

Operating Instructions

Explosion-Proof Control Button

Model A1301



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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.

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.

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 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.

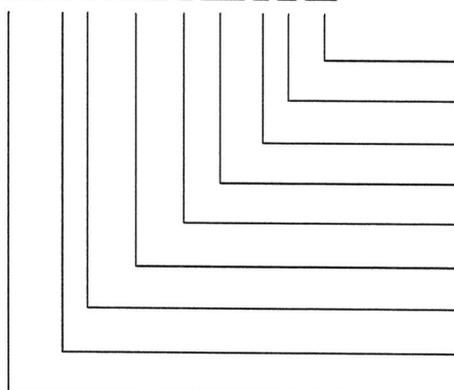


4. Technical Data

| Item | Description |
|---|--|
| Explosion Protection IECEX Gas Explosion Protection Dust Explosion Protection ATEX Gas Explosion Protection Dust Explosion Protection | II 2 G Ex db IIC T6 Gb II 2 D Ex tb IIIC T85°C Db ⊕ II 2 G Ex db IIC T6 Gb ⊕ II 2 D Ex tb IIIC T85°C Db |
| Standards | IEC 60079-0:2011 Ed 6 / EN 60079-0:2012+A11:2013 IEC 60079-1:2014 Ed 7 / EN 60079-1:2014 IEC 60079-31:2013 Ed 2 / EN 60079-31:2014 |
| Certificates and Approvals IECEX ATEX | IECEX SIR 17.0052X Sira 17 ATEX1226X |
| Ambient Temperature Range | -40°C ~ +55°C |
| Rated Operational Voltage | Model A1301A: 600V (Switch) Model A1301B: 600V (Switch) Model A1301C: 250V (Breaker) Model A1301D: 250V (Breaker) |
| Current capacity | 10A、28~14 AWG (Switch) 3-20A、28~12 AWG (Breaker) |
| Maximum signal current when used as signal transmission | 2 ~ 40mA |
| Degree of Protection | IP6X |
| Material Enclosure Sealing Gasket | Aluminum alloy Silicone |

5. Model Code

THT 2 S 1301 1 ZR 2 L 00



- 00: Series number
- L: Cable Gland Type*
- 2: Box Cable Hold Type**
- ZR: Element Features and Quantity***
- 1: Element Type****
- 1301: Model name
- S: Category of Product, S= Switch, Control station
- 2: Classification of product: 2=Accessory
- THT: Brand, THT=Top Hi-Tech Co., Ltd.

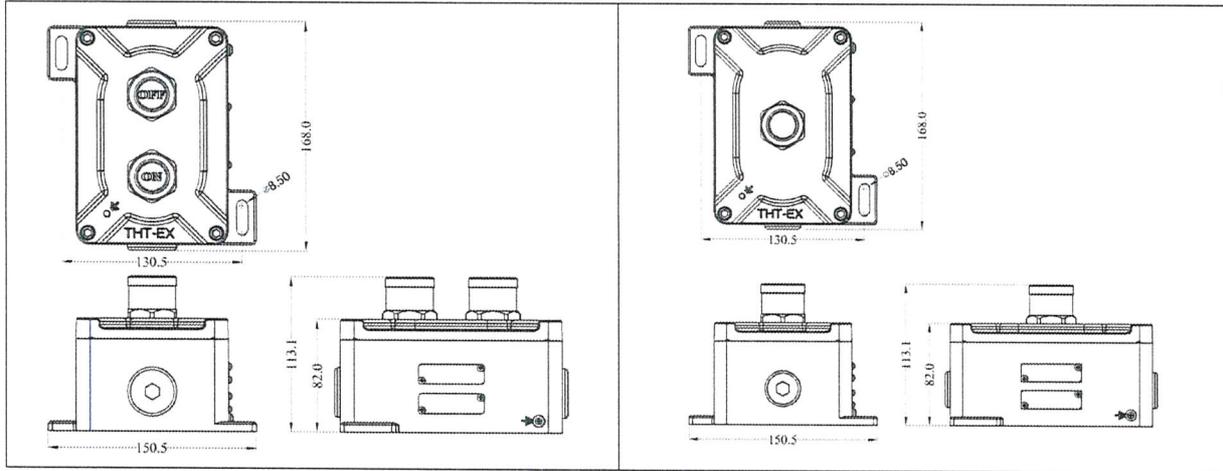


* L=Long Type、S=Short Type.

** 1=Along Hold、2=Double Hold.

*** Z= Not Anyone Element 、ZR=Along Hold and Open Switch 、ZG=Along Hold and Close Switch 、
 RR=Double Open Switch 、GG=Double Close Switch 、RG= Only one Open and Close Switch.
 **** 1=Push Control Button 、3=Breaker Control Button.

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



7. Installation

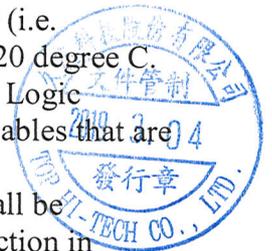


WARNING

The electrical installation must be carried out by qualified persons.

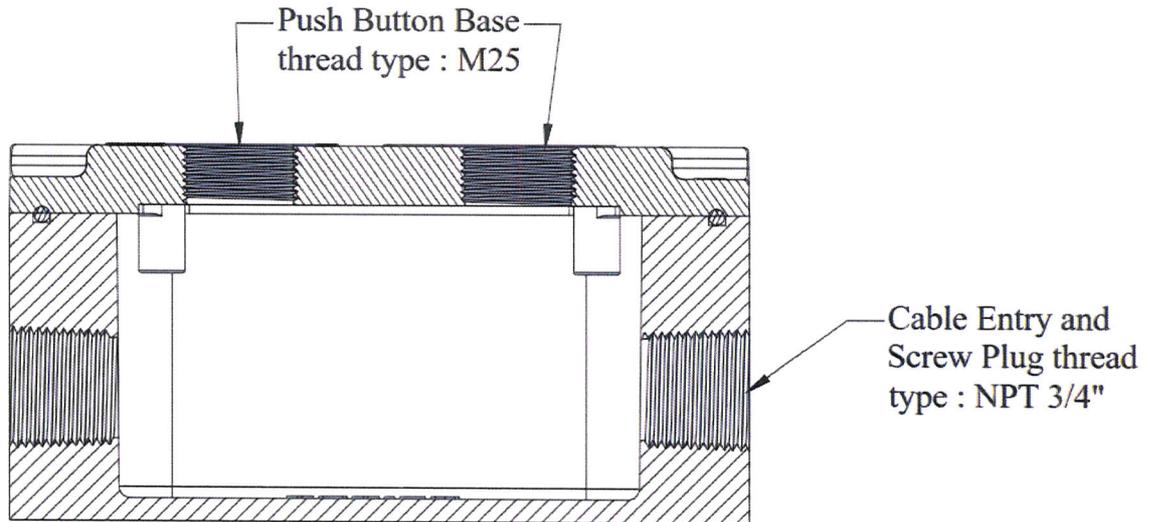
- ▶ Electrical power must be disconnected from the power supply before and during the installation and maintenance.
- ▶ Secure the connections against unauthorized activation.

- ☞ Securely fasten the enclosure with suitable cable gland and make certain the cable gland is wrench tight, suggest tightening torque: 105 N-m.
- ☞ Cover fasteners shall be those provided by the enclosure manufacturer, be of a property class A4-70 and have a yield stress of at least 700Mpa
- ☞ Do not open while the unit is live or explosive atmospheres is present.
- ☞ The field personal must ensure the selection and installation of cable gland are in accordance with chapter 8: Cable Gland Installation, EN/IEC 60079-14 and the latest guidance from the local AHJ (Authorities Having Jurisdiction), and the flameproof joints, internal pressure and ingress protection at the enclosure interface, and service temperatures of the associated sealing materials are maintained.
- ☞ For connections with electrical equipment operated in continuous duty (i.e. lighting), the cables that are selected for use shall be rated to at least 120 degree C.
- ☞ For connections made for signal transmission only (i.e. Programmable Logic Controller), the maximum signal current shall not exceed 40 mA and cables that are selected for use shall be rated to at least 60 degree C.
- ☞ If the main enclosure is opened for maintenance, the sealing gasket shall be replaced with a new one and installed correctly according to the instruction in operation manual provided by manufacturer.
- ☞ Loosen enclosure cover and carefully set it aside to prevent damage to the cover



threads.

- ☞ Pull wires into enclosure, making sure they are long enough to make the required electrical connections. Make all electrical connections.
- ☞ Test wiring for correctness with continuity checks and also for unwanted grounds with insulation resistance tester.
- ☞ Re-thread cover into enclosure housing and tighten cover.
- ☞ Entries of enclosure:

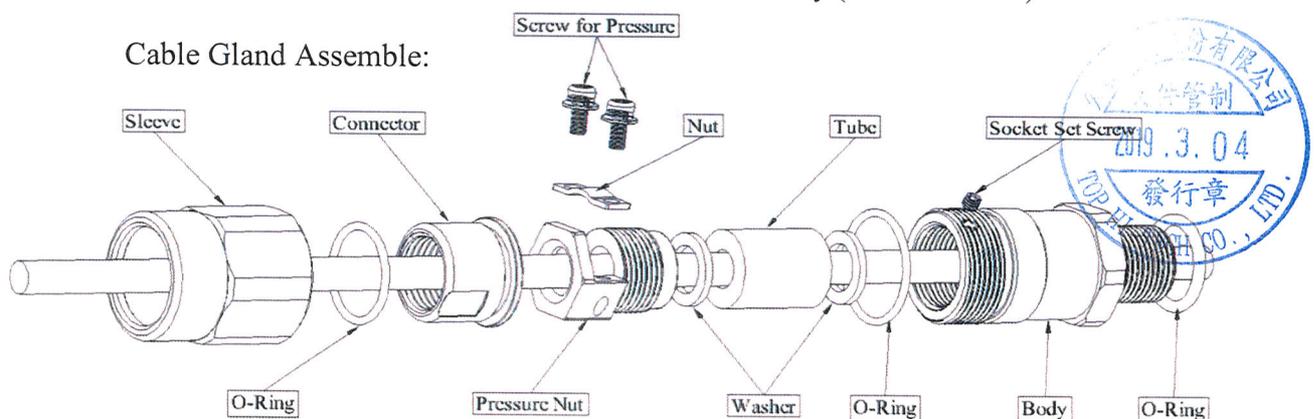


- ☞ The flameproof joints are not intended to be repaired.
- ☞ Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.

8. Cable Gland Installation

- The client must choose the quality cable that meet CE / IEC to install and use.
- Must install from qualified people.
- Follow each country electrical standard (to assemble).
- Pressure Nut with 65N.m torque range.
- Body must screw into and fasten the tanks' cable entry.(at least 65Nm)

Cable Gland Assemble:



Cables shall be in accordance with EN/IEC 60079-14 and the latest guidance from the local AHJ (Authorities Having Jurisdiction), when using the cable glands supplied with the A1301 Explosion Proof Switches, the cable diameter shall be in accordance with the following table:

| | | | |
|------------------------|--------|--------|---------|
| Tube Internal Diameter | 8.5 mm | 9 mm | 10 mm |
| Washer | 9.0 mm | 9.5 mm | 10.5 mm |
| Minimum Cable Diameter | 8.5 mm | 9 mm | 10 mm |

9. 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.

10. 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.

The flameproof joints are not intended to be repaired.



11. 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.

12. 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.

13. Declaration of Conformity

See Attachment.

