

INSTALLATION AND MAINTENANCE MANUAL FOR
EXPLOSIONPROOF LUMINAIRE

EXL320



Carefully read the instructions before
mounting the luminaire.

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1. GENERAL INFORMATION

EXL320 luminaires are designed to light indoor and outdoor areas in zone 2 of explosion hazard of gas, vapours, or clouds of flammable liquids mixed with air which belongs to IIA, IIB or IIC explosion group, and T1-T5 (for 2x24W and 2x54W) T1-T4 (for 4x54W) of temperature class. EXL320 luminaires are also suitable to light areas in zone 22 of explosion hazard of dust and flammable fibres mixed with air when ignition temperature is higher than 150°C, and glow temperature of 5mm dust layer exceeds 175°C.

| | | | | | | | | | | |
|--|---|----|--|-----|----|----|---|------|----|--|
| EXL320 | | | | 35E | | | | | GL | |
| grupa group | | | | | | | | | | |
| typ type | | | | | | | | | | |
| ilość lamp lamps qty. | 2 | 36 | | | | | | | | |
| moc lamp lamps watt. | 4 | 58 | | | | | | | | |
| | | 24 | | | | | | | | |
| | | 28 | | | | | | | | |
| | | 54 | | | | | | | | |
| napięcie zasilania / voltage | | | | | | | | | | |
| częstotliwość / frequency | | | | | | | | | | |
| typ statecznika / ballast type | | | | | | | | | | |
| okablowanie cross wiring | | | | | 30 | | | | | |
| | | | | | 33 | | | | | |
| | | | | | 50 | | | | | |
| | | | | | 55 | | | | | |
| wpusty kablowe cable entries | | | | | | 10 | M | 2 | 0 | |
| materiał wpustu / cable entry material | | | | | | 11 | P | 2 | 5 | |
| rozmiar wpustu cable entry size | | | | | | 20 | | | | |
| | | | | | | 21 | | | | |
| | | | | | | 22 | | | | |
| materiał obudowy housing material | | | | | | | | GS | | |
| materiał klosza diffuser material | | | | | | | | NIRO | | |
| | | | | | | | | | | NB |
| | | | | | | | | | | WB |
| | | | | | | | | | | NB - odbłyśnik wąskoprętowy / narrow beam reflector |
| | | | | | | | | | | WB - odbłyśnik szerokostrumieniowy / wide beam reflector |

TECHNICAL INFORMATION

Type: EXL320 explosion-proof, nA type , luminaires for zone 2 & 22.

Ex marking:



II 3G Ex nA IIC T5-T4 Gc
II 3D Ex t IIIC T80°C-T120°C IP65 Dc

Explosion group: IIA, IIB, IIC

Protection degree: IP65

Admission wires diameter: 1-2.5mm²

Admission cable diameter: Ø 8-13mm

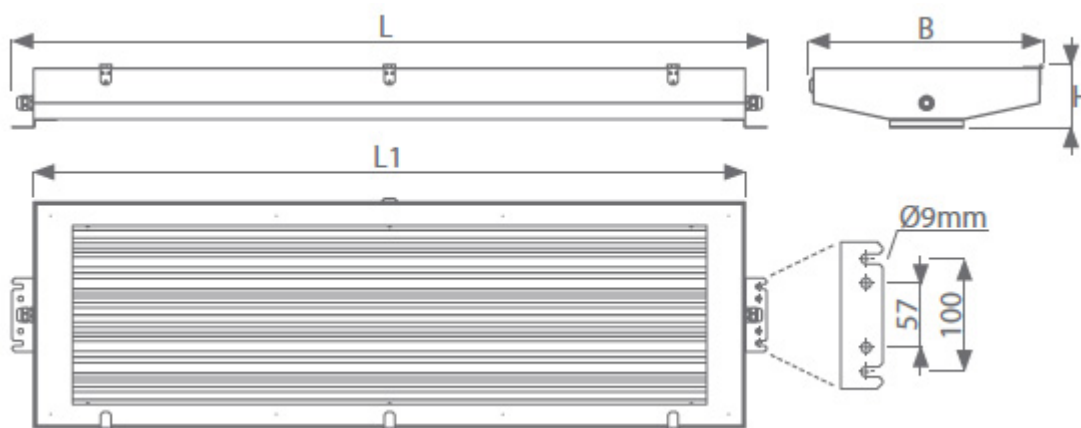
Voltage: 230V, 0/50-60Hz

Protection class: I

Ambient temperature Ta: -20°C ... +45°C

2. TECHNICAL INFORMATION

| Type | Lamp-holder | Lamp type | Power | Electrical unit | IP | Protection class | Power factor | Ambient temp. |
|----------------|-------------|-----------|-------|-------------------|----|------------------|--------------|---------------|
| EXL320-224-... | G5 | T5 | 2x24W | 230V 0,50,60Hz | 65 | I | ≥0,95 | -20 do +45°C |
| EXL320-424-... | | | 4x24W | | | | | |
| EXL320-228-... | | | 2x28W | | | | | |
| EXL320-428-... | | | 4x28W | | | | | |
| EXL320-236-... | G13 | T8 | 2x36W | | | | | |
| EXL320-436-... | | | 4x36W | | | | | |
| EXL320-254-... | G5 | T5 | 2x54W | | | | | |
| EXL320-454-... | | | 4x54W | | | | | |
| EXL320-258-... | G13 | T8 | 2x58W | | | | | |
| EXL320-458-... | | | 4x58W | | | | | |



| For version T5 | | | | | For version T8 | | | | |
|----------------|------|------|-----|-----|----------------|------|------|-----|-----|
| Type | L | L1 | B | H | Type | L | L1 | B | H |
| EXL320-224 | 730 | 654 | 311 | 105 | EXL320-236 | 1388 | 1312 | 415 | 128 |
| EXL320-228/254 | 1330 | 1254 | | | EXL320-258 | 1688 | 1612 | | |
| EXL320-424 | 730 | 654 | 411 | | EXL320-336 | 1388 | 1312 | 563 | |
| EXL320-428-454 | 1330 | 1254 | | | EXL320-358 | 1688 | 1612 | | |

3. CONSTRUCTION DESCRIPTION

Luminaires are built according to PN-EN 60079-0:2013-03+A11:2014-03, PN-EN 60079-15:2010, PN-EN 60079-31:2011 and common electrical engineering rules. Used solutions and materials, electrical equipment and proper insulating spaces makes that during normal exploitation there is no possibility to occur any sparks, electrostatic charge, dangerous heating or luminaires destruction caused by environment factors.

Luminaires are built as a one chamber equipment. Housing and mounting tray are made of powder painted galvanized steel. Diffuser is made of tempered glass. Reflector is made of polished aluminum.

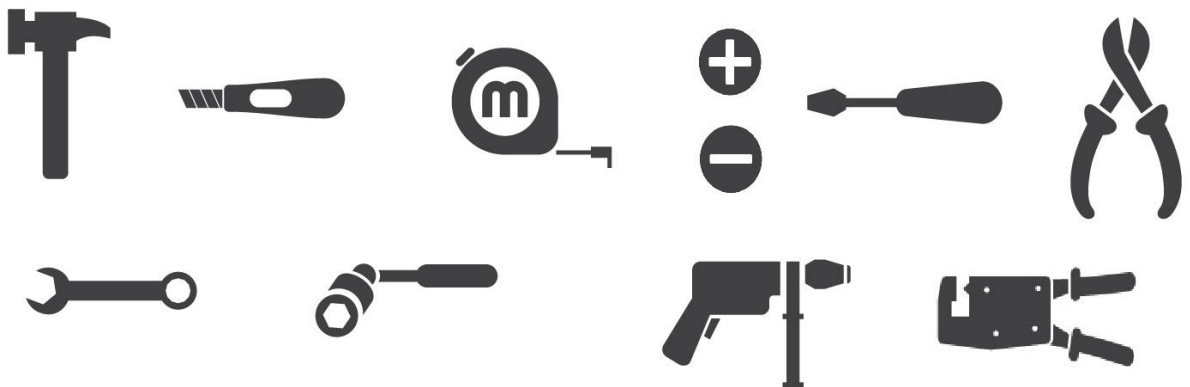
Used lampholder ensures stable and non-sparking connection and exchange of lamps. Used terminals ensures safe and non-sparking connection of inner wires and admission cables.

4. PRELIMINARIES

CONDITIONS OF SAFETY RULES

- Carefully read all the information included in the manual before mounting the luminaires
- General safety must be followed.
- Failure to comply with rules of the installation and use can lead to personal injury or property loses. ATM Lighting sp. z o.o. company takes no responsibility in such cases.
- Failure to comply with rules included in manual results with void of the manufacturer warranty.

NECESSARY TOOLS



5. LUMINAIRE MOUNTING

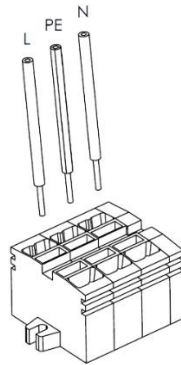
Luminaire is mounted with use of two brackets. It is designed for direct installation on a ceiling or on a wall. Spacing and size of the mounting holes are in point 2.

6. ELECTRICAL CONNECTION

To connect power supply:

- enter the power cable to the housing through the cable entry (gland),
- carefully unisolate the wires (8-10mm), and put them into the connector according to a label inside the luminaire,
- precisely tighten power cable in the gland with two wrench,
- check the effectiveness of grounding.

Power connection:



Remarks:

- Use one wrench to tighten the sealing nut, while using the second wrench to block gland body against rotation, otherwise damage of the sealing can be caused and therefore sealing level will be decreased.

7. CONDITIONS OF SAFETY USE

- Every luminaire must have rating plates with rating data on it. Each luminaire is equipped with this „Installation and maintenance manual” , which must be kept by user until the end of exploitation.
- Luminaries are designed for fixed installations only.
- Using luminaire outside the designated operating temperature range is unacceptable and will decrease a lifetime of luminaire and/or damage it. It will also cause a loss of warranty.
- Each luminaire must have a warning sign: „do not open under voltage” on it.
- Admission cables must have 3-wires (with PE wire) and diameter 8-13mm.
- Use power wires with cross section 0,5-1,8mm².
- Maximum cross current I=16A.

8. LUMINAIRE MAINTENANCE AND SERVICING

INSPECTION: at least once a month. Inspection is made without opening the luminaire. User must check admission cables condition (insulation damage, cracks, burns etc.). Cables must not have any acute bends. Outside parts of the luminaire must be checked. No cracks or corrosion signs may occur. Bolts used to mount luminaire should be properly tightened, washers mustn't be cracked. Cleanliness of outer surfaces and luminaires surroundings must be checked. Luminaires may not be soiled by paint or grease. Do not allow for dust (dirt) deposition on the luminaire. The readability of rating and warning plates must be checked. Abnormalities found must be fixed.

SERVICE AND MAINTENANCE: at least once a year. Service and maintenance must be made with power supply turned off. User must make inspection steps first. After opening: metal parts painting, condition of inner wiring and its mounting, insulating materials, cable glands gaskets, terminals. Lampholder and the reliability of light source mounted in it must be checked. Abnormalities found must be fixed. Rating and warning plates must be cleaned. Surfaces of insulating materials and covers must be clean.

VERIFICATION OF TECHNICAL CONDITION: at least once for 2 years. Power supply must be switched off. Verification of technical condition must be proceeded outside of Ex zone. Luminaire must be uninstalled. Besides all the examination from inspection, service and maintenance paragraphs electrical examination from the inspection, service and maintenance paragraphs electrical examination must be also made: luminaire current consumption, insulation examination, protective earthing condition. Special attention must be paid to insulating parts condition. No crack or burns may occur.

CLEANING: do not allow for dust (dirt) deposition on the luminaire. Cleaning must be proceeded without use of chemical. Cleaning must be proceeded with use of compressed air and soft cleaning cloth or soft brush. If necessary use water and/or neutral detergent, however without any chemicals, which can damage any part of the luminaire.

9. PARTS EXCHANGE

All parts considered as a spare parts must be ordered at manufacturer of luminaire.

10. REPAIRING

All repairs (excluding lamps exchange) may be made only by manufacturer or authorized repair workshops.

11. LAMPS EXCHANGE

Lamps exchange may be made only by personnel authorized to maintain explosion-proof equipment.

12. TRANSPORT AND CONDITIONS OF STORAGE

During transport luminaires shouldn't be exposed to precipitation or mechanical shock.

Luminaires may be storage only in sheltered warehouses, within +5°C to +35°C temperature range, and relative humidity lower than 75%. No corrosion causing vapors or gases should be present.

13. DISPOSAL OF WASTE EQUIPMENT

User must obey relevant rules and regulations about disposal of wasted equipment valid in their country.

14. WARRANTY

- It is forbidden to use damaged or malfunctioned luminaire.
- It is required to disconnect power supply from the luminaire before any maintenance work.
- All specific information can be found in document „General terms and conditions warranty ATM Lighting sp. z o.o.” available at the website www.atmlighting.pl/en/

ADDRESS:

ATM Lighting sp. z o.o.

ul. Budowlanych 31 80-298 Gdańsk

tel: +48 58 347 51 07 fax: +48 58 347 51 08

office@atmlighting.pl