

Wireless SO₂ Sensor

Wireless Sensor Network Based on LoRa Technology



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Wireless SO₂ Sensor

Overview

The R718PA6 is a wireless communication device that detects SO₂ concentration in ambient air. The main unit and SO₂ sensor communicate via the RS485 connection interface, and it sends detected data to the other equipment via wireless network compliance LoRa™ wireless communication protocol standards.

Main characteristics

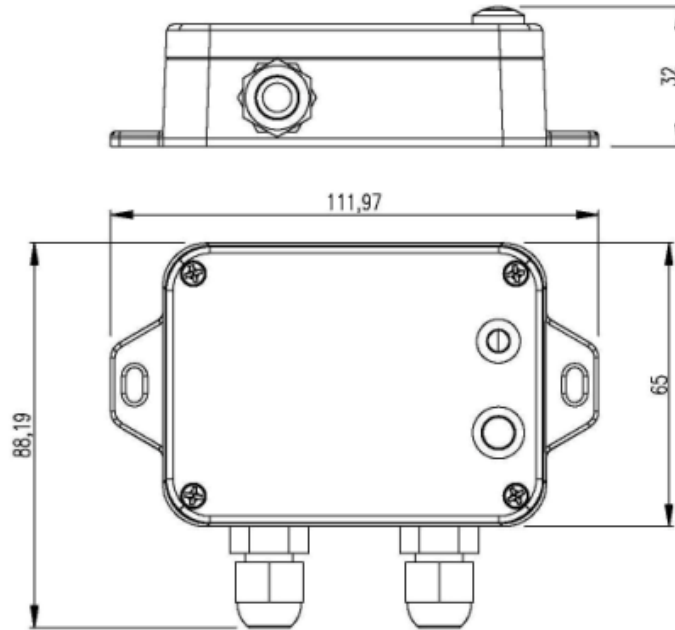
- Adopt SX1276 wireless communication module
- DC 12V adapter power supply
- Main unit protection class IP65 / IP67 (optional)
- The base is equipped with a magnet that can be attached to the iron object.
- RS485 communication
- Compatible with LoRaWAN™ Class A
- Frequency hopping spread spectrum technology
- Configuration parameters can be configured through third-party software platforms
- Data can be read and alerts can be set via SMS text and email (optional)
- Applicable to third-party platforms: Actility / ThingPark, TTN, MyDevices / Cayenne

Application scenario

- SO₂ concentration detection

Wireless SO₂ Sensor

Dimensions



Electrical characteristics

Power Supply	DC 12V adapter power supply
Working Current	< 70mA (external sensor)

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

SO₂ Sensor

SO ₂ Measurement Range	0 to 20ppm
SO ₂ Measurement Method	Electrochemical sensors
SO ₂ Measurement Accuracy	≤ ± 3 % of reading (@25 ° C)
Response Time	Usually less than 15 seconds
Communication Port	RS485

Wireless SO₂ Sensor
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	0.3kbps ~ 50kbps (LoRa) 1.2kbps ~ 300kbps (FSK)
Modulation	LoRa / FSK (Note: You can choose one of them)
Supportable LoRaWAN Band	EU863-870,US902-928,AU915-928,KR920-923,AS923-1,AS923-2,A S923-3,IN865-867,CN470-510 (Note: optional, to be done in the factory configuration)

Physical

Main Body Size	L: 112 mm*W: 88.19 mm*H: 32 mm,
Ambient Temperature Range	-20 °C to 55 °C
Main Unit Weight	About 160g
Ambient Humidity Range	<90% RH (no condense)
Storage Temperature Range	-40 °C to 85 °C