

Water quality analyzer



Introduction

Zhice Yunlian online water quality detector is capable of online monitoring of optional parameters. It integrates monitoring sensors as well as communication and storage modules, enabling fast and accurate recording of key parameters in water bodies.

The instrument supports the extension of multi-parameter water quality sensors, including but not limited to pH, dissolved oxygen (DO), electrical conductivity (EC), turbidity, temperature, ammonia nitrogen, etc. These can be combined and configured according to different requirements and applications. Historical data can be exported in .XLSX format.

The RS485 interface supports the MODBUS-RTU communication protocol, facilitating flexible communication and data transmission with PLC, DCS, configuration software, DTU and other equipment.

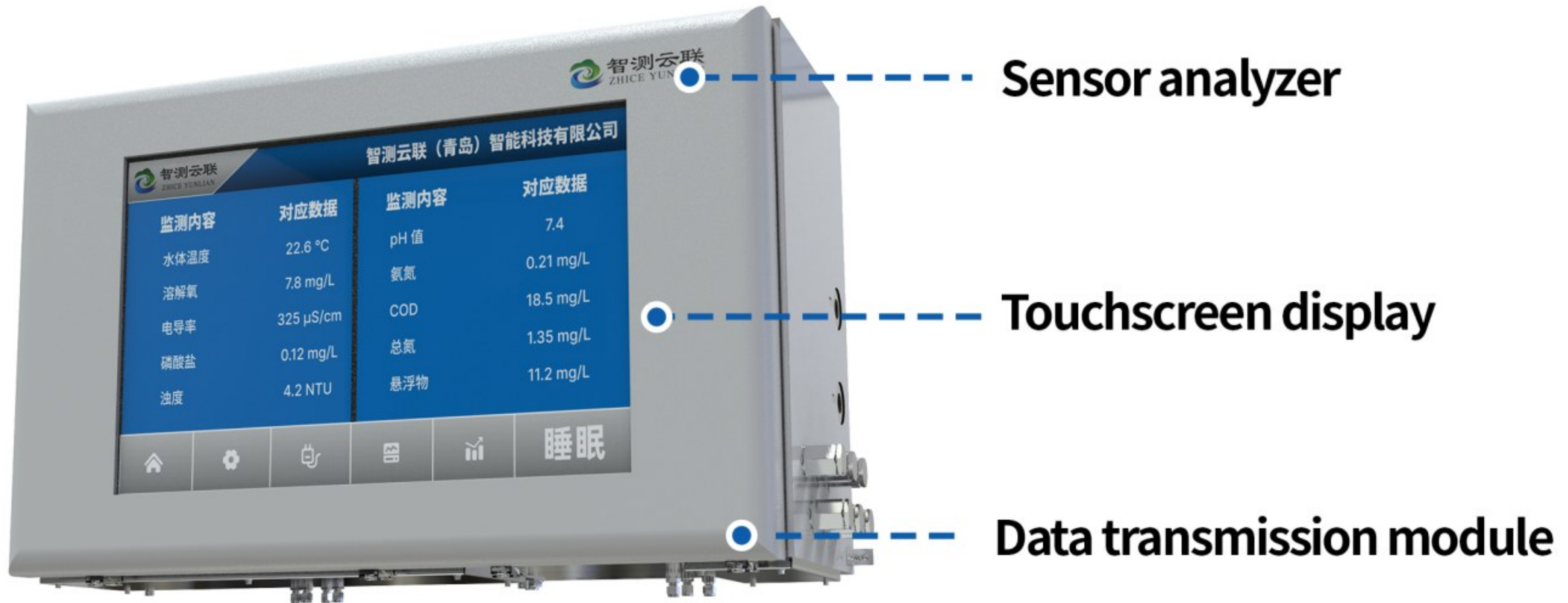
Application fields

Online multi-parameter water quality analyzers are widely used in the monitoring and control of various water bodies, including but not limited to the following fields: waterworks, groundwater monitoring, river and lake monitoring, marine monitoring, wastewater treatment, industrial production, and scientific research.

Note: Sensors must not be installed upside down or horizontally. They must be installed at an inclination angle of at least 15 degrees. The operating environment for water quality sensors: 0–50°C, pressure < 0.3 MPa.



Product structure



Various data transmission modes

Double-layer structure for preventing rain and snow





Sensor parameters

Sensor Type	Measuring Range	Accuracy
COD Sensor	0~500mg/L	±5%
PH Sensor	0~14pH	±0.1ph
Dissolved Oxygen Sensor	0~20mg/L	±2%
Turbidity Sensor	0~1000NTU	±3%
Electrical Conductivity Sensor	0~5000μS/cm	±1.5%
Ammonia Nitrogen Sensor	0~100mg/L	±10
ORP Sensor	-1500~+1500mV	±3mV
Water Hardness Sensor	0~1000mg/L	±10%
Residual Chlorine Sensor	0~20mg/L	±5%
Sludge Concentration Sensor	0~20g/L	±5%
Suspended Solids Sensor	0~2000mg/L	±5%
Oil-in-Water Sensor	0~40mg/L	±3%
Colority Sensor	0~2000Hazen	±5%
Salinity Sensor	0~2mg/L	±5%
Nitrate Nitrogen Sensor	0~100mg/L	±10%
Potassium Ion Sensor	0~100mg/L	±10%
Fluoride Ion Sensor	0~100mg/L	±10%
Chloride Ion Sensor	0~35000mg/L	±5%
Chlorophyll Sensor	0~400μg/L	±3%
Cyanobacteria Sensor	0~300Kcells/mL	±3%





Equipment specifications

Item	Details
Display Output	4.3-inch touch screen with LED high-brightness backlight, operable under direct sunlight
Power Supply	DC 12V
Power Consumption	Approx. 1W at 12V
Audio Output	Buzzer
Communication Protocol	Standard RS485 Modbus-RTU protocol, with master/slave transmission channel support
Main Material	ABS+PC composite material
Storage Temperature	-20°C to 70°C
Operating Temperature	-10°C to 50°C
Protection Grade	IP68 (Underwater sensor)
Dimensions	175mm (L) × 140mm (W) × 49mm (H)
Weight	Approx. 0.5kg





Introduction to the upper computer software

Function Category	Specific Description
Core Functions	Realize integrated management of data reception, storage, viewing and analysis in the PC standalone environment
Data Reception and Processing	1. Support data reception via serial port, as well as data processing and visual display 2. Compatible with communication methods such as JSON string and MODBUS485
Parameter Configuration	1. Allow independent setting of data storage time 2. Support custom collection time in MODBUS485 collection mode
Monitoring Parameter Management	Support users to independently add, delete and modify monitoring parameters, including information such as parameter protocols, names and icons
Data Processing Expansion	1. Equipped with data post-processing function 2. Support external running of JAVASCRIPT scripts



Introduction to Cloud Platform

Function Category	Specific Description
Architecture & Access Method	Adopts a CS architecture software platform, supporting direct access and observation via mobile phones and PC browsers without additional software installation
Account & Device Management	Supports multi-account and multi-device login, meeting the collaborative management needs of multiple users and terminals
Data Display Function	1. Provides dashboards for real-time data display and historical data display 2. Supports data curve analysis 3. Supports map display and device information viewing
Data Storage & Stability	Implements cloud data storage based on cloud servers, featuring stability, reliability, easy scalability and load balancing
Alarm & Threshold Management	Supports SMS alarm function, allowing custom alarm threshold settings to respond to abnormal data in a timely manner
Data Processing & Output	1. Supports data export in table format 2. Has data post-processing function 3. Supports external running of JAVASCRIPT scripts to enhance customization capabilities
Data Forwarding Function	Supports data forwarding via multiple protocols, including HJ-212 protocol, TCP forwarding, HTTP protocol, etc.

