LoRaWAN Node with Latching Relay Output

daviteq

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

SKU: WSLRW-LRO

✓ Safe Zone   ○ Hazardous Zones

LORAWAN NODE WITH LATCHING RELAY OUTPUT
WSLRW-LRO

WSLRW-LRO   is a LoRaWAN node with latching relay output to electrically operate switch that uses a small electrical signal to control a larger electrical circuit. It works by energizing a ON relay coil or OFF relay coil, which creates a magnetic field that moves an armature to open or close contacts, allowing or interrupting the flow of electricity. This makes relays essential for controlling high-power devices with low-power signals.

The node will transmit data in kilo-meters distance to the LoRaWAN gateway from any brand on the market. LoRaWAN relay nodes are used in various applications to remotely control devices with low power consumption over long distances. Latching relays are commonly used in applications where it is necessary to maintain the last state after a power failure such as industrial machinery, automate home systems like lighting and heating, regulate pumps and valves in water treatment plants, optimize irrigation in agriculture, control energy distribution in buildings, and operate urban infrastructure such as streetlights and traffic signals.

Applications

Smart Irrigation, Water Supply System, Water Level Control, Oil Level Control, Home Automation, Industrial Automation, Energy Distribution, Urban Infrastructure

Notes For Applications

- Load Requirements: Match the relay's voltage and current ratings to the load.
- Contact Configuration: Select the appropriate contact form (SPST, SPDT, etc.) and rating.

✓ **LoRaWAN communication**
LoRaWAN communication standard to allow the device connect to any LoRaWAN Gateway on the market.

✓ **Multi-control modes**
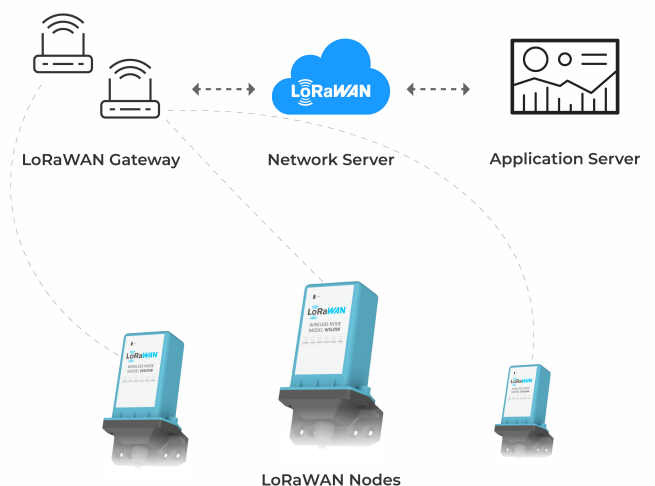Various control modes: instant control, scheduled control, power control, fallback control

✓ **Control schedules to prevent wrong control**
Control schedules to prevent wrong control when LoRaWAN communication lose during controlling process

✓ **Cost-effectiveness of wireless control**
Wireless control to reduce installation and maintenance costs by eliminating cabling and physical connections

LORAWAN NODE WITH LATCHING RELAY OUTPUT
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LoRaWAN Gateway   Network Server   Application Server

LoRaWAN Nodes

SYSTEM ARCHITECTURE

Specification

Number of relay channel	1 channel/2 channel/4 channel
Contact rating	Electro-mechanical relays, SPST (NO) 250 VAC@8A (resistive load) 24 VDC@5A (resistive load), 10,000,000 operations min. (at 18,000 operations/h)
Relay contact connection	PG9 with 90 cm length, 2x 1.0 mm2 cable,
Control functions	On/Off based on control schedule, powerup, fall back mode
COMMUNICATION	
SF Factors	SF7~SF12
Antenna	Internal Antenna 2 dbi
Power supply	2 x AA 1.5 VDC primary battery
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 (default) V1.0.3
Data sending modes	cycle, alarm and manually triggering by magnetic key
Alarm function	Yes
Remote control via schedule downlink	Class A
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℃
Dimensions	H106xW73xD42
Net-weight	200g
Housing	Engineering plastic, IP65
Mounting	Wall mount

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APPLICATION TO
CONTROL ON/ OFF PUMPS

LORAWAN NODE WITH LATCHING RELAY OUTPUT
WSLRW-LRO

APPLICATION TO
CONTROL ON/ OFF VALVES

LORAWAN NODE WITH LATCHING RELAY OUTPUT
WSLRW-LRO

APPLICATION TO
CONTROL ON/ OFF LIGHTS

LORAWAN NODE WITH LATCHING RELAY OUTPUT
WSLRW-LRO

78.00
72.80
51.05

42.00
35.05

123.30

2x ⌀ 4.50

62.00
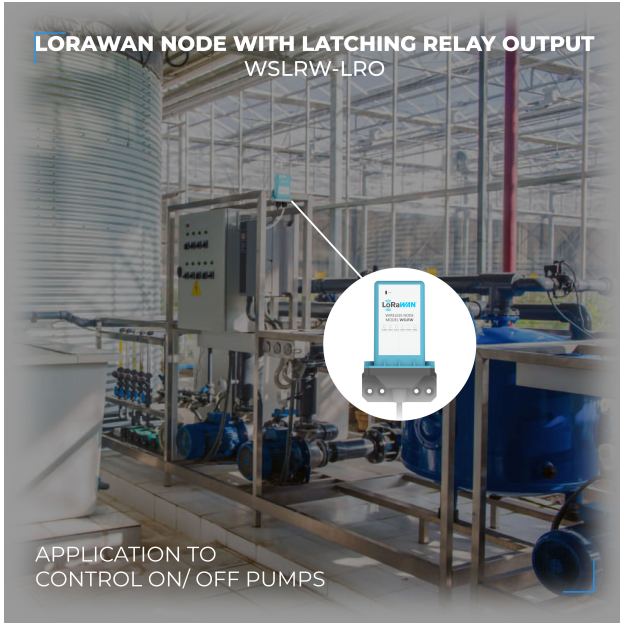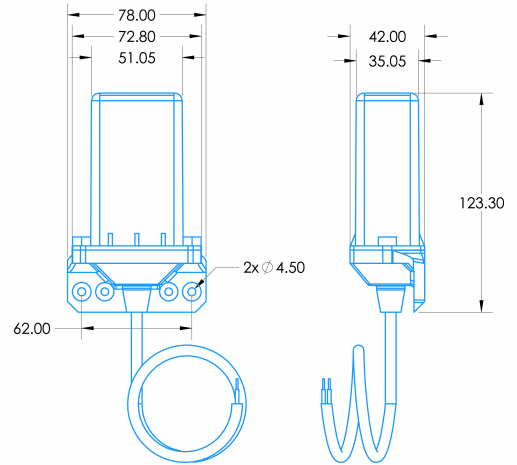
DIMENSION DRAWING OF
WIRELESS NODE (Unit: mm)

LORAWAN NODE WITH LATCHING RELAY OUTPUT
WSLRW-LRO

+|AA
ALKALINE BATTERY
Energizer

DAVITEQ'S CHOICE
RECOMMEND

+|AA
LITHIUM BATTERY
Energizer
ULTIMATE LITHIUM

E91 AA
Alkaline battery

-18~60°C working temperature
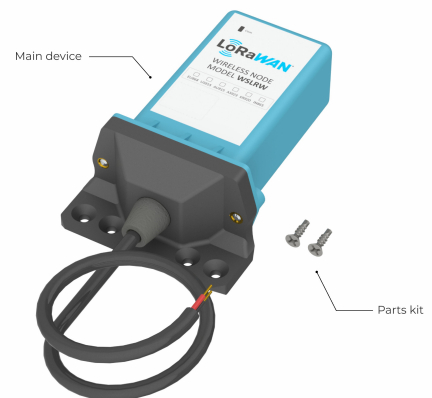10-year shelf life
3000 mAH capacity
Price: 1X

L91 AA
Lithium battery

-40~60°C working temperature
20-year shelf life
3500 mAH capacity
Price: 3.5X

RECOMMENDED BATTERIES
POWERED BY PRIMARY BATTERY

LORAWAN NODE WITH LATCHING RELAY OUTPUT
WSLRW-LRO

Main device

Parts kit

PRODUCT PACKAGE

Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRW-LRO-01	LORAWAN NODE WITH LATCHING RELAY OUTPUTS, 2 x 1.5 V AA BATTERY, INTERNAL ANTENNA, 1x SPST RELAY 10A@250VAC
WSLRW-LRO-02	LORAWAN NODE WITH LATCHING RELAY OUTPUTS, 2 x 1.5 V AA BATTERY, INTERNAL ANTENNA, 2x SPST RELAY 10A@250VAC
WSLRW-LRO-04	LORAWAN NODE WITH LATCHING RELAY OUTPUTS, 2 x 1.5 V AA BATTERY, INTERNAL ANTENNA, 4x SPST RELAY 10A@250VAC