

Wireless Emergency Button R312A Data Sheet

Wireless Sensor Network Based on LoRa Technology



R312A

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Wireless Emergency Button

General Description

The R312A is an emergency button switch device that detects the closing or opening signal of the emergency button switch and sends an alarm signal to the gateway for processing. It uses the SX1276 wireless communication module.

Principle of Operation

The emergency button switch is a switch that is activated when an emergency is needed. This device uses a tact switch that is easy to operate and easy to carry. When the emergency button switch is pressed, the IO port of the module (the 19th pin of U1) detects a low level, and when the emergency button switch is released, the IO port of the module KEY1 (the 19th leg of U1) A high level was detected.

Example Applications

- Emergency button switch device
- Fire alarm
- Other

Features of NETVOX Sensors

- Wireless range of 10 km *1
- 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

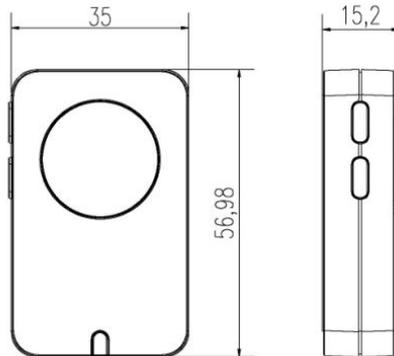
At this website, users can find battery life time for varier models at different configurations.

- 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

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Technical Specifications

Electric

Input Power	2pcs 3.0V CR2450 button battery
Working Voltage	DC 2.4V~3V
Standby Current	13uA/3.0V
Transmitting Current (max)	120mA/3.0V
Receiving Current (max)	11mA @3.0V
Low Voltage Threshold	2.4V
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 10km, 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 Emergency Button

Physical

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

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