
IOTH6000 WLS (DC Smart Valve)

Installation Guide

Change History

Date	Version	Description
29 th May 2024	1.0	First Release

1. Product Description

The IOTH6000 WLS (DC Smart Valve) is a smart wireless ball valve. It is designed for the process industries and can be installed individually and on Instrumentation panels. The IOT Smart Valve helps to provide pressure data as well as control the installed actuator (separate accessory).

2. Technical Data

- IP65
- 24V DC Operated
- Wireless uplink connectivity with LoRAWAN 1.0.2
- Digital Pressure Sensors for inlet and outlet ($\pm 0.1\%$ accuracy)
- Temperature sensor accuracy: $\pm 3^{\circ}\text{C}$
- Operating temperature (Ta): -20 to 50 $^{\circ}\text{C}$
- Max Pressure at 6000psi.
- Modbus RTU supported

3. IOT Smart Valve Setup

Connecting the LoRa Antenna

Connect the SMA plug of the right-angle antenna to the communication box per picture shown (The Antenna is provided in the packaging.)

Warning! After inserting the SMA plug, tighten the plug and set the antenna in the vertical direction.



Connecting the DC Power

Refer to Section 5, connect the loose M8 4pins Female cable to the corresponding M8 4pins Male connector on the valve housing. The other end of the cable needs to be connected to the customer's power supply. The cable configuration is shown in Section 5



4. LED Status Indicator



LED Status	Function / Behaviour
Fast Blink	Power on and connecting to LoRa Gateway
Slow Blink	Provision with IOT-LET cloud
Solid ON	In Operational Mode
OFF	Power Off

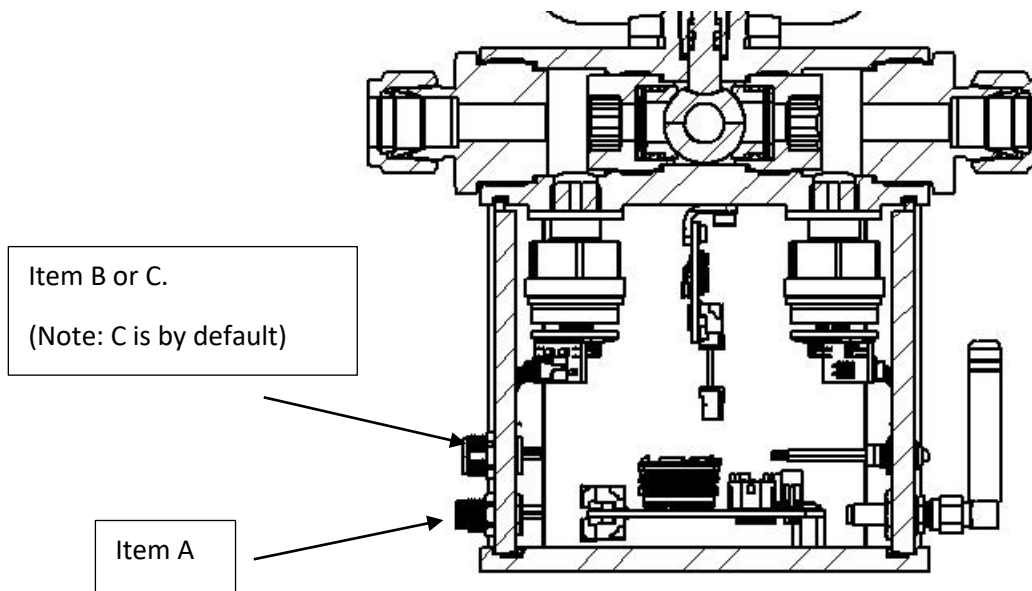
Warning!

If the LED remains at Slow Blink continuous for ~5mins, it may have connected in Test Mode. Please power cycle the valve again for it to join correctly.

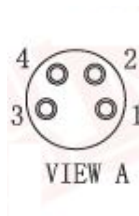
5. External Cabling Instructions

External Cabling Instructions

No.	Items	Part No.	Notes
A	M8 4pins Female with loose wire	7008312	24V DC Supply & Mod-Bus Control
B	M8 4 pins Male with loose wire	7008316	External Actuator Control (Optional)
C	M8 Dust Cap	7008325	By default, to cover the connector if 7008316 is not in-used.



A. M8 4pins Female with Loose Wire (DC Supply & Mod-Bus Control)

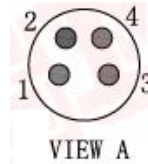


Pin Out		
M8 4P Female	Color	Cable
1	Brown	AWG24
2	White	AWG24
3	Blue	AWG24
4	Black	AWG24

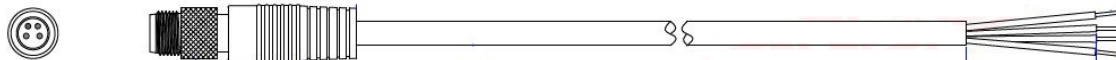


Pin	Color	Definition
1	Brown	+24V
2	White	RS-485-A
3	Blue	GND
4	Black	RS-485-B

B. M8 4pins Male with Loose Wire (Actuator Control)



Pin Out		
M8 4P Male	Color	Cable
1	Brown	AWG24
2	White	AWG24
3	Blue	AWG24
4	Black	AWG24



Pin	Color	Definition
1	Brown	Not Connected
2	White	Not Connected
3	Blue	Signal (+)
4	Black	Signal (-)

C. M8 Dust Cap



Regulatory/Compliance Notice

FCC Statement

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

To comply with RF exposure requirements, a minimum separation distance of 20cm must be maintained between the user's body and the device, including the antenna.