Wireless CO Sensor

R718PA1 Datasheet

Wireless Sensor Network Based on LoRa Technology

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Wireless CO Sensor

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.
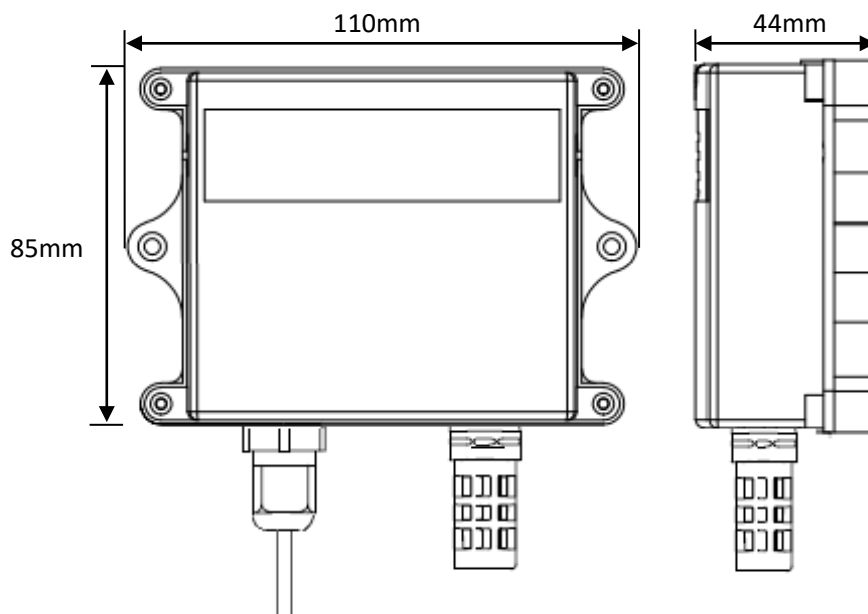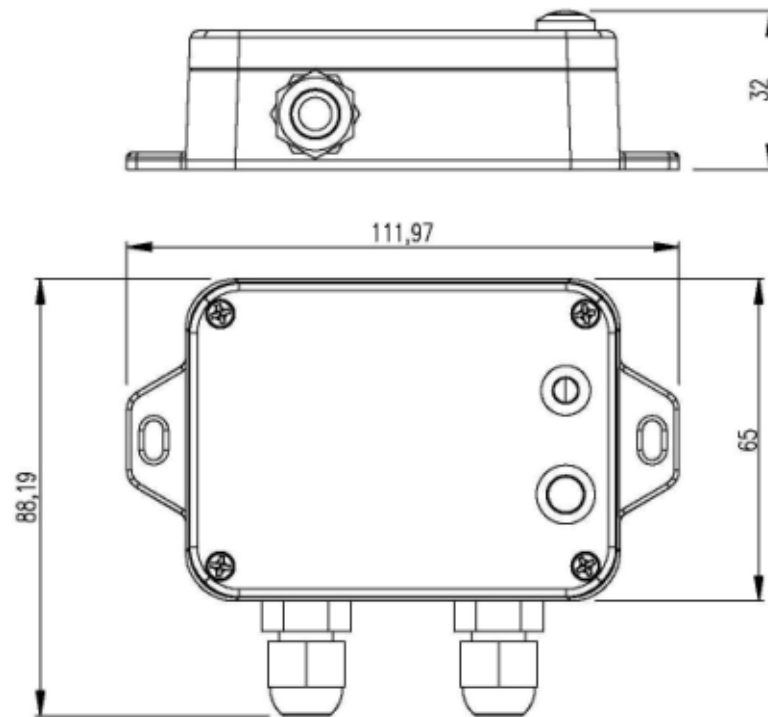
Features

- Adopt SX1276 wireless communication module

- DC 12V adapter power supply

- Protection level: Main body IP65 / IP67 (optional), CO Sensor IP54

- The base is attached with a magnet that can be attached to a ferromagnetic material object

- RS485 communication

- Compatible with LoRaWAN^{TM} Class A

- Frequency hopping spread spectrum technology

- Applicable to third-party platforms: Actility / ThingPark, TTN, MyDevices / Cayenne

Applications

- CO Concentration Detection

Wireless CO Sensor

Dimensions

Wireless CO Sensor

Electrical Specifications

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

Note: The electrical specifications may vary depending on the power supply voltage.

CO Sensor Parameter

CO Measurement Range	0 to 2000ppm
CO Measurement Resolution	1ppm
CO Measurement Accuracy	±10%
Operating Temperature	-20° to 50°
Operating Humidity	15% to 90%RH (No condensation)
Operating Pressure	90 to 110k Pa

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 (line of sight)

	Note: The actual transmission distance may vary depends on the environment.
Data Transfer Rate	LoRa: 0.3kbp–50kbps FSK: 1.2kbps–300kbps
Modulation System Mode	LoRa / FSK Note: One modulation method is required.
Supportable LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923-1, AS923-2, AS923-3, IN865, CN470-510 Note: optional, to be configured before shipment

Physical Properties

Dimensions	Main part - L: 112 mm*W: 88.19 mm*H: 32 mm CO Sensor - L: 110 mm*W: 85 mm*H: 44mm
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 to 85 °C