Wireless Temperature Sensor
PT1000 Clamp Probe

Wireless Network Based on LoRa Technology

R718BC Datasheet

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Introduction

R718BC is a wireless temperature sensor that can measure temperature from -50 to 150℃. With its clamp probe, users can fix it on the surface and easily measure the temperature of a tube.

Features

- SX1276 wireless communication module
- PT1000 RTD with clamp probe
- Temperature detection: -50 to 150℃
- 2* ER14505 lithium batteries in parallel
- IP65 / 67 (main body)
- Magnetic base
- Compatible with LoRaWANTM Class A
- Frequency spread spectrum technology
- Applicable to third-party platforms: Actility / ThingPark, TTN, MyDevices / Cayenne
- Low power consumption and long battery life

Note: Please visit http://www.netvox.com.tw/electric/electric_calc.html for more information of battery lifespan.
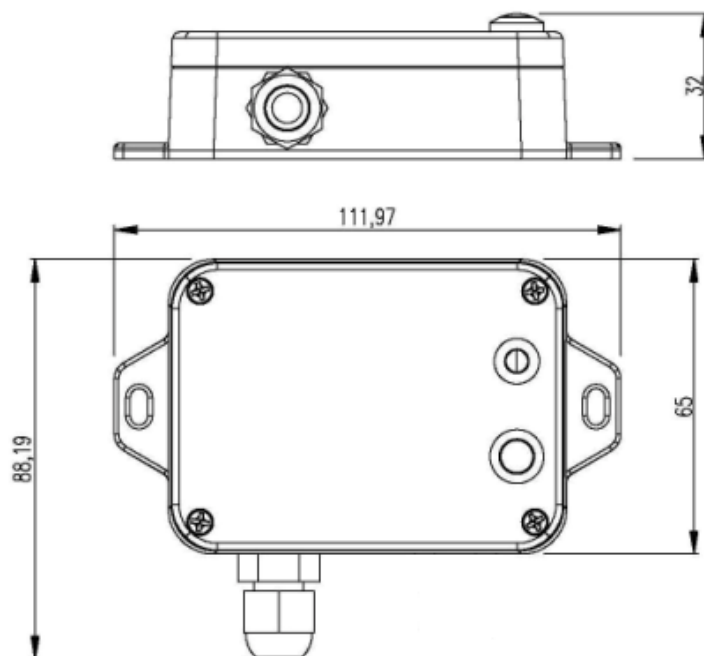
Applications

- Temperature Detection
- Thermal System Equipment

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Dimensions

▼ Main body: 112mm (L) x 88.19mm (W) x 32mm (H)

▼ Clamp Probe

Clamp Probe
(304 stainless steel)

21 – 38mm

Cable
(Length: 2m ± 10mm)

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Electrical Specifications

Power Supply	2* ER14505 AA 3.6V 2400mAh lithium batteries in parallel
Operating Voltage	3.1V – 3.65V
Battery Lifespan	5 years (conditions: ambient temperature 25°C, report every 15 minutes, TX power = 20dBm, LoRa spreading factor SF = 10)
Wake-up Current	9.94mA (typical value) 0.8mA – 20mA (without transmitting /receiving LoRa data)
Low Voltage Alarm	3.2V
Battery Measurement Accuracy	±0.1V

R100H Module

Wake-up Current	0.8mA – 8mA @3.3V
RF Receiving Current	11mA @3.3V
RF Transmitting Current	120mA @3.3V

Note: The electrical specifications may vary due to the power supply voltage.

PT1000 Clamp Probe

Measurement Range	-50°C ≤ T ≤ 150°C
Accuracy	± 3°C
Cable Length	2m
Dimensions	Ø: 21 – 38mm
Wiring	2-wire connection
Protection	IP67
Certification	RoHS

Note: Please reach out to our sales reps for more clamp sizes.

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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	Built-in antenna
Communication Range	10km (line of sight) Note: The actual transmission distance depends on the environment.
Data Transfer Rate	0.3kbp–50kbps (LoRa); 1.2kbps–300kbps (FSK)
Modulation	LoRa / FSK Note: One modulation method is required.
Available LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923-1, AS923-2, AS923-3, IN865-867, CN470-510 Note: optional and need to be configured before shipment

Physical Properties

Dimensions	112mm (L) x 88.19mm (W) x 32mm (H)
Ambient Temperature	-20°C – 55°C
Ambient Humidity Range	<90%RH (no condensation)