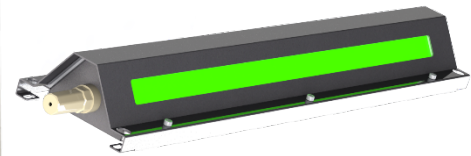
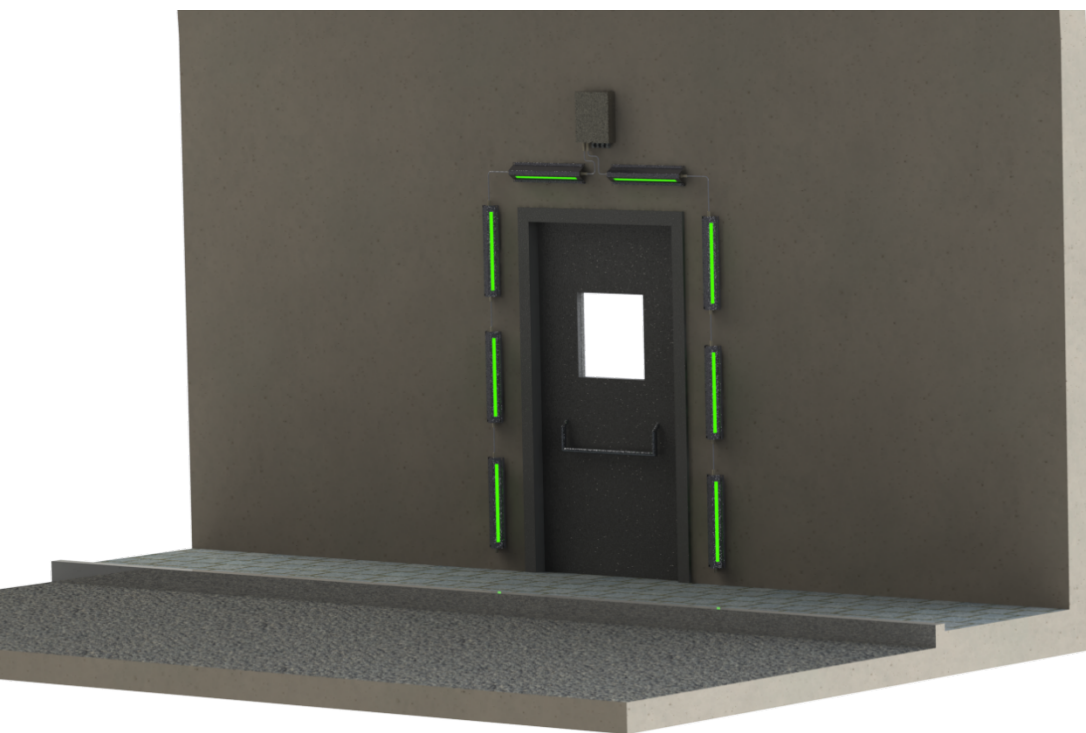




INSTALATION AND MAINTENANCE MANUAL  
FOR THE LIGHTING LUMINAIRE SYSTEM

# TNL320LED



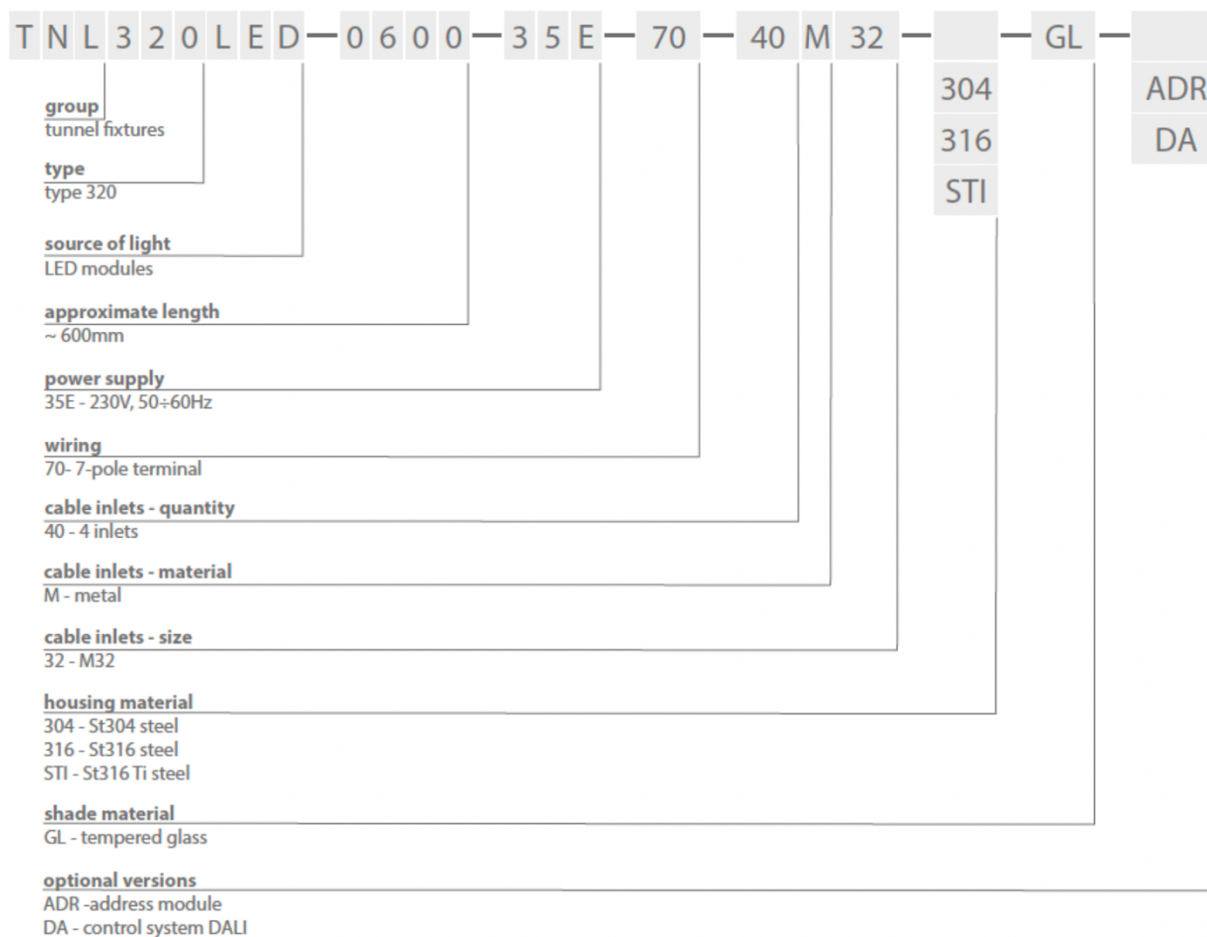
Read this manual carefully before installation.

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## 1. GENERAL INFORMATION

TNL320LED lighting system is designed to mark evacuation doors. Suitable for use in tunnels. The luminaire is equipped with a power supply with DALI protocol.



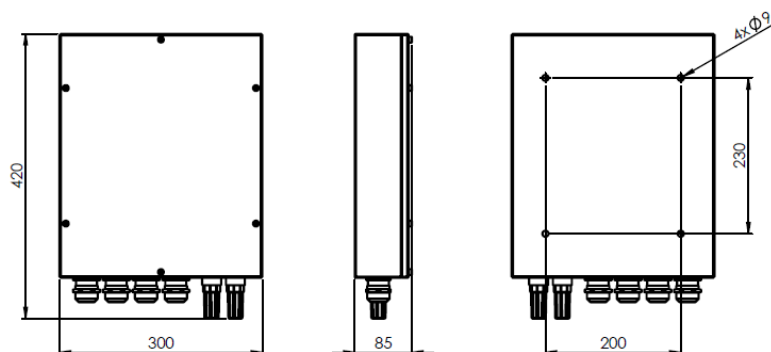
Risk group of the LED modules RG = 1.

## 2. TECHNICAL DATA

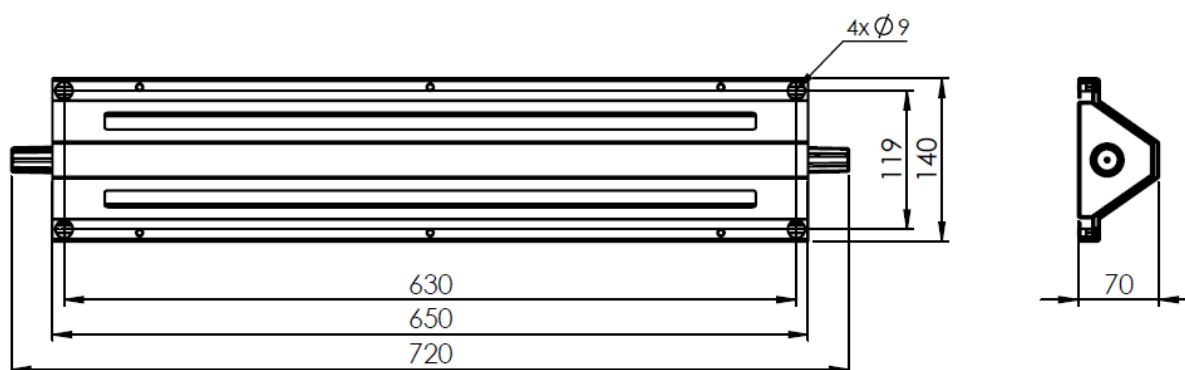
Luminaire type	Source power	Power supply	IP	Protection class	Power factor
TNL320LED	68,2 W	230V 0,50,60Hz	65	I	0,97

1. Dimensions of individual elements:

- Power box:



- Luminaire:



### 3. PHOTOMETRICAL DATA

Luminaire type	Luminous flux of the system	Lifetime of modules
TNL320LED	>200 lm	>70000 h

Lifetime of LED modules: L<sub>70</sub>B<sub>10</sub>

### 4. CONSTRUCTION

The luminaire has been built in accordance with the principles of good engineering practice. The product meets the essential requirements of the directives and harmonized standards listed in the provided EU declaration of conformity.

The housing is made of 316 Ti stainless steel. The diffuser is made tempered glass.

The set consists of 6 luminaires shining on both sides, 2 luminaires shining on one side and a power supply box.

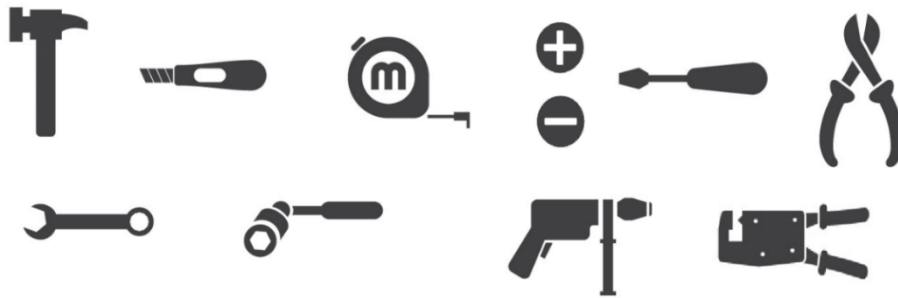
## 5. PRELIMINARIES

### SAFETY RULES

- Before starting the installation, carefully read all the information contained in this manual,
- General safety rules should be followed,
- Failure to comply with the installation and use rules may result in personal injury or material loss. ATM Lighting sp. z o.o. is not responsible in such cases,

Failure to follow the recommendations in this manual will void the manufacturer's warranty.

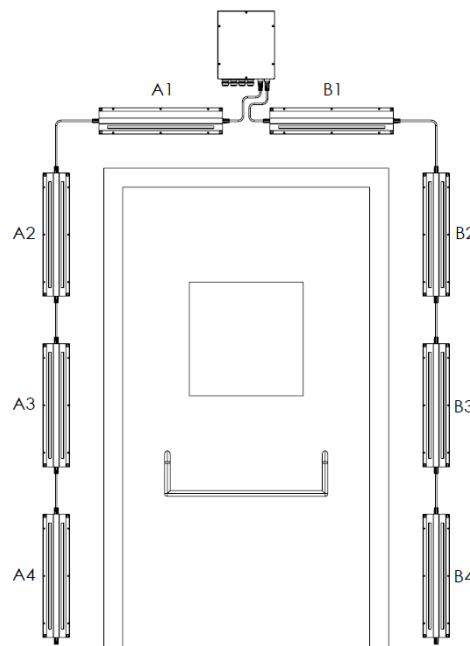
### NECESSARY TOOLS




## 6. INSTALLATION

The TNL320LED luminaire should be mounted directly on the wall with dowels. Installation dimensions are given in point 2 of this manual (page 4)

TNL320LED system consists of 6 luminaires on both sides, 2 luminaires shining on one side (downwards) and a power box. Housings should be mounted as follows:



Luminaires are marked with the following symbols:

A1, B1	Luminaires mounted horizontally above the door (A1 on the left, B1 on the right).
A2, A3, A4	Luminaires mounted vertically, on the left side of the door (from top A2, A3, A4).
B2, B3, B4	Luminaires mounted vertically, on the right side of the door (from the top B2, B3, B4).
Power Supply A i B	Marking of connections of luminaires mounted horizontally (A1 and A2) to the power box. For example, the socket marked "Power Supply A (" should be connected to the socket in the power box marked "Power Supply A".
A1-A2, A2-A3, A3-A4, B1-B2, B2-B3, B3-B4	Designations of connections of individual luminaires. For example, socket marked A1-A2 in A1 socket should be connected to socket A1-A2 in A2 luminaire.
	Direction of installation of luminaires arranged vertically. Housings should be mounted so that the arrow is pointing upwards.

Installation of luminaires marked with the above symbols does not require opening them.

## 7. ELECTRICAL CONNECTION

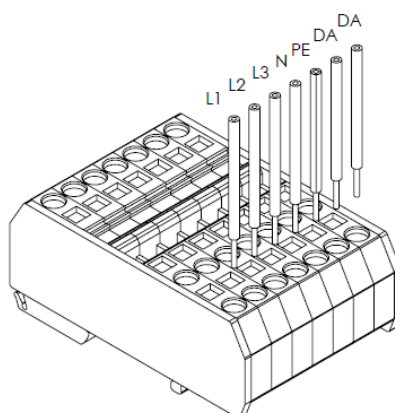
To connect the power supply:

- insert the power cord into the power box, through the cable entry (gland),
- carefully remove insulation the cable conductors (8-10mm) and then insert them into connector according to the marking inside the housing,
- tighten the power cord in the gland with 2 keys,
- connect the grounding of the lid and check the effectiveness of the grounding.

Attention:

- Use one key to tighten the gland sealing nut while securing the gland body with the other key against rotation.
- Failure to comply with the above remark may damage the sealants, thus reducing the degree of tightness.

Power connection diagram:



## 8. CONDITIONS OF SAFETY USE

- Each luminaire has a nameplate with technical data. Each luminaire has an instruction and operating manual, which should be kept until the end of the luminaire's useful life.
- The luminaires are suitable for fixed installations only.
- Operation of the luminaire outside the designated operating temperature range will lead to faster wear and/or damage. At the same time, it may cause the loss of the manufacturer's warranty.
- Each luminaire must have a warning plate saying: "DO NOT OPEN UNDER VOLTAGE".
- 7-conductor cables (with PE conductor) with a maximum external diameter of 1.3-21 mm should be used as power cables.
- Unused glands should be properly plugged with special plugs,
- Power wires with a cross section of 0.5-10 mm<sup>2</sup> should be used.
- Maximum load on through-line cables I=32A



- Do not stare at a working light source



- Risk of electric shock

## 9. LIGHT FITTING MAINTENANCE AND SERVICING

**REMARK:** during service and conformation works, it is forbidden to touch LED points, as this will reduce the life of the luminaire and lose the manufacturer's warranty.

**INSPECTION:** at least once a month, the luminaire should be inspected without opening it. Check the condition of the power cords (insulation damage, cracks, burns, etc.). Cables must not be refracted at sharp angles. Visual inspection of the exterior parts. There must be no cracks or signs of corrosion. The mounting screws must be tensioned. Check the cleanliness of the outer surfaces of the housing. The luminaire must not be contaminated with paint or greasy. Do not allow dust and dirt to accumulate on the luminaire. Check the legibility of the statutory plates. Any irregularities encountered must be rectified immediately.

**SERVICE AND MAINTENANCE:** should be performed at least once a year. Service and maintenance should be carried out with the power disconnected. First you need to make a visual inspection. After opening the luminaire, check the condition of the protective coating of metal parts, the condition of internal connection cables and their fixing, the condition of insulation elements, fittings, glands and gaskets. Markings and statutory plates must be cleaned. Any irregularities encountered must be rectified immediately.

**VERIFICATION OF TECHNICAL CONDITIONS:** at least once every two years. Disconnect the power supply from the luminaire. In addition to the tests carried out during inspections and maintenance, electrical tests should also be carried out: measurement of the current consumed by the luminaire, measurement of the insulation condition, measurement of the effectiveness of the protective connection. Particular attention should be paid to the condition of the insulating parts. There should be no traces of cracks and burns on them.

**CLEANING:** Do not allow dust and dirt to accumulate on the luminaire. Cleaning of luminaires should be carried out using compressed air and a soft cloth or soft brush. If necessary, use water and/or neutral detergent, but do not use chemicals that may damage any part of the housing.

## 10. SPARE PARTS



All spare parts must be ordered from the luminaire manufacturer.

## 11. REPAIRING



Any repairs can only be made by the manufacturer or an authorized service workshop.

## 12. LIGHT SOURCE EXCHANGE



The light source used in this luminaire should only be replaced by the manufacturer or his service representative or a similarly qualified person.

## 13. TRANSPORT AND STORAGE CONDITIONS

Luminaires should be transported by covered means of transport, protected against strong shocks.

Luminaires may only be stored in covered rooms at a temperature of +5°C to +35°C and humidity of less than 75%. The premises should be free of corrosive vapors and gases.

## 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 defective luminaire. In order to detect any irregularities, checks must be carried out on the installation.
- 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/)



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