Multi-Sense Sensor

Wireless Sensor Network Based on LoRa Technology

R31508

Data Sheet

Introduction

R31508 is a comprehensive detection device with temperature and humidity, PIR, tilt detection, Digital Output, and dry contact input.

The radio transmission of R31508 is based on LoRa long-distance technology. According to the required behavior and state, it can transmit information and data to the server, and can directly transmit and connect to the central system of the programmable alarm system.

The sensors used are reliable, accurate, and can detect multiple applications.R31508 has the advantages of durability, beautiful appearance, multi-function integration, low power consumption, and convenient installation and use.
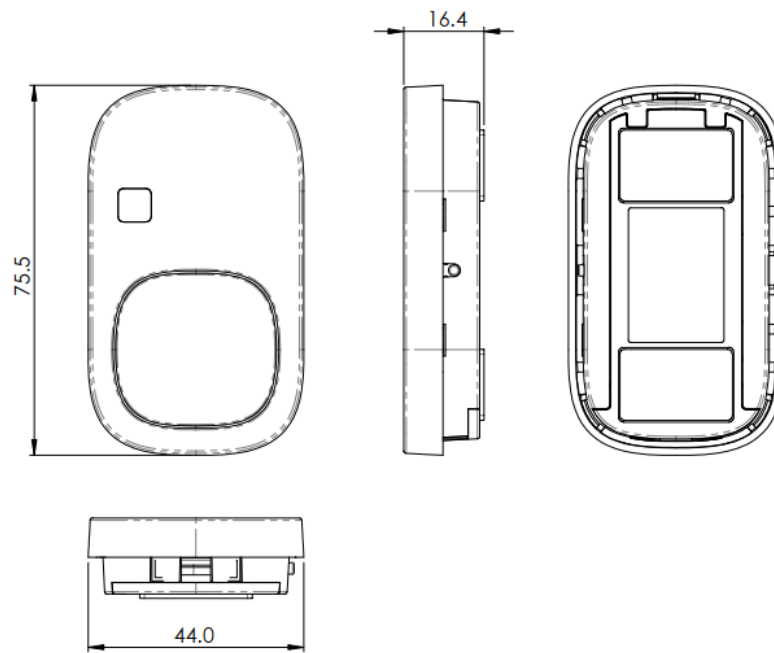
Main Characteristic

➢ Adopt SX1262 wireless communication module

➢ 2 x 3.0V CR2450 button batteries in parallel

➢ Compatible with LoRaWAN™ Class A

➢ Frequency hopping spread spectrum (FHSS)

➢ Applicable to the third-party platforms: Actility/ThingPark, TTN, MyDevices/Cayenne

➢ Low power consumption and long battery life

➢ Battery life is determined by the sensor reporting frequency and other variables, please refer to http://www.netvox.com.tw/electric/electric_calc.html on this website, users can find the battery life of various models in different configurations.

Application

➢ Security system

➢ Villas

➢ Office

➢ Hotels and apartments

➢ Schools, shopping malls and supermarkets

➢ Others

Dimension

Main body

(75.5mm x 16.4mm x 44mm)

The Port Types

The type of R31508 must be configured according to the rules.

Left	Center	Right
Dry contact input	/	Digital Output

Electrical Characteristics

---Electric---

Power Supply	2* 3V CR2450 button batteries connected in parallel (The capacity of a single CR2450 battery is 620mah, subject to the actual shipment)
Operating Voltage Range	2.3V to 3V
Battery Low Voltage Alarm	2.4V
Sleep Current	21uA/3.0V
Battery Measurement Accuracy	± 0.1V

*The specific electrical characteristics will vary depending on the supply voltage

---PIR Sensor---

Sleep Current Value	9.5uA
Detectable Angle	80 ° horizontally and 55 ° vertically
Detectable Range	3m to 5m

---Temperature and Humidity Sensor---

Temperature Measurement Range	-20°C to 55°C
Temperature Measurement Accuracy	±1°C
Humidity Measurement Range	0% RH to 100% RH
Humidity Measurement Accuracy	±7%RH

---Tilt Sensor---

Conversion Angle	45±5 degrees
Contact Resistance	Less than 10 ohms
The Insulation Resistance	Greater than 100 megohms
Operating Temperature	-40°C to 85 °C
Installation Type	Suitable for PCB at vertical state

---Frequency---

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm; AS923 16dbm; AU915 20dbm; CN470 19.15dbm; EU868 16dbm; KR920 14dbm; IN865 20dbm;
Receiving Sensitivity	-123 dBm (Frequency deviation=5kHz,Bit Rate=1.2kb/s)
Antenna Type	Spiral antenna
Communication Distance	10 km(Visible linear obstacle-free transmission distance, actual transmission distance depending on the environment.)
Data Transfer Rate	0.6kbps ~ 300kbps
Modulation	FSK
Supportable LoRaWAN Frequency	EU863-870, US902-928, AU915-928, KR920-923, AS923-1, AS923-2, AS923-3, IN865,CN470-510 (Note: The frequency band is optional and needs to be configured before shipment.)

---Physical---

Operating Temperature Range of R315 Host Body	-20°C to 55 °C
Environment Humidity Range	<90 %RH (No condensation)
Storage Temperature	-40°C to 85 °C

More Combinations

Please refer to this file:

http://www.netvox.com.tw/download/R315_combination.xlsx