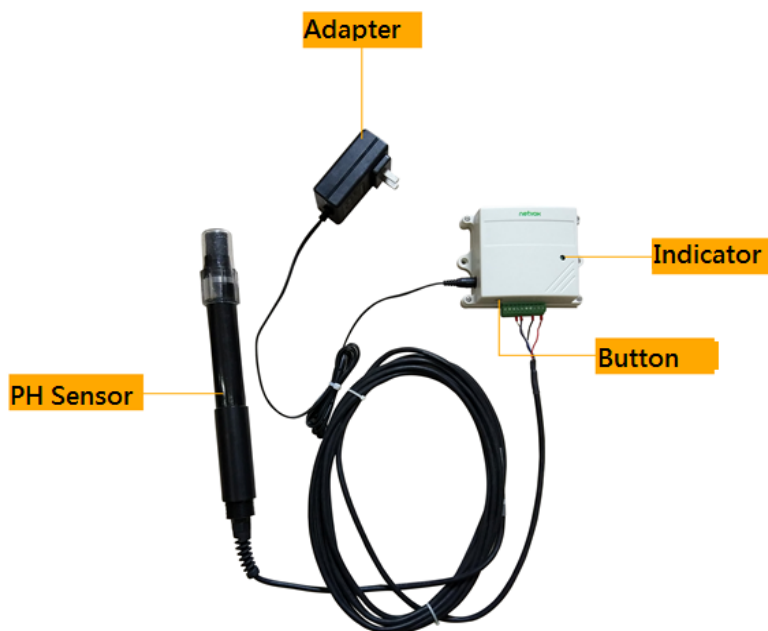


# Wireless PH Sensor

Wireless Sensor Network Based on LoRa Technology



RA0708

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## Wireless PH Sensor

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### General Description

RA0708 is a device for pH detection in water environment. It can detect and send environmental pH data. to data center. It is a wireless communication method. It adopts SX1276 wireless communication module.

### Example Applications

- PH detection
- Use SX1276 wireless communication module.

### Features of NETVOX Sensors

- Wireless range of 10 km <sup>\*1</sup>
- LoRaWAN™ compatible
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Over-the-air updates (future)
- Third-Party online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email (optional)
- Available third-party platform: Actility/ThingPark, TTN, MyDevices/Cayenne
- Uses SX1276 wireless communication module

\*1. Actual range may vary depending on environment.

\*2. Battery life is determined by sensor reporting frequency and other variables

## Wireless PH Sensor

### Electric

Power Supply	Adapter DC Power Supply (12V/1A)
Operating Current 1	40mA (no RF signal transmission)
Operating Current 2	80mA (with RF signal emission)

### PH Sensor

Operating voltage	12VDC-24VCD±10%
Operating temperature range	0-65°C
Range	0-14PH
Accuracy	±0.01PH
Working pressure	<0.2MPa
Temperature Compensation	Automatic Temperature Compensation (NTC)
Signal output	RS485
Wet material	PPR
Mounting Method	3/4" NPT Thread, Immersion Mount
Cable length	5m, other lengths can be customized
Calibration method	2-point calibration
Power Consumption	<0.5W
Protection class	IP68

### Frequency

TX Power	19dBm±1dBm
Rx Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps ) -121dBm (FSK,Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Build-in antenna
Communication Range	10 km (line-of-sight, the actual transmission distance depends on the environment)
Data Transfer Rate	0.3kbps~50kbps
Spread Technique	LoRa/FSK
Available Frequency	EU863-870 , US902-928 , AU915-928 , KR920-923 , AS923 , CN470-510 Configured before shipment

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## Wireless PH Sensor

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### Physical

Dimension	111mm*86mm*41mm
Operating Temperature Range	-20°C ~ 55°C
Operating Humidity Range	< 90%RH (no condensation)
Storage Temperature range	-40°C ~ 85°C
IP Rating	IP20 (Main body)

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