

# Wireless 2-Gang Thermocouple Sensor Type R



## R718CR2 Data Sheet

**Copyright©Netvox Technology Co., Ltd.**

This document contains proprietary technical information which is the property of NETVOX Technology. It shall be maintained in strict confidence and shall not be disclosed to other parties, in whole or in part, without written permission of NETVOX Technology. The specifications are subject to change without prior notice.

---

## Wireless 2-Gang Thermocouple Sensor - Type R

---

### Introduction

This equipment is used to detect temperature of the object and medium which thermocouple is contacted. It uses SX1276 wireless communication module.

### Features

- SX1276 wireless communication module
- 2 ER14505 batteries AA size in parallel (3.6V / section)
- R-type thermocouple: IP60
- Magnetic base
- Thermocouple detection
- LoRaWAN™ Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- Third-Party online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email (optional)
- Available third-party platforms: Actility/ThingPark, TTN, MyDevices/Cayenne
- Improved power management for longer battery life

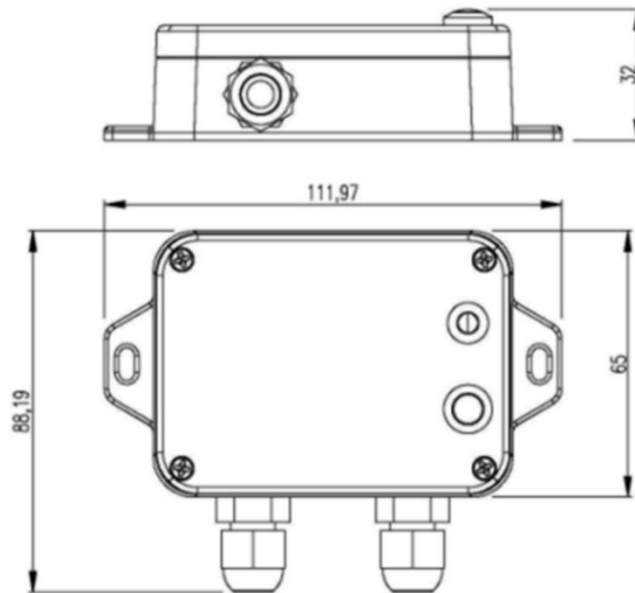
Note: Please visit [http://www.netvox.com.tw/electric/electric\\_calc.html](http://www.netvox.com.tw/electric/electric_calc.html) for more information about battery lifespan.

### Applications

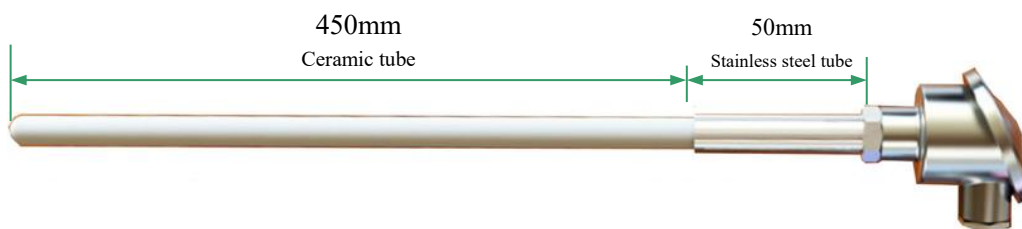
- Temperature Measuring
- Thermal system Equipment

Wireless 2-Gang Thermocouple Sensor - Type R

Dimensions



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



R-type thermocouple: 500mm

## Wireless 2-Gang Thermocouple Sensor - Type R

### Electrical Specifications

Input Power	2 x 3.6V ER14505 AA size lithium batteries (3.6V2400mah/section)
Operating Voltage	3.1V – 3.65V
Battery Life	4.8 years (conditions: ambient temperature 25 °C, 15 min report once, txpower = 20dBm, LoRa spreading factor SF = 10)
Standby Current	40uA
Wakeup Current	7.33mA (typical value); 0.8mA–20 mA (without 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

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

### R-Type Thermocouple

Measurement Range	$0^{\circ}\text{C} \leq t \leq 1400^{\circ}\text{C}$
Measurement Accuracy	$\pm 1.5^{\circ}\text{C}$ ( $0^{\circ}\text{C} \leq T_2 \leq 600^{\circ}\text{C}$ ); $\pm 0.0025 * T_2^{\circ}\text{C}$ ( $600^{\circ}\text{C} < T_2 \leq 1400^{\circ}\text{C}$ ) Note: (1) Temperature range of the main body: $0^{\circ}\text{C} \leq T_1 \leq 55^{\circ}\text{C}$ . (2) $T_1$ : the temperature of the main body; $T_2$ : temperature of the thermocouple
Wire Length	2m
Wire Material	Platinum rhodium
Probe Length	500mm (customizable)

## Wireless 2-Gang Thermocouple Sensor - Type R

### 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	10km (line of sight) Note: The actual transmission distance depends on the environment.
Data Transfer Rate	0.3kbps–50kbps (LoRa); 1.2kbps–300kbps (FSK)
Modulation Method	LoRa/FSK Note: One modulation method is required.
Available Frequency	EU863-870, US902-928, AU915-928, KR920-923, AS923-1, AS923-2, AS923-3, IN865-867, CN470-510 Note: Optional, configured before shipment

### Physical Properties

Dimensions	Main Body: 112mm (L) x 88.19mm (W) x 32mm (H)
Environment Temperature Range	-20°C–55°C
Environment Humidity Range	<90% RH (No condensation)
Storage Temperature	-40°C–85°C