LoRaWAN Smart Solenoid Valve Battery Operated

Smart Agriculture, Smart Utility, Smart City, Smart Facility

SKU: WSLRW-ISV

daviteq

◯ Safe Zone ◯ Hazardous Zones

LORAWAN SMART SOLENOID VALVE BATTERY OPERATED
WSLRW-ISV

VALVE WITH
INTEGRATED CONTROLLER

The WSLRW-ISV is an integrated LoRaWAN Latching Solenoid Valve Controller with a built-in latching solenoid valve body, available in sizes ranging from 3/4 inch to 4 inches, specifically designed for irrigation systems and water supply or distribution networks. This all-in-one solution eliminates the need for external valve installation, making deployment faster and more efficient. Engineered with ultra-low power consumption, the device can operate for up to 5 years on battery power, depending on configuration. The WSLRW-ISV transmits data over distances of several kilometers to any brand of LoRaWAN gateway available on the market, ensuring reliable long-range communication in various environments. Ideal for smart irrigation systems in gardens, farms, and hydroponic applications, the WSLRW-ISV is also well-suited for use in building water supply lines, facility management, and FCU control in HVAC systems. Its robust design, seamless wireless integration, and long-lasting battery life make it a high-performance, low-maintenance solution for remote water flow control. By combining valve control and communication in a single unit, the WSLRW-ISV significantly reduces installation complexity and enhances automation in water resource management.

Applications
Utility, Smart Irrigation, Water Distribution

Notes For Applications

✓ **Battery Operated for 5-10 years!**
Thanks to smart design in electronics and firmware

✓ **Multi-function controls**
Smart control functions allow various applications to be implemented

✓ **High quality Valve Body**
10 barg Valve body from 3/4" to 4"

✓ **Support Multi-region LoRaWAN Networks**
Support all LoRaWAN frequency bands Worldwide

LORAWAN SMART SOLENOID VALVE BATTERY OPERATED
WSLRW-ISV

VALVE WITH
REMOTE CONTROLLER

Specification

Valve size	DN20, DN25, DN40, DN50, DN65, DN80, DN100
Materials	Reinforced Nylon (Body), AISI 300 & 400 series (Solenoid trim), NR/EPDM (Diaphragm), NBR Seals
Pressure rating	0.3 - 10 bargs
Working temperature	Fluid: 5ºC to 50ºC (no freezing) | Ambient: -10ºC to 50ºC
Process connection	BSPT, NPT, Flange (4" only)
Manual Operator	Optional
Control mode	Scheduled Control, Instant Remote Control, Power-on Control, Fall-back Control
Optional Communication Port	1 x RS485 modbus RTU master
COMMUNICATION	
SF Factors	SF7~SF12 for EU868, RU864, KR920, AS923 and SF7 for US915, AU915, and IN865
Antenna	Internal Antenna 2 dbi
Power Supply	Primary batteries 01 x AA size 3.6VDC for LoRaWAN and 9V for valve control (battery not included). For version with RS485 port: 2 x AA 3.6V batteries
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 (Class A is default, Class is not recommended for battery operated version)
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
CE & FCC	Yes
Ambient working temperature for electronics	-40~85℃ (battery working temperature should be considered separately)
Dimension	W78 x H114 x D48 for electronic, for valve body please check drawings
Net-weight	310g (without batteries, for electronics only)
Housing	Engineering plastic, IP68 or IP67 (for RS485 port version)
Electronic part Mounting	Integrated on valve body or Wall mount (via 2m cable come as standard)

LORAWAN SMART SOLENOID VALVE BATTERY OPERATED
WSLRW-ISV

VALVE WITH
RS485 MASTER PORT

LORAWAN SMART SOLENOID VALVE BATTERY OPERATED
WSLRW-ISV

Valve with
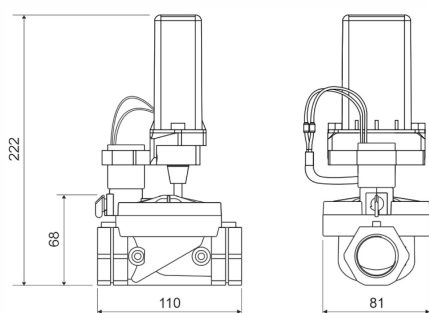Integrated Controller
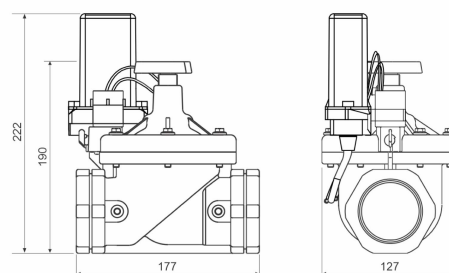
Valve with
Remote Controller

Valve with
RS485 Master Port

RS485

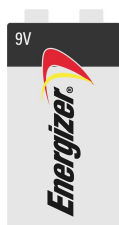SMART SOLENOID VALVE

LORAWAN SMART SOLENOID VALVE BATTERY OPERATED
WSLRW-ISV

DIMENSION DRAWING
FOR DN20(3/4") (Unit: mm)

LORAWAN SMART SOLENOID VALVE BATTERY OPERATED
WSLRW-ISV

DIMENSION DRAWING
FOR DN50(2") (Unit: mm)

RECOMMENDED BATTERIES

Energizer® MAX 522
Alkaline battery

-18~55°C working temperature
5-year shelf life (21°C)
400 mAh capacity

SAFT LS 14500
AA Lithium Thionyl Chloride

-40~85°C working temperature
20-year shelf life (21°C)
2600 mAh capacity

POWERED BY PRIMARY BATTERY

Ordering Information

Item Code	Description
	VERSION WITHOUT RS485 PORT, WITH MANUAL OPERATOR
WSLRW-ISV-DN20-BSP-01	LoRaWAN Smart Solenoid Valve, Battery Operated, DN20 Body, BSPT internal threads, Manual operator, IP68, internal antenna
WSLRW-ISV-DN25-BSP-01	LoRaWAN Smart Solenoid Valve, Battery Operated, DN25 Body, BSPT internal threads, Manual operator, IP68, internal antenna
WSLRW-ISV-DN40-BSP-01	LoRaWAN Smart Solenoid Valve, Battery Operated, DN40 Body, BSPT internal threads, Manual operator, IP68, internal antenna
WSLRW-ISV-DN50-BSP-01	LoRaWAN Smart Solenoid Valve, Battery Operated, DN50 Body, BSPT internal threads, Manual operator, IP68, internal antenna
WSLRW-ISV-DN65-BSP-01	LoRaWAN Smart Solenoid Valve, Battery Operated, DN65 Body, BSPT internal threads, Manual operator, IP68, internal antenna
WSLRW-ISV-DN80-BSP-01	LoRaWAN Smart Solenoid Valve, Battery Operated, DN80 Body, BSPT internal threads, Manual operator, IP68, internal antenna
WSLRW-ISV-DN100-BSP-01	LoRaWAN Smart Solenoid Valve, Battery Operated, DN100 Body, BSPT internal threads, Manual operator, IP68, internal antenna
WSLRW-ISV-DN100F-BSP-01	LoRaWAN Smart Solenoid Valve, Battery Operated, DN100 Body with Flange, Manual operator, IP68, internal antenna
	VERSION WITH RS485 PORT, WITHOUT MANUAL OPERATOR
WSLRW-ISV-DN20-BSP-MB485	LoRaWAN Smart Solenoid Valve, Battery Operated, DN20 Body, BSPT internal threads, 1 x RS485 Port, IP67, internal antenna
WSLRW-ISV-DN25-BSP-MB485	LoRaWAN Smart Solenoid Valve, Battery Operated, DN25 Body, BSPT internal threads, 1 x RS485 Port, IP67, internal antenna
WSLRW-ISV-DN40-BSP-MB485	LoRaWAN Smart Solenoid Valve, Battery Operated, DN40 Body, BSPT internal threads, 1 x RS485 Port, IP67, internal antenna
WSLRW-ISV-DN50-BSP-MB485	LoRaWAN Smart Solenoid Valve, Battery Operated, DN50 Body, BSPT internal threads, 1 x RS485 Port, IP67, internal antenna
WSLRW-ISV-DN65-BSP-MB485	LoRaWAN Smart Solenoid Valve, Battery Operated, DN65 Body, BSPT internal threads, 1 x RS485 Port, IP67, internal antenna
WSLRW-ISV-DN80-BSP-MB485	LoRaWAN Smart Solenoid Valve, Battery Operated, DN80 Body, BSPT internal threads, 1 x RS485 Port, IP67, internal antenna
WSLRW-ISV-DN100-BSP-MB485	LoRaWAN Smart Solenoid Valve, Battery Operated, DN100 Body, BSPT internal threads, 1 x RS485 Port, IP67, internal antenna
WSLRW-ISV-DN100F-BSP-MB485	LoRaWAN Smart Solenoid Valve, Battery Operated, DN100 Body with Flange, 1 x RS485 Port, IP67, internal antenna