

# Operating Instructions

## Universal Explosion Proof LED Lighting

### Model L1512D

# THT-EX

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## Contents

1. General Safety Instructions .....	1
2. Intended Field of Application .....	1
3. Technical Data .....	2
4. Dimension .....	3
5. Assembly and Installation .....	3
6. Maintenance .....	5
7. Accessories and Spare Parts .....	5
8. 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.

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

**WARNING – The flameproof joints are not intended to be disassembled or repaired.**

**WARNING – Potential electrostatic charging hazard. Please wipe with a damp cloth when cleaning.**

### 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.

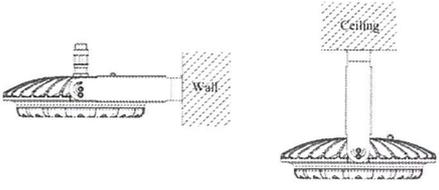
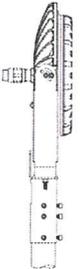
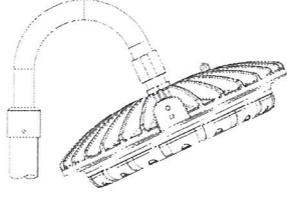
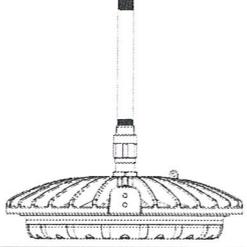
### 1.2 When operating the device:

- ☞ 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

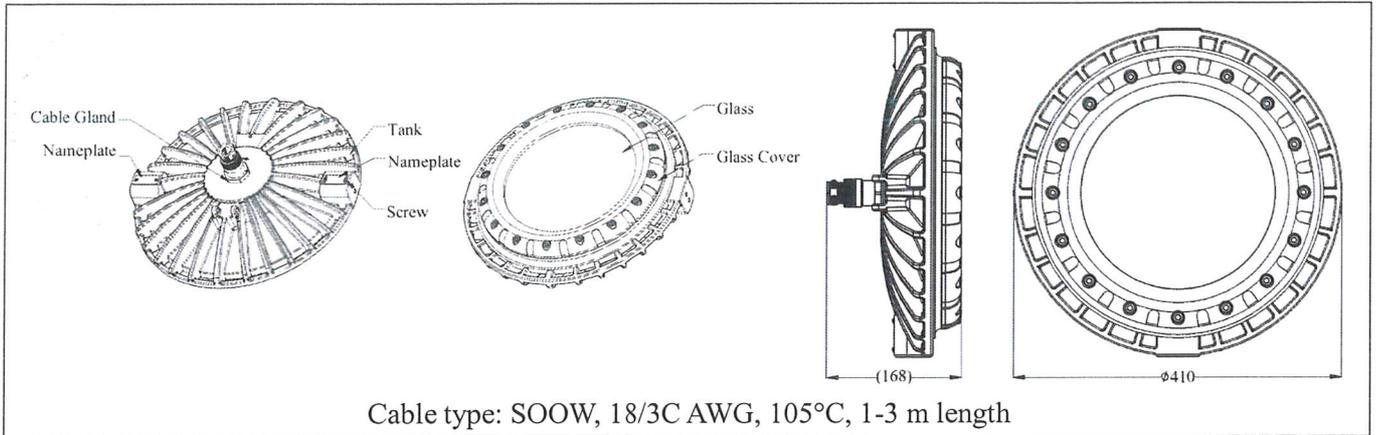
The Universal Explosion Proof LED Lighting, Model L1512D is intended for using in gas explosive atmospheres (Zone 1 according to IEC60079-10-1) and dust explosion hazards (Zone 21 according to IEC60079-10-2). The use in other potentially explosive atmospheres does not correspond to the designated use and is therefore not allowed. The apparatus is designed for using in indoor and outdoor environments.

### 3. Technical Data

Item	Description	
Explosion Protection IECEx Gas Explosion Protection Dust Explosion Protection ATEX Gas Explosion Protection Dust Explosion Protection	IECEx UL 20.0095X Issue 0 Ex db IIC T5 Gb Ex tb IIC T100°C Db UL 20 ATEX 2433X Rev. 0 CE0035 II 2 G Ex db IIC T5 Gb CE0035 II 2 D Ex tb IIC T100°C Db	
Rated Voltage (Vac)	110/120/220/230/277/347/480 Vac	
Rated Wattage (W)	120/140/150/180/200/220/240/250 W	
Power Factor	≥ 0.9	
Ambient Temperature Range	-20°C ≤ Ta ≤ +40°C	
Degree of Protection	IP67	
Material	Enclosure: Aluminum alloy Glass: Tempered glass	
LED Service Life	60,000 hrs	
Luminaire provide with cable gland and cable which assembled at the factory. A torque with 65 N-m shall apply to the Pressure Nut to compress the 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=25.6 mm		
Mounting Type	Trunnion Bracket Mounting	Bending Electrical Tube Mounting
		
	Bending Electrical Tube Mounting 25°	Straight Electrical Tube Mounting 90°
		



#### 4. Dimensions (All Dimensions in mm)



#### 5. Assembly and Installation (The flameproof joints are not intended to be disassembled or repaired)

##### 5.1 Mounting Bracket Installation

##### 5.1.1 Trunnion Bracket Mounting

- ☞ The mount bracket is for the use of both Wall mount (Figure 1) and Ceiling mount (Figure 2).
- ☞ Position the bracket holders and fix it by means of the provided M8 screws, 122 kgf-cm.
- ☞ Secure the trunnion mounting bracket to the structure by using four fasteners (not provided).
- ☞ The angle of lighting fixture can be adjusted.

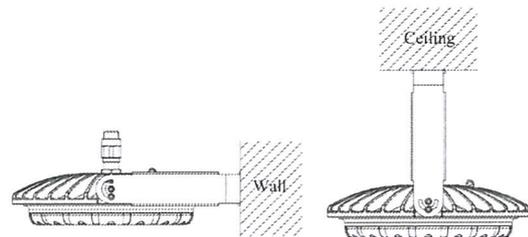


Figure 1

Figure 2

##### 5.1.2 Bending Electrical Tube Mounting

- ☞ This mounting bracket type is for mounting unto the bending electrical tube (Figure 3).
- ☞ The assembly of the bracket onto the conduit must be secured with the use of M8 threaded screws and by applying 122 kgf-cm torque.

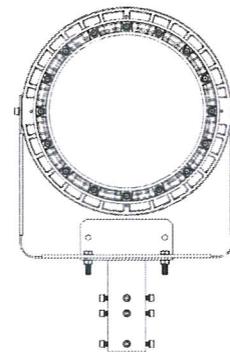


Figure 3

##### 5.1.3 Straight Electrical Tube Mounting 90°

- ☞ The mounting type is for the use of straight electrical tube mounting (Figure 4).
- ☞ Tube mounting thread is NPT 3/4".
- ☞ Thread the tube mounting on conduit and torque until wrench-tight as requirement, 2700 kgf-cm.

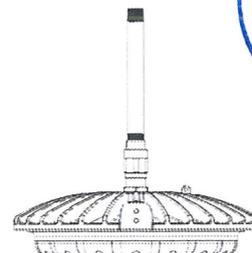


Figure 4



### 5.1.4 Bending Electrical Tube Mounting 25°

- ☞ The mounting types are for the use of bending electrical tube mounting (Figure 5). Tube mounting thread is NPT 1-1/2".
- ☞ Thread the tube mounting on conduit and torque until wrench-tight as requirement, 6600 kgf-cm.

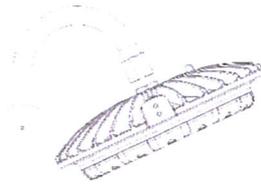


Figure 5



### 5.2 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 below pictures.
- ☞ Ground wire cross-sectional area=4mm<sup>2</sup> , max LED current=1A; @V=110Vac-10%.
- ☞ Both ground screw and washer material is stainless steel.
- ☞ Screw hole spec: M5.
- ☞ Torque requirement: 14.5 kgf-cm.
- ☞ Ensure wire is tied assured.



U Type

O Type



### 5.3 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.
- ☞ 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 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.
- ▶ 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 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](http://www.tht-ex.com).

## 8. 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.