Wireless Window/Door Sensor and Wireless Glass Sensor

R311CB Data Sheet

Wireless Sensor Network Based on LoRa Technology

R311CB

Wireless Window/Door Sensor and Wireless Glass Sensor

General Description

The R311CB device has a built-in reed switch sensor and can be externally connected to the reed switch. It can be used for door and window switch status detection and externally connected to broken glass sensor to detect the glass status. It uses the SX1276 wireless communication module.

Working Principle

The built-in reed switch and the externally connected reed switch are in a series connection state; when the reed switch state is to be detected, a high level state is detected when all the reed switches are closed. Similarly, when the reed switch is not fully closed, it detects a low level state. When the glass is broken, the glass breakage detection will change its resistance value, and there is a high and low level change for its detection port.

Example Applications

- Villa
- Office
- Hotel
- Apartment

Features of NETVOX Sensors

• 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)

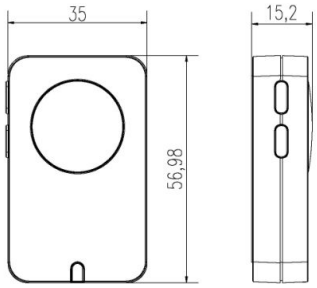
• Available third-party platform: Actility/ThingPark, TTN, MyDevices/Cayenne

•*1. Actual range may vary depending on environment.

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

Wireless Window/Door Sensor and Wireless Glass Sensor

Technical Specifications



Main Body (Unit: mm)

Electric

Input Power	2pcs 3.0V CR2450 button battery Parallel (single-cell CR2450 battery capacity 620mah)
Working Voltage	DC 2.4V～3V
Standby Current	10uA /3.0V
Transmitting Current (max)	120mA / 3.0V
Receiving Current (max)	11mA / 3.0V
Battery Voltage Measurement Accuracy	±0.1V

Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
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	Up to 10 km, 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

Wireless Window/Door Sensor and Wireless Glass Sensor

Reed Switch Sensor Specification

Sensor Case Size	L:42mm*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

Physical

Main Body Dimension	57mm x 35mm x 15.2mm
Weight	45 g
Operating Temperature	-20℃ ～ 55℃
Environment Humidity Range	<90% RH (No condensation)
Storage Temperature	-40℃ ～ 85℃

Contact:

NETVOX TECHNOLOGY CO., LTD.

TEL: 886-6-2617641
FAX: 886-6-2656120
E-mail: sales@netvox.com.tw
WEB: www.netvox.com.tw

NETVOX TECHNOLOGY CO., LTD (XIAMEN)
TEL: 86-592-5717188
FAX: 86-592-5717180
E-mail: dyx@netvox.com.cn
WEB: www.netvox.com.cn