

# Wireless Door Bell Button R312 Data Sheet

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Wireless Sensor Network Based on LoRa Technology



**R312**

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## Wireless Door Bell Button

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### General Description

The R312 is a wireless doorbell control device that detects the closing or disconnecting signal of the wireless doorbell switch and sends a wireless doorbell signal to the gateway for processing. It uses the SX1276 wireless communication module. The wireless doorbell does not require wiring and is simple and flexible to install.

### 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) detects a high level.

### Main Characteristics

- 2 sections of 3.0V CR2450 button batteries in parallel
- Apply SX1276 wireless communication module
- Simple operation, no wiring required

### Example Applications

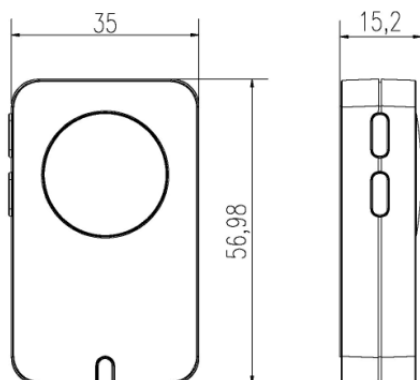
- Villa
- Office
- Hotel
- Apartment

### Features of NETVOX Sensors

- LoRaWAN™ Class A compatible
  - Frequency Hopping Spread Spectrum (FHSS)
  - Improved interference immunity
  - Improved power management for longer battery life
  - Battery Life\*2:
    - Please refer to web: [http://www.netvox.com.tw/electric/electric\\_calc.html](http://www.netvox.com.tw/electric/electric_calc.html)
    - At this website, users can find battery life time for varier models at different configurations.
  - 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 3V CR2450 button battery
Working Voltage	DC 2.4V~3V
Standby Current	14uA/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

Frequency Range	863MHz-928MHz 470MHz-510MHz
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

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**Wireless Door Bell Button**

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**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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