

Full Spectrum Water Quality Monitor

ATE2300

Features

- Based on full-wavelength UV-Visible absorption spectroscopy and electrode methods, this sensor requires no chemical reagents, ensuring there is no secondary pollution during water quality monitoring.
- Testing Parameters include COD, BOD, turbidity, suspended solids, total phosphorus (TP), total nitrogen (TN), ammonia nitrogen, pH value, water temperature, and conductivity.
- Modular Design: Customers can select from various water quality monitoring parameter combinations, providing flexibility and customization for different applications.
- Advanced lightning and surge protection circuitry guarantees stable operation of the instrument under all weather conditions.
- Pump suction sampling: The sampling interval and duration can be customized based on actual needs, allowing for remote and unattended operation.
- RS485/NB-IoT/4G/5G data transmission: Seamlessly integrates with terminal water quality monitoring platforms for real-time data analysis and smart water quality management.
- Touchscreen interface: Featuring a large, user-friendly touch display for easy operation.

Description

The ATE2300 is a highly integrated extraction-type micro water quality monitoring station. It consists of a cabinet, sensor analysis unit, water intake unit, sample storage unit, and a data acquisition and transmission system. The water quality monitoring parameters can be customized according to the client's specific needs, with signal output supporting RS485, NB-IoT, 4G, 5G, and other data transmission methods, making it adaptable to various application scenarios.

As the development of ecological environment monitoring networks and the promotion of water quality grid monitoring progress, water environment automatic monitoring stations require denser deployment to meet the demands of pollution source tracing, water quality early warning, and river chief assessment in big data applications. The ATE2300 project is specifically developed to address the needs for high-density, high-frequency, and low-cost monitoring in environmental protection, water conservancy, or water utilities. The station features a small footprint, no need for land acquisition, flexible installation, short construction period, and low cost, enabling real-time online monitoring of multiple parameters.

Application

- Drinking Water Sources and Water Treatment Plants: Monitors standard five parameters, ammonia nitrogen, COD, blue-green algae, chlorophyll, oil in water, and more.
- Environmental Protection: Monitors standard five parameters, chlorophyll, blue-green algae, and ammonia nitrogen.
- Municipal Sewage: Monitors standard five parameters, ammonia nitrogen, and COD.
- Agriculture (Ecology, Aquaculture): Monitors standard five parameters, ammonia nitrogen, and COD.
- Industrial Discharge: Monitors standard five parameters, ammonia nitrogen, COD, hardness, and ions.



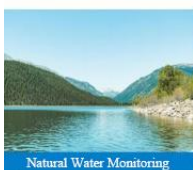
Wastewater Treatment Monitoring



Aquaculture Monitoring



Industrial Process Monitoring



Natural Water Monitoring



Surface Water Monitoring



Drainage Network Monitoring



Product data information is current as of publication data. Products conform to specifications per the terms of Optosky Standard warranty.

1. Parameter

Water Quality Monitoring Sensor					
Basic Measurement Parameters (Measurement Ranges Customizable)	Monitoring Parameter	Measurement Principle	Measurement Range	Resolution	Accuracy
	Chemical Oxygen Demand (COD)	Spectroscopy	0-500mg/L	0.1mg/L	±25%
	Total Phosphorus (TP)	Spectroscopy	0-10mg/L	0.1mg/L	±30%
	Total Nitrogen (TN)	Spectroscopy	0-100mg/L	0.1mg/L	±30%
	Ammonia Nitrogen	Spectroscopy	0-100mg/L	0.1mg/L	±25%
	Nitrate	Spectroscopy	0-50mg/L	0.1mg/L	±30%
	Nitrite	Spectroscopy	0-50mg/L	0.1mg/L	±30%
	BOD	Spectroscopy	0-50mg/L	0.1mg/L	±10%FS
	Turbidity	Spectroscopy	0-100NTU	0.1NTU	±5%FS
	TOC	Spectroscopy	0-100mg/L	0.1mg/L	±10%FS
	TSS	Spectroscopy	0-100mg/L	0.1mg/L	±5%FS
	Water Temperature	Thermocouple	0-50°C	±0.1°C	±0.5°C
Supported Additional Parameters (Measurement Ranges Customizable)	PH Value	Glass Electrode	0-14PH	±0.01PH	±0.05PH
	Conductivity	Conductivity Cell	0-5000μS/cm	1μS	±5%FS
	Dissolved Oxygen	Fluorescence Photometry	0-20mg/L	0.01mg/L	±5%FS
	Chlorophyll	Fluorescence	0-400ug/L	0.1μg/L	±5%FS
Whole Machine					
Power Supply System	Supports solar power and mains power supply. Lightning surge circuit design, safe and stable operation around the clock.				
Water Intake System	Single pipeline water intake and drainage design, equipped with one offline standby pipeline and pump. Filter water pumping module, prevents sediment entry. Self-priming booster unidirectional water pump, adjustable water intake volume, sampling intervals. Automatic drainage system and self-cleaning after measurement. Automatic sampling system, automatically samples when water quality exceeds standards for evidence collection.				
Self-Cleaning System	Single water intake, automatic cleaning before sampling.				
Data Acquisition System	Integrated water quality monitoring parameter module, customers can choose different sensor modules according to different measurement needs.				

Data Transmission System	RS485, 4G/5G, etc. transmission methods, interfacing with water quality monitoring platform.
Control System	Parameter setting and calibration functions integrated into a color touch screen with a English interface for easy operation, with the ability to query historical alarm records. At least one spare interface for future expansion.
Cabinet Dimensions	600*1000*1600cm
Cabinet Weight	≤100kg
Operating Voltage	24V DC
Rated Power	≤120W
Protection Level	IP54
Operating Temperature	0-50°C (with anti-freezing protection)

2. Accessories list

No.	Item	Quantity	Optional/Standard
1	Cabinet	1	Standard
2	Standard Host	1	Standard
3	Sampling Unit	1	Standard
4	Sample Retention Unit	1	Standard
5	Analysis Unit (ATE2000)	1	Standard
6	Analysis Unit (pH, Dissolved Oxygen, Chlorophyll, etc.)	1	Optional
7	Power Supply Unit	1	Optional
8	Water Intake Materials	1	Optional
9	User Manual	1	Standard