitably certified Ex e or must meet the requirements of EN 60079-0 & EN 60079-7 for ATEX certified apparatus and IEC 60079-0 & IEC 60079-7 for IECEx certified apparatus for increased safety enclosures. Where dual certification is provided, cable glands and stopping devices must be similarly dual certified.

Cable glands should be fitted with an appropriate sealing washer to the outside of the enclosure. The sealing washer must maintain the minimum IP rating as noted on the apparatus label.

Standard cable entry is M20; other cable entry sizes are available on request. Additional cable entry holes must not be drilled on site and may only be modified by Abtech.

6. LED Fitting and Replacement

The driver enclosure within the luminaire contains no user serviceable parts and must not be opened as this may affect the safe operation of the equipment and will invalidate the certification.

A replacement LED panel is available from Abtech.

A replacement battery pack is available from Abtech but must only be replaced when a flammable atmosphere is not present.

Care must be taken to ensure the battery conductors are not shorted.

In the event of a failure or malfunction, please contact Abtech technical department.

7. Special Conditions for Safe Use

None

Maintenance

1. Visual Inspection

Visually inspect the luminaire for signs of damage or loose screws,

Check operation of LED by powering up the unit, leave the unit powered for at least an hour and re-inspect for any failures.

2. Internal; Inspection

Remove the Junction box cover and check state of gasket for tears or dirt. Replace as necessary (see below)

Check tightness of cable gland and tighten as necessary.

Check tightness of all terminal screws (if applicable).

Check for any signs of water ingress and remedy as necessary.

Check condition of all wiring and electrical components for signs of arcing or overheating.

Refer to Abtech technical department for advice if any components are in doubt.

Refit junction box cover and tighten screws.

3. Fault Finding

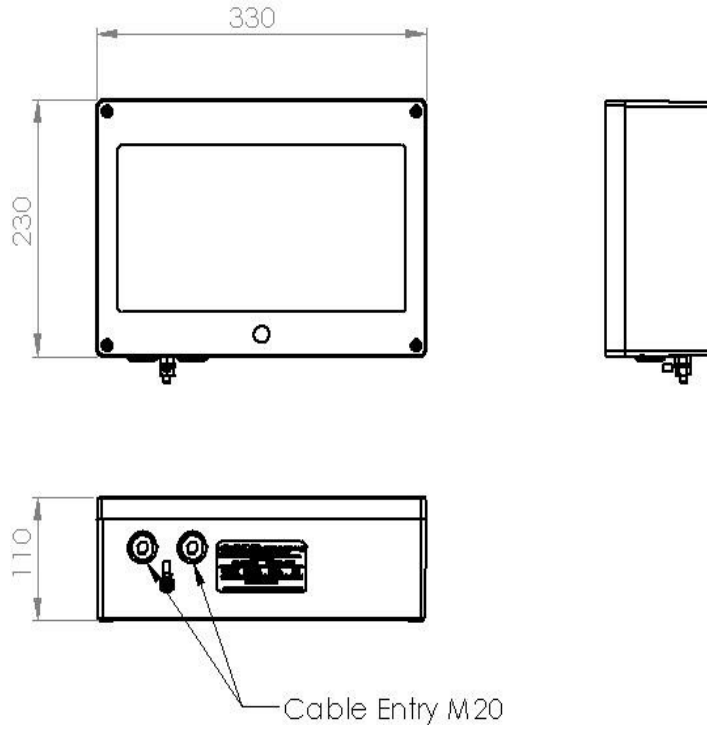
Any fault finding must be carried out with the luminaire de energised and without a flammable atmosphere present.

Generally, LED drivers are very reliable and faults are generally the result of loose cabling. If after checking the wiring the fault is still present, please refer to Abtech technical department for assistance.

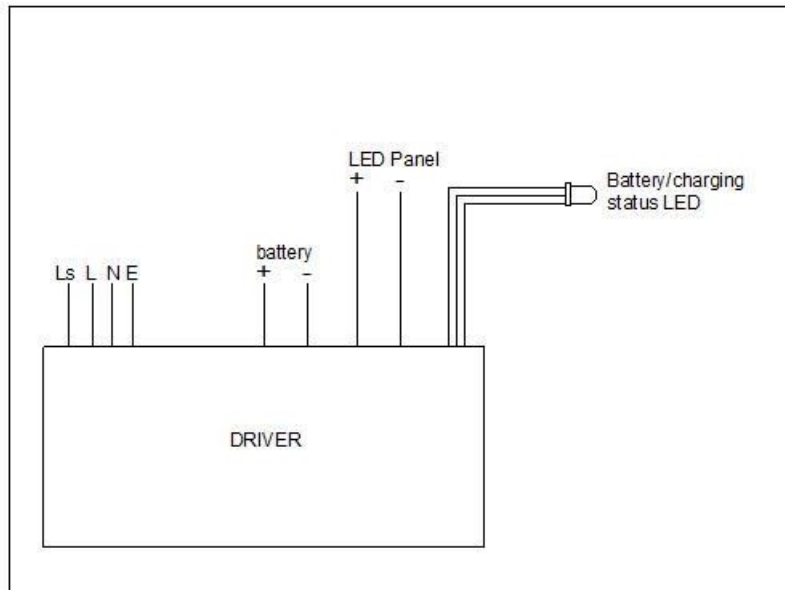
4. Gasket Replacement

Junction Box Gasket

The junction box gasket is one-piece silicone sponge and can only be obtained from Abtech. The old gasket should be removed and any traces of sealant cleaned off. The area where the gasket is situated should be clean and free from grease. The cover, with new gasket fitted, should then be fitted to the enclosure and the four cover screws fitted and tightened evenly to ensure constant and even compression of the gasket.



Wiring Diagram



- Ls – Live Switched. If switching is required, a switch should be wired between Ls and L. If panel needs to be constantly illuminated, link to be placed between Ls and L.
- L - Contant live. Permanent 24hr supply to be connected.
- N - Neutral
- E - PE Connections

LED Status Lamp

- Green fast flash – Fast charge all ok
- Green slow flash – Slow/trickle charge all ok
- Alternate green/red – Mains absent, batteries discharging

Operation – LED Emergency Indicator

- LED Green Lit– Normal Operation, Power Supply ok, Battery fully charged.
- LED Green Flashing – Normal Operation, Power Supply ok, Battery charging.
- LED Alternate Green/Red Flashing – Emergency mode, running off Emergency Battery.
- LED Red Flashing – Fault on Emergency System i.e. cable not connected.