

Wireless 2-Gang Water Leak Detector

Wireless Sensor Network Based on LoRa Technology



R311W Data Sheet

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Wireless 2-Gang Water Leak Detector

Description

Wireless 2-Gang Water Leak Detector (R311W) is a LoRaWAN device compatible with LoRaWAN protocol (ClassA). When the R311W sensor detects the leak, it will send an alarm message to the gateway. When the sensor detects no leaks, it will send a message that shows no leak to the gateway.

This device has been certified by the LoRa Alliance and is allowed to use the following logo on the product:



Features

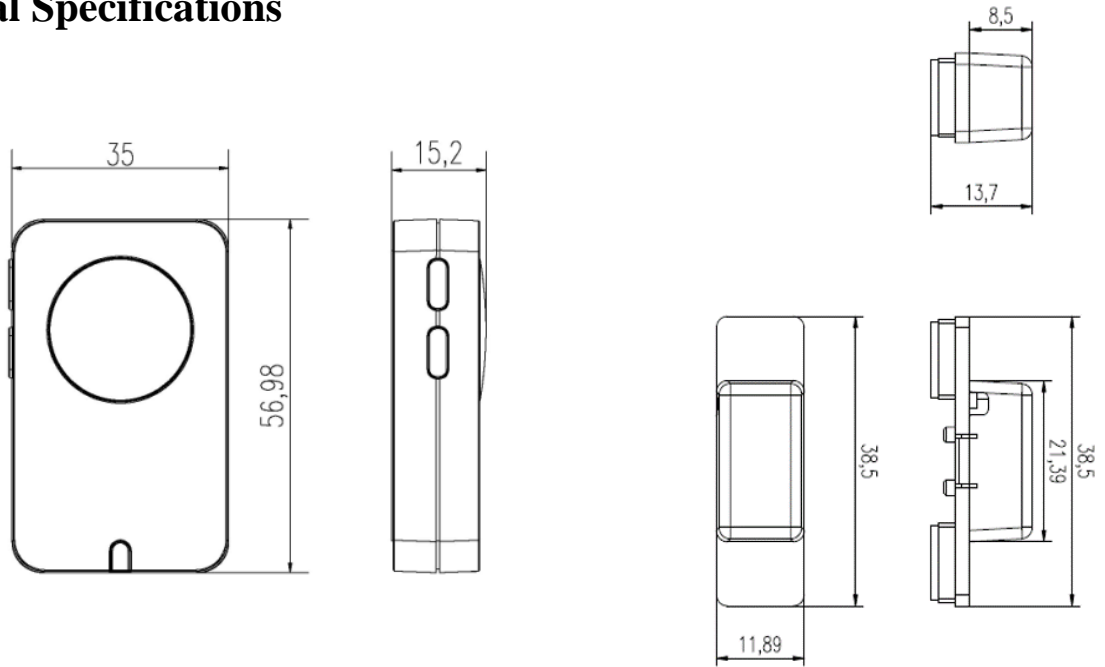
- LoRaWAN™ Class A compatible
- 2*3.0V CR2450 button battery power supply
- Water leak detection
- Apply SX1276 wireless communication module
- Frequency Hopping Spread Spectrum (FHSS)
- Configuration parameters can be configured through a third-party software platform
- Applicable to third-party platforms: Actility / ThingPark, TTN, MyDevices / Cayenne
- Low power consumption and long battery life Improved
- Battery Life:
 - Please refer to web: http://www.netvox.com.tw/electric/electric_calc.html
 - At this website, users can find battery life time for varier models at different configurations.

Applications

- Data center and server room water monitoring
- Document retention center monitoring
- Basement water monitoring
- Plumbing leak detection
- Boat bilge monitoring
- Storage monitoring
- And many more...

Wireless 2-Gang Water Leak Detector

Technical Specifications



Electric

| | |
|-----------------------------|---------------------------------|
| Input Power | 2pcs 3.0V CR2450 button battery |
| Operation Voltage | 2.4V to 3.0V |
| Standby Current | 12uA/3.0V |
| Transmitting Current (max) | 120mA/3.0V |
| Receiving Current (max) | 11mA @3.0V |
| Low Voltage Threshold | 2.4V |
| Battery Voltage Measurement | ±0.1V |

Water Leak Wire

| | |
|--------------------------------|-------------------------|
| Water Leakage Material | UL2468 28AWG |
| Water Wire Maximum Temperature | 80°C |
| Water Wire Weight | 5g |
| Water Wire Diameter | 1mm |
| Water Wire Length | 1000mm (±5mm) |
| Water Wire Flame Rating | VW-1 |
| Water Wire Length Limit | 300m(Theoretical value) |

Wireless 2-Gang Water Leak Detector**Frequency**

| | |
|---------------------|--|
| TX Power | US915 20dbm ; AS923 16dbm ; AU915 20dbm ; CN470 19.15dbm ; EU868 16dbm ; KR920 14dbm ; IN865 20dbm ; |
| Rx Sensitivity | -136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK,Frequency deviation=5kHz, Bit Rate=1.2kbps) |
| Antenna Type | Build-in antenna |
| Communication Range | Up to 10 km, the actual transmission distance depends on the environment) |
| Data Transfer Rate | 0.3kbps ~ 50kbps (LoRa) 1.2kbps ~ 300kbps (FSK) |
| Modulation | LoRa/FSK |
| Available Frequency | EU863-870,US902-928,AU915-928,KR920-923, AS923-1,AS923-2,AS923-3,IN865-867,CN470-510 (Note: optional, to be done in the factory configuration) |

Physical

| | |
|----------------------------|----------------------------|
| Main Body Dimension | 57mm x 35mm x 15.2mm |
| Sensor Dimension | 11.89mm x 38.5mm x 13.7mm |
| Weight | 48.9g |
| Operating Temperature | -20°C ~ 55°C |
| Environment Humidity Range | < 90% RH (No condensation) |
| Storage Temperature | -40°C ~ 85°C |