Wireless Noise Sensor

Wireless Sensor Network Based on LoRa Technology

Copyright©Netvox Technology Co., Ltd.

Introduction

R718PA7 is a wireless communication device that detects the noise. The main unit and the noise sensor communicate via the RS485 connection interface, and it sends detected data to the other equipment via wireless network with LoRa^{TM} wireless communication protocol standards.

Operating Principle

The module R100H (R100L) and the noise sensor communicate via RS485
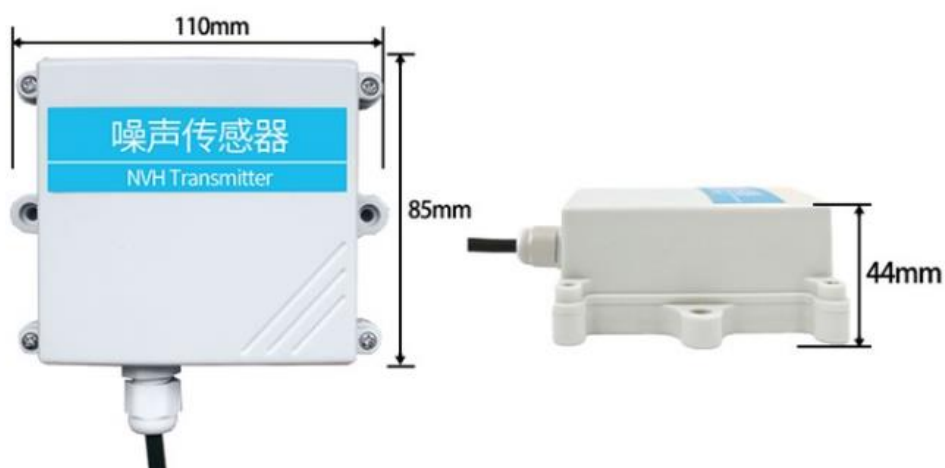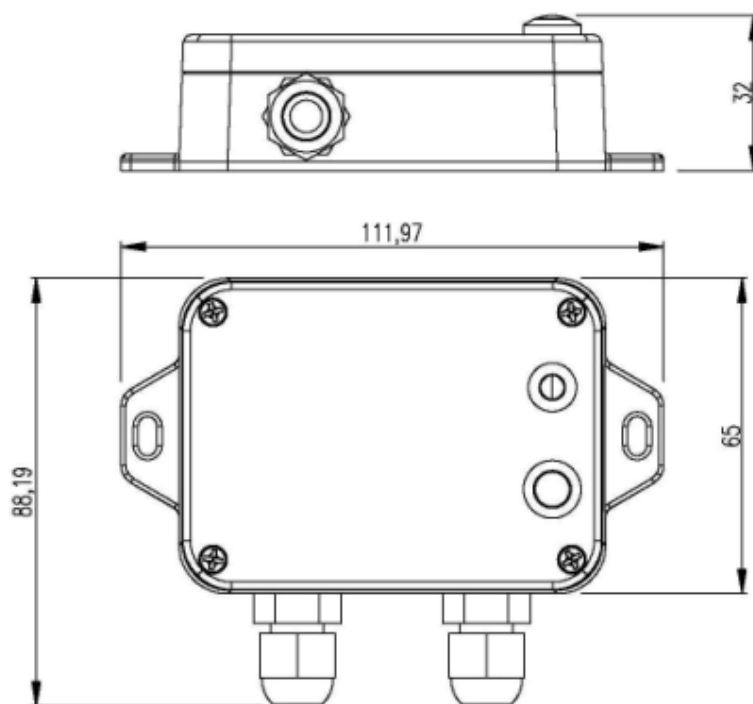
Main Characteristic

● Adopt SX1276 wireless communication module

● DC 12V adapter power supply

● Host body IP ratings: IP65/IP67 (option)

● The base is equipped with a magnet that can be attached to the iron object.

● RS485 communication

● Compatible with LoRaWAN^{TM} Class A

● Frequency hopping spread spectrum technology

● Configuring parameters and reading data via the third-party software platforms, and set alarms via SMS text and email (optional)

● Applicable to the third-party platforms: Actility / ThingPark / TTN / MyDevices / Cayenne
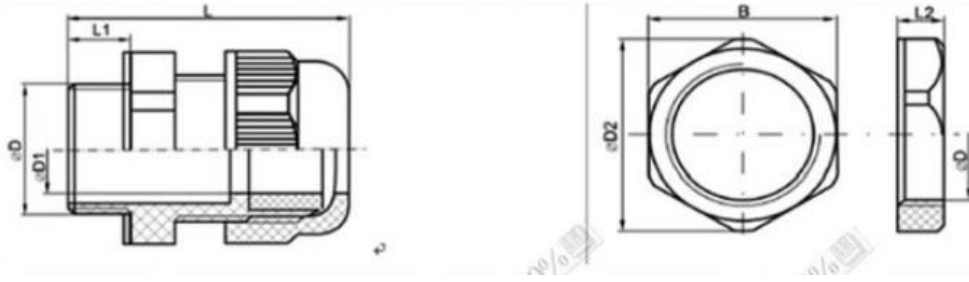
Application

● Noise level detection

netvox™

Wireless Noise Sensor

Dimension

Wireless Noise Sensor

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
Operating Current	<70mA (external sensor)

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

Noise Sensor Parameter

Power Supply	12V ~ 24 VDC
Operating Temperature	-20°C ～ 60°C
Operating Humidity	15%-90% (No condensation)
Noise Sensor Dimension	110mm*85mm*44mm
Power Consumption (max)	0.4W
Noise Sensor Measurement Range	30dB-130dB
Resolution	0.1db
Measurement Error	3% F.S
Response Time	≤2s
Weighting Curve	A-Weighting
Frequency Response	35Hz-20Khz
Communication Port	RS485

Wireless Noise Sensor

Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	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	0.3kbps to 50kbps
Modulation Method	LoRa/FSK (Note: choose one of them)
Supportable LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510 (Note: The frequency band is optional and needs to be configured before shipment)

Physical

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