

Operating Instructions

Flameproof LED Lighting

Model L1102D

THT-EX

Drawing No: Instruction_RD-EX-L1102D-A

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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 apparatus, and for properly and safety run of the apparatus according to its performance data. Any damage of the apparatus may result explosion protection null and void. This manual represents the most relevant information about the product, applicable codes and regulations shall 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 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

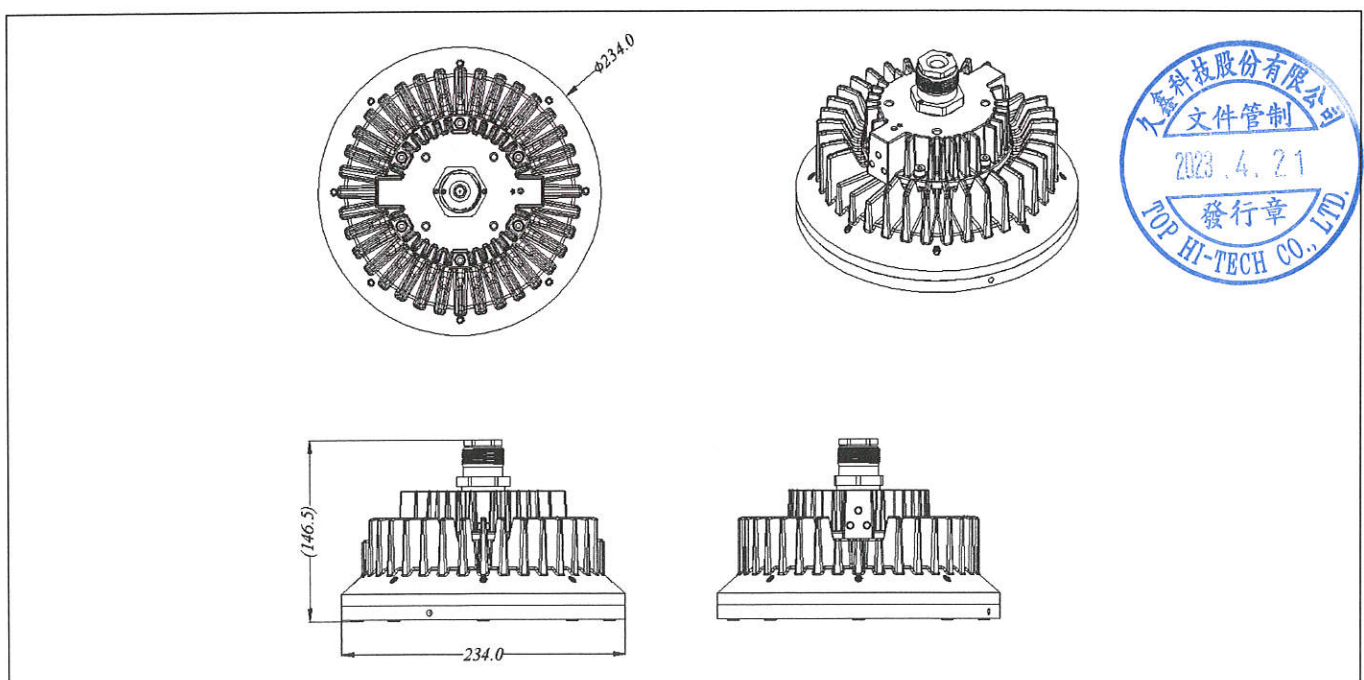
The flameproof LED Lighting, Model L1102D is intended for using in gas explosive atmospheres (Zone 1 according to IEC 60079-10-1) and dust explosion hazards (Zone 21 according to IEC 60079-10-2). The use in other potentially explosive atmospheres does not correspond to the designated use and is therefore not allowed. The apparatus is designed for using in indoor and outdoor environments.

3. Technical Data

Item	Description	
Explosion Protection IECEx	IECEx UL 22.0059X	Apply Standards : ■ IEC 60079-0
Gas Explosion Protection	Ex db IIC T4...T5 Gb	■ IEC 60079-1
Dust Explosion Protection	Ex tb IIIC T105°C...T95°C Db	■ IEC 60079-31 EN 60079-10-1
ATEX	UL 22 ATEX 2815X	■ EN 60079-0 EN 60079-10-2
Gas Explosion Protection	CE0035 II 2 G Ex db IIC T4...T5 Gb	■ EN 60079-1 EN 60079-14
Dust Explosion Protection	CE0035 II 2 D Ex tb IIIC T105°C...T95°C Db	■ EN 60079-31 EN 60079-19
LED Module Type	COB	SMD
Voltage (Vac)	24V/100V/110V/120V/200V/220V/230V/277V/480V	110V/120V/220V/230V/277V/480V
Wattage (W)	30W/40W/50W/60W/70W/80W/90W/100W	95W/75W/65W/60W/50W/40W
Frequency (Hz)	50/60 Hz	
Power Factor	cos φ ≥ 0.9	
Ambient Temp Range	-20°C≤Ta ≤+40°C / -20°C≤Ta ≤+50°C	
Degree of Protection	IP67	
Enclosure Material	Aluminum alloy & Tempered Glass	
<p>Luminaires provide with cable gland and cable which assembled at the factory. The cable gland is not allowed to disassemble by the user. Cable gland is for circular (round), non-metal sheathed cables. The cable type is: SOOW, 18/3C AWG, 105°C, 1-3 m length. Size of Cable Gland Tube:</p> <ol style="list-style-type: none">ID Ø9.0 (Fitting Cable: OD Ø8 or Ø9), L=15 mmID Ø9.0 (Fitting Cable: OD Ø8 or Ø9), L=25.6 mm		
Mounting Type	Hanging/Wall Mounting (1)	

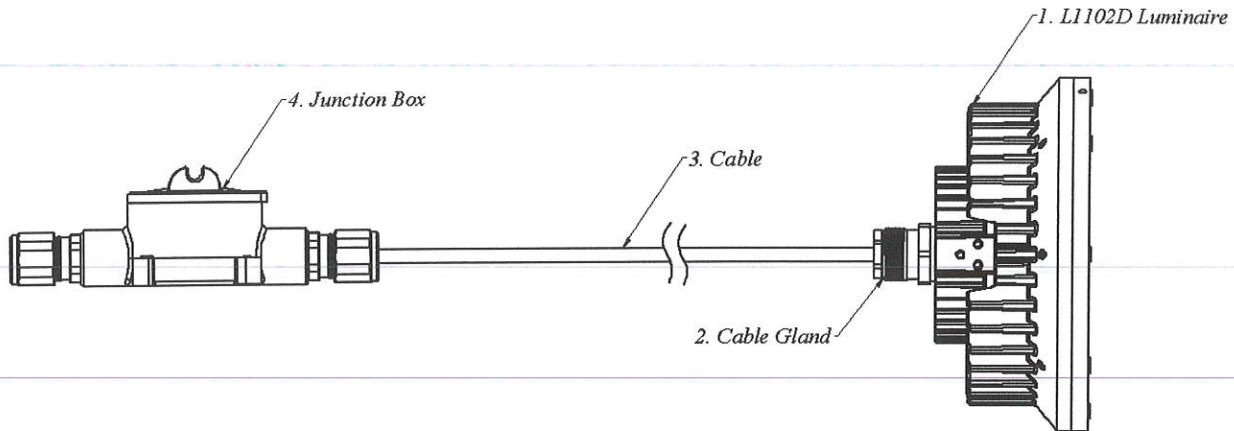
Mounting Type	Hanging/Wall Mounting (2)			
	Ceiling Mounting	Stanchion 25° Mounting	Stanchion 90° Mounting	Pendant Mounting

4. Dimensions (All Dimensions in mm)



5. Assembly and Installation

5.1 Electrical Connection



Overview of Electrical Connection

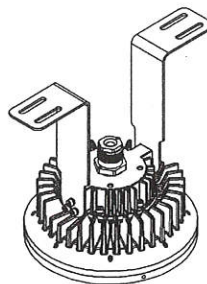
1: L1102D Luminaire	2: Cable Gland	3: Cable	4: Junction Box (Provide by customer)
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1. For luminaire with Ceiling/Wall/Hanging Mounting Bracket: Insert the Cable (3) into the Junction Box (4) (provide in the field).
2. For luminaire with Stanchion/Pendant Mounting Bracket: Insert the Cable (3) through the conduit into the Junction Box (4) (provide in the field).
3. Fix and introduce the wires of luminary with the terminal post of Junction Box (White-wire connects to Neutral; Black-wire connects to Live; Green-wire connects to Ground.)

5.2 Mounting Bracket Installation

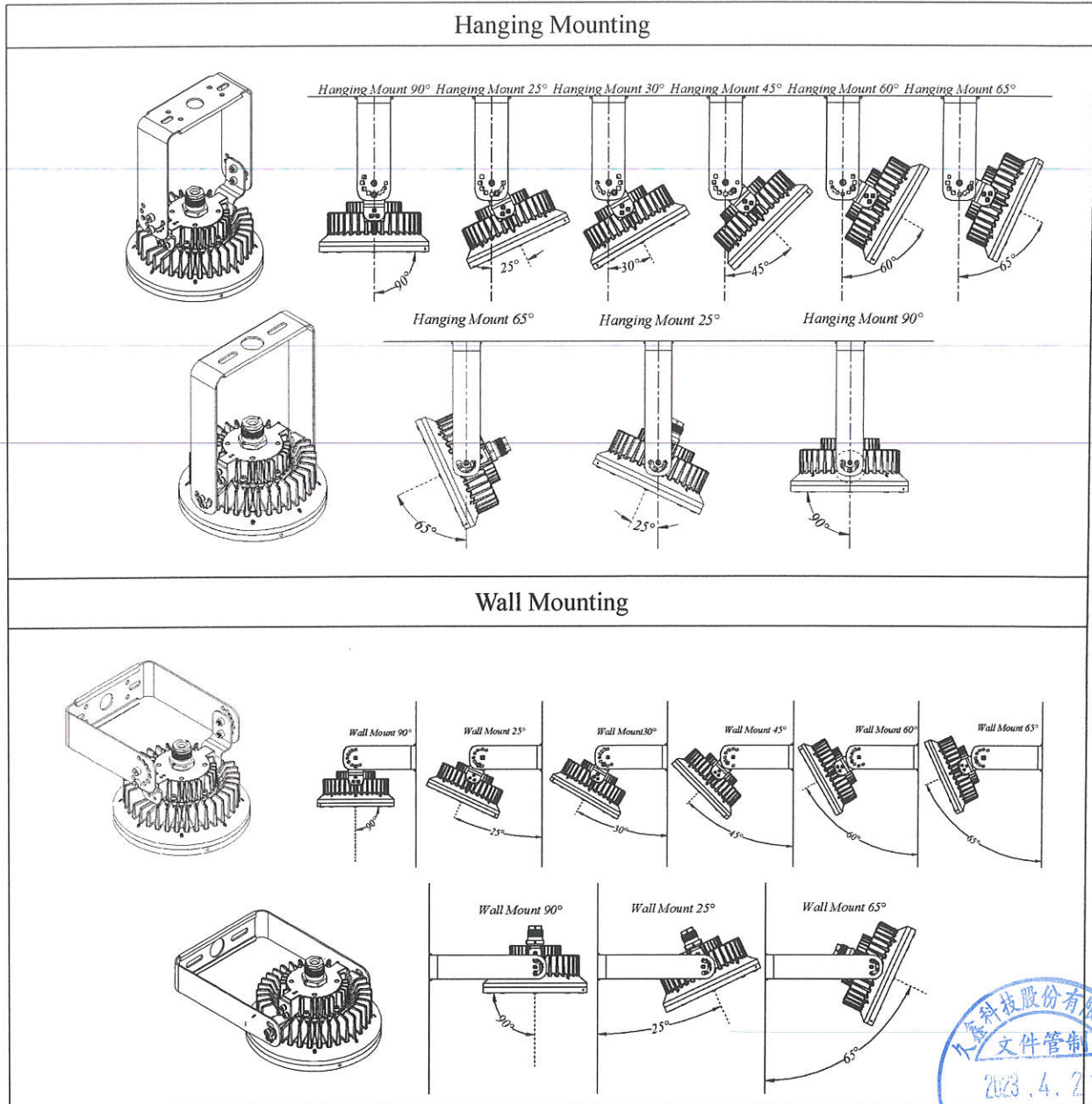
5.2.1 Ceiling Mounting Bracket

- ☞ The mount bracket is for the use of the ceiling mount.
- ☞ Secure the ceiling mounting bracket to the structure by using four fasteners (not provided).



5.2.2 Hanging/Wall Mounting Bracket

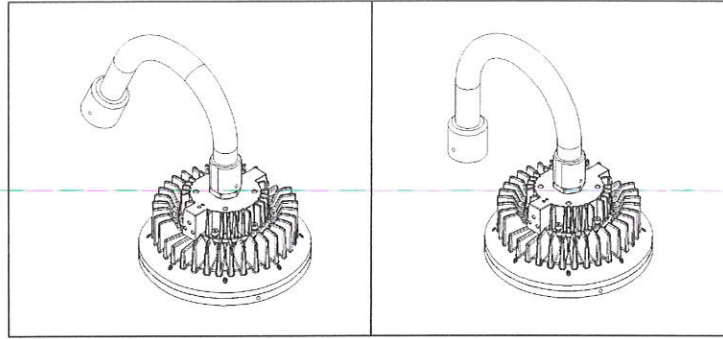
- ☞ The mount bracket is for surface mounting to wall and ceiling.
- ☞ Position the bracket holders and secured by means of the provided M8 screws with 61 kgf-cm.
- ☞ Secure the wall/ceiling mounting bracket to the mounting surface by using four fasteners (not provided).
- ☞ The luminaire can be adjusted in one position as shown in below Figures



5.2.3 Stanchion 25° Mounting Bracket/Stanchion 25° Mounting Bracket

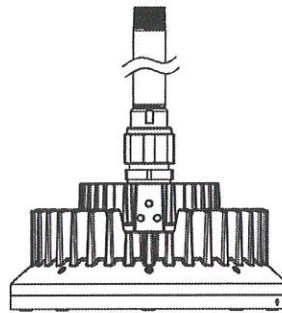
- ☞ Supplement for the Item 5.1 – Electrical Connection. The thread of entry hole of Connection Base is M35x1.5.
- ☞ Introduce the wires of the cord by attached closed-end-terminals as indicated in Item 5.1 – Electrical Connection.
- ☞ The bending electrical tube, one end secured to Cable Gland Body by integral M35 female threads and with a setscrew; the other end provided with 1-1/2" (pitch: 2.209 mm) NPT female threads for connecting with conduit by AHJ.
- ☞ Thread the tube mounting on conduit and torque until wrench-tight with 6600 kgf-cm.
- ☞ Tighten tube locking setscrew to conduit, 1.0 N-m.

Stanchion 25° Mounting	Stanchion 90° Mounting
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5.2.4 Pendant Mounting Bracket

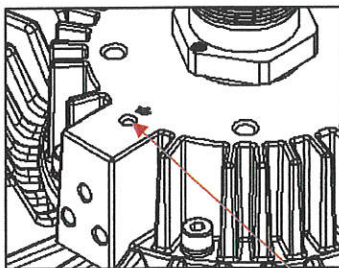
- ☞ Supplement for the Item 5.1 – Electrical Connection. The thread of entry hole of Connection Base is NPT 3/4”.
- ☞ Introduce the wires of the cord by attached closed-end-terminals as indicated in Item 5.1 – Electrical Connection.
- ☞ The straight electric tube, one end secured to Connector by integral NPT 3/4” male threads and with a setscrew; the other end provided with 3/4”NPT male threads for connecting with conduit by AHJ.
- ☞ Thread the tube mounting on conduit and torque until wrench-tight with 1500 kgf-cm.
- ☞ Tighten tube locking setscrew to conduit, 1.0 N-m.



5.3 Earth ground

External earth ground

- ☞ The external ground screw is not provided
- ☞ Terminal type as show the right pictures.



External earth ground Screw hole

- ☞ O-shaped or U-shaped clamp (material: cooper) is recommended to avoid twisted.
- ☞ Ground wire cross-sectional area=4 mm² , max current=0.5A; @V=100Vac-10%.
- ☞ Both ground screw and washer material are stainless steel.
- ☞ Screw hole spec (screw not provided): M4x0.7-6L.
- ☞ Torque requirement: 9 kgf-cm.
- ☞ Ensure wire is tied assured.

5.4 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.
- ☞ the voltage is correctly.

6 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 luminaire cool down for approximate 30 minutes before touching them.
- ▶ Repairs are only to be carried out by the manufacturer. Unauthorized repair shall cause the manufacturer's liability and warranty expires.
- ▶ To avoid danger of potential electrostatic charging hazard, please wipe with a damp cloth when cleaning.

Regular Maintenance

- ☞ Consult the relevant national regulations (e.g. IEC 60079-17) to determine the type and extent of inspections.
- ☞ Arrange the plan of regular inspection with the equipment, one time per 3-month at least, 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.
- ☞ Screws of the mounting bracket are tightened.



7 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.

8 Transport, Storage and Disposal

- ☞ Transport and storage are 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.

9 Specific Conditions of Use

- Do not open when an explosive atmosphere is present.
- Do not open when energized.
- The flameproof joints are not intended to be disassembled or repaired.
- Potential electrostatic charging hazard. Please wipe with a damp cloth when cleaning.
- The special fastener shall have a property class of A2-70.