

LoRaWAN Mini Control Valve



Smart Agriculture, Smart Building, Smart City, Smart Facility, Smart Farm, Smart Factory

SKU: WSLRW-BV

LoRaWAN Mini Control Valve WSLRW-BV

LoRaWAN



WSLRW-BV-H1.JPG



WSLRW-BV is a LoRaWAN Mini Control Valve, integrated with a Ball valve body. The ultra-low power design allows the Valve to run in 5 years with 2 batteries (depending on configuration). The valve will transmit data in kilo-meters distance to the LoRaWAN gateway, any brand on the market.

This LoRaWAN Mini Control valve is the best choice for an Irrigation System for a Garden, Smart Farm, or Hydroponic Farm. It can be used for FCU in HVAC or any water supply line in a Facility or Building.

Applications

Smart Irrigation, Water Supply System, Water Level Control, Oil Level Control

Notes For Applications

- Flow Characteristic: Understand the desired flow characteristic
- Valve Size: Choose size based on the flow rate and pipe diameter.
- Noise and Cavitation: Evaluate the potential for noise and cavitation.
- Body and Trim Materials: Consider the fluid properties
- Actuator Type and Size: Ensure the actuator can handle the required force and speed.
- Dynamic Response: Assess how quickly the valve responds to changes in the control signal.

- ✓ **LoRaWAN communication**
LoRaWAN communication standard to allow the device connect to any LoRaWAN Gateway on the market.
- ✓ **5-Year battery**
Ultra-low power technology from Daviteq allows the Valve to last up to 5 years with 02 batteries.
- ✓ **Remote Control via Class A or Class C**
Remotely control via Downlink command in Class A or Class C mode
- ✓ **Valve Health Diagnostic**
Detect valve malfunctions, clogging...

Garden Irrigation



WSLRW-BV-H2.JPG

DAVITEQ TECHNOLOGIES INC

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Specification

Valve Body	Ball valve, low torque design
Body materials	Brass (standard), 304SS, 316SS
Sealing	EPDM (standard), NBR, Silicone Rubber
Seat	PTFE
Ball	304SS (standard), 316SS
Size	DN8, DN15, DN20, DN25
Process connection	BSPP female threads
Cable	2m molded M12 connector cable
Working temperature	0~100°C
Working pressure	-1~10 barg
Manual override	Yes
Valve housing rating	IP5
Control functions	On-Off
Valve Diagnostic	Yes, to detect clogging, longer closing or opening time, valve failure
COMMUNICATION	
SF Factors	SF7~SF12
Antenna	Internal Antenna 2 dBi
Power Supply	Primary batteries 02 x D size 3.6VDC (battery not included)
RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Protocol	LoRaWAN Class A or Class C V1.0.3
Data sending modes	interval time, alarm and manually triggering by magnetic key
Alarm function	Yes
Remote control via downlink	Class A or Class C mode
RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Vietnam Type Approval	
Ambient working temperature	-40~85°C
Dimensions of Wireless Module	92×57×120 mm for hardware version 1 and 130 x 61 x 117 mm for hardware version 2
Net-weight of Wireless Module	310g (without batteries)
Housing of Wireless Module	Engineering plastic, IP67
Mounting of Wireless Module	Wall mount

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Farm Irrigation



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LoRaWAN NETWORK

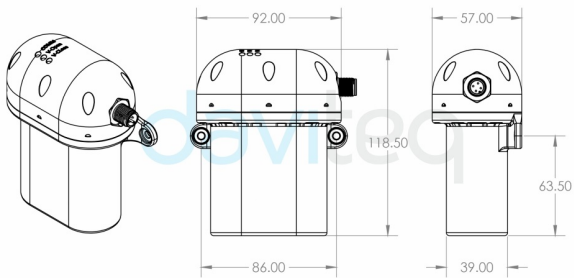


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This wireless network can connect any kind wireless sensors:

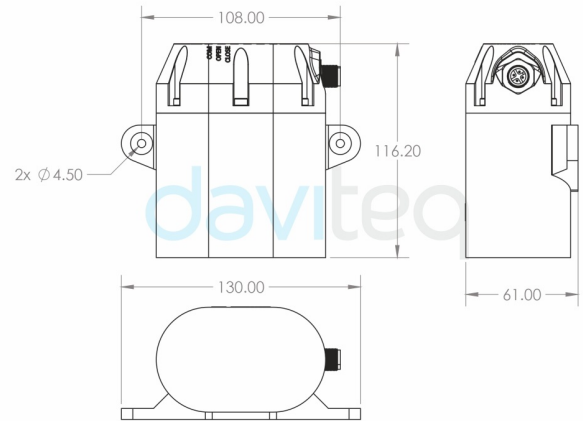
- * RELAY OUTPUTS FOR VALVE/PUMP CONTROLS;
- * AIR HUMIDITY/TEMPERATURE SENSOR;
- * CO2 SENSOR;
- * AMBIENT LIGHT SENSOR;
- * ...ETC

DIMENSION DRAWING OF WIRELESS NODE FOR HARDWARE VERSION 01



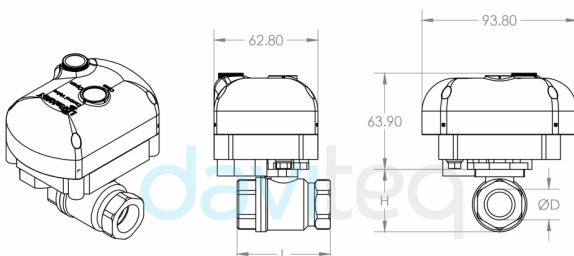
WSLRW-BV-H5.JPG

DIMENSION DRAWING OF WIRELESS NODE FOR HARDWARE VERSION 02



WSLRW-BV-H5.JPG

DIMENSION DRAWING OF CONTROL VALVE



Size	D(mm)	L(mm)	H(mm)
DN8	8	46	31
DN15	15	57	38
DN20	20	71	45
DN25	23.5	72	49

WSLRW-BV-H6.JPG

RECOMMENDED BATTERIES FOR WIRELESS NODE

LS 33600 Lithium battery



-60°C..+85°C working temperature

Low self-discharge rate

17.0 Ah Capacity

WSLRW-BV-H7.JPG

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RECOMMENDED BATTERIES

E91 AA Alkaline battery



L91 AA Lithium battery



-18 .. + 60 oC working temperature

10-year shelf life

3000 mAh Capacity

Price: 1X

-40 .. + 60 oC working temperature

20-year shelf life

3500 mAh Capacity

Price: 3.5X

WSNB-SMT-H9.JPG

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Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRW-BV-BR-08	LoRaWAN Mini Control Valve, Internal antenna, DN8 Brass Body, 304SS Ball, PTFE Seat, EPDM Sealing, D Size Battery design, 860~930MHz
WSLRW-BV-BR-15	LoRaWAN Mini Control Valve, Internal antenna, DN15 Brass Body, 304SS Ball, PTFE Seat, EPDM Sealing, D Size Battery design, 860~930MHz
WSLRW-BV-BR-20	LoRaWAN Mini Control Valve, Internal antenna, DN20 Brass Body, 304SS Ball, PTFE Seat, EPDM Sealing, D Size Battery design, 860~930MHz
WSLRW-BV-BR-25	LoRaWAN Mini Control Valve, Internal antenna, DN25 Brass Body, 304SS Ball, PTFE Seat, EPDM Sealing, D Size Battery design, 860~930MHz

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