

Wireless Activity Detection Sensor R311FA Data Sheet

Wireless Sensor Network Based on LoRa Technology



R311FA

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Wireless Activity Detection Sensor

General Description

It can detect the sudden movement or vibration of the device and send an alarm signal to the gateway for processing. It uses the SX1276 wireless communication module.

Main Property

- 2 section 3V CR2450 button battery
- Acceleration sensor detection
- Adopt SX1276 wireless communication module
- Vibration intensity sensitivity: 62.5mg

Example Applications

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

Features of NETVOX Sensors

- 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

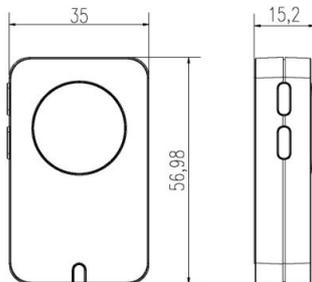
At this website, users can find battery life time for varier models at different configurations.

- 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

Wireless Activity Detection Sensor

Technical Specifications


Main Body

(Unit: mm)

Electric

Input Power	2pcs 3.0V CR2450 button battery
Working Voltage	DC 2.4V~3.0V
Standby Current	40uA /3.0V
Transmitting Current (max)	120mA / 3.0V
Receiving Current (max)	11mA / 3.0V
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	10 km (line-of-sight, 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 Activity Detection Sensor

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

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