

Wireless 2-Gang Thermocouple Interface For T/K/R Type



R730CK2 / R730CT2 / R730CR2 Data Sheet

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Wireless 2-Gang Thermocouple Interface For K/T/R Type

Introduction

This equipment is used to detect temperature of the object and medium which thermocouple is contacted. It can be connected to two thermocouples for testing. It uses SX1276 wireless communication module.

R718CX2 can be connected according to requirements: type K (R730CK2), type T thermocouple (R730CT2), type R thermocouple (R730CR2).

The collected data is displayed in the gateway.

Main Characteristic

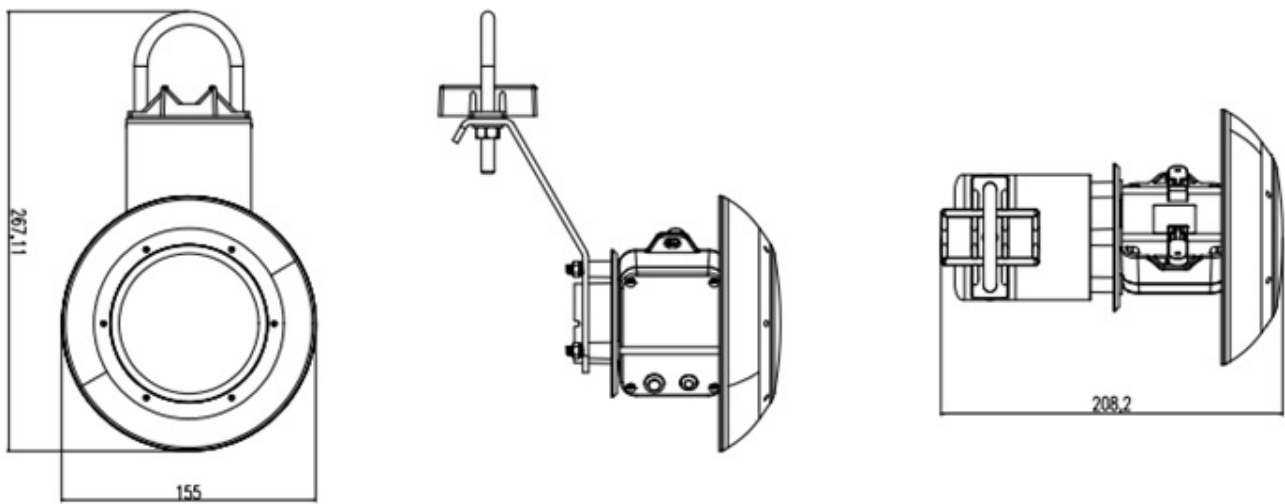
- Apply SX1276 wireless communication module
- 2-cell rechargeable NiMH batteries AA SIZE (1.2V / section) series power supply
- Main body IP rating IP65/ IP67
- External thermocouple sensor IP rating:
 - Type K thermocouple IP60
 - Type T thermocouple IP65
 - Type R thermocouple IP60
- Thermocouple 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 platform: Actility/ThingPark, TTN, MyDevices/Cayenne
- Improved power management for longer battery life
- Battery Life:
 - Please refer to web: http://www.netvox.com.tw/electric/electric_calc.html
 - At this website, users can find battery lifetime for varier models at different configurations
 - *1. Actual range may vary depending on environment
 - *2. Battery life is determined by sensor reporting frequency and other variables

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Application

- Temperature Measuring
- Thermal system Equipment

Technical Specification



Unit. mm

Electric

Input Power	2-cell rechargeable NiMH batteries AA SIZE (1.2V / section) series power supply
Working Voltage Range	2.3VDC~3VDC
Sleeping Current	21uA
Transmitting current (max)	130mA/3V (Signal transmitting)
Low Voltage Threshold	2.3VDC

* Specific electrical characteristics may vary depending on the power supply voltage.

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Solar Panel and NiMH Battery Specifications

Solar Panel Specification	5W / 4VDC
Nickel-metal Hydride Battery Specifications	Two-section rechargeable Ni-MH battery AA SIZE (1.2V / section) series power supply, capacity recommended 800mah.
NiMH Battery Charging Current	80mA

Thermocouple Characteristic

Measurement Accuracy	Measurement error caused by the wire: $\cong 2^{\circ} \text{C}$
	Thermocouple basic error limit:
	Type K thermocouple: $-40\sim 375^{\circ}\text{C} \pm 1.5^{\circ}\text{C}$
	Type T thermocouple: $-40\sim 125^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$
Thermocouple Wire Length	1m

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	Up to 10 km, the actual transmission distance depends on the environment
Data Transfer Rate	0.3kbps ~ 50kbps
Modulation Method	LoRa/FSK (Note: choose one of them)
Available Frequency	EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510(Note: Configured before shipment)
Communication Range	Up to 10 km, the actual transmission distance depends on the environment,

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Physical

Dimension	267.11mm*155mm*208.2mm
Environment Temperature Range	-20°C to 55°C
Environment Humidity Range	<90% RH (No condensation)
Storage Temperature	-40°C to 85°C