Wireless Wind speed sensor/Wind direction sensor/ Temperature/Humidity Sensor

Wireless Sensor Network Based on LoRa Technology

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Introduction

RA0730 is equipped with wind speed sensor, wind direction sensor, and temperature and humidity sensor. It can detect and send the data of the wind speed, wind direction, temperature and humidity of the environment. It adopts a wireless communication method and conforms to the LoRa protocol standard. It can detect the four elements of the air.
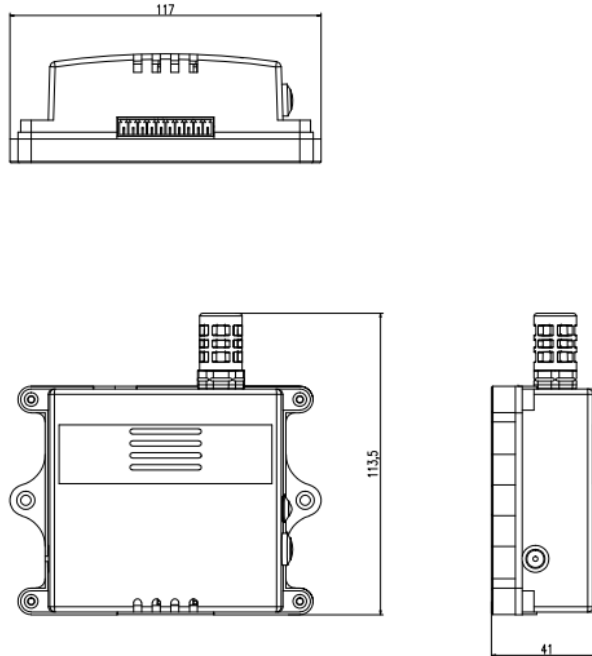
Main Feature

- Temperature and humidity detection
- Adopts SX1276 wireless LoRa chip
- Wind speed detection
- Wind direction detection
- IP rating: IP30 (main body)
- Compatible with LoRaWAN™ Class A
- Frequency hopping spread spectrum
- 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

- Temperature and humidity detection
- Wind speed detection / wind direction detection

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Dimension

Electric

Power Supply	DC adapter power supply (12V/1A）
Operating Current	<150mA

Temperature and Humidity Sensor Specification

Temperature Measurement Range	-20°C ~ 55°C
Temperature Measurement Accuracy	±0.8°C
Humidity Measurement Range	0%RH~100%RH
Humidity Measurement Accuracy	±4%RH @25°C

Wind Speed Sensor

Use Place	Outdoor
Model	JXBS-3001-FS (485 wind speed sensor)
Output Signal	RS485
Measurement	0-30m/s
Waterproof Type	Waterproof

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Wind Direction Sensor

Use Place	Outdoor
Model	JXBS-3001-FX (485 wind direction sensor)
Output Signal	RS485
Response Time	Less than 2 seconds
Waterproof Type	Waterproof
Warranty Period	Host Body: 2 years, Gas Probe 1 year

Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm AS923 16dbm AU915 20dbm CN470 19.15dbm EU868 16dbm KR920 14dbm IN865 20dbm
Receive Sensitivity	-136 dBm (LoRa, Spreading Factor=12, Bit Rate=293bps) -121 dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Built-in antenna
Communication Distance	10km (visible linear obstacle-free transmission distance, actual transmission distance depending on the environment)
Data Transfer Rate	0.3 kbps～50 kbps (LoRaWAN) 1.2 kbps～300 kbps (FSK)
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.)

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Physical

Dimension	117mm x 113.5mm x 41mm
Ambient Temperature Range	-20℃ ～ 55℃
Ambient Humidity Range	<90%RH (No condensation)
Storage Temperature Range	-40℃ ～ 85℃