Wireless Dry Contact Sensors R311CA Data Sheet

Wireless Sensor Network Based on LoRa Technology

R311CA

Dataprodukter utöver det vanliga

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Wireless Dry Contact Sensors

General Description

Netvox wireless dry contact sensors can be used to detect contact between two wired contact points.
 It can realize wireless alarm and other functions through built-in wireless module, and is compatible with LoRaWAN protocol.
It can be easily networked with other related devices. The R311CA is durable and ensures optimum use and is a low power consumption device. Due to their small size, they can be installed anywhere, they are wireless, so they take up very little space.

Main Property

- 2 section 3V CR2450 button battery
- Compatible with LoRaWAN protocol
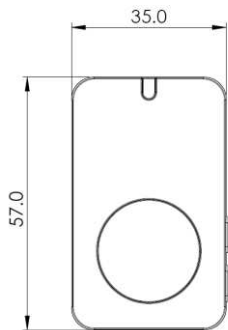- Apply SX1276 wireless communication module

Example Applications

- Smart home
- Anti-theft system
- Industrial equipment
- Security field

Features of NETVOX Sensors

- LoRaWAN[TM] 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 Dry Contact Sensors

Technical Specifications

Main Body

(Unit: mm)

Electric

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

Frequency

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 Dry Contact Sensors

External Wire Specification

Wire material	UL2468 28AWG
Wire maximum temperature	80°C
Wire weight	5g
Maximum outer diameter of the wire	1mm
Wire length	1000mm（±5mm）
Wire flame resistance rating	VW-1

Physical

Main Body Dimension	57mm x 35mm x 15.2mm
Weight	48.9 g
Operating Temperature	-20℃ ～ 55℃
Environment Humidity Range	<90% RH (No condensation)
Storage Temperature	-40℃ ～ 85℃