

# Wireless Air Pressure and Temperature Sensor

## R720C Data Sheet

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Wireless Sensor Network Based on LoRa Technology



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## Wireless Air Pressure and Temperature Sensor

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### Introduction

R720C is a wireless communication device that detects ambient air pressure and temperature.

R720C detects ambient air pressure and temperature and transmits the detected data to other devices via a wireless network for display. The device adopts the SX1276 wireless communication module.

### Main Characteristic

- Apply SX1276 wireless communication module
- 2 ER14505 batteries AA size (3.6V / section) in parallel
- Ambient air pressure, temperature
- The base is attached with a magnet that can be attached to a ferrous object
- Protection class IP65
- Compatible with LoRaWAN™ Class A
- Frequency hopping spread spectrum
- Configuration parameters can be configured via a third-party software platform, data can be read and alerts can be set via SMS text and email (optional)
- Applicable to the 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](http://www.netvox.com.tw/electric/electric_calc.html).

On this website, users can find various types of batteries in different configurations.

### Application

- Smart home
- Atmospheric Detection
- Other

**Wireless Air Pressure and Temperature Sensor**

**Dimension**

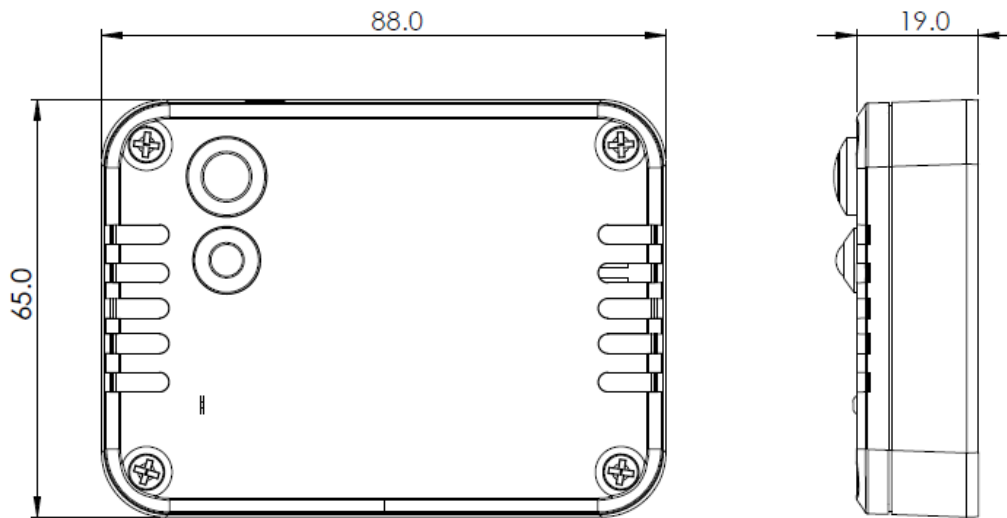


Fig. 1 Host Body Dimension: 88mm x 65mm x 19mm

**Electric**

Power Supply	2 sections ER14505 lithium batteries (3.6V, 2400mAh/ section) in parallel
Battery Lifetime	Battery lifetime 5 years (Condition: ambient temperature 25°C, report once every 15min, TX power = 20dBm, LoRa spreading factor SF = 10)
Standby Current	24uA
Wake-up Current	6.3mA@3.3V
Low Voltage Threshold	3.2V
RF Receiving Current	11mA @3.3V
RF Transmitting Current	120mA @3.3V

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

## Wireless Air Pressure and Temperature Sensor

### Pressure Sensor

Air Pressure Measurement Range	300-1100hPa
Air Pressure Measurement Accuracy	±1.5hPa (950~1050 hPa, 0~40 °C)
Temperature Measurement Range	-40°C~55°C
Temperature Measurement Accuracy	±1°C @25°C

### Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm AS923 16dbm AU915 20dbm CN470 19.15dbm EU868 16dbm KR920 14dbm IN865 20dbm
Receive Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps ) -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Built-in antenna
Communication Distance	10km (visible linear obstacle-free transmission distance, actual transmission distance depending on the environment)
Data Transfer Rate	0.3kbps ~ 50kbps (LoRa) 1.2kbps ~ 300kbps (FSK)
Modulation Method	LoRa/FSK (Note: choose one of them)
Supportable LoRaWAN Band	EU863-870,US902-928,AU915-928,KR920-923,AS923-1, AS923-2,AS923-3,IN865-867,CN470-510 (Note: optional, to be done in the factory configuration)

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**Physical**

Dimension	L 88mm* W 65mm* H 19mm
Host Body Weight	About 113g
Ambient Temperature Range	-40°C ~ 55°C
Storage Temperature Range	<90%RH (No condensation)
Ambient Humidity Range	-40°C ~ 85°C