



WLRI-523



Wireless pH Sensor

This specialized water pH/temperature sensor is factory calibrated and ready to use out of the box. Ideal to use indoor or outdoor facilities that are away from main building. 12VDC power required for operation. Wireless long-range signal makes it ideal for pool house, farmhouse, etc.

Features:



- Super Long Range Signal Penetration
- Easy Installation
- 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
- Interactive WatchNET IoT platform with dashboard, search and notification settings

Applications:

- Swimming pool pH level and temperature
- Agricultural water pH level
- Commercial laundry
- Aquariums pH/temperature
- Drinking water

Schematic Diagram:



Automating the manual test of water pH

Technical Specifications

Electrical	
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	
Alarm Sound Intensity	85dBm at 3m / 9.84ft
Operating temperature range	0 - 65°C / 32 - 149°F
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 / 16ft, other lengths can be custom
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	Built-in antenna
Communication Range	Up to 500m/0.310miles, the actual transmission distance depends on the environment*
Data Transfer Rate	0.3kbps~50kbps
Spread Technique	LoRa/FSK
Available Frequency	EU863-870,US902-928, Configured before shipment
Physical	
Dimension	111mm x 86mm x 41mm / 4.37" x 3.38" x 1.61"
Protection Class	Main Part IP40 / External sensor IP65
Environment Temperature Range	-20°C ~ 55°C / -4°F ~ 131°F
Environment Humidity Range	<90%RH (No condensation)
Storage Temperature	-40°C ~ 85°C / -40°F ~ 185°F

* Actual signal range may vary depending on the environment.

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