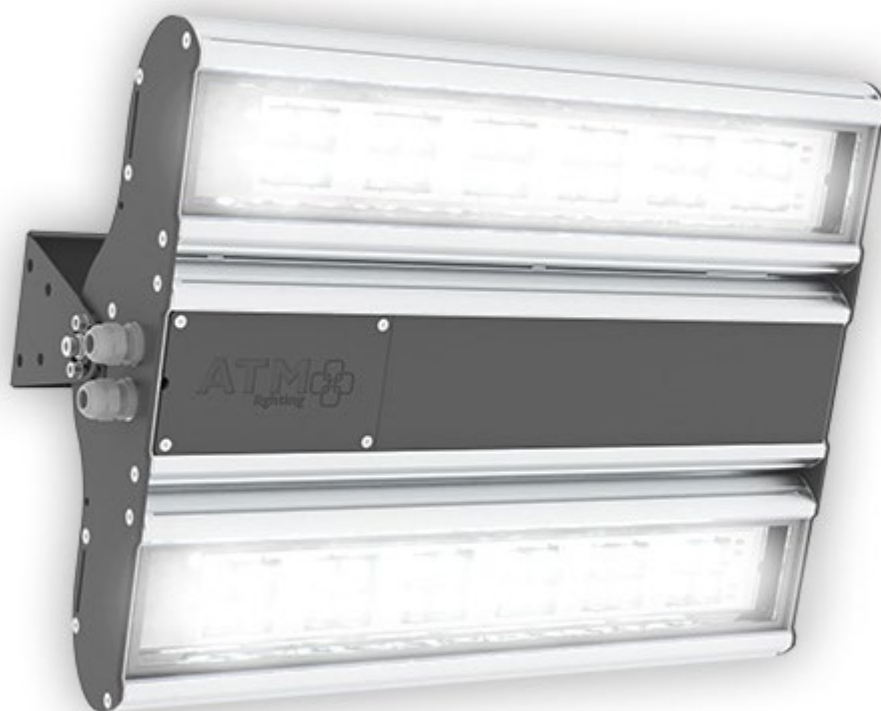




INSTALLATION AND MAINTENANCE MANUAL FOR  
INDUSTRIAL LIGHT FITTING

# HPL450LED



Carefully read the instructions before mounting the light fitting.

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**Ambient temperature Ta:**

| Version | Working temperature (25E) | Working temperature (PC diffuser) |
|---------|---------------------------|-----------------------------------|
| HE2-1   | -40°C ... +65°C           | -40°C ... +55°C                   |
| HE2-2   | -40°C ... +60°C           | -40°C ... +50°C                   |
| HE2-3   | -40°C ... +50°C           | -40°C ... +45°C                   |
| HE3-1   | -40°C ... +65°C           | -40°C ... +55°C                   |
| HE3-2   | -40°C ... +60°C           | -40°C ... +50°C                   |
| HE3-3   | -40°C ... +50°C           | -40°C ... +45°C                   |
| HE4-1   | -40°C ... +65°C           | -40°C ... +55°C                   |
| HE4-2   | -40°C ... +60°C           | -40°C ... +50°C                   |
| HE4-3   | -40°C ... +50°C           | -40°C ... +45°C                   |

| Version | Working temperature (35E) | Working temperature (PC diffuser) |
|---------|---------------------------|-----------------------------------|
| HE2-1   | -40°C ... +60°C           | -40°C ... +55°C                   |
| HE2-2   | -40°C ... +55°C           | -40°C ... +50°C                   |
| HE2-3   | -40°C ... +50°C           | -40°C ... +45°C                   |
| HE3-1   | -40°C ... +55°C           | -40°C ... +55°C                   |
| HE3-2   | -40°C ... +50°C           | -40°C ... +50°C                   |
| HE3-3   | -40°C ... +50°C           | -40°C ... +45°C                   |
| HE4-1   | -40°C ... +50°C           | -40°C ... +50°C                   |
| HE4-2   | -40°C ... +55°C           | -40°C ... +50°C                   |
| HE4-3   | -40°C ... +50°C           | -40°C ... +45°C                   |

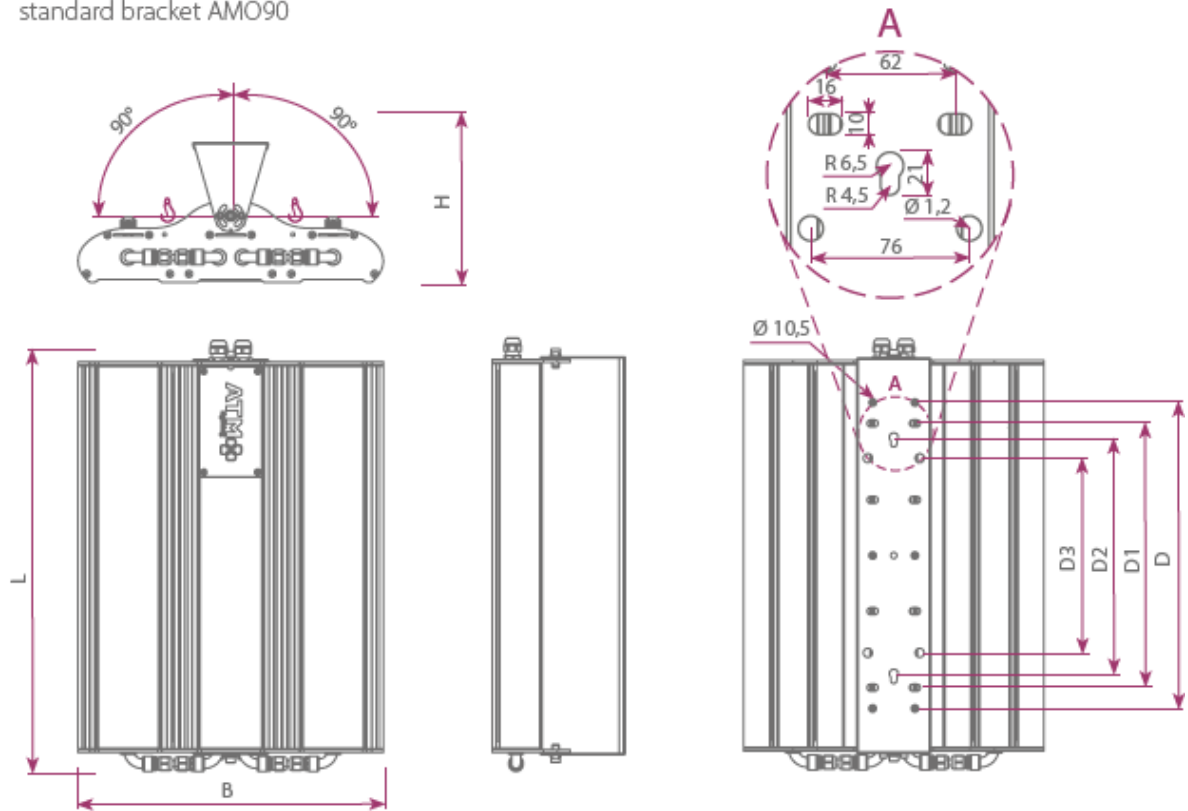
**LED module risk group RG = 1**

## 2. TECHNICAL INFORMATION

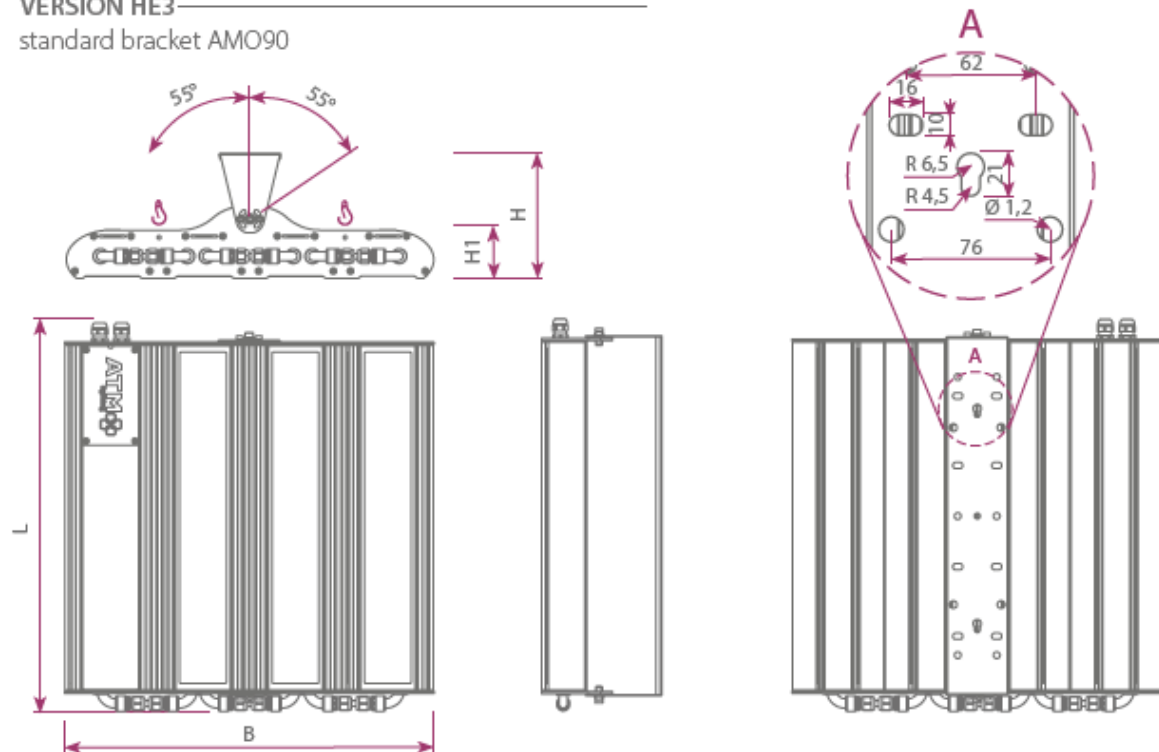
| Type            | Power | Voltage                            |                                    | IP    | Protection class | Power coefficient | Ambient temperature                |
|-----------------|-------|------------------------------------|------------------------------------|-------|------------------|-------------------|------------------------------------|
| HPL450LED-HE2-1 | 103W  | 100V-199V, 50-60Hz + 127-300V, 0Hz | 200V-277V, 50-60Hz + 127-300V, 0Hz | 66/67 | I                | ≥0,98             | Depends on version and module type |
| HPL450LED-HE2-2 | 132W  |                                    |                                    |       |                  |                   |                                    |
| HPL450LED-HE2-3 | 155W  |                                    |                                    |       |                  |                   |                                    |
| HPL450LED-HE3-1 | 152W  |                                    |                                    |       |                  |                   |                                    |
| HPL450LED-HE3-2 | 197W  |                                    |                                    |       |                  |                   |                                    |
| HPL450LED-HE3-3 | 240W  |                                    |                                    |       |                  |                   |                                    |
| HPL450LED-HE4-1 | 205W  |                                    |                                    |       |                  |                   |                                    |
| HPL450LED-HE4-2 | 260W  |                                    |                                    |       |                  |                   |                                    |
| HPL450LED-HE4-3 | 307W  |                                    |                                    |       |                  |                   |                                    |

**VERSIONS**

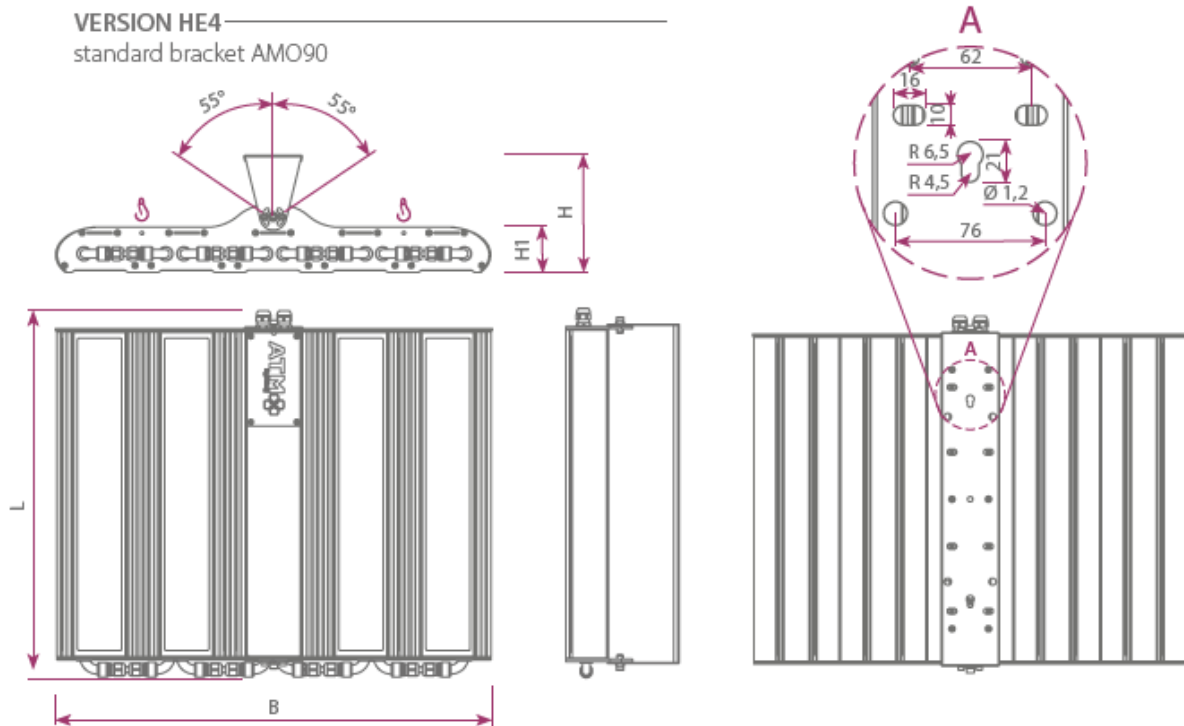
**VERSION HE2**  
standard bracket AMO90



**VERSION HE3**  
standard bracket AMO90



**VERSION HE4**  
standard bracket AMO90



| Type           | L   | B   | H   | H1 | D   | D1  | D2  | D3  |
|----------------|-----|-----|-----|----|-----|-----|-----|-----|
| HPL450LED-HE2  | 620 | 435 | 202 | 78 | 440 | 380 | 340 | 280 |
| HPL450LED- HE3 |     | 585 |     |    |     |     |     |     |
| HPL450LED- HE4 |     | 735 |     |    |     |     |     |     |

### 3. PHOTOMETRICAL DATA

| Type            | Luminous Flux | Efficiency | Colour Temperature                     | CRI                  | Modules Lifetime  |
|-----------------|---------------|------------|--|----------------------|---|
| HPL450LED-HE2-1 | 15500 lm      | 150 lm/W   | 4000K<br>(Option: 3000K, 5000K, 6500K) | >70<br>(Option: >80) | >100000 h –<br>„L70B50”<br>>80000 h –<br>„L70B10”<br>>50000 h –<br>„L80B10” |
| HPL450LED-HE2-2 | 19000 lm      | 144 lm/W   |  |                      |   |
| HPL450LED-HE2-3 | 22000 lm      | 142 lm/W   |  |                      |   |
| HPL450LED-HE3-1 | 24000 lm      | 158 lm/W   |  |                      |   |
| HPL450LED-HE3-2 | 28500 lm      | 145 lm/W   |  |                      |   |
| HPL450LED-HE3-3 | 34000 lm      | 142 lm/W   |  |                      |   |
| HPL450LED-HE4-1 | 31500 lm      | 154 lm/W   |  |                      |   |
| HPL450LED-HE4-2 | 37500 lm      | 144 lm/W   |  |                      |   |
| HPL450LED-HE4-3 | 43000 lm      | 140 lm/W   |  |                      |   |

## 4. CONSTRUCTION DESCRIPTION

Light fittings are built according to common electrical engineering rules. The product meets the essential requirements of the Directives and the harmonized standards listed in the EU Declaration of Conformity. Used solutions and materials, electrical equipment and proper insulating spaces makes that during normal exploitation there is no possibility any sparks, electrostatic charge, dangerous heating or light fitting destruction caused by environment factors occurrence.

Light fittings are built as a one chamber equipment. Housing, endcaps and mounting tray are made of aluminum. Sealing is made of silicone.

Used terminals ensures safe and non-sparking connection of inner wires and admission cables. The diffuser is made of UV resistant polycarbonate (PC) or tempered glass.

Floodlights bodies should be equipped attested cable glands and plugs which provide protection class of IP66 or IP67 depending on floodlights version, in compliance with EN 60079-14 norm.

## 5. PRELIMINAIRES

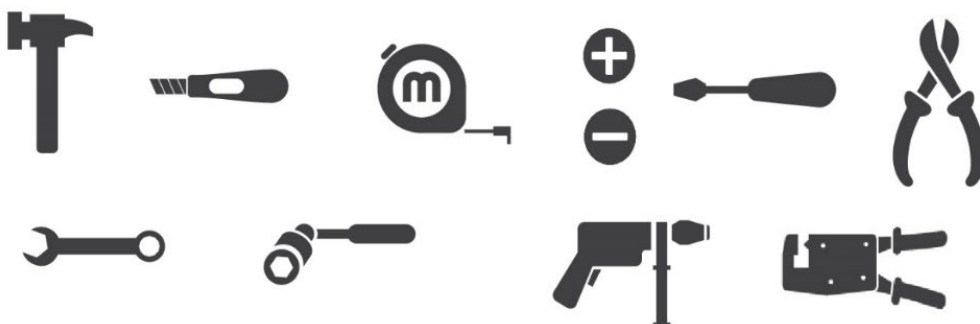
### SAFETY RULES

- Carefully read all the information included in the manual before mounting the light fitting.
- General safety rules 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.
- Manufacturer takes no responsibility for any damages resulting from improper installation, maintenance or improper use.
- It is the responsibility of the user to perform the installation in accordance with this manual and the safety regulations and standards applicable to the type of installation
- In case of malfunction, the device must be turned off and returned for repair to the manufacturer or his authorized entity.



Before performing any installation work, including opening the enclosure, be absolutely sure to disconnect the unit from the power source

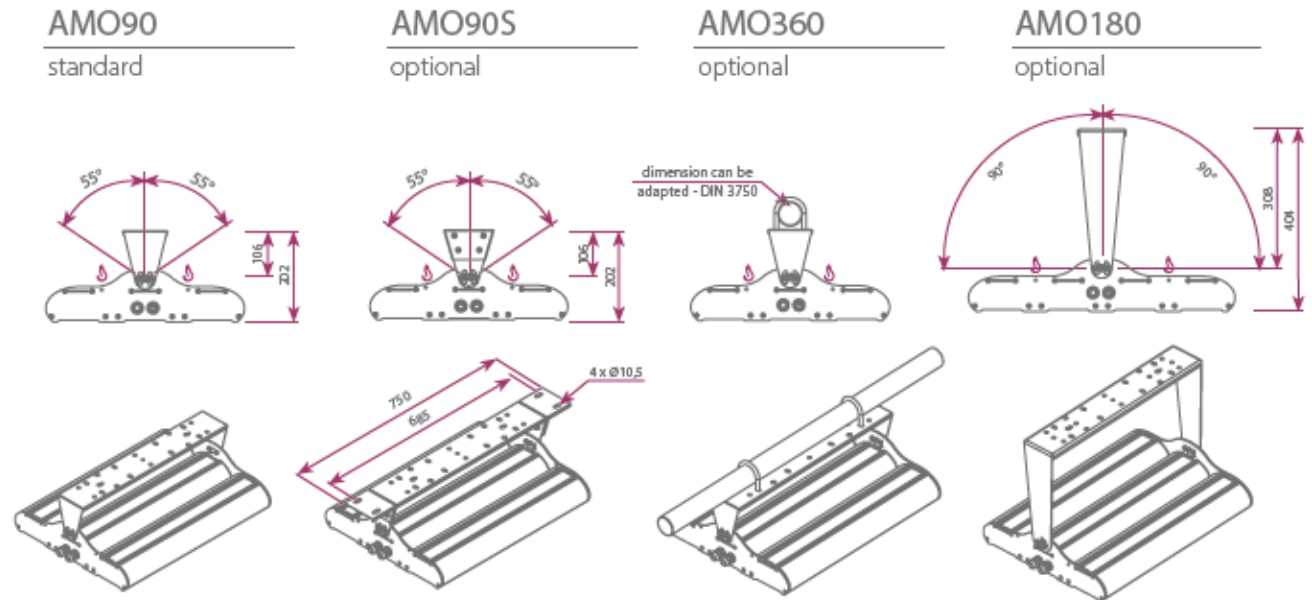
### NECESSARY TOOLS



## 6. LIGHT FITTING MOUNTING

The luminaire is equipped with two mounting brackets, designed to be mounted directly on the ceiling, wall or pipe. As standard, the fixture is equipped with four  $\varnothing 5\text{mm}$  mounting holes for hanging.

### VERSIONS OF MOUNTING



## 7. ELECTRICAL CONNECTION



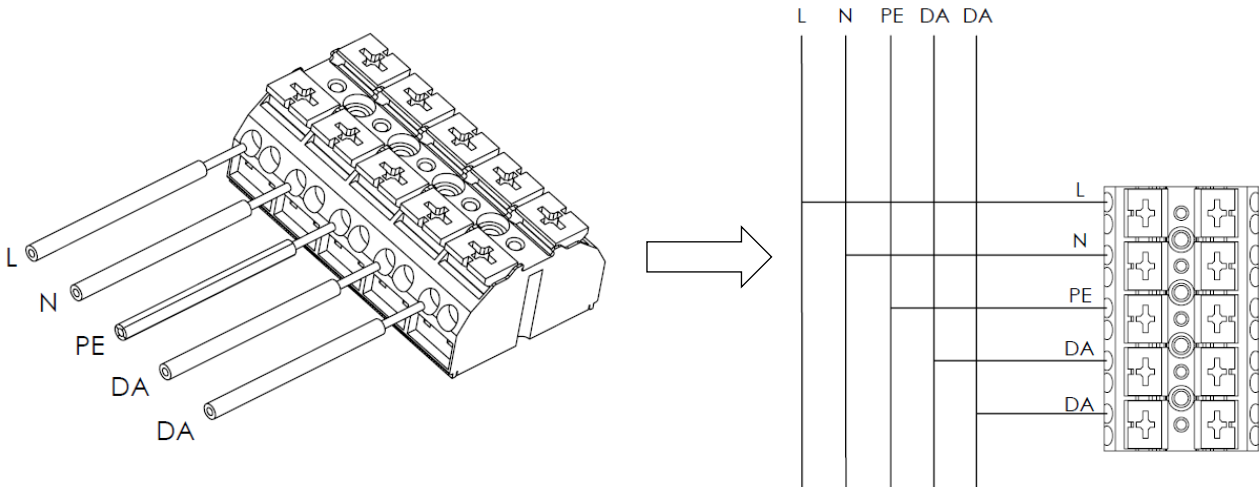
Installation and electrical connection should be in accordance with the requirements of PN-EN 60079-14.

To connect power supply:

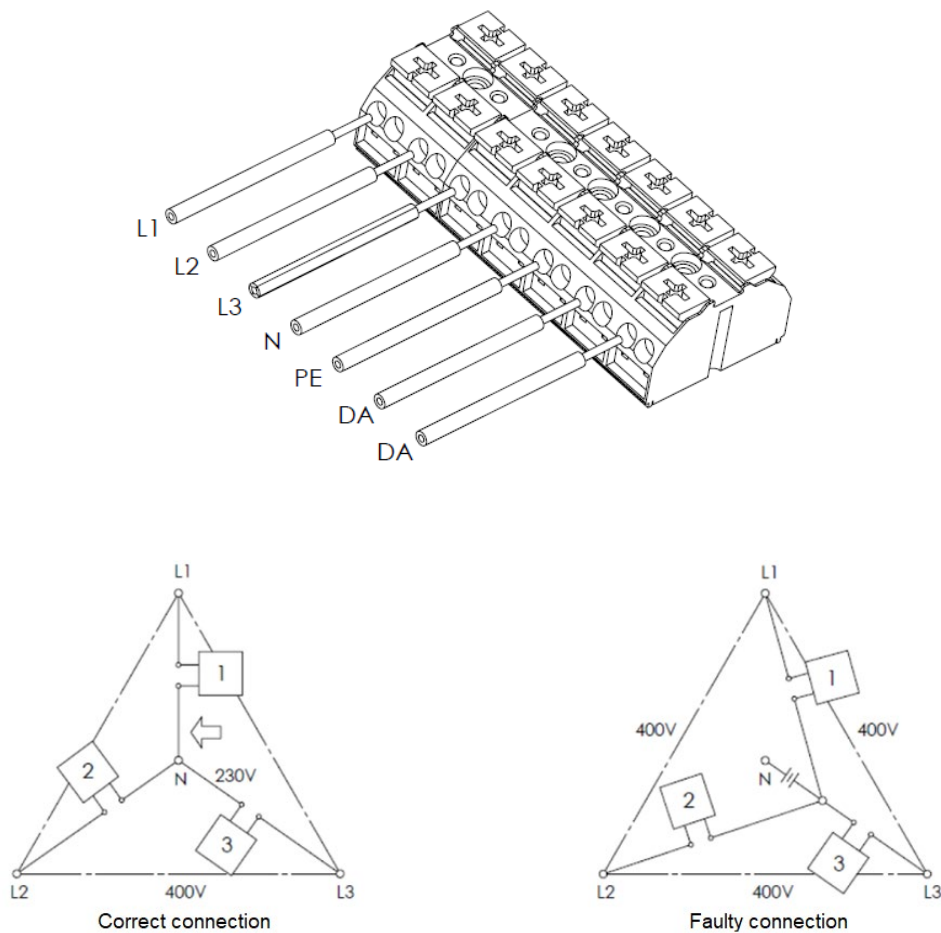
- enter the power cable to the housing through the cable entry (gland),
- carefully unisolate the wires (8-10mm), and put it into the connector according to a label inside the light fitting (L, N, PE, DA, DA) in standard connection and (L1, L2, L3, N, PE, DA, DA) in 3 phase connection,
- the wires L2, L3 in 3 phase connection are only a through connection,
- precisely tighten power cable in the gland with two wrench,
- check the effectiveness of grounding.



**Standard connection (wiring 50):**



**3 Phase connection (wiring 70):**





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.
- Not following this remark may cause damage to the seals, resulting in a lowering of the IP rating and damage to the luminaire in the result.
- If the neutral line is damaged or voltage occurs in it, a floodlight or group of floodlights may start to work under larger than predicted load, which in consequence may lead to damage of power delivery system.

## 8. CONDITIONS OF SAFETY USE

- Every light fitting must have label with rating data on it. Each light fitting is equipped with this „Installation and maintenance manual”, which must be kept by user until the end of exploitation.
- Light fittings are designed for fixed installations only.
- Using light fitting outside the designated operating temperature range is unacceptable and will decrease a lifetime of light fitting and/or damage it. It will also cause a loss of warranty.



**Remark:** Using light fitting beyond the designated operating temperature range may reduce its lifetime or damage to the luminaire itself.

- Each light fitting must have a warning sign: „DO NOT OPEN UNDER VOLTAGE” on it.
- As power cables, use 5-core cables (with PE core) or 7-core cables (with PE core) for the 3F version.
- Use power wires with cross section **0,5-4mm<sup>2</sup>**. Cross-section **2,5-6mm<sup>2</sup>** for special luminaire execution.
- Maximum cross current **I=16A**. For 3 phase connection cross current **I=10A**
- Depending on the version, the diffuser is made of tempered glass or PC. Version with PC diffuser should not be exposed to chemicals that can damage it, in particular: oil, acetone, chlorine, ethyl, ether, solvents. If there is uncertainty about the substances present in the luminaire's work area that could lead to damage to any of the components, then determination measures should be taken. Luminaires fitted with a PC diffuser shall carry the warning label "Caution! Risk of electrostatic charge".



- Do not stare into working light source.



- Risk of electrical shock.

## 9. LIGHT FITTING MAINTENANCE AND SERVICING

**REMARK:** during the servicing and maintenance touching the LED are prohibited, because it will decrease the lifetime of light fitting and cause the loss of manufacturer's warranty.



It is recommended to carry out inspections of electrical equipment in accordance with the requirements of PN-EN 60079-17.

**INSPECTION:** at least once a month. Inspection is made without opening the light fitting. User must check admission cables condition (insulation damage, cracks, burns etc.). Cables must not have any acute bends. Outside parts of the light fitting must be checked. No cracks or corrosion signs may occur. Bolts used to mount light fitting should be properly tightened, washers mustn't be cracked. Cleanliness of outer surfaces and light fittings surroundings must be checked. Light fittings may not be soiled by paint or grease. Do not allow for dust (dirt) deposition on the light fitting. 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. 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. Light fitting must be uninstalled. Verification of technical condition must be proceeded.

Besides all the examination during inspection, service and maintenance paragraphs electrical examination must be also made: light fitting current consumption, insulation examination, protective earthing condition. Special attention must be paid to insulating parts condition. No crack or burns may occur.

## 10. CLEANING



Do not allow dust to accumulate on the light fitting. Cleaning have to be carried out using vacuum cleaners or a soft cloth with antistatic agent suitable to working conditions. Do not use chemicals that can damage any part of the light fitting.

## 11. REPAIRING AND EXCHANGE PARTS

All parts considered as a spare parts must be ordered at manufacturer of light fitting. Additionally, the replacement of the light source may be performed by ATM Lighting Sp. z o.o and specially trained personnel, using original components supplied by ATM Lighting Sp. z o.o.



All repairs may be made only by manufacturer or authorized repair workshops according to PN-EN 60079-19.

## 12. LIGHT SOURCE EXCHANGE

The light source used in this luminaire should be replaced only by the manufacturer or its service representative, or a similarly qualified person, using original components supplied by ATM Lighting sp.z o.o.

## 13. TRANSPORT AND CONDITIONS OF STORAGE

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

Light fittings 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

## 14. DISPOSAL OF WASTE EQUIPMENT



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

## 15. WARRANTY

- It is forbidden to use a damaged or malfunctioning luminaire. Installation checks must be carried out to detect any anomalies.
- It is required to disconnect power supply from the light fitting before any maintenance work.
- It is forbidden to make any changes to the light fitting construction. Any unauthorized interference may result in reduced functionality or damage to the device and may in some cases endanger life or health. At the same time it relieves the manufacturer of all warranty liability.
- 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/](http://www.atmlighting.pl/en/)

### ADDRESS:

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