

Abtech Nimo IP68 LED Luminaire

CML 16ATEX3345

IECEX CML 16.0120

Installation, Operation and Maintenance Instructions

Description

The Abtech Nimo range of stainless steel and glass LED luminaires consists of two LED arrays connected to the sealed driver unit. Additionally, the intrinsically safe driver unit is quartz-filled. This assembly is housed in a stainless steel and glass enclosure. One end of the enclosure has a threaded end cap, where the mains input terminals are situated. This end also has a threaded entry. A suitable ATEX and IECEX cable gland, capable of maintaining the ingress protection rating of IP68, must be used. The luminaire contains no serviceable components, and other than the threaded end cap, no other components should be disassembled.

Application

The luminaire is suitable for use in Zone 1 internal areas, gas and dust hazards and reference should be made to the rating table below with respect of T rating and ambient temperature considerations.

The luminaire is designed for use in areas not subject to vibration or shock levels above those considered normal for fixed installations.

Care should be taken not to expose the gasket(s) to high concentrations of hydrocarbon vapours. To avoid the build-up of an electrostatic charge, clean only with a damp cloth.

The apparatus certificates (supplied with the luminaire and available at www.abtech.co.uk) provide 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	Dimensions (mm)
				Tamb 55°C	
LX1NIM024L57	5700	-20°C to +55°C	22W	T4	727x148

Operating Parameters

Product Reference	Lamp Power	LED Current	Input Voltage	Input Frequency
LX1NIM024L57	20W	1.1A	90 to 264 Vac	47Hz to 440Hz

Installation

1. General

The Nimo luminaire is certified to the ATEX directive, certificate number: CML 16ATEX3345 and also the IECEx standards, certificate number: IECEx CML 16.0120. 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 EN/IEC60079-17 as applicable and local or national standards and/or codes of practice as applicable.

The Nimo luminaire is a class 1 apparatus and must be suitably earthed. An external earth stud is provided on the end cap. 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. To avoid the build-up of an electrostatic charge, clean only with a damp cloth.

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 from a solid 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)

The enclosure is manufactured from stainless steel and in rare cases, ignition sources due to impact and friction could occur. This shall be considered during installation.

4. Wiring

Mains connections are to the terminal block only and this is suitable for use with cable with insulation rated for a minimum temperature of 80°C. Access to the terminals is via the threaded end cover which can be removed by unscrewing. Care should be taken not to damage the o-ring when replacing the end cap.

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 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 Nimo is an increased safety enclosure and the cable glands 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 mains cable entry is M20 x 1.5p; 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 Nimo luminaire is a sealed for life unit, the only acceptable access is to the electrical connections through the threaded end cap. The driver enclosure within the enclosure contains no user serviceable parts and must not be opened as this may affect the safe operation of the equipment. In the event of a failure or malfunction, please contact Abtech technical department.

Maintenance

1. Visual Inspection

Visually inspect the luminaire for signs of damage or loose end cap,

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 end cap and check state of the o-ring 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. O-ring Replacement

End cap o-ring

The end cap o-ring is one-piece silicone sponge and can only be obtained from Abtech. The old o-ring 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 o-ring fitted, should then be fitted to the enclosure and tightened to ensure constant and even compression of the o-ring.

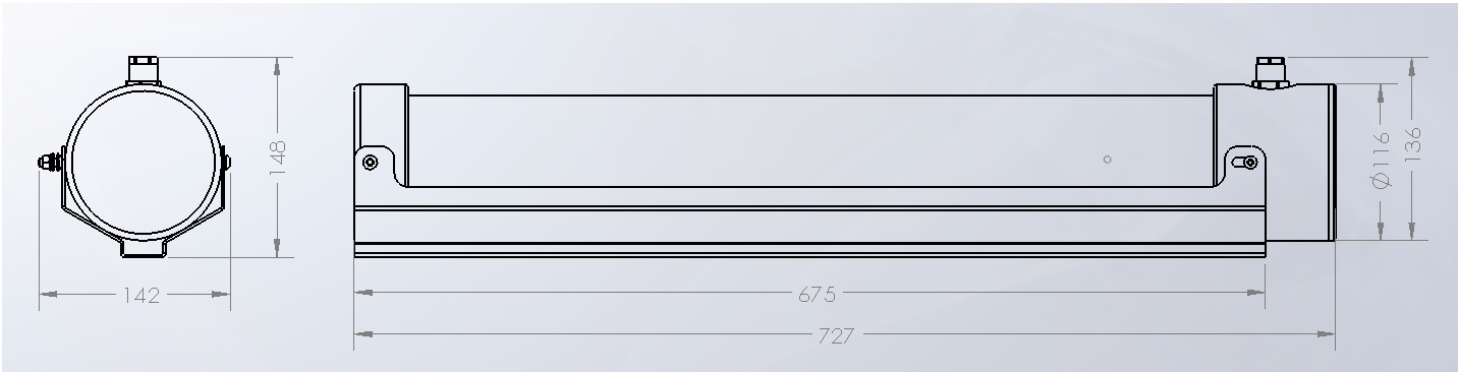
Disposal Information

None of the electrical components contain pcb's. Electrical components contain synthetic resins, plastics and other inorganic compounds which may produce noxious fumes if incinerated.

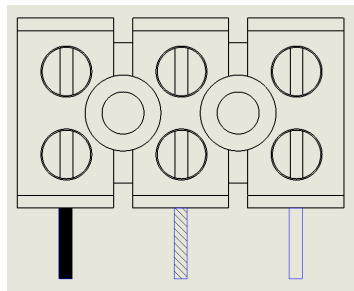
Within the EC, disposal of components must comply with WEEE directive 2012/19/E. Any local or national regulations with regard to waste disposal must also be complied with.

Lamps must not be incinerated. Lamps should be disposed off in accordance with local or national regulations.

Luminaire Dimensions



Wiring Diagram



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