

Wireless 2-Gang Resistance Temperature Detector

Wireless Sensor Network Based on LoRa Technology



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Introduction

P718B2 is connected to two-way PT1000 platinum thermal resistance and the collected data will be shown in other devices such as the third party platform.

Main characteristics

- Adopt SX1276 wireless communication module
- 2- way PT1000 platinum thermal resistance detection
- R718B2 can detect the temperature range: $-40^{\circ} \sim 200^{\circ}$
- 2 sections of ER14505 battery AA Size (3.6V / section) parallel power supply
- Host protection level IP65/ IP67 (optional)
- The base is equipped with a magnet that can be attached to the iron 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

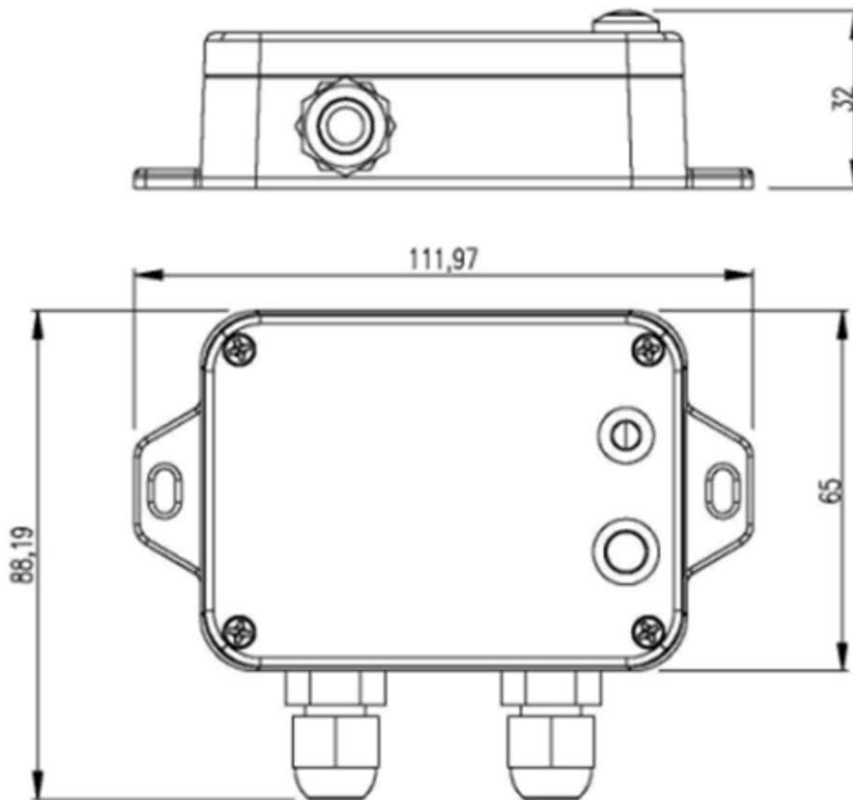
On this website, users can find battery life of various models in different configurations.

Application

- Temperature measuring equipment
- Thermal system equipment
- Food industry

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Dimensions



Electric

Power Supply	2 ER14505 lithium batteries (3.6 V, 2400 mAh /section) in parallel The specifications are subject to actual shipment.
Operating Voltage Range	3.1V-3.65V
Battery Life	Battery life are about 5 years (condition: ambient temperature 25 ° C, report once every 15 min, txpower = 20 dBm, SF = 10)
Standby Current	24uA
Wakeup Current	Wakeup current range 0.8mA-20mA * When not transmitting /receiving LoRa data
Low Battery Voltage Threshold	3.2V
Battery Measurement Accuracy	± 0.1V

Wireless 2-Gang Resistance Temperature Detector**Module-R100H**

Wakeup Current	0.8mA - 8mA @3.3V
RF Receiving Current	11mA @3.3V
RF Emission Current	120mA @3 .3 V

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

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	LoRa: 0.3kbps~50kbps FSK: 1.2kbps~300kbps
Modulation	LoRa/FSK (Note: choose one of them)
Supportable LoRaWAN Band	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)

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PT1000 platinum thermal resistance specifications

PT1000 Temperature Range	-40 - 200°C
Measurement Accuracy	<p>The host body and the external PT1000 are in the same temperature range: Temperature Range: $0^{\circ}\text{C} \leq t \leq 55^{\circ}\text{C}$, Accuracy: $\pm 0.5^{\circ}\text{C}$</p> <p>The host body and the external PT1000 are in different temperature ranges: Temperature Range T1: $0^{\circ}\text{C} \leq T1 \leq 55^{\circ}\text{C}$ (Host body) Temperature Range T2: $-40^{\circ}\text{C} \leq T2 < 0^{\circ}\text{C}$ (PT1000) Accuracy: $\pm \{(0.15 + 0.002* T2)+1\}^{\circ}\text{C}$</p> <p>Temperature Range T1: $0^{\circ}\text{C} \leq T1 \leq 55^{\circ}\text{C}$ (Host body) Temperature Range T2: $55^{\circ}\text{C} < T2 \leq 200^{\circ}\text{C}$ (PT1000) Accuracy: $\pm \{(0.15 + 0.002* T2)+0.3\}^{\circ}\text{C}$ * t, T1, T2 refers to temperature</p>
Lead Length	2m (default)
Probe Specifications	<p>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.</p>
Wiring	4-wire system
Protection Level	IP65/ IP67 (optional)
ROHS Standard	Meet ROHS standards

Physical characteristics

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