

Wireless Resistance Temperature Detector

Wireless Sensor Network Based on LoRa Technology



Copyright©Netvox Technology Co., Ltd.

This document contains proprietary technical information which is the property of NETVOX Technology and is issued in strict confidential and shall not be disclosed to others parties in whole or in parts without written permission of NETVOX Technology.

The specifications are subjected to change without prior notice.

Introduction

P718B is connected to one-way PT1000 platinum thermal resistance and the collected data will be shown in other devices such as the third-party platform.

Main characteristic

- Adopt SX1276 wireless communication module
- One-way PT1000 platinum thermal resistance detection
- Temperature range of -40 °C to 200°C
- 2 section of ER14505 battery in parallel (AA SIZE 3.6V / section)
- Host protection level IP65/IP67 (optional)
- The base is attached with a magnet that can be attached to a ferromagnetic material object
- Compatible with LoRaWAN™ Class A
- Frequency hopping spread spectrum technology
- Configuration parameters can be configured through a third-party software platform
- Applicable to third-party platforms: Actility / ThingPark, TTN, MyDevices / Cayenne
- Low power consumption and long battery life

Note*:

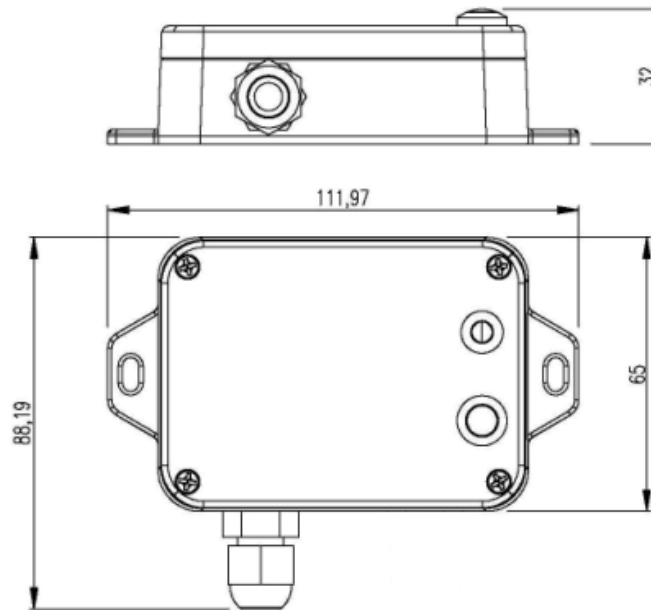
Battery life is determined by the sensor reporting frequency and other variables, please refer to http://www.netvox.com.tw/electric/electric_calc.html

On this website, users can find battery life of various models in different configurations.

Application

- Temperature measuring equipment
- Thermal system equipment

Dimension



Electric

R718B

Input Power	2 x ER14505 AA lithium batteries (3.6V 2400mah/section)
Operating Voltage	DC 3.1V~3.65V
Battery Life	5 years (Conditions: ambient temperature 25 °C, 15 min report once, TX power = 20dBm, LoRa spreading factor SF = 10)
Standby Current	23uA
Wakeup Current	9.94mA (Typical value) Wakeup current range 0.8mA-20 mA * When not transmitting /receiving LoRa data)
Low Battery Voltage Threshold	3.2V
Battery Measurement Accuracy	±0.1V

Module-R100H

Wake-up Current	0.8mA - 8mA@3.3V
RF Receiving Current (max)	11mA/3.3V
RF Transmitting Current (max)	120mA/3.3V

*Specific electrical characteristics will vary depending on the power supply voltage

 Wireless Resistance Temperature Detector

Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
Power Output	US915 20dbm; AS923 16dbm; AU915 20dbm; CN470 19.15dbm; EU868 16dbm; KR920 14dbm; IN865 20dbm;
Receiving Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate = 293bps); -121 dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Built-in antenna
Communication Distance	Up to 10 km (visible linear obstacle-free transmission distance, actual transmission distance depends on the environment)
Data transfer Rate	0.3kbps to 50kbps
Modulation System Mode	LoRa/FSK (Note: choose one of them)
Supportable LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510 (Note: The frequency band is optional and needs to be configured before shipment)

PT1000 platinum thermal resistance specification

PT1000 Temperature Range	-40~200°C
Lead Length	2m (default)
Measurement Accuracy	± 0.5°C from -20°C ~ 55°C, ± (0.15+0.002t)+1.5 °C from -40°C ~ 20°C or 55°C~ -200°C,
Probe Specifications	1: Probe diameter 5mm, needle probe 15cm (316 stainless steel) 2: Probe diameter 5mm, round head probe 15cm (316 stainless steel). 3: Probe diameter 5mm* length 100+60mm L-type probe (316 stainless steel) Choose one of the above probe specifications.
Wiring	4-wire system
Protection Level	IP67
ROHS Standard	Meet ROHS standards

Wireless Resistance Temperature Detector

Physical

Host Body Dimension	L: 112 mm*W: 88.19 mm*H: 32 mm
Host Body Weight	About 141g
Ambient Temperature Range	-20 °C to 55°C
Ambient Humidity Range	<90% RH (no condensation)