

Wireless Door/Window Sensor

Wireless Sensor Network Based on LoRa Technology



R311A Data Sheet

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General Description

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.

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



Main Feature

- 2 sections of 3V CR2450 button battery power supply
- Adopt SX1276 wireless communication module
- LoRaWAN™ Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- 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
- Improved power management for longer battery life
- Battery Life*2:

Please refer to web: http://www.netvox.com.tw/electric/electric_calc.html

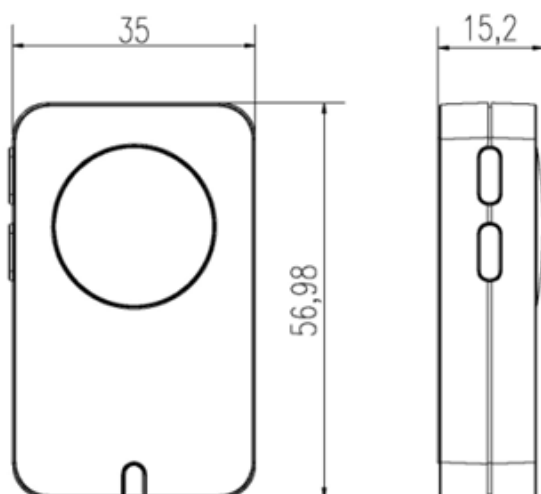
At this website, users can find battery life time for varier models at different configurations

Example Applications

- Detects when a door or window is accessed.

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Technical Specifications



Unit: mm

Electric

Input Power	2pcs 3.0V CR2450 button battery (Single CR2450 battery capacity 620mah)
Working Voltage	DC 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 Voltage Measurement Accuracy	±0.1V

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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	Built-in antenna
Communication Range	Up 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 Configured before shipment

Physical

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