

Operating Instructions

Universal Explosion Proof LED Lighting

Model THT-L1102A

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1. General Safety Instructions



WARNING

This manual contains basic safety instructions to be observed during installation, operation and maintenance of the device, and for properly and safety run of the device according to its performance data. Any damage of the device may result explosion protection null and void. This manual represents the most relevant information about the product, applicable codes and regulations supplement it. Non-observance will endanger persons, plant and the environment. The person in charge is required to secure its employment in the industrial unit. Any improper usage, as well as non-compliance with the rules under this manual, shall release the manufacturer's all responsibilities.

1.1 Before assembly/commissioning:

- ☞ Read through the operating instructions.
- ☞ Give adequate training to the assembly and operating personnel.
- ☞ Ensure that the contents of the operating instructions are fully understood by the personnel in charge.
- ☞ The national installation and assembly regulations (e.g. IEC/EN 60079-14) apply.

1.2 When operating the device:

- ☞ Ensure the operating instructions are made available for the person in charge on location at all times.
- ☞ Observe these instructions, other working instructions and national safety regulations.
- ☞ Verify the implementation of safety instructions.

2. Intended Field of Application

The Universal Explosion Proof LED Lighting, Model THT-L1102 is intended for using in gas explosive atmospheres (zones 1 and 2 according to IEC 60079-10-1) and zones with dust explosion hazards (zones 21 and 22 according to IEC 60079-10-2).

The apparatus is designed for using in indoor and outdoor environments.

The use in other potentially explosive atmospheres does not correspond to the designated use and is therefore not allowed.

3. Conformity to Standards

The relevant standards are listed in the Declaration of Conformity, as set forth in Section 12 of this Operating Instructions.

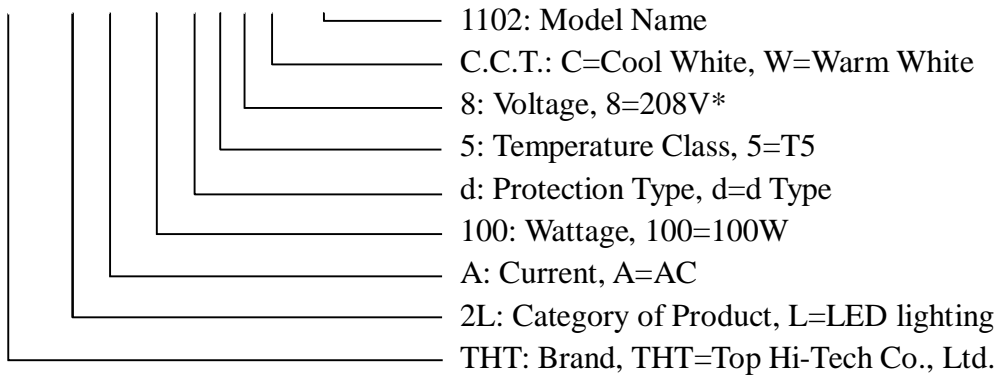


4. Technical Data

Item	Description
Explosion Protection	
IECEX	
Gas Explosion Protection	II 2 G Ex d IIB+H ₂ T5...T4 Gb
Dust Explosion Protection	II 2 D Ex tD IIIC T110°C Db
ATEX	
Gas Explosion Protection	⊕ II 2 G Ex d IIB+ H ₂ T5...T4 Gb
Dust Explosion Protection	⊕ II 2 D Ex tD IIIC T110°C Db
Taiwan	
Gas Explosion Protection	Ex d IIB+H ₂ T5 Gb
Dust Explosion Protection	Ex tD A21 IP64 T104°C
China	
Gas Explosion Protection	Ex d IIB+H ₂ T5...T4 Gb
Dust Explosion Protection	DIP A21 T _A T110°C
USA (UL)	
Gas Explosion Protection	Class I, Zone 1, AEX de IIB+ H ₂ T5
Dust Explosion Protection	Zone 21, AEx tD, IIIC T110°C IP67
Canada (UL)	
Gas Explosion Protection	Ex de IIB+H ₂ T5
Certificates and Approvals	IECEX/ATEX, US/Canada (UL), Taiwan (ITRI), China (PCEC)
Other Certificates	SGS test report for IP68
Marking(CE)	CE 0035
Rated Voltage	IECEX/ATEX/Taiwan/China 24, 110, 220Vac (±10%), 50 & 60Hz USA/Canada 208Vac (±10%), 50 & 60Hz Note information on type label.
Power Factor	cos φ ≥ 0.9
Ambient Temperate Range	-20°C ~ +40°C
Degree of Protection	IP68
Material	
Enclosure	Aluminum alloy
Glass	Temperature-resistant pressed glass
Cable Gland	Stainless steel
LED Service Life	30,000 hrs
Cable Gland	1×NPT 3/4" threaded hole

5. Model Code

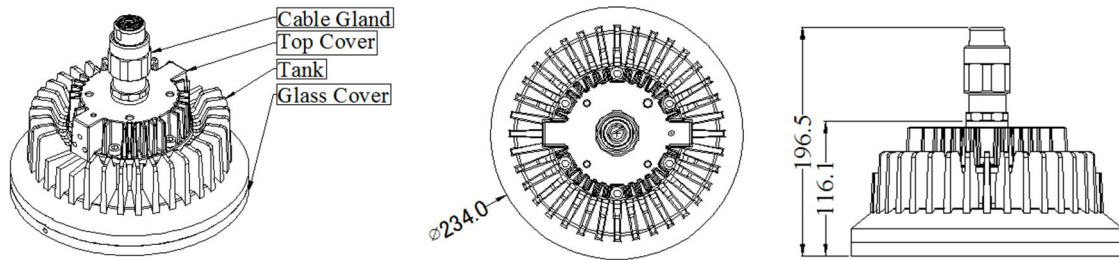
THT 2L A 100 d 5 8 C 1102



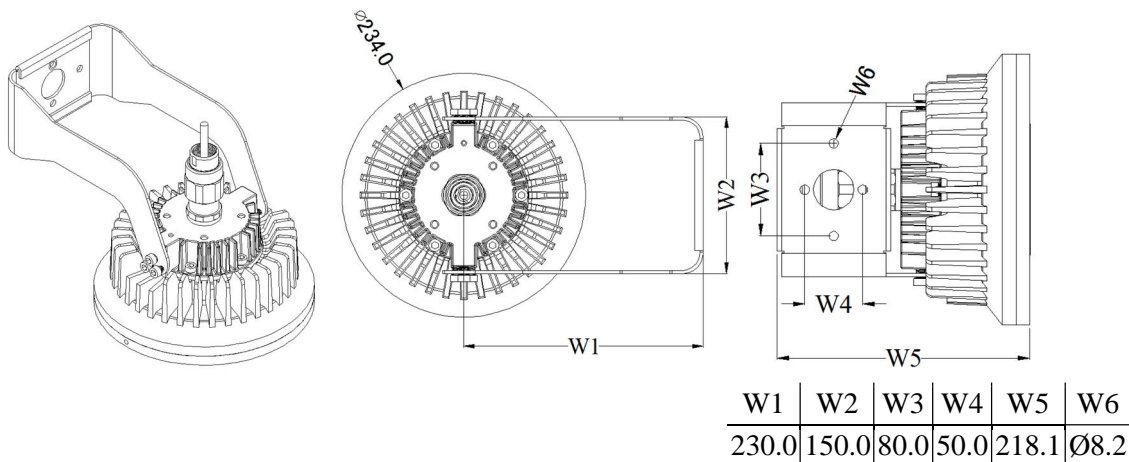
*0=277V, 1=110V, 2=220V, 3=24V, 4=12~220V, 5=100V, 6=120V, 7=200V, 8=208V, 9=240V

6. Dimension Drawings (All Dimensions in mm) – Subject to Alterations

Without Mounting Bracket



With Mounting Bracket – Wall Hanging (Angle Adjustable)



7. Assembly and Installation



WARNING

The electrical installation must be carried out by qualified persons.

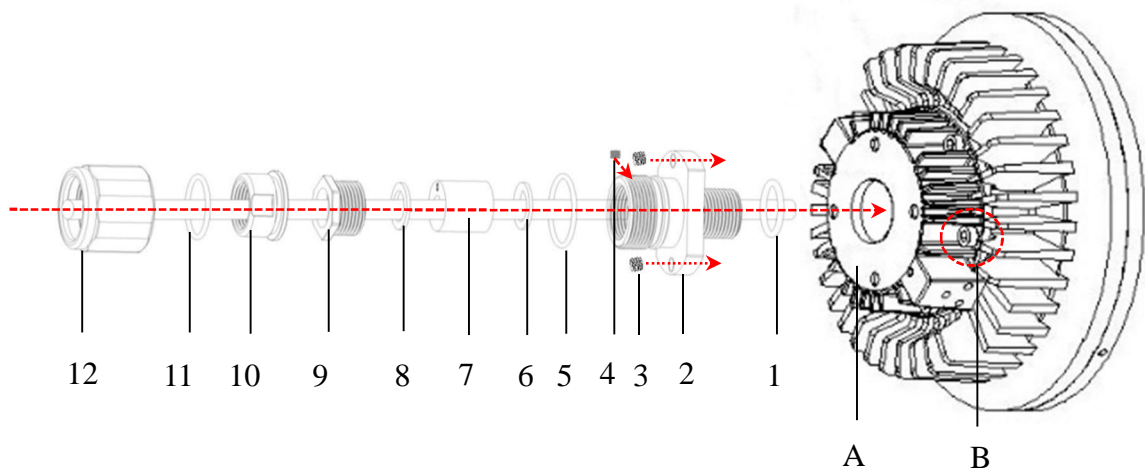
- ☞ All connections and wiring must be disconnected from the power supply.
- ☞ Secure the connections against unauthorized activation.

7.1 Electronic Connection

Cable Entries

This lighting is equipped with one hole by mounting a Cable Gland. To mount the Cable Gland proceed as follows:

Overview

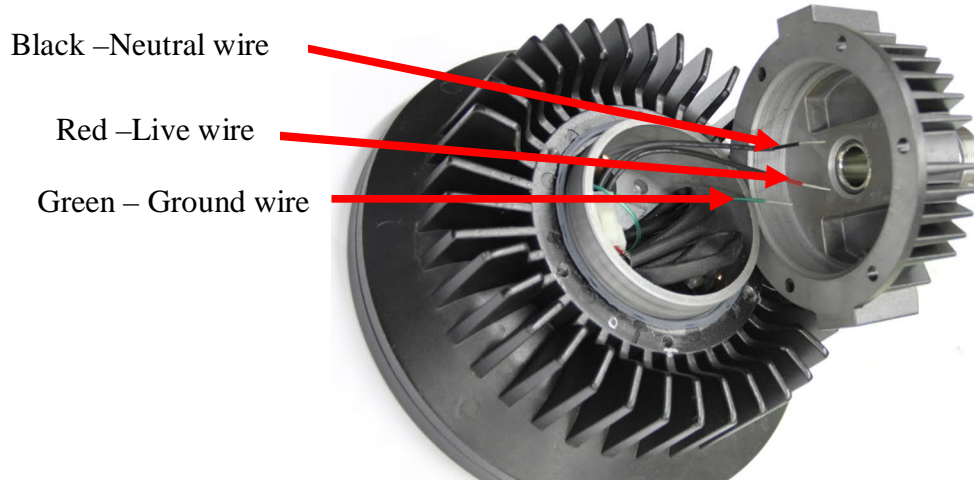


- | | | | |
|---|-----------------------|----|-----------------------|
| A | Top Cover | 7 | Tube (φ8.5, 10, 12) |
| B | 6×M6 Screws | 8 | Washer |
| 1 | O-Ring | 9 | Pressure nut |
| 2 | Main Body | 10 | Connector (NPT 3/4'') |
| 3 | M6 Socket Set Screw×2 | 11 | O-Ring |
| 4 | M4 Socket Set Screw×1 | 12 | Sleeve |
| 5 | O-Ring | | |
| 6 | Washer | | |

- ▶ Loosen the screws (B) of Top Cover (A) of lighting and remove it.
- ▶ Disassemble the Cable Gland; assemble the Main Body (2) and O-ring (1) of Cable Gland, and tighten the Main Body (2) with the entry hole of the Top Cover (Tightening torque: 60Nm), then screw and tighten the M6 Socket Set Screws (3).
- ▶ Elect the fitting Tube (7) from the package of Cable Gland, where are 3 sizes of Tube (φ8.5, 10, 12) contained in THT standard package.
- ▶ Insert the cable from outside trough each parts of Cable Gland and the Top Cover (A) which has been tightened with Main body (2) of Cable Gland.

Electrical Connection

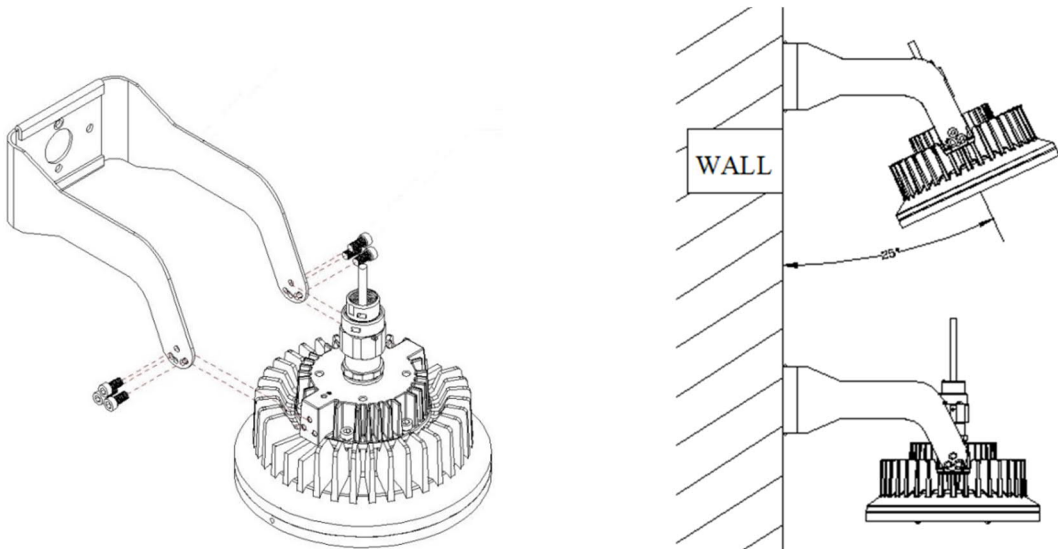
- ▶ Introduce the wires of the luminary with wires of the cable by attached closed-end-terminals as following: Neutral-wire with black-wire; Live-wire with red-wire; Ground-wire with green-wire (see below picture).



- ▶ Re-attach the Top Cover and tighten it by using the respective M6 screws (B).
- ▶ Assemble the O-ring (5), Washers (6) & (8), Tube (7) and Pressure nut (9) of Cable Gland orderly by appropriate tool, then screw and tighten the M4 Socket Set Screw (4).
- ▶ Assemble the O-ring (11) with the Connector (10); attach the Sleeve (12) with the Main Body (2). The Cable Gland is assembled completely.
- ▶ Check the tightness of Cable Gland and Top Cover, to ensure the IP protection be guaranteed.

7.2 Assembly of the Mounting Bracket

- ☞ The mounting bracket is for the usage of wall mounting.
- ☞ The lighting can be adjusted up by 25°.



- ▶ Position the bracket holders and fix it by means of the provided M6 screws.
- ▶ The holding bracket is mounted.

Putting into Service

Before putting into operating, it's necessary to ensure that:

- ☞ the lighting is correctly installed.
- ☞ the connection has been correctly made.
- ☞ the cable has been inserted correctly.

8. Maintenance



WARNING

- ☞ To avoid dangers due to energized parts, all connections and wiring must be disconnected from the power supply. Secure the connections against unauthorized activation.
- ☞ To avoid risk of burn to hands, let the housing, the cable gland and the protective glass cool down for approximate 30 minutes before touching them.
- ☞ Maintenance work is not permitted on flameproof enclosures. Repairs are only to be carried out by the manufacturer. Unauthorized repair shall cause the manufacturer's liability and warranty expires.

8.1 Regular Maintenance

- ☞ Consult the relevant national regulations (e.g. IEC/EN 60079-17) to determine the type and extent of inspections.
- ☞ Arrange the plan of regular inspection with the equipment so that any defects in the equipment which may be anticipated are promptly detected.

To check as part of the maintenance schedule as following:

- ▶ Cracks or damages on the glass cover and/or on the enclosure.
- ▶ Condition of the connecting cables.
- ▶ Compliance with the permitted temperatures in accordance with IEC 60079-0.
- ▶ Cable Gland is intact and tightened.
- ▶ Screws of the mounting bracket are tightened.

8.2 Cleaning



WARNING

Do not clean the corroded gap using abrasives or a steel brush. Use chemical agents for cleaning, such as reducing oils.

Flameproof gap:

- ▶ Clean the flameproof gap regularly with an acid-free grease which is compatible with aluminum.
- ▶ Corrosion prevention by means of a coat of paint is forbidden.



9. Accessories and Spare Parts



WARNING

Use only original THT-EX accessories and spare parts.

For accessories and spare parts, see data sheet at www.tht-ex.com.

10. Transport, Storage and Disposal

- ☞ Transport and storage is only allowed in the original packaging, on the way pointed out on the carton box.
- ☞ Transport – Shock-free in its original carton, do not drop, and handle carefully.
- ☞ Store – Store in a dry place in its original packaging.
- ☞ Disposal – Ensure environmentally friendly disposal of all components according to the legal regulations.



11. Declaration of Conformity

See Attachment.