

Wireless H2S Sensor

Wireless Sensor Network Based on LoRa Technology



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Introduction

R718PA4 is a wireless communication device that detects the H₂S concentration in the air. The main unit and H₂S sensor are connected with RS485 interface, and the detected data is transmitted to other equipment for display via the wireless network. It adopts the wireless communication method which conforms to the LoRaTM protocol standard.

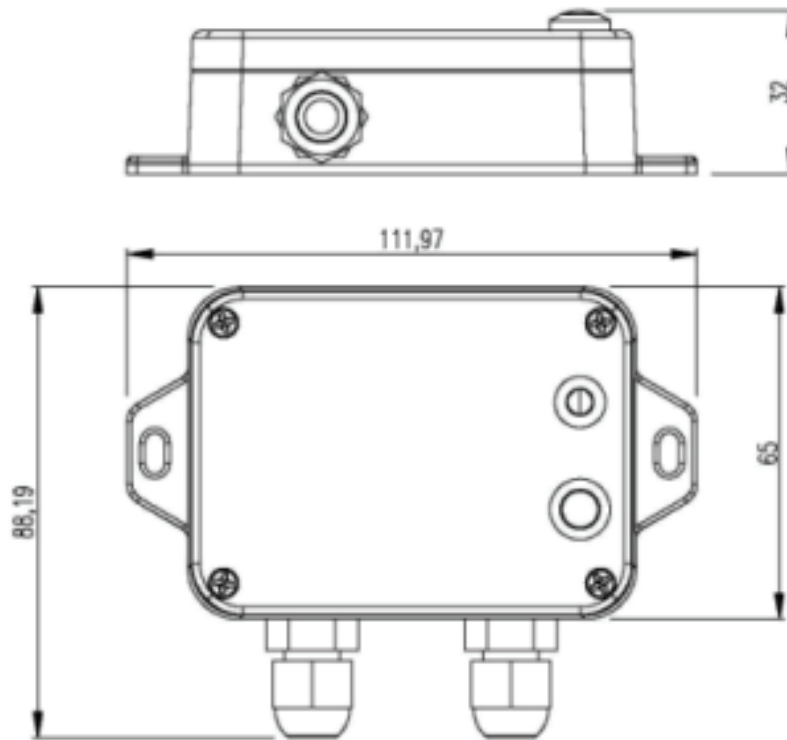
Main Characteristic

- Adopt SX1276 wireless communication module
- DC 12V adapter power supply
- Protection class IP65 (Main body)
- The base is equipped with a magnet that can be attached to the iron object.
- RS485 communication
- Compatible with LoRaWANTM Class A
- Frequency hopping spread spectrum technology
- Configuration parameters can be configured through third-party software platforms
- Applicable to third-party platforms: Actility / ThingPark, TTN, MyDevices / Cayenne

Applications

- H₂S concentration detection
- Other

Dimensions



Electric

Power Supply	DC 12V adapter power supply
Operating Current	$\leq 60\text{mA}$ (external sensor)

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

H2S sensor parameter

Power Supply	+ 10V - +24 VDC
H ₂ S Measurement Range	0- 100 ppm
H ₂ S Measurement Method	Electrochemical sensors
H ₂ S Accuracy	$\leq 2\%$ maximum range
Response Time	≤ 30 seconds
H ₂ S Resolution	< 0.1ppm
Service Life	In the air > 2 years
Communication Port	RS485

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	-136dB (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	L: 112 mm*W: 88.19 mm*H: 32 mm,
Main Unit Weight	About 160g
Ambient Temperature Range	-20 °C ~ 55 °C
Ambient Humidity Range	<90% RH (No condensation)
Storage Temperature Range	- 40 °C ~ 85 °C