

Operating Instructions

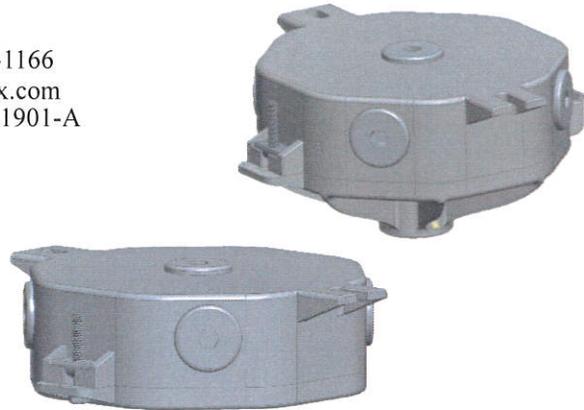
Explosion-Proof Junction Box

Model A1901

THT-EX

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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. The junction box shall not be used in the environment where propagating brush discharge might occur. e.g. fast moving particles along the surface.



1.1 Before assembly

- ☞ 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.
- ☞ The electrical wiring connection shall also comply with the electrical code of the country which is intended to be installed.

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.

1.3 After being fixed on the luminaire

- ☞ Only one to one string can be connected to the next lamp, the shortest distance between the lamp and the lamp is 5 meters.
- ☞ The maximum size of series luminaires is 5A, 200W.

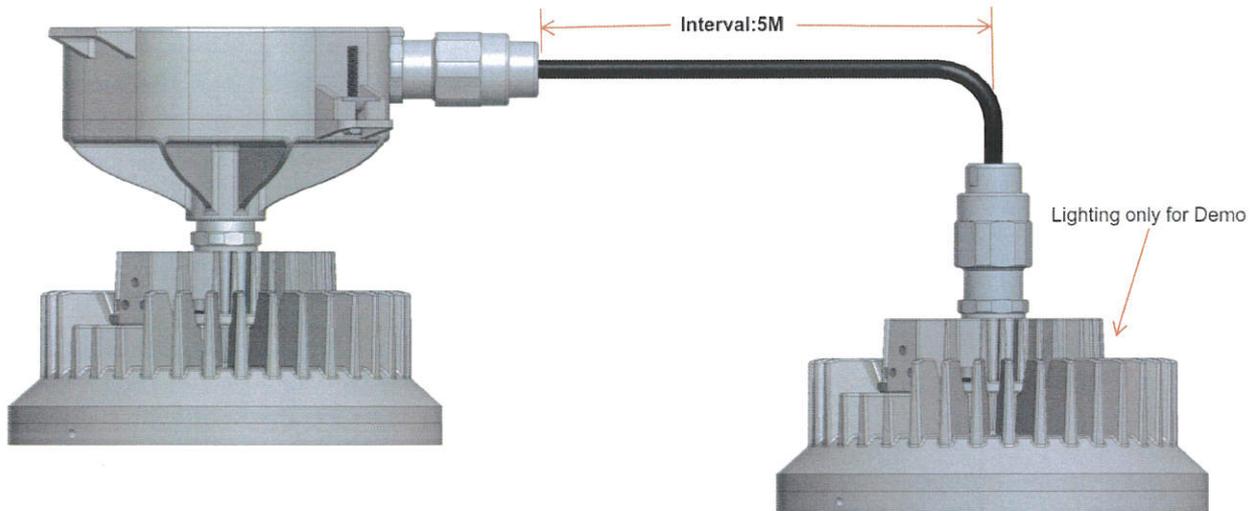
1.4 Explosion-proof Cable Gland specifications should include

- ☞ Protection type db, tb or eb, tb
- ☞ Above IP67 level
- ☞ ATEX/IECEX certification
- ☞ Thread size: M20 or M25 or NPT 1/2" or NPT 3/4"



1.5 Specific Conditions of Use

- ☞ Electrostatic charging hazard - Clean only with a damp cloth.
- ☞ Only single serial connection to the next Luminaire A is allowed. The distance between Luminaire B is at least 5 meter. The junction box shall be mounted on the Luminaire B though the bottom opening. Maximum allowable rating: Luminaire A: 200W, 5A; Luminaire B: 200W.
- ☞ The maximum surrounding air temperature between the junction box and the bottom luminaire is 78.7°C. It is measured with the maximum rating mentioned above. The cable entry and branching temperature of Luminaire B (200W) are 76.1°C and 84.5°C respectively. If the end-user would use the junction box with the lower rating of Luminaire B, the manufacturer (THT) shall verify the service temperature of the cable entry and branching point. In order to allow the end-user to adopt the regular rating power cable and cable gland.
- ☞ The junction box has been subjected to the thermal endurance to heat at 104.5°C.
- ☞ The internal wiring cable shall be suitable for minimum service temperature 70°C.



2. Intended Field of Application

The devices are intended for using in gas explosive atmospheres (Zone 1 and Zone 2 according to IEC60079-10-1) and dust explosion hazards (Zone 21 and Zone 22 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. Conformity to Standards

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

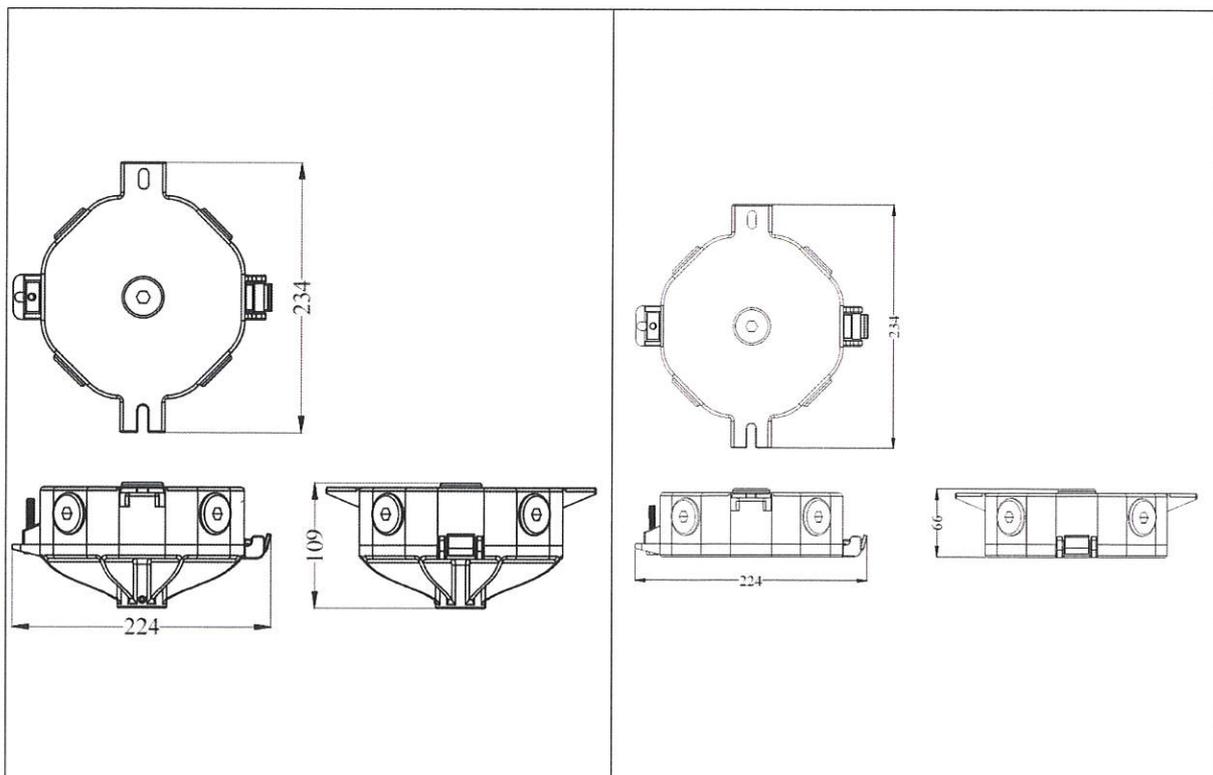


4. Technical Data

Item	Description
Explosion Protection IECEX Gas Explosion Protection Dust Explosion Protection ATEX Gas Explosion Protection Dust Explosion Protection	II 2 G Ex eb IIC T5 Gb II 2 D Ex tb IIIC T95°C Db ⊕ II 2 G Ex eb IIC T5 Gb ⊕ II 2 D Ex tb IIIC T95°C Db
Certificates and Approvals IECEX ATEX	IECEX TUR 18.0035X TÜV 18 ATEX 8245 X
Ambient Temperate Range	-40°C ~ +55°C
Rated Operational Voltage	320V
Connection Terminal	Max. 23A
Current capacity	Max. 8A
Capacity	Min. 0.2 mm ² to 2.5 mm ² Single-core, finely stranded and stranded
Degree of Protection	IP67
Material Enclosure Sealing Gasket	Aluminum alloy Silicone



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



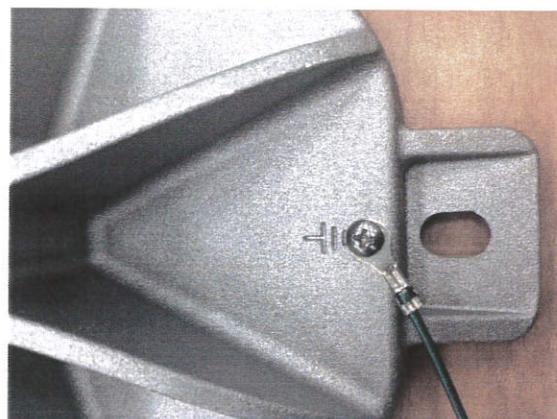
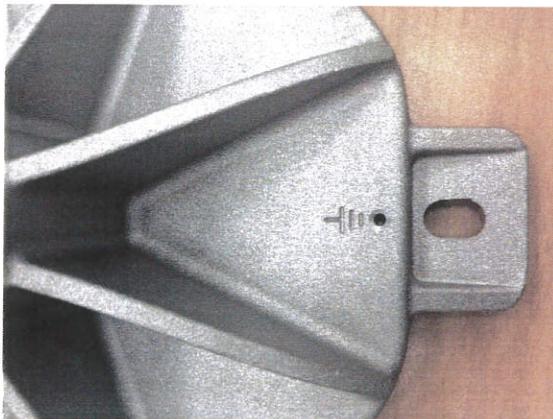
6. Installation

WARNING

The electrical installation must be carried out by qualified persons.

- ▶ Electrical power must be disconnected from the power supply before and during the installation and maintenance.
- ▶ Secure the connections against unauthorized activation.

- ☞ Put Lamp's Cable Gland into O-Ring, and the cable through the Junction box body, then turn it clockwise Spin to the end, Side M6 stop screw locking(Torque value 24.5 kgf-cm).
- ☞ Pull wires into Junction box body, making sure they are long enough to make the required electrical connections. Make all electrical connections.
- ☞ Follow Terminal blocks Installation.
- ☞ Capturing the luminaires 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).
- ☞ Test wiring for correctness with continuity checks and also for unwanted grounds with insulation resistance tester.
- ☞ External ground(outside):
 - ☞ Ground wire cross-sectional area=4mm²
 - ☞ Both ground screw and washer material is M4*5 stainless steel.
 - ☞ Torque Requirement: 7.0 kgf.cm.
 - ☞ Screw material is SUS316.
 - ☞ Ensure wire is tied assured.



7. Putting into Service

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

- ☞ the device is not damaged.
- ☞ the device is installed correctly.
- ☞ the cable glands and stopping plugs are tight.
- ☞ the cover of junction box is tightly fitted.

8. Maintenance

 **WARNING**

- ▶ Installation, maintenance, overhaul and repair may only be carried out by appropriately authorized and trained personnel.
- ▶ Observe the relevant national standards in the country of use.
- ▶ Always disconnect primary power source before opening enclosure for inspection or service.

Frequent inspection should be made. A schedule for maintenance check should be determined by the environment and frequency of use. The following details must be checked during maintenance:

- ☞ Compliance with the permitted temperatures (according to IEC 60079).
- ☞ Damaged to the enclosure.
- ☞ Damaged to the sealing gasket.

The Device may only be cleaned with a damp cloth.



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.

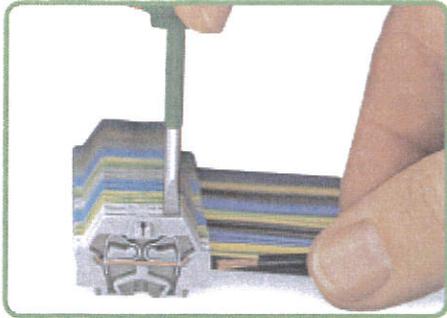
11. Terminal blocks Installation

- ☞ Stripping length:
Remove the wire insulation before connecting to the terminal block as following length (8-9 mm / 0.33 in).



☞ Wiring:

Use the flathead screwdriver to compress the spring. Then insert the wire into the terminal. Release the flathead screwdriver.



12. Declaration of Conformity

See Attachment.

13. Model Code

THT	2	J	N	034	2	A1901	05
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

- (1) Brand name, THT = Top Hi-Tech Co., Ltd
- (2) Classification of product, 2=Accessory
- (3) Category of Product, J=Junction Box
- (4) Designates Thread type, N=NPT, M=Metric
- (5) Designates Thread size, 012=1/2" , 020=M20, 025=M25, 034=3/4"
- (6) Designates Type of shape, 2= Polygon
- (7) Model name, A1901 = Model A1901 series, 1901B= Model A1901 series without Bottom Entry
- (8) Designates Series number, 01 =single hole, 02 =Double holes, 03 =Triple holes, 04 =Four holes, 05 =Five holes