

# Installation and Maintenance Manual

## Model L1905

# THT-EX

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### 1. General Information

Model L1905 LED Luminaires are suitable for use in the following hazardous (classified) areas as defined by the IEC Scheme for Certification to Standards for Electrical Equipment for Explosive Atmospheres (IECEx) and ATmosphere EXplosibles (ATEX):

Refer to the luminaire nameplate for specific classification information, maximum ambient temperature suitability and corresponding operating temperature (T-Code).

Model L1905 LED Luminaire is designed for using in indoors and outdoors environment.



#### 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.

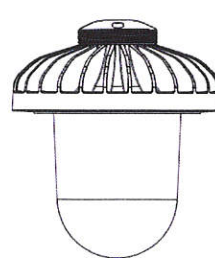
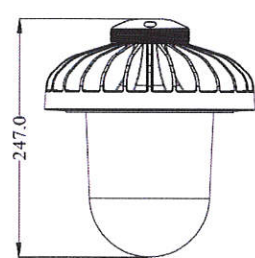
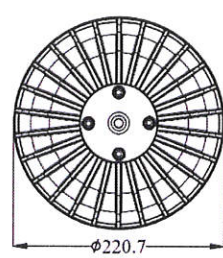
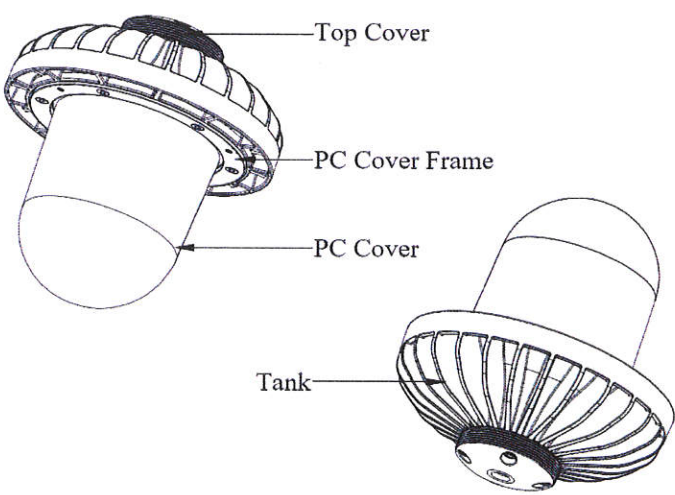
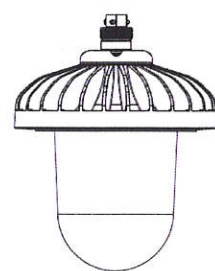
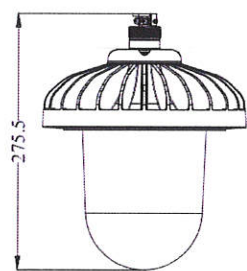
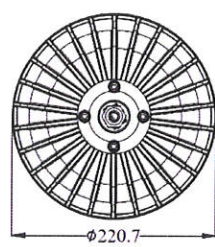
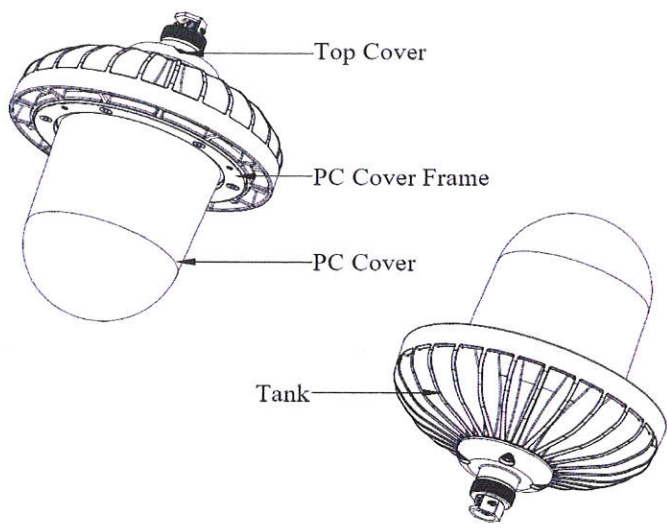
**WARNING - Potential Electrostatic Charging Hazard.** Please wipe with a damp cloth when cleaning.

**WARNING - The luminaire shall not be opened.**

**WARNING - The luminaire does not have a test port fitted.**

**WARNING - The gasket not to be replaced in the field.**

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





### 3. Technical Data

| Item                    | Description  |
|-------------------------|--|
| Rated Voltage           | 100/110/120/200/208/220/230/240/277/347/480Vac, 50/60 Hz   |
| IECEX                   | IECEX UL 21.0036X Issue 0<br>Ex nR IIC T6 Gc<br>Ex tb IIIC T85°C Db  |
| ATEX                    | UL 21 ATEX 2336X Rev. 0 (Type Exam)<br>UL 21 ATEX 2335X Rev. 0 (EU Type)<br>CE II 3 G Ex nR IIC T6 Gc<br>CE0035 II 2 D Ex tb IIIC T85°C Db |
| Material                | Enclosure: Aluminum alloy; PC Cover: PC  |
| Power Factor            | $\cos \phi \geq 0.9$   |
| LED Service Life        | 60,000 hrs   |
| Ambient Temperate Range | $-20^{\circ}\text{C} \leq \text{Ta} \leq +40^{\circ}\text{C} / -20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$                |

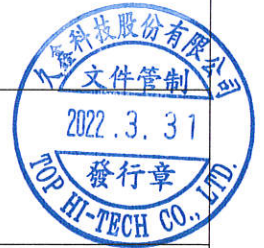
Luminaire provide with cable gland and cable which assembled at the factory.

A torque with 50 N-m (for M17) / 510 kgf-cm (for M22) shall apply to the Pressure Nut to compress the Angle Tube / Tube at the factory.

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 Tube: ID Ø9.0 (Fitting Cable: OD Ø9), L=15 mm



#### Threaded Bracket Mounting Type

| Wall Mounting | Hanging Mounting | Stanchion Mounting |
|---------------|------------------|--------------------|
|               |                  |                    |

| Ceiling Mounting | Pendant Mounting | Stanchion Mounting (25°) | Stanchion Mounting (90°) |
|------------------|------------------|--------------------------|--------------------------|
|                  |                  |                          |                          |

**Electrical Rating:**

| Models            | Voltage (Vac)                               | Wattage (W) |
|-------------------|---|-------------|
| THTH1905ACBxyz    | 100/110/120/200/208/220/230/240/277/347/480 | 10/20       |
| THTH1905ACKxxyyzz | 110/120/220/230/277/347/480                 | 40/50/60    |

x can be C, W, R or G; y can be 4, 1, 6, 5, 7, 2, D, 8, 9, F or C; z can be A0 or B0

xx can be C or W; yy can be 1, 6, 2, D, 9, F or C; zz can be D0, E0 or F0

| Models            | Ambient Temperature range                               | Gas Temperature Code | Dust Temperature Rating |
|-------------------|---|----------------------|-------------------------|
| THTH1905ACBxyz    | $-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ | T6                   | T85°C                   |
| THTH1905ACKxxyyzz | $-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$ | T6                   | T85°C                   |

x can be C, W, R or G; y can be 4, 1, 6, 5, 7, 2, D, 8, 9, F or C; z can be A0 or B0

xx can be C or W; yy can be 1, 6, 2, D, 9, F or C; zz can be D0, E0 or F0

**NOTE:**

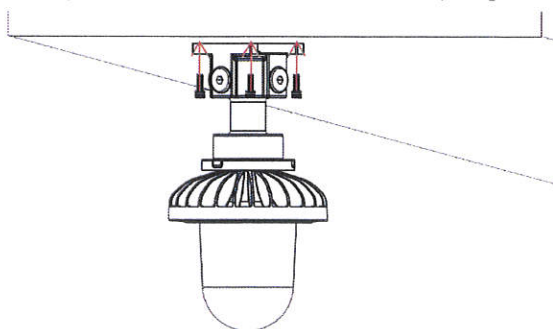
| CCT of LED     | Voltage of luminaire |             | Wattage of luminaire |
|----------------|----------------------|-------------|----------------------|
| C = Cool white | 4 = 100 Vac          | D = 230 Vac | A0 = 10 W            |
| W = Warm white | 1 = 110 Vac          | 8 = 240 Vac | B0 = 20 W            |
| R = Red        | 6 = 120 Vac          | 9 = 277 Vac | D0 = 40 W            |
| G = Green      | 5 = 200 Vac          | F = 347 Vac | E0 = 50 W            |
|                | 7 = 208 Vac          | C = 480 Vac | F0 = 60 W            |
|                | 2 = 220 Vac          |             |                      |

**4. Assembly and Installation****4.1 Electrical Connection****4.1.1 Overview of Electrical Connection**

- ☞ Open the rear end cover of the luminaire, and White-wire connected to Neutral; Red-wire connects to Live; Green-wire connects to Ground.
- ☞ The customer need choose the IECEx/ATEX Certified Cable Gland.
- ☞ Cable Gland specifications should include:
  - Protection type “nR” and “tb”
  - Above IP67 level
  - ATEX/IECEx Certification
  - Male thread size are M20, M25, NPT 1/2”, NPT 3/4”

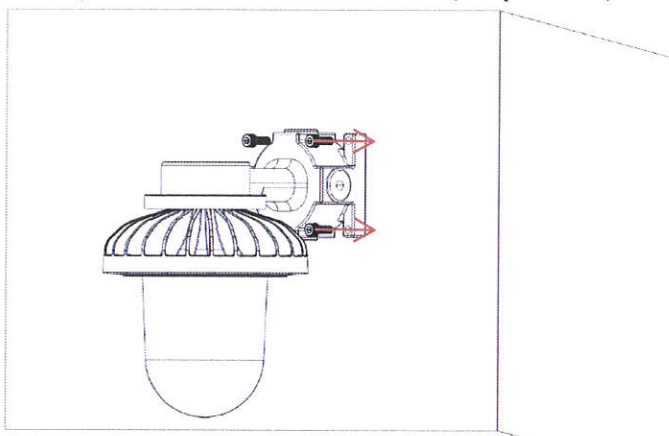
**4.2 Mounting Bracket Installation****4.2.1 Hanging Mounting--**

- ☞ The mount bracket is for surface mounting to ceiling.
- ☞ Secured by means of the four M8 screws (not provided) with 61 kgf-cm.



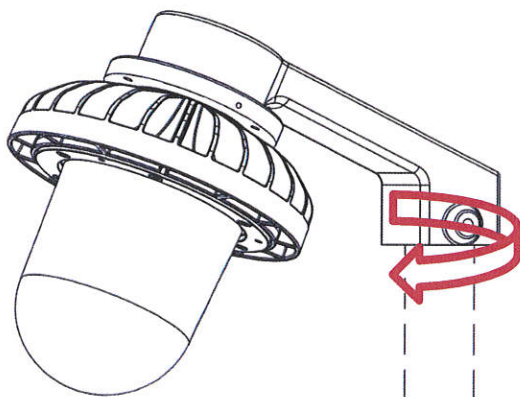
#### 4.2.2 Wall Mounting–

- ☞ The mount bracket is for surface mounting to wall.
- ☞ Secured by means of the four M8 screws (not provided) with 61 kgf-cm.



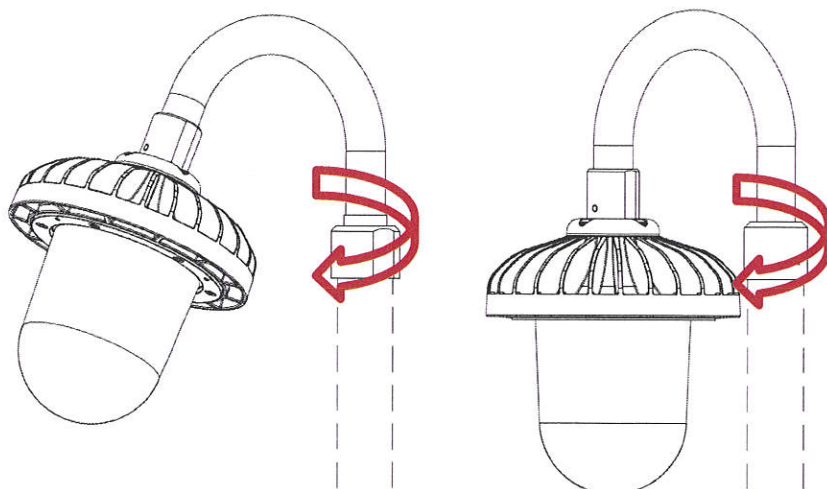
#### 4.2.3 Stanchion Mounting–

- ☞ The pipe thread with thread lock on the stanchion.
- ☞ After the installation is completed to confirm the electric tube is locking in the column.



#### 4.2.4 Stanchion Mounting for Electrical Tube (25 degrees and 90 degrees) –

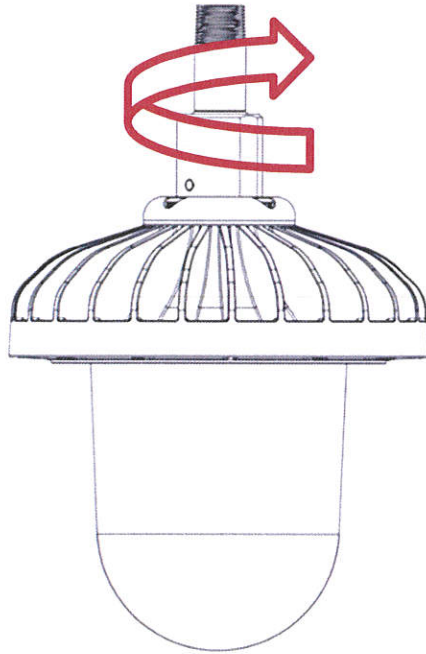
- ☞ The pipe thread with thread lock on the stanchion.
- ☞ After the installation is completed to confirm the electric tube is locking in the column.





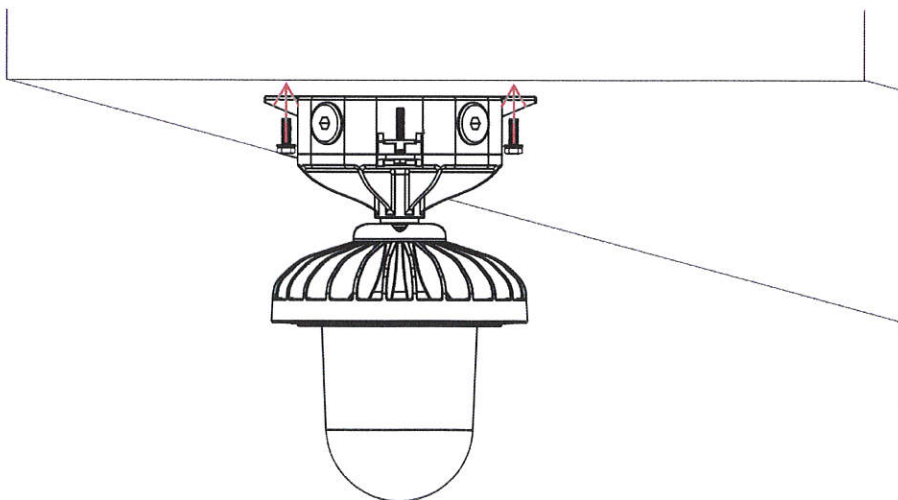
#### 4.2.5 Pendant Mounting–

- ☞ The straight electric tube, one end secured to Nipple Body of Nipple (Adapter) Assembly by integral M35 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.



#### 4.2.6 Ceiling Mounting–

- ☞ The mounting bracket is for the use of Ceiling mounting type.
- ☞ Position the bracket holders and fix it by means of the provided M8 screws, 61.0 kgf-cm.
- ☞ Capturing the luminaire's hinge pin inside the adapter hinge hook, clamp the adapter down, Thread the captive closing screw into the adapter, and tighten it to 30 in.-lbs (3.4 N-m).



### 4.3 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.

### 4.4 Ground wire

- ☞ External earth screw location as showing in the Red Circle of right pictures.
- ☞ The external earth ground wire installation and terminal type as show the right pictures.
- ☞ Ground wire cross-sectional area=4mm<sup>2</sup> , max LED current=2.7A; @V=110Vac-10%.
- ☞ Both ground screw and washer material is stainless steel.
- ☞ Screw hole Spec: M3 with torque 4 kgf.cm.
- ☞ Screw hole Spec: M4 with torque 7.35 kgf.cm.
- ☞ Ensure wire is tied assured.

U Type



O Type



## 5. 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/EN 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 and/or on the enclosure.
- ☞ Condition of the connecting cables.
- ☞ Screws of the mounting bracket are tightened.

## 6. 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](http://www.tht-ex.com).

## 7. 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.