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**Wireless Water Leak Detector with Rope Sensor**

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# **Wireless Water Leak Detector with Rope Sensor R718WB Data Sheet**

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Wireless Sensor Network Based on LoRa Technology



**R718WB**

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## Wireless Water Leak Detector with Rope Sensor

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### General Description

R718WB is a non-locating leak detection wireless communication device. R718WB can detect the leak status through an external dual-core non-positioning water rope sensor, and send the detected data to data center through the wireless network. It uses the SX1276 wireless communication module.

### Main Characters

- Apply SX1276 wireless communication module
- 2 section ER14505 batteries AA SIZE (3.6V/section) parallel power supply
- Non-locating leak detection
- Base with magnet attached to iron objects

### Example Applications

- Engine room
- Warehouse
- Smart home
- Archives
- Air conditioning
- Semiconductor plant
- Data center

### Features of NETVOX Sensors

- LoRaWAN™ Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Improved power management for longer battery life
- Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Battery Life\*2:

Please refer to web: [http://www.netvox.com.tw/electric/electric\\_calc.html](http://www.netvox.com.tw/electric/electric_calc.html)

At this website, users can find battery life time for varier models at different configurations.

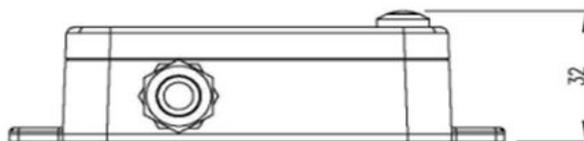
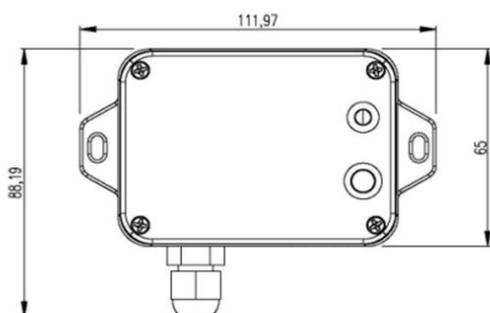
- Over-the-air updates (future)
- Third-Party online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email (optional)
- Available third-party platform: Actility/ThingPark, TTN, MyDevices/Cayenne
- R718X series carry magnets which can be attached to ferromagnetic materials and objects

\*1. Actual range may vary depending on environment.

\*2. Battery life is determined by sensor reporting frequency and other variables

## Wireless Water Leak Detector with Rope Sensor

### Technical Specifications (Main Part)



(Uni. mm)

### Electric

|                                      |  |
|--------------------------------------|--|
| Input Power                          | 2 x 3.6V ER14505 AA lithium batteries<br>(3.6V2400mah/section)   |
| Battery Life                         | 5 years (Conditions: ambient temperature 25 °C, 15 min heartbeats, txpower = 20dBm, LoRa spreading factor SF = 10) |
| Sleeping Mode                        | 20uA   |
| Wake up Mode                         | 6.3mA@3.3V   |
| Low Voltage Threshold                | 3.2V   |
| Receiving Current (max)              | 11mA @3.3V   |
| Transmitting Current (max)           | 120mA/3.3V   |
| Battery Voltage Measurement Accuracy | ±0.1V  |

\* Specific electrical characteristics may vary depending on the power supply voltage.

### Non-positioning Leakage Rope Sensor

|                            |                                      |
|----------------------------|--------------------------------------|
| Material                   | Conductive Polyethylene + Alloy Wire |
| Working Temperature (Max.) | 75° C                                |
| Diameter                   | 5.5mm                                |
| Length                     | 3000mm (± 5mm)                       |
| Fire Rating Grade          | 2 Pressure Vent Cable                |
| Quality                    | 18g/m                                |
| Color                      | Orange                               |
| Breaking Strength          | 60 kg                                |
| Detect Core Resistance     | Less than 5 ohms/100 meters          |
| Recommended Max. Length    | 1000 meters (theoretical value)      |

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**Frequency**

|                     |   |
|---------------------|---|
| TX Power            | 19dBm±1dBm  |
| Rx Sensitivity      | -136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps )<br>-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  |
| Spread Technique    | LoRa/FSK  |
| Available Frequency | EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510 (Configured before shipment)                         |

**Physical**

|                               |                                     |
|-------------------------------|-------------------------------------|
| Dimension                     | Main Part: L: 112mm*W: 65mm*H: 32mm |
| Weight                        | 141g                                |
| Environment Temperature Range | -20℃ ~ 55℃                          |
| Environment Humidity Range    | <90% RH (No condensation)           |
| Storage Temperature           | -40℃ ~ 85℃                          |

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