
Wireless 2-Input Dry Contact Interface

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Wireless Sensor Network Based on LoRa Technology



R311CA Data Sheet

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General Description

R311CA is externally connected to two dry contacts for customers to connect to the equipment under test, such as switches, buttons, sensors, relays, reed switches, etc. At the same time, wireless alarm and other functions can be realized through the built-in wireless module. The device is compatible with the LoRaWAN protocol.

It can easily communicate with other related equipment. R311CA has the characteristics of long-lasting durability and ensuring the best use. It is a low power consumption device. Because of the small size and being wireless, it can be installed anywhere and takes up very little space.

Main Property

- 2 section 3V CR2450 button battery
- Compatible with LoRaWAN protocol
- Apply SX1276 wireless communication module
- LoRaWAN™ Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Improved power management for longer battery life
- 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
- Battery Life:

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

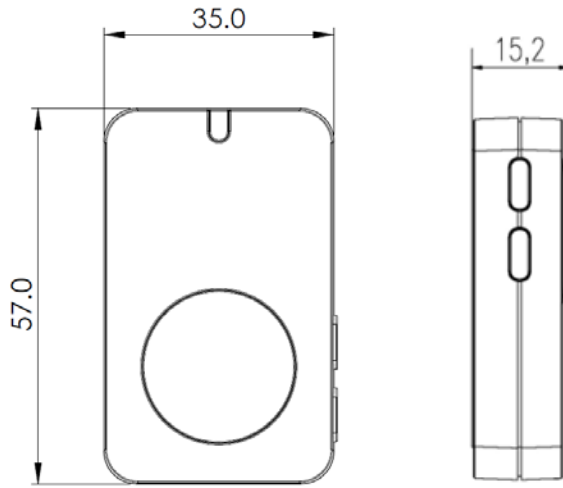
At this website, users can find battery life time for varier models at different configurations.

Example Applications

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

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Technical Specifications



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

Dry Contact

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
Water Wire Length Limit	300m(Theoretical value)

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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	Build-in antenna
Communication Range	Up to 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,AS9231, AS923-2,AS923-3,IN865-867,CN470-510 (Note: optional, to be done in the factory configuration)

Physical

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