

Wireless Asset Sensor R311D Data Sheet

Wireless Sensor Network Based on LoRa Technology



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Wireless Asset Sensor

General Description

The device is a simple positioning function (which can detect the position status of the device), periodically reports RSSI and SNR information to the gateway for processing and can locate the position status of the device according to the reported RSSI and SNR information, and adopts SX1276 wireless communication module.

Main Property

- Compatible with LoRaWAN
- 2 sections of 3V CR2450 button battery power supply
- Report RSSI/SNR periodically
- Simple operation and setting
- Compatible with LoRaWAN™ Class A
- 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
- Improved power management for longer battery life

Battery Life:

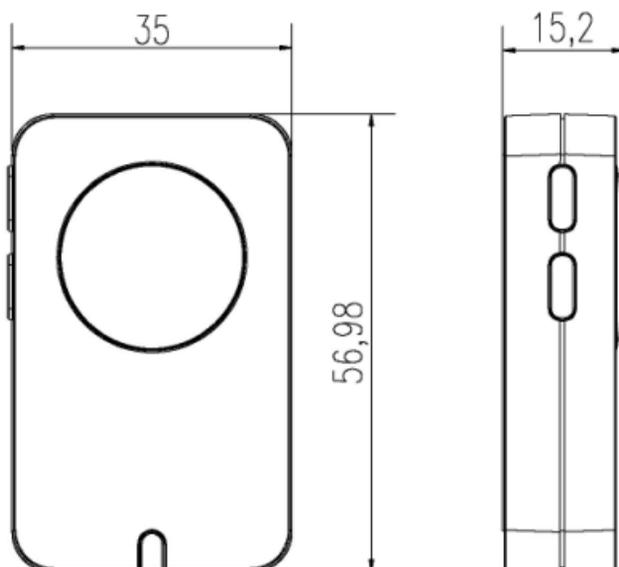
~Please refer to web: http://www.netvox.com.tw/electric/electric_calc.html

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



(Unit: mm)

Electric

Input Power	2pcs 3.0V CR2450 button battery
Working Voltage	DC 2.4V~3.0V
Standby Current	16uA / 3.0V
Transmitting Current (max)	120mA / 3.0V
Receiving Current (max)	11mA / 3.0V
Battery Voltage Measurement Accuracy	±0.1V

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Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
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) Configured before shipment

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