

Wireless CO Sensor

Wireless Sensor Network Based on LoRa Technology



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Introduction

R718PA1 is a wireless communication device for detecting the concentration of CO in the air. The main unit and the sensor are connected through the RS485 interface, and the detected data is transmitted to other device through the wireless network for display. It adopts SX1276 wireless communication module.

Main Characteristic

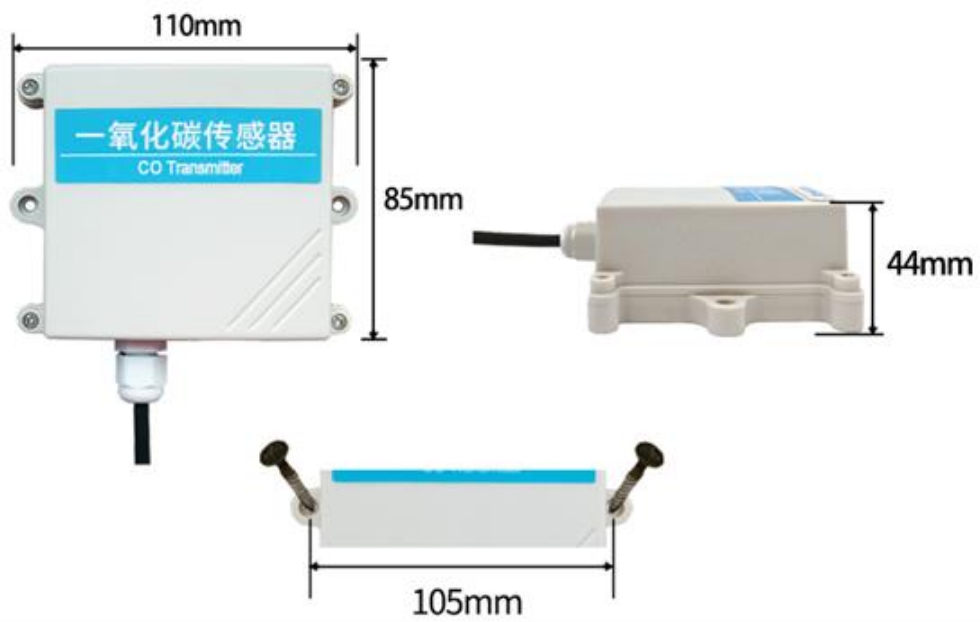
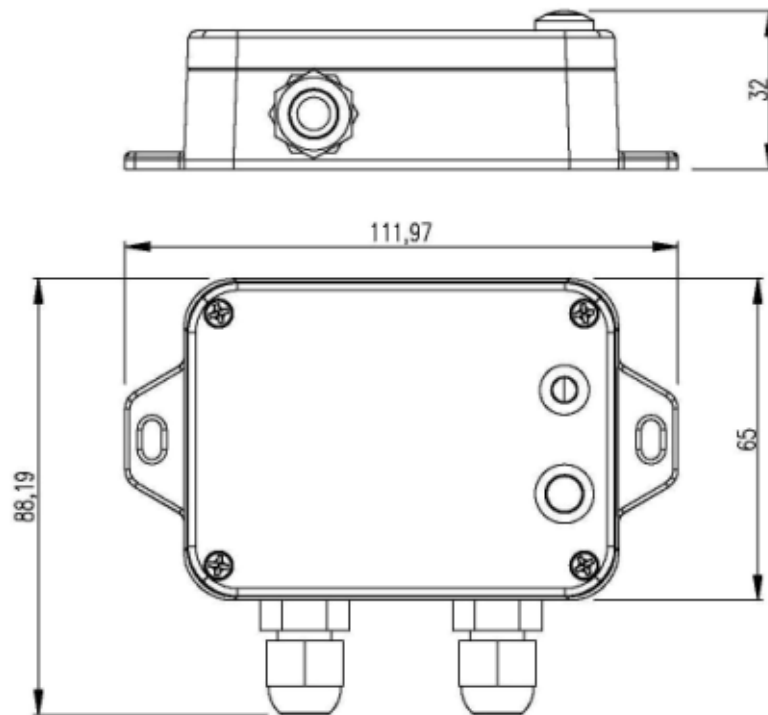
- Adopt SX1276 wireless communication module
- DC 12V adapter power supply
- Main unit protection class IP65/IP67 (optional)
- Main unit adopts PG7 waterproof fixed connector
- The base is attached with a magnet that can be attached to a ferromagnetic material object
- RS485 communication
- Compatible with LoRaWAN™ Class A
- Frequency hopping spread spectrum technology
- Configuring parameters and reading data via third-party software platforms, and set alarms via SMS text and email (optional)
- Applicable to third-party platforms: Actility / ThingPark, TTN, MyDevices / Cayenne

Application

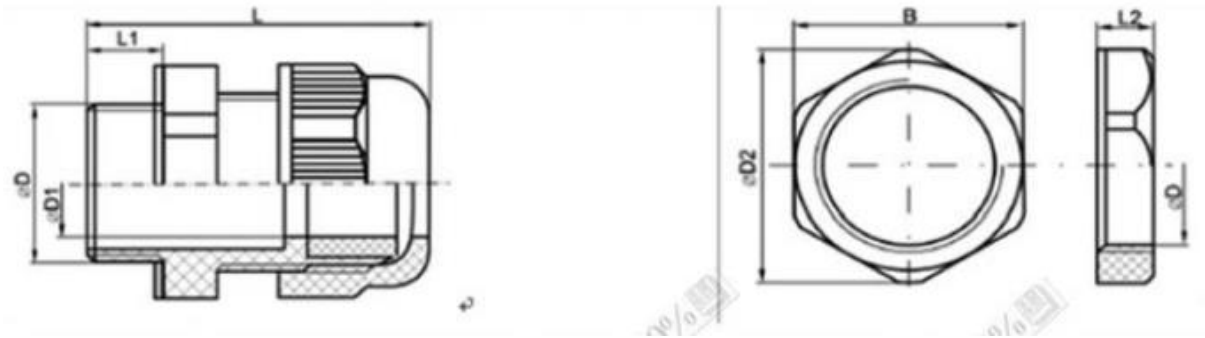
- CO concentration detection

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Dimension



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Model	D(mm)	B(mm)	D2(mm)	L(mm)	L1(mm)	L2(mm)
M12	11.8	17.8	19.5	30.3	8	5

Electric

Power supply	DC 12V adapter power supply
Working current	<100mA (external sensor)

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

CO Sensor Parameter

Power supply	+12 VDC
CO Sensor Dimension	110mm*85mm*44mm
CO Measurement Range	0- 2000ppm
CO Measurement Method	Electrochemical sensor
CO Measurement Accuracy	< ± reading 3% (@25°C)
CO Measurement Resolution	0.5ppm
Response Time	≤ 50s
Service Life	In the air > 5 years
Operating Pressure Range	Standard atmospheric pressure ±10%

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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 System Mode	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)

Physical

Dimension	Main part - L: 112 mm*W: 88.19 mm*H: 32 mm CO Sensor - L: 110 mm*W: 85 mm*H: 44mm CO Sensor Waterproof (white) - D: 19.5mm*L: 30.3mm - M12*1.5 (Screw Thread)
Main unit weight	About 160g
Ambient Temperature Range	- 20°C to 55°C
Ambient Humidity Range	<90% RH (no condensation)
Storage Temperature Range	- 40 °C ~ 85 °C