Wireless Dry Contact Interface

Wireless Sensor Network Based on LoRa Technology

R718J

Data Sheet

Wireless Dry Contact Interface

Introduction

R718J is a ClassA external dry contact device based on LoRaWAN open protocol of Netvox. It can externally connect various switches, buttons, relays and reed switch output. It can detect the closing or disconnecting signal of dry contact and is compatible with LoRaWAN protocol.

Main Characteristic

- Adopt SX1276 wireless communication module
- Compatible with LoRaWAN™ Class A
- Improved interference immunity
- The base is attached with a magnet that can be attached to a ferromagnetic material object
- Frequency hopping spread spectrum (FHSS)
- Configuration parameters can be configured through third-party software platforms, data can be read and alarms can be set 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 life of various models in different configurations.

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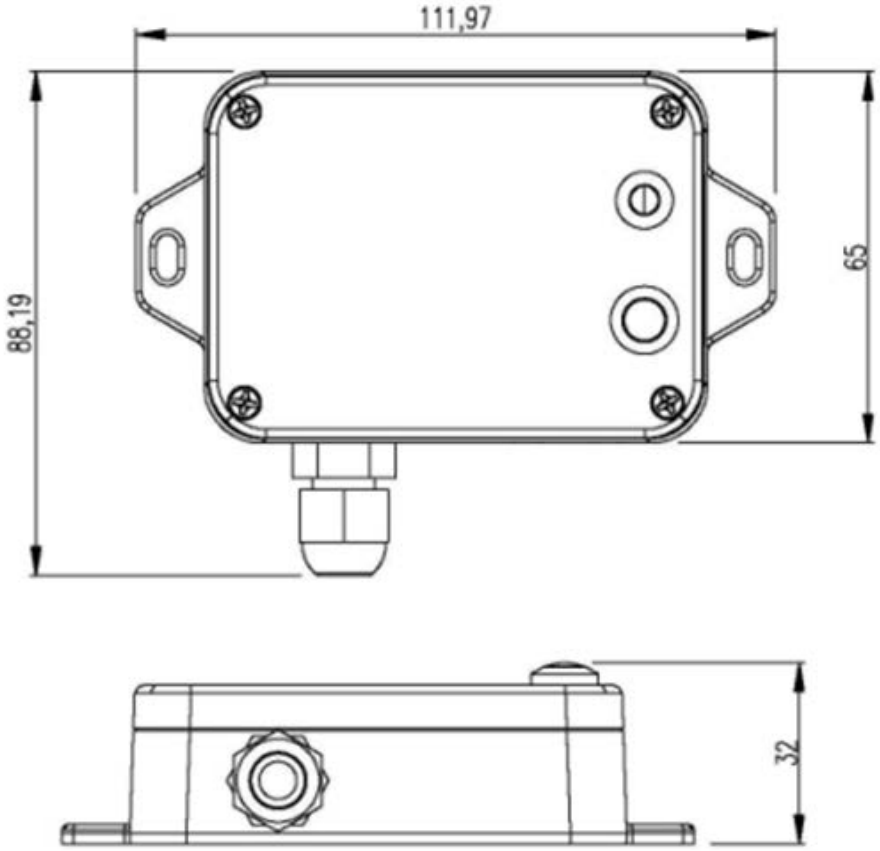
Application

- Tamper switches
- Barn door access monitoring
- Freezer/ cooler door access
- Freezer/ cooler doors (to determine if they are not closed all the way)
- Convenience store cooler doors (to determine if they are not closed all the way)
- Forklift seat switches
- Dry contact switches

Dimension



Dimensions of main engine shell

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Electric

Input Power	2 x 3.6V ER14505 AA lithium batteries (3.6V2400mah/section)
Standby Current	22uA
Wakeup Current	6.3mA/ 3.3V
Transmitting Current (max)	120mA/ 3.3V
Receiving Current (max)	11mA/ 3.3V
Battery Measurement Accuracy	± 0.1V
Low Voltage Threshold	3.2V

External Wire Characteristics

Wire Material	UL2547 28AWG
Wire Temperature (Max)	80°C
Wire Outer Diameter (Max)	2mm
Wire Length	1000mm (±5mm)
Wire Flame Resistance Rating	VW-1

Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm; AS923 16dbm; AU915 20dbm; CN470 19.15dbm; EU868 16dbm; KR920 14dbm; IN865 20dbm;
Receiving Sensitivity	-136 dBm (LoRa, Spreading Factor=12, Bit Rate = 293bps) -121 dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Build-in antenna
Communication Distance	10 km (Visible linear obstacle-free transmission distance, actual transmission distance depending on the environment.)

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Data Transfer Rate	0.3kbps ~ 50kbps
Modulation	LoRa / FSK (Note: choose one of them)
Supportable LoRaWAN Frequency	EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510 (Note: The frequency band is optional and needs to be configured before shipment.)

Physical

Dimension	L: 112 mm x W: 88.19 mm x H: 32 mm
Weight	141g
Environment Humidity Range	<90 %RH (No condensation)
Operating Temperature	-20°C to 55 °C
Storage Temperature	-40°C to 85 °C