

## Wireless PH Sensor

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Wireless Sensor Network Based on LoRa Technology



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## Introduction

RA0708 is a device for PH and water temperature detection. It can detect the PH and water temperature of the water environment.

It adopts SX1276 wireless communication module.

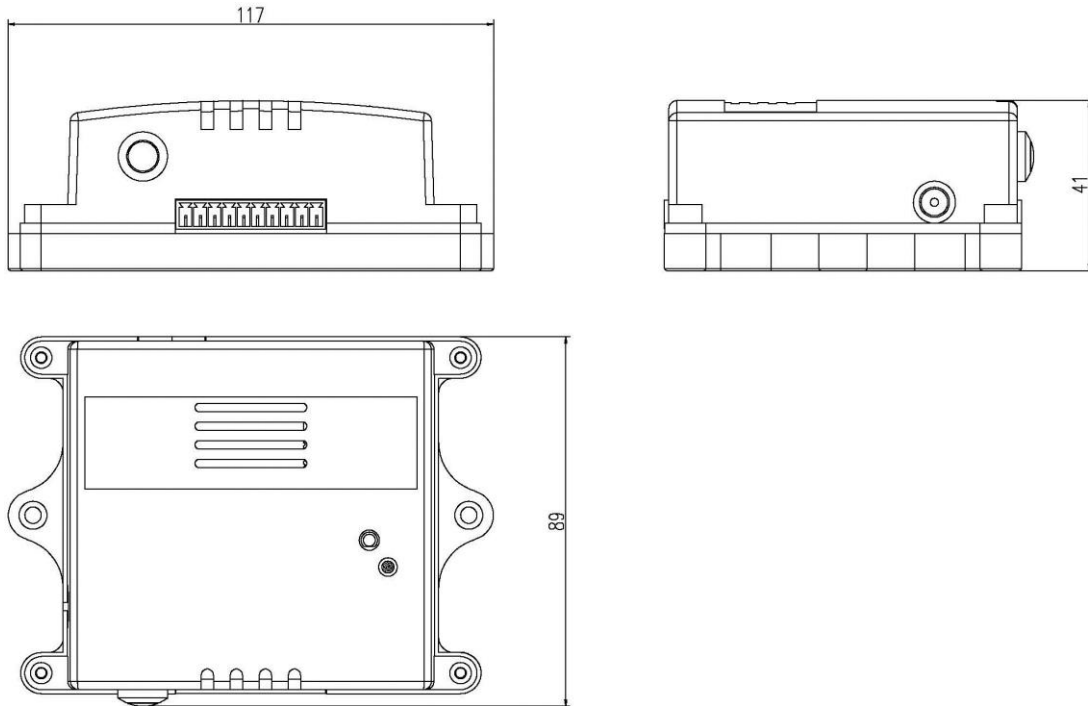
## Main Characteristic

- Based on LoRa™ wireless protocol
- PH value detection
- Water temperature detection
- Adopt SX1276 wireless communication module
- Compatible with LoRaWAN™ 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/ Cayenn

## Application Field

- PH detection
- Water temperature detection
- Other

**Dimension (The Host Body)**



**Electric**

Power Supply	DC12V/1A
Operating Current 1	40mA (no RF signal transmission)
Operating Current 2	80mA (with RF signal transmission)

**PH Sensor Parameter**

Operating Temperature Range	0 to 65°C
Working Voltage	12VDC-24VDC
Water Temperature Accuracy	±1.5% F.S.
PH Value Range	0-14PH
PH Resolution	0.01 PH
PH Value Accuracy	±0.3 PH

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Usable Pressure Range	<0.2MPa
Temperature Compensation	Automatic Temperature Compensation (NTC)
Signal Output	RS485
Wetted Part Material	PPR
Installation	Immersion mounting, 3/4 NPT thread
Cable length	5m, other lengths can be customized
Calibration method	Two-point calibration
Power Consumption	0.2W@12V
IP Grade	IP68

\*The bare 4 pin wiring terminal on PH sensor, please keep it dry.

**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	-121dBm (FSK,Frequency deviation=5kHz, Bit Rate=1.2kbps) -136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps)
Antenna type	Built-in antenna
Communication Distance	10km (visible linear obstacle-free transmission distance, actual transmission distance depending on the environment)
Data Transfer Rate	0.3kbps~50kbps
Modulation	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**

Host Body Dimension	Host body: 117mm*89mm*41mm
Ambient Temperature Range	-20°C ~ +55°C
Ambient Humidity Range	< 90%RH (No condensation)
Storage Temperature Range	-40°C ~ +85°C