
Wireless Hall Type Open/Close Detection Sensor

Wireless Hall Type Open/Close Detection Sensor R718LB Data Sheet

Wireless Sensor Network Based on LoRa Technology



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Wireless Hall Type Open/Close Detection Sensor

General Description

This device is equipped with a Hall sensor, which can be used for door and window switch state detection. It can realize wireless alarm and other functions through the built-in wireless module. It applies SX1276 wireless communication module.

Main Characteristics

- Adopt SX1276 wireless communication module
- 2 ER14505 battery AA SIZE (3.6V / section) parallel power supply
- The base is attached with a magnet that can be attached to a ferromagnetic material object
- Hall sensor detection
- LoRaWAN™ Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- Improved power management for longer battery life
- 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: Activity/ThingPark, TTN, MyDevices/Cayenne
- 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 various models at different configurations.

1. Actual range may vary depending on environment.

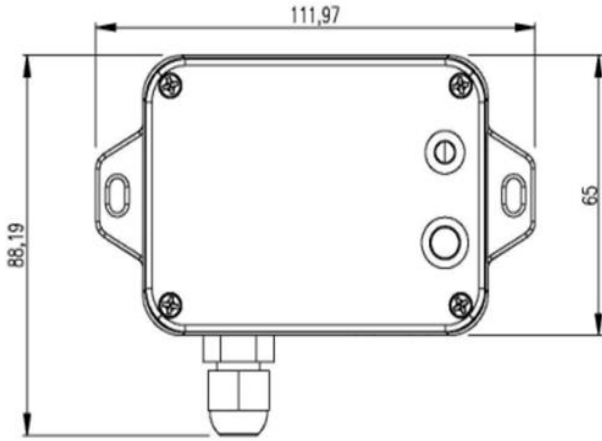
2. Battery life is determined by sensor reporting frequency and other variables

Example Applications

- Door and window switchgear
- Other

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Technical Specifications (Main Part)



(Uni. mm)

Electric

R718LB

Input Power	2 x 3.6V ER14505 AA lithium batteries (3.6V 2400mah/section)
Operating Voltage	DC 3.1V to 3.65V
Battery Life	5 years (Conditions: ambient temperature 25 °C, 15 min report once, txpower = 20dBm, LoRa spreading factor SF = 10)
Standby Current	23uA
Wakeup Current	7.2mA (Typical value) Wakeup current range 0.8mA-20 mA * When not transmitting /receiving LoRa data)
Low Battery Voltage Threshold	3.2V
Battery Measurement Accuracy	±0.1V

Module-R100H

Wake-up Current	0.8mA - 8mA@3.3V
RF Receiving Current (max)	11mA/3.3V
RF Transmitting Current (max)	120mA/3.3V

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

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Hall Sensor Specification

External Hall Sensor Housing Size	42mm*13mm*12mm
Performance Characteristics	All-pole sensing, the magnet can activate either pole.
Hall Sensor Supply Voltage Range	1.65-5.5VDC
Hall Sensor Working Temperature Range	-40°C to 85°C
Push-pull Output	No external pull-up resistor required
Hall Sensor Sensing Distance	Less than 3cm.
Cable Length	1m

Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
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 10km, the actual transmission distance depends on the environment.
Data Transfer Rate	0.3kbps ~ 50kbps (LoRa) 1.2kbps ~ 300kbps (FSK)
Spread Technique	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)

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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