

# Ammonia Nitrogen Water Sensor

## WQS-NH3 Series



### Overview

Ammonia nitrogen is a common pollutant found in industrial, agricultural, and domestic wastewater. Ammonium nitrogen depletes dissolved oxygen in water bodies and leads to eutrophication. Ammonium ions are measured using the ion-selective method, which consists of a working electrode, a reference electrode, an ion-selective membrane, and an electrolyte. Only the ammonium ions to be measured can pass through the ion-selective membrane and undergo a charge change, generating a potential at the working electrode that is proportional to the ion concentration and a constant potential at the reference electrode. The transmitter is based on the Nernst equation, which measures the potential difference between the working and reference electrodes and converts it to the ammonia nitrogen concentration based on the principle of potentiometric measurement, independent of coloration and turbidity.



It is suitable for online and portable monitoring of municipal wastewater, domestic wastewater, agricultural wastewater, industrial wastewater, process control, nitrification treatment and aeration tanks, etc. It is suitable for integrated applications such as buoy monitoring, floating discharge monitoring and vessel monitoring.

### Main Features

- Quick measurement, the shortest measurement cycle is 1 second
- RS485 communication mode, can quickly connect the meter head, control the sensor
- IP68 protection grade, can be used in harsh environments
- Low power consumption, can be powered by battery, convenient for equipment deployment

### Specifications

Principle	Ion-selective electrode method	Pressure	1 bar
Dimension	φ25×226 mm	Installation	Submerged flow-through
Power requirements	DC+12 V ~ +24 V	Sample flow rate	250-500 mL/min
Operating temperature	2 to 45°C	Communication	RS485(Modbus RTU), Bluetooth

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### Parameter information

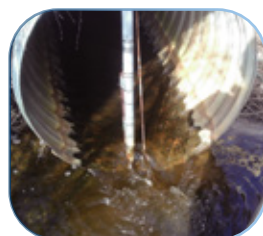
Parameter	Model No.	Range	Resolution	Accuracy
NH3-N	WQS-NH3	0-100mg/L,0-1000mg/L,0-2000mg/L	0.001mg/L	±3%F.S.
Temperature	WQS-NH3	0-50 °C	0.1°C	±1°C

Model	Description	IP rating	Application
WQS-NH3-S01	5 pole aviation plug with waterproof connection thread	IP65	
WQS-NH3-S11	Cable extending directly with waterproof connection thread	IP68	
WQS-NH3-P01	5 pole aviation plug	IP65	
WQS-NH3-P11	Cable extending directly	IP68	

### Application



Domestic sewage



Surface water,  
groundwater



Wastewater  
treatment process



Industrial  
Wastewater