Wireless 2-Gang Door/Window Sensor

Wireless Sensor Network Based on LoRa Technology

R313CC Data Sheet

Introduction

R313CC is connected with two external reed switches and matching magnets. It can be used for door and window open and close state detection. It can realize wireless alarm and other functions through the built-in wireless module. It is compatible with the LoRaWAN protocol.
It can easily communicate with other related equipment.

R313CC has the characteristics of long-lasting durability and ensuring the best use. It is a low power consumption device. Because of the small size, it can be installed anywhere. The device is wireless, so it takes up little space.

Main Characteristic

- 2 sections 3V CR2450 button battery
- Compatible with LoRaWAN protocol
- Adopt SX1276 wireless communication module
- Frequency hopping spread spectrum
- Configuring parameters and reading data via the third-party software platforms, and set alarms via SMS text and email (optional)
- Applicable to the third-party platforms: Actility/ ThingPark, TTN, MyDevices/Cayenne
- Low power consumption and long battery life

Note:

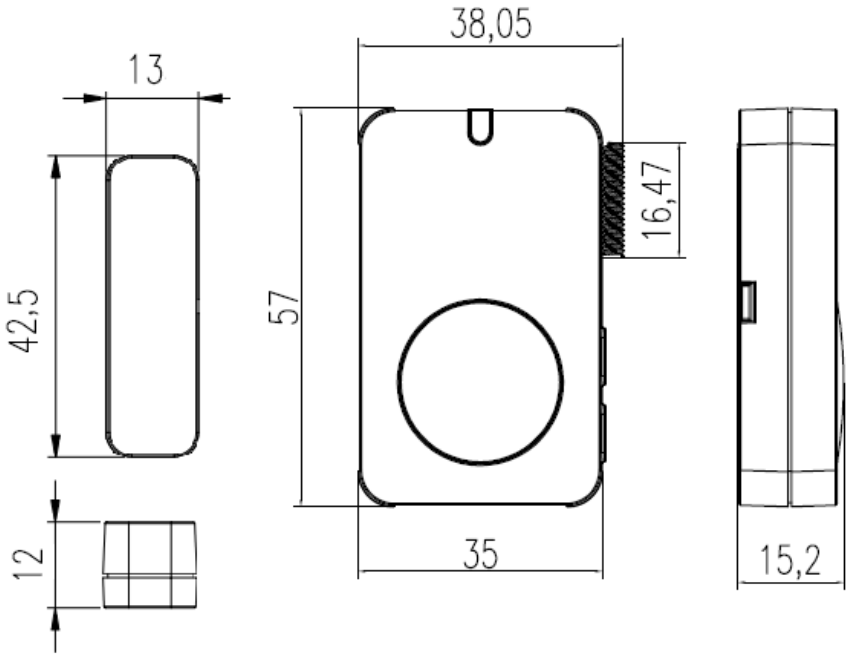
Battery life is determined by the sensor reporting frequency and other variables, please refer to http://www.netvox.com.tw/electric/electric_calc.html

On this website, users can find battery lifetime for varied models at different configurations.

Application

- State monitoring of doors and windows for home or business

Dimension



Electric

Input Power	2 sections 3.0V CR2450 button battery
Operating Voltage	DC +2.4V～3.0V
Standby Current	10uA/3.0V
Transmitting Current (max)	120mA/3.0V
Receiving Current (max)	11mA/3.0V
Battery Measurement Accuracy	±0.1V

External Reed Switch

Shell Dimension	42.5mm*13mm*12mm
Characteristic	It is in a closed state (conducting) in the magnetic field. It is in an opened state (non-conducting) when it leaves the magnetic field.

Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm AS923 16dbm AU915 20dbm CN470 19.15dbm EU868 16dbm KR920 14dbm IN865 20dbm
Receive Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	External antenna
Communication Range	10km (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 Method	LoRa/FSK (Note: choose one of them)
Supportable LoRaWAN Band	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

Host Body Dimension	57mm x 38.5mm x 15.2mm
Weight	48.9g
Ambient Temperature Range	-20°C ～ 55°C
Ambient Humidity Range	＜90%RH (No condensation)
Storage Temperature Range	-40°C ～ 85°C