
Wireless 2-Gang Reed Switch Open/Close Detection Sensor

Wireless 2-Gang Reed Switch Open/Close Detection Sensor R718F2 Data Sheet

Wireless Sensor Network Based on LoRa Technology



R718F2

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Wireless 2-Gang Reed Switch Open/Close Detection Sensor

General Description

The device is equipped with 2-gang reed sensors, which can be used to detect the status of the door and window. Through the built-in wireless module, it can achieve wireless alarm and other functions. It uses the SX1276 wireless communication module.

Principle of Operation

The reed switch is on (conducting) within the magnetic range, and is off (nonconducting) when it's out of the magnetic range. The module can detect the closing and opening signals so that the state of the door window status can be detected.

Example Applications

- Doors and windows
- Production line tracking
- Objects to be detected open / close status

Features of NETVOX Sensors

- Wireless range of 10km *1
- 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

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

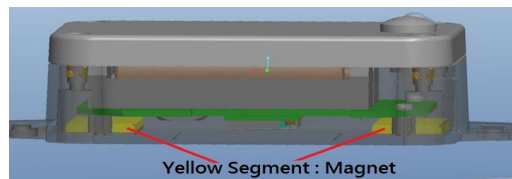
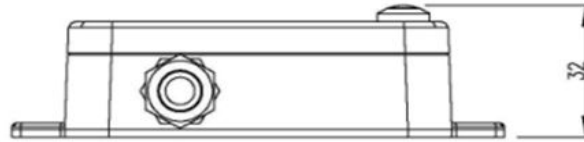
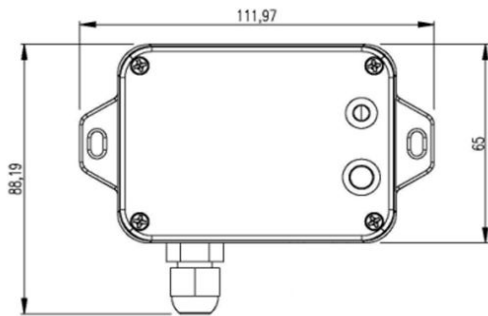
- Over-the-air updates (future)
- Third-Party online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email (optional)
- Available third-party platform: Actility/ThingPark, TTN, MyDevices/Cayenne
- R718X series carry magnets which can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

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Technical Specifications (Main Part)



(Uni. mm)

Electric

| | |
|--------------------------------------|--|
| Input Power | 2 x 3.6V ER14505 AA lithium batteries (3.6V2400mah/section) |
| Sleeping Mode | 26uA |
| Wake up Mode | 6.3mA@3.3V |
| Receiving Current (max) | 11mA @3.3V |
| Transmitting Current (max) | 120mA/3.3V |
| Battery Voltage Measurement Accuracy | ±0.1V |
| Low Voltage Threshold | 3.2V |

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

Reed Switch Sensor

| | |
|-----------------------|--|
| Sensor Case Size | L:43mm*W:13mm*H:12mm |
| Sensor Characteristic | Inside the magnetic rang, it is at on state (conducting). When out of the magnetic range, it is at off state (non-conducting). Sensing distance inside magnetic rang is 2cm. |
| Reed solderability | Good solderability |
| External Cable Length | 1 meter |

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Frequency

| | |
|---------------------|--|
| TX Power | 19dBm±1dBm |
| 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 | 10 km (line-of-sight, 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 | 150g |
| Environment Temperature Range | -20°C ~ 55°C |
| Environment Humidity Range | <90% RH (No condensation) |
| Storage Temperature | -40°C ~ 85°C |

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