
Wireless Activity Timer

Wireless Activity Timer R311FC Data Sheet

Wireless Sensor Network Based on LoRa Technology



R311FC

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Wireless Activity Timer

General Description

The device detects the duration of the movement or vibration (timekeeping) and sends the duration or timing information of the movement or vibration to the gateway for processing. The duration of the movement or vibration can be up to 1000 hours (theoretical value). Apply SX1276 wireless communication module.

Main Property

- 2 section 3V CR2450 button battery
- Acceleration sensor detection
- Adopt SX1276 wireless communication module

Example Applications

- Smart Home
- Industrial Equipment
- Others

Features of NETVOX Sensors

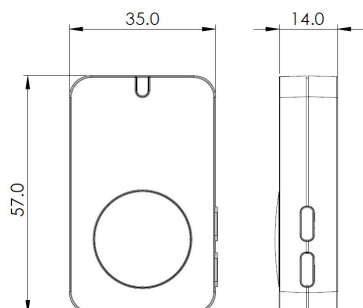
- Wireless range of 10 km *1
- LoRaWAN™ Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Improved power management for longer battery life
- Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Battery Life*2:
 - 5 years
 - (Conditions: ambient temperature 25 °C, 20 triggers/day, txpower = 20dBm, LoRa spreading factor SF = 10)
- 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



Main Body

(Unit: mm)

Electric

Input Power	2pcs 3.0V CR2450 button battery
Working Voltage	DC 2.4V~3.0V
Standby Current	42 uA /3.0V
Transmitting Current (max)	120 mA / 3.0V
Receiving Current (max)	11 mA / 3.0V
Battery Voltage Measurement Accuracy	$\pm 0.1V$

Frequency

TX Power	19dBm \pm 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

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Physical

Main Body Dimension	57mm x 35mm x 14mm
Weight	48.9 g
Operating Temperature	-20℃ ~ 55℃
Environment Humidity Range	<90% RH (No condensation)
Storage Temperature	-40℃ ~ 85℃

Contact:**NETVOX TECHNOLOGY CO., LTD.****TEL: 886-6-2617641****FAX: 886-6-2656120****E-mail: sales@netvox.com.tw****WEB: www.netvox.com.tw****NETVOX TECHNOLOGY CO., LTD (XIAMEN)****TEL: 86-592-5717188****FAX: 86-592-5717180****E-mail: dyx@netvox.com.cn****WEB: www.netvox.com.cn** **LoRa Alliance Member™** **zigbee alliance member**