

Operating Instructions

Explosion Proof Junction Box

Model A1726



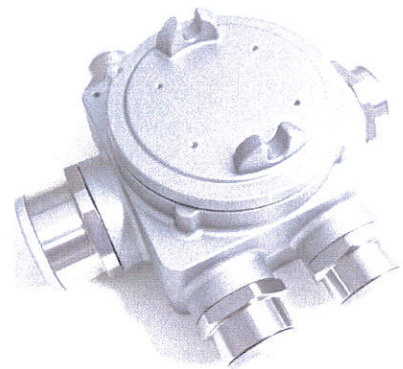
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Subject to alterations.



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

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 60079-14) apply.

1.2 When operating the device:

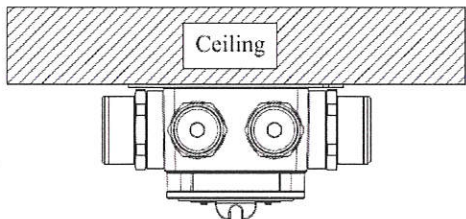
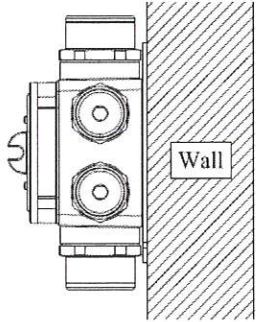
- ☞ Ensure the operating instructions are made available for the person in charge on location at all times.
- ☞ Observe these instructions, other working instructions and national safety regulations.
- ☞ Verify the implementation of safety instructions.

2. Intended Field of Application

The Explosion Proof Junction box, Model A1726 is intended for using in gas explosive atmospheres (Zone 1 and Zone 2 according to IEC 60079-10-1) and dust explosion hazards (Zone 21 and Zone 22 according to IEC 60079-10-2). 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	Ex db IIC T6 Gb Ex tb IIIC T80°C Db IP67 Ex II 2 G Ex db IIC T6 Gb Ex II 2 D Ex tb IIIC T80°C Db IP67
Rated Voltage	600Vac
Rated current	30A
Cable Rated Temperature	≥ 60°C
Insert Cable OD Range	NPT1/2" hole ----- 6.5~14.0mm NPT3/4" hole ----- 11.0~20.0mm NPT1" hole ----- 17.0~26.3mm NPT1-1/4" hole ----- 22.0~32.2mm NPT1-1/2" hole ----- 29.5~38.2mm
Cable Gland	The Cable Gland must be pass the Ex db/Ex tb certification that approved by IECEX/ATEX. (not provided)
The cross sectional area of wire Terminal Block Module 1 Fine-stranded conductor Solid conductor Terminal Block Module 2 Fine-stranded conductor Solid conductor	Spring clamp type 0.5 ~ 6 mm ² (20 ~ 10 AWG) ※Stripping length 11~13mm 0.5 ~ 6 mm ² (20 ~ 10 AWG) ※Stripping length 11~13mm Screw type 0.34 ~ 5.5 mm ² (22 ~ 10 AWG) ※Stripping length 11~13mm 0.34 ~ 5.5 mm ² (22 ~ 10 AWG) ※Stripping length 11~13mm
Connection Terminal	Max. 6
Ambient Temperate Range	-20°C ~ +55°C
Degree of Protection	IP67
Material Enclosure Screw Plug Connectors O-ring (Gasket)	Aluminium alloy Aluminium alloy Stainless steel Silicone
Thread size	The box body provides two types of threads : NPT 1-1/2" / NPT 1" Three additional threads can be provided by connector : NPT 1-1/4" / NPT 3/4" / NPT 1/2"
Mounting Type / Weight	Ceiling / Wall
	 
	Weight 1.3kg



4. Model Code

THT-	2J	1726	W	6	A	A	A	A	A	A
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

(1) Brand name, THT-2= Top Hi-Tech Co., Ltd

(2) Category of product, J = Explosion proof Junction Box

(3) Model name, 1726 = Model A1726 series

(4) Terminal type, W = Terminal type 1, D = Terminal type 2

(5) Quantity of Terminal, 1=1 Pcs, 2=2 Pcs, 3=3 Pcs, 4=4 Pcs, 5=5 Pcs, 6=6 Pcs

(6) Tank hole 1 Thread Type, A, B, C, D

(7) Tank hole 2 Thread Type, A, B, C, D

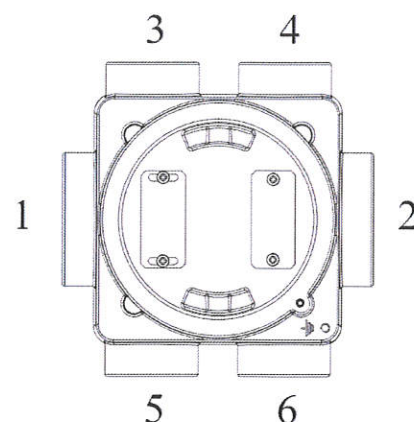
(8) Tank hole 3 Thread Type, A, D, E, F

(9) Tank hole 4 Thread Type, A, D, E, F

(10) Tank hole 5 Thread Type, A, D, E, F

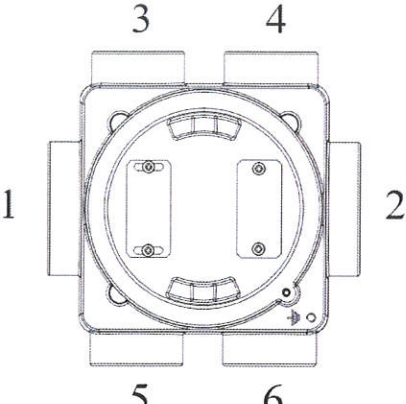
(11) Tank hole 6 Thread Type, A, D, E, F

A	No hole
B	NPT 1-1/2"
C	NPT 1-1/4"
D	NPT 1"
E	NPT 3/4"
F	NPT 1/2"



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

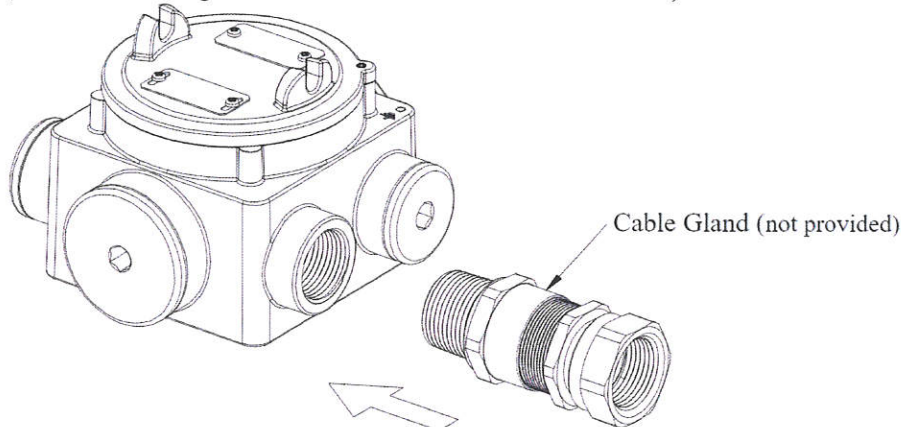
Dimensions	
Junction Box with Connector	
Junction Box without Connector (Thread holes locked by Plug)	
Junction Box without Holes	
Thread hole type and option	

	<p>Thread hole 1、2</p> <p>Without Connector: NPT1-1/2" or no threads hole</p> <p>With Connector: NPT1-1/4" or NPT1" (Option)</p> <p>Without thread hole: Tank thread hole will be blocked</p> <hr/> <p>Thread hole 3、4、5、6</p> <p>Without Connector: NPT1" or no threads hole</p> <p>With Connector: NPT3/4" or NPT1/2" (Option)</p> <p>Without thread hole: Tank thread hole will be blocked</p>
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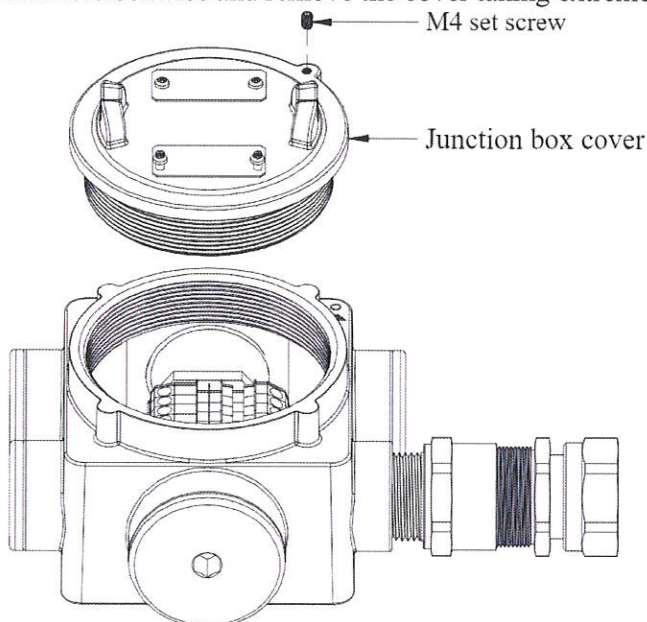
6. Installation

6.1 Electrical Connection

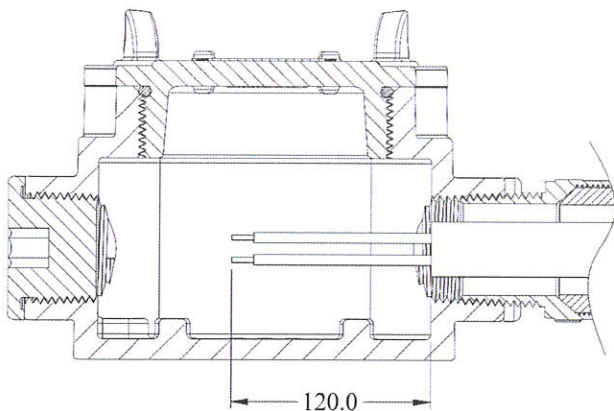
- Securely fasten on the enclosure with suitable cable gland and make certain the cable gland is wrench tight. (or fix the cable gland onto the enclosure with connector.)



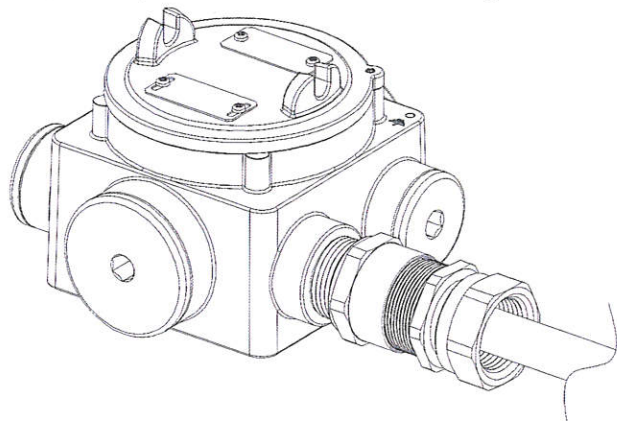
- Loosen the M4 set screw on the junction box cover. Open the enclosure by turning the junction box cover counterclockwise and remove the cover taking extreme care not to damage the threads in the process.



- Pull wires into enclosure, the maximum length of conductor connected to each terminal and contained within the enclosure shall be 120mm.



- ☞ Test wiring for correctness with continuity checks and also for unwanted grounds with insulation resistance tester.
- ☞ Fully tighten the junction box cover all the way, ensure no gap is visible between the junction box cover and body of the junction box enclosure and tighten the M4 set screw.



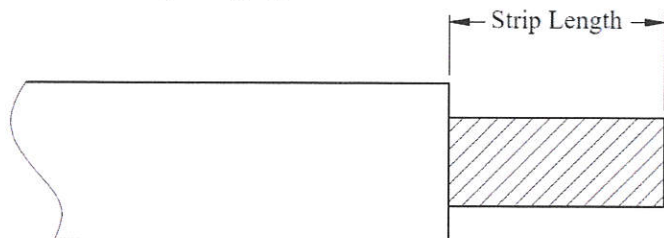
Attention:

- ☞ The Cable Gland must be pass the Ex db/Ex tb certification that approved by IECEX/ATEX.
- ☞ If a high IP rating is required then a suitable sealing washer must be fitted under the cable glands.
- ☞ The Connector is option.
- ☞ Please put Screw Plug in unused the thread hole(THT provided).
- ☞ Only IEC-prototype tested and certified screw plug must be used(THT provided).
- ☞ Screw Plug and Connector Torque value:
 NPT1-1/2" = Max 286 N-m
 NPT1-1/4" = Max 209 N-m
 NPT1" = Max 152 N-m
 NPT3/4" = Max 106 N-m
 NPT1/2" = Max 73 N-m

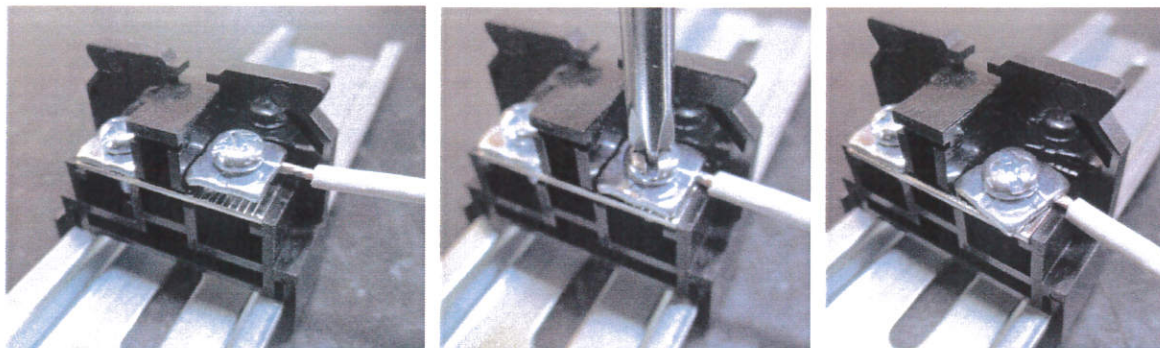
6.2 Inserting Conductor

Terminal Block Module 1 - Screw type

- ☞ Wire Strip Length, please see Technical Data.

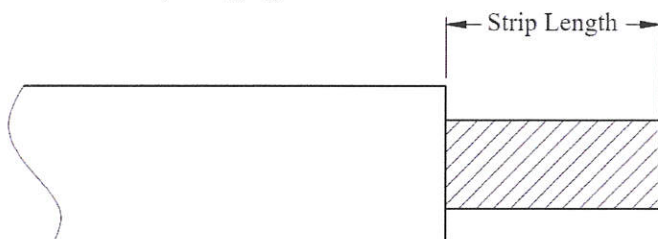


- ☞ Insert a stripped conductor into the clamping unit until conductor is not exposed. Hold in this position
- ☞ Rotate the Screwdriver clockwise
- ☞ Make certain the conductor is wrench tight.

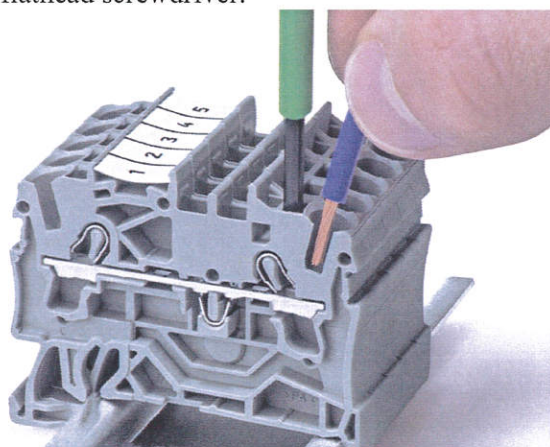


Terminal Block Module 2 – Spring clamp type

- ☞ Wire Strip Length, please see Technical Data.



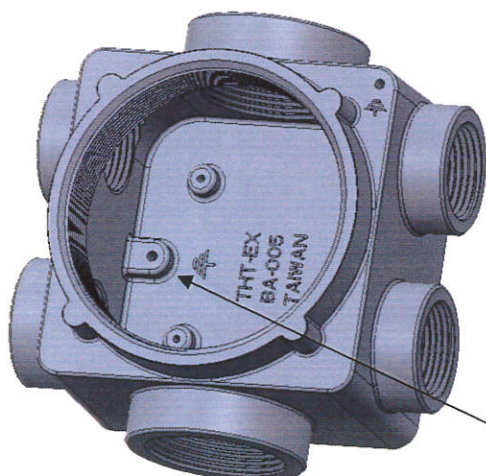
- ☞ Use the flathead screwdriver to compress the spring. Then insert the wire into the terminal. Release the flathead screwdriver.



6.3 Earth ground

6.3.1 Internal earth ground hole

- ☞ Internal ground hole size: M4, torque: 7.0 kgf-cm. (Figure 1)
- ☞ Terminal type as show the Figure 2.
- ☞ Protective earthing (PE) conductor connection facilities shall allow for the effective connection of at least one conductor with a cross-sectional area given in Table 4.



Internal ground hole

Figure 1

6.3.2 External earth ground

- Equipotential bonding connection facilities on the outside of electrical equipment shall provide effective connection of a conductor with a cross-sectional area of at least 4 mm². When this connection facility is also intended to serve as the PE connection, the requirements of Table 4 apply.
- External ground hole size: M4, torque: 7.0 kgf-cm. (Figure 3)
- Terminal type as show the Figure 2.



Figure 3



Figure 2



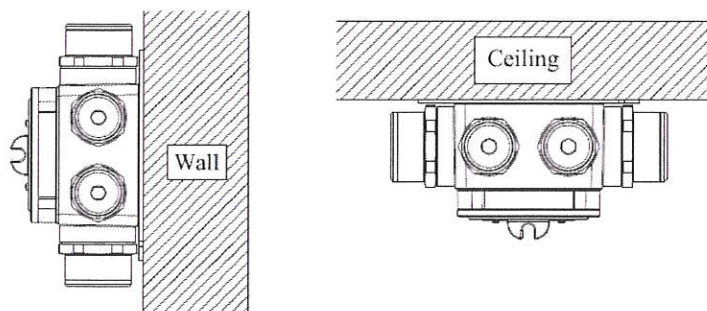
Table 4 – Minimum cross-sectional area of PE conductors

Cross-sectional area of phase conductors, s mm ²	Minimum cross-sectional area of the corresponding PE conductor, s_p mm ²
$s \leq 16$	s
$16 < s \leq 35$	16
$s > 35$	$0,5 s$

6.4 Mounting Bracket Installation

6.4.1 Wall /Ceiling Mounting Bracket

- The mount bracket is for the use of both Wall mount and Ceiling mount.
- Position the bracket holders and fix it by means of the provided M5 screws, 14.5 kgf-cm.
- Secure the Wall/ Ceiling mounting bracket to the structure by using two fasteners. (not provided)



6.5 Putting into Service

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

- the Junction box is correctly installed.
- the connection has been correctly made.
- the cable has been inserted correctly.
- the voltage is correctly

7. 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 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.

Regular Maintenance

- ☞ Consult the relevant national regulations (e.g. IEC 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 enclosure.
- ☞ Condition of the connecting cables.
- ☞ Screws of the mounting bracket are tightened.



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.