

Wireless Door/Window Sensor

Wireless Sensor Network Based on LoRa Technology



R311A

Data Sheet

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Introduction

R311A is equipped with a reed sensor, 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.

Main Characteristic

- Adopt SX1276 wireless communication module
- 2 sections of 3V CR2450 button battery power supply
- Compatible with LoRaWAN™ Class A
- Frequency hopping spread spectrum (FHSS)
- Applicable to the third-party platforms: Actility/ThingPark, TTN, MyDevices/Cayenne
- Low power consumption and long battery life

Note:

Battery life is determined by the sensor reporting frequency and other variables, please refer to

http://www.netvox.com.tw/electric/electric_calc.html

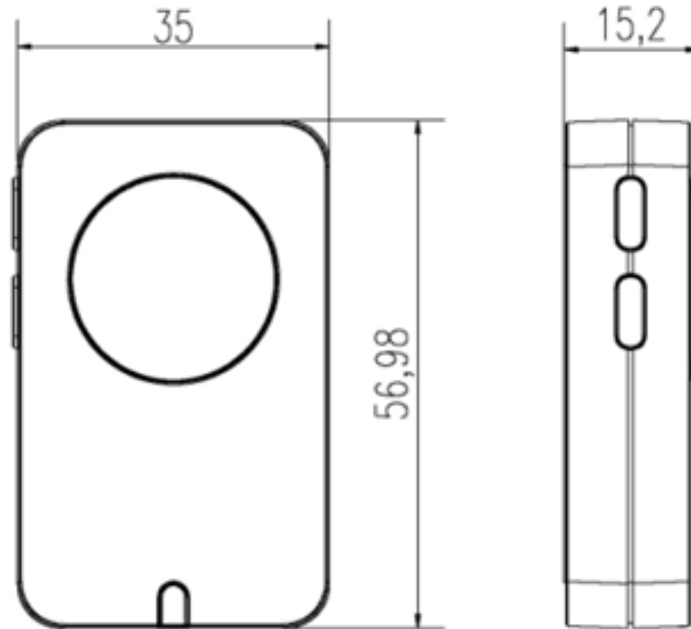
On this website, users can find battery life of various models in different configurations.

Application

- Door and window open/close detection

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Dimension



Electric

Input Power	2 x 3V CR2450 button battery
Working Voltage	2.4V to 3V
Standby Current	12uA/ 3.0V
Transmitting Current (max)	120mA/ 3.0V
Receiving Current (max)	11mA/ 3.0V
Low Voltage Threshold	2.4V
Battery Measurement Accuracy	±0.1V

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Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm; AS923 16dbm; AU915 20dbm; CN470 19.15dbm; EU868 16dbm; KR920 14dbm; IN865 20dbm;
Receiving Sensitivity	-136 dBm (LoRa, Spreading Factor=12, Bit Rate = 293bps) -121 dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Build-in antenna
Communication Distance	10 km (Visible linear obstacle-free transmission distance, actual transmission distance depending on the environment.)
Data Transfer Rate	0.3kbps ~ 50kbps (LoRa) 1.2kbps ~ 300kbps (FSK)
Modulation	LoRa / FSK (Note: choose one of them)
Supportable LoRaWAN Frequency	EU863-870, US902-928, AU915-928, KR920-923, AS923-1, AS923-2, AS923-3, IN865-867, CN470-510 (Note: The frequency band is optional and needs to be configured before shipment.)

Physical

Dimension	Mian Body: 57 mm x 35 mm x 15.2 mm Magnet: 43 mm x 13 mm x 12 mm
Weight	43.8g
Environment Humidity Range	<90 %RH (No condensation)
Operating Temperature	-20°C to 55 °C
Storage Temperature	-40°C to 85 °C