Wireless Reed Switch Open / Close Detection Sensor

Wireless Sensor Network Based on LoRa Technology

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Description

The device is equipped with a reed sensor, which can be used to detect the status of the door and window. Through the built-in wireless module, it can achieve wireless alarm and other functions. It uses the SX1276 wireless communication module.

Feature

- Compatible with LoRaWAN
- Simple operation and setting
- 2 ER14505 lithium batteries in parallel power supply (3.6V / section)
- IP Rating: Main part-IP65 / IP67 (Optional), sensor- IP67
- Compatible with LoRaWAN™ Class A
- The base is attached with a magnet that can be attached to a ferromagnetic material object
- Frequency hopping spread spectrum
- Configuration parameters can be configured via a third-party software platform, data can be read and alerts can be set via SMS text and email (optional)
- Applicable to third-party platforms: Actility/ThingPark, TTN, MyDevices/Cayenne
- Low power consumption and long battery life
- 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 variety models at different configurations.

Application

- Doors and windows
- Production line tracking
- Objects to be detected open / close status

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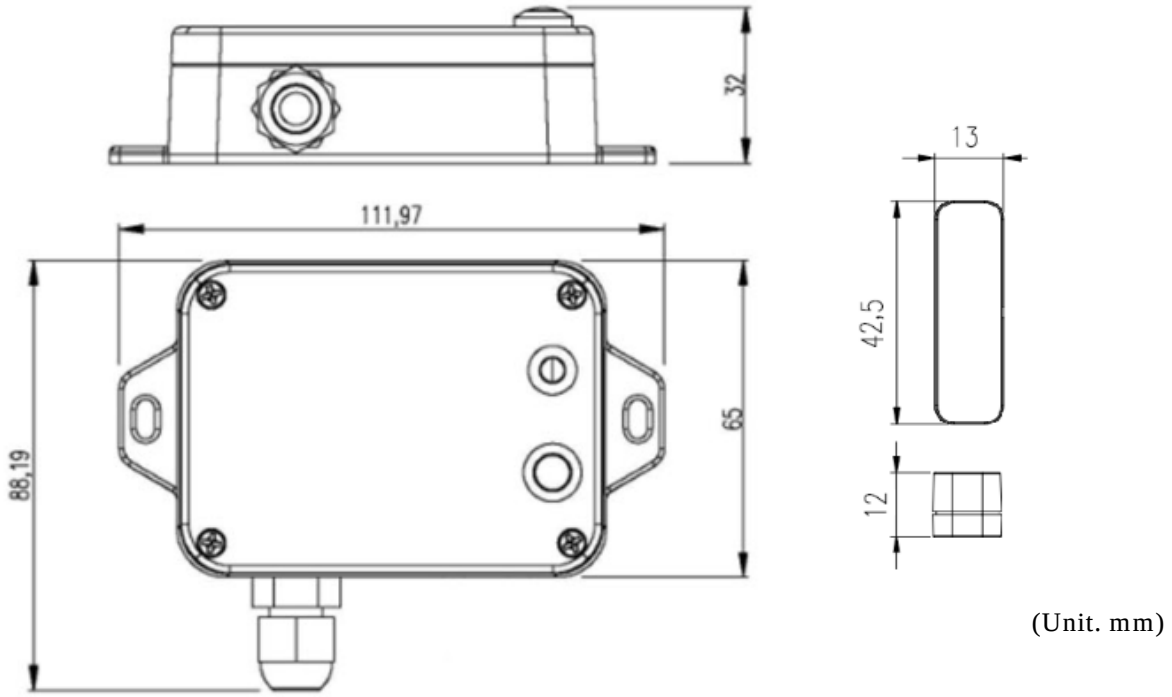
Technical Specification



(Unit. mm)

Electric

Input Power	2 x 3.6V ER14505 AA lithium batteries
Standby Current	20uA
Wake up Current	6.3mA@3.3V
Receiving Current (max)	11mA @3.3V
Transmitting Current (max)	120mA/3.3V
Battery Voltage Measurement Accuracy	±0.1V
Low Voltage Threshold	3.2V

* Specific electrical characteristics may vary depending on the power supply voltage.

Reed Switch Sensor

Sensor Case Size	L:43mm*W:13mm*H:12mm
Sensor Characteristic	Inside the magnetic range, it is at on state (conducting). When out of the magnetic range, it is at off state (non-conducting). Sensing distance inside magnetic range is 2cm.
External Cable Length	1 meter

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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, AS923-1,AS923-2,AS923-3,IN865-867,CN470-510 (Note: optional, to be done in the factory configuration)

Physical

Dimension	Main Part: L: 112mm*W: 65mm*H: 32mm
Weight	141g
Environment Temperature Range	-20℃ to 55℃
Environment Humidity Range	< 90% RH (No condensation)
Storage Temperature	-40℃ to 85℃