

Operating Instructions

Universal Flameproof LED Lighting

Model THT-P1202



Top Hi-Tech Co., Ltd.
9F., No. 1, Zhongshan Rd.,
Tucheng District,
New Taipei City, 236 Taiwan
Website: www.tht-ex.com

TEL: +886 2 22671234
FAX: +886 2 22691166
e-mail: sales@tht-ex.com
Publication Code: UL-P1202A-00
Subject to alterations.



Contents

1. General Safety Instructions	1
2. Intended Field of Application	1
3. Technical Data	2
4. Model Code	2
5. Dimension	3
6. Assembly and Installation	3
7. Maintenance	4
8. Accessories and Spare Parts	5
9. Transport, Storage and Disposal	5

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. NEC) apply.

1.2 When operating the device:

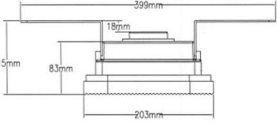
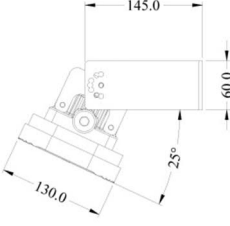
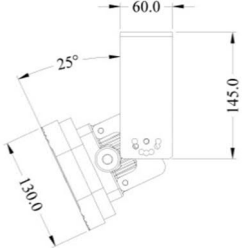
- ☞ Ensure the operating instructions are made available for the person in charge on location at all times.
- ☞ Observe these instructions, other working instructions and national safety regulations.
- ☞ Verify the implementation of safety instructions.
- ☞ Insulation for supply conductors shall be suitable for 100°C.

2. Intended Field of Application

The Universal Flameproof LED Lighting, Model THT-P1202 is intended for using in gas explosive atmospheres (Zone 1 and Zone 2) and dust explosion hazards (Zone 21 and Zone 22). 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 USA (UL) Gas Explosion Protection Dust Explosion Protection Canada (cUL) Gas Explosion Protection	Class I, Zone 1, AEx d IIB+H ₂ T5 Gb Zone 21, AEx tb IIIC T100°C Db Ex d IIB+H ₂ T5 Gb X		
Rated Voltage	USA/Canada 120 Vac / 277 Vac (±10%), 50 & 60 Hz Note information on type label.		
Power Factor	$\cos \varphi \geq 0.9$		
Ambient Temperate Range	For USA/Canada (UL): -40°C ~ +40°C		
Degree of Protection	IP67		
Material Enclosure Glass	Aluminum alloy Tempered glass		
LED Service Life	60,000 hrs		
Entrance Hole	NPT 3/4" or M20 threaded hole		
Weight	Ceiling mounting Bracket	Pendant Mounting Bracket	Wall Mounting Bracket
			
	3.4kg	3.6kg	3.6kg

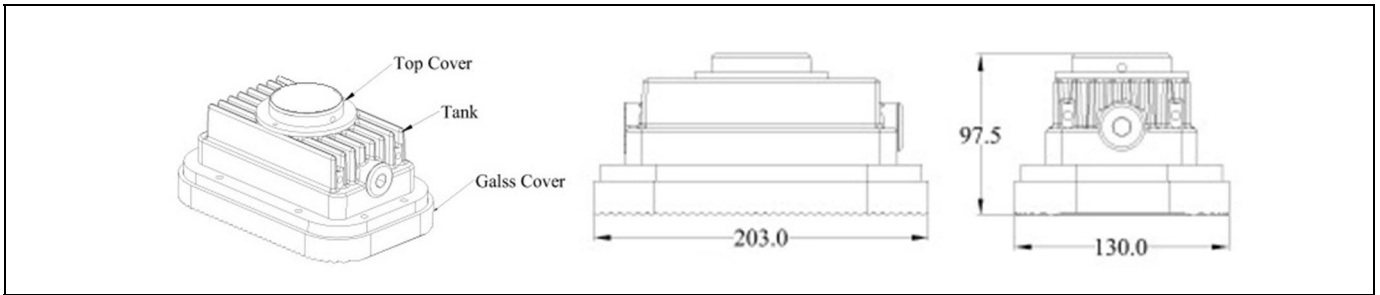
4. Model Code

THT	E	1202	Z	C	B	C	6	D4	C90
-----	---	------	---	---	---	---	---	----	-----

Mounting bracket type, C90 = Ceiling mounting 90°*
 Wattage, D4 = 44 W; D0 = 40W
 Voltage, 6 = 120 Vac; 9 = 277 Vac
 CCT, C = cool white; W = warm white
 LED module type, B = DCOB (driver chip on board)
 Type of top Cover, C = Top cover with M20 or NPT 3/4" opening; D = Top cover without opening
 Internal control code, maybe any one alphabet from A to Z
 Model name
 Type of product, E = Flame Proof Lighting
 Brand, THT=Top Hi-Tech Co., Ltd.

* C90 = Ceiling mounting 90°, W25 = Wall mounting 25°, W90 = Wall mounting 90°, H25 = Pendant mounting 25°, H90 = Pendant mounting 90°

5. Dimensions (All Dimensions in mm) – Subject to Alterations



6. Assembly and Installation

6.1 Electrical Connection

6.1.1 Cable Entries through Top Cover

- Loosen the M4 set screw of Top Cover of the luminaire. (Figure 1)
- Loosen the Top Cover of the luminaire and remove it.
- The thread of cable entry hole of Top Cover is NPT 3/4" or M20.
- Attach the Top Cover to suitable conduit.
- Insert the cable from outside through the conduit and the cable entry hole of Top Cover.
- Introduce the wires of the luminaire with wires of cable by attached closed-end-terminals as following (Figure 2):
 - Black-wire connects to Neutral;
 - Red-wire connects to Live;
 - Green-wire connects to Ground.

- Thread the Top Cover and torque until wrench-tight.
- Tighten the M4 set screw of Top Cover with torque value 1 N-m.
- Check the tightness of conduit and Top Cover.

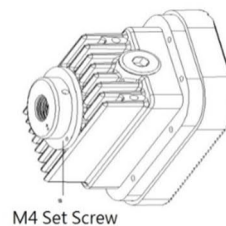


Figure 1

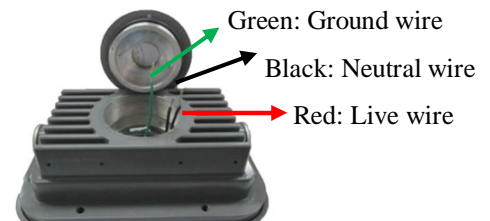


Figure 2

6.1.2 Cable Entries through Entry Hole of Tank

- Loosen the Plug from the Tank and remove it. (Figure 3)
- The thread of cable entry hole of Tank is M20.
- Attach the Tank to suitable conduit.
- Insert the cable from outside through the conduit and the cable entry hole of Tank.
- Introduce the wires of the luminaire with wires of cable by attached closed-end-terminals as following (Figure 2):
 - Black-wire connects to Neutral;
 - Red-wire connects to Live;

- Green-wire connects to Ground.
- Thread the conduit and torque until wrench-tight with torque value 40 N-m.
- Check the tightness of conduit.

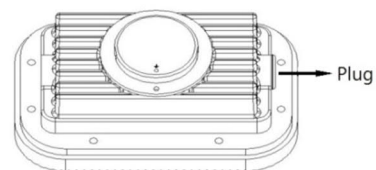


Figure 3

6.2 Mounting Bracket Installation

6.2.1 Wall Mounting & Pendant Mounting Bracket (W25, W90 & H25, H90)

- The mounting bracket is both for the use of wall mounting and Pendant mounting.
- Position the bracket holders and fix it by means of the provided M6 screws, 24.5 kgf-cm. (Figure 4)
- Secure the wall/pendant mounting bracket to the structure by using six fasteners (not provided). (Figure 5)
- The lighting can be adjusted up and down by 25°.

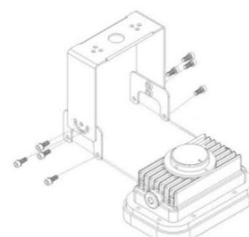


Figure 4

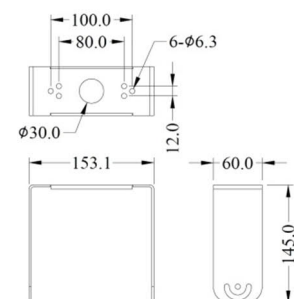


Figure 5

6.2.2 Ceiling Mounting Bracket (C90)

- ☞ The mounting bracket is for the use of ceiling mounting.
- ☞ Position the bracket holders and fix it by means of the provided M6 screws, 24.5 kgf-cm. (Figure 6)
- ☞ Secure the wall mounting bracket to the structure by using four fasteners (not provided). (Figure 7)

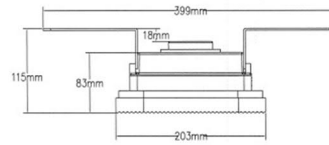


Figure 6

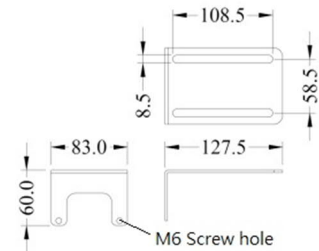


Figure 7

6.3 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.
- ☞ insulation for supply conductors shall be suitable for 100°C.

7. Maintenance

WARNING

- ▶ To reduce the risk of ignition due to electrostatic discharge, avoid contact with the luminaire while an explosive atmosphere is present. Clean only with a damp cloth.
- ▶ Contact manufacturer for information on the flameproof joints.
- ▶ Instructions for safety (i.e. putting into service, use, assembling, maintenance, installation, adjustment, and mounting).
- ▶ Tools used for the equipment.
- ▶ Instructions relevant to the safe installation, use, and operation of the equipment shall be in both English and French (for Canada).
- ▶ To avoid personal injury, disconnect power to the light and allow the unit to cool down before performing maintenance.
- ▶ Perform visual, electrical, and mechanical inspections on a regular basis. The environment and frequency of use should determine this. However, it is recommended that checks be made at least once a year. Frequency of use and environment should determine this. It is recommended to follow an Electrical Preventive Maintenance Program as described in the National Fire Protection Association Bulletin NFPA No. 70B: Recommended Practice for Electrical Equipment Maintenance.
- ▶ The lens should be cleaned periodically to ensure continued lighting performance. Clean the lens with a clean, damp, non-abrasive, lint-free cloth. If this is not sufficient, use a mild soap or a liquid cleaner. Do not use an abrasive, strong alkaline or acid cleaner as damage may occur.
- ▶ Inspect the cooling fins on the luminaire to ensure that they are free of any contamination (i.e. excessive dust build-up). Clean with a non-abrasive cloth if needed.
- ▶ Electrically check to make sure that all connections are clean and tight.
- ▶ Mechanically check that all parts are properly assembled.
- ▶ 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.

7.1 Regular Maintenance

- ☞ Consult the relevant national regulations (e.g. NEC) 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.
- ☞ Screws of the mounting bracket are tightened.

7.2 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.

8. 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.

9. 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.