Datasheet

Multi-Parameter Water Quality Online Analyzer

SUP-MDX500

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Multi-Parameter Water Quality Online Analyzer
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The multi parameter water quality online analyzer is our company's new generation of drinking water quality monitoring equipment. This equipment can be widely used for online monitoring of water quality in urban or rural water plants, water supply pipelines, secondary water supply, user terminals, indoor swimming pools, large water purification equipment, and direct drinking water. It is an essential online analysis equipment for water plant production process control, water conservancy and water management, health supervision and other fields.

Applications

- Water plant production process control
- Water conservancy
- Water management
- Health supervision

Multi-Parameter Water Quality Online Analyzer

Features

- Integrated design, capable of simultaneously monitoring parameters such as turbidity, residual chlorine/chlorine dioxide, pH, etc
- High precision, capable of long-term stable and accurate measurement on the order of magnitude of tap water and purified water (0.001-0.1NTU)
- High reliability, sensors and instrument components use imported components
- Support remote control function, low system operation and maintenance costs
- The device has built-in water ingress detection and automatic protection functions, as well as built-in lightning protection devices
- Standard RS485 Modbus RTU protocol and device wireless data transmission channel support on-site third-party device access
- Strong adaptability to the environment, able to operate outdoors year-round in cold regions

Item	Parameters	
System	Power supply	(220±22)VAC，(50±1)Hz
	Power	30W
	Dimension	1150mm*600mm*400mm
	Weight	About 55kg
	Storage temperature	（-20~55）℃
	Working temperature	(-25~+50) ℃ (optional temperature control heating antifreeze module)
	Working humidity	≤ 95% RH (no condensation)
	Inlet flow rate	(500-1000) mL/min
	Inlet flow pressure	<0.6MPa
	Communication interface	RS485 Modbus RTU communication protocol+air data connection
	Display	Color touch screen, Chinese/English menu
Turbidity	Measuring method	90° light scattering method
	Measuring range	0~1NTU / 0~20NTU / 0~100NTU / 0~2000NTU
	Resolution ratio	0~1NTU/0~20NTU/0~100NTU：0.0001NTU 0~2000NTU：0.001NTU
	Lower detection limit	0.005NTU
	Zero drift	≤1.5%
	Value stability	≤1.5%
	Accuracy	2% or ±0.02NTU； 10% or ±0.5NTU, whichever is greater（0~2000NTU）
	Repeatability	≤1%
	Response time	T90≤120s, the measured value 0~ 90% of the turbidity value
	Recommended maintenance	period 3~12 months (depending on site water quality)
Residual chlorine/chlorine dioxide	Measuring method	Reagent free, electrochemical, three-electrode amperometry system
	Repeatability	± 3%
	Resolution ratio	0.001mg/L
	Lower detection limit	0.030mg/L or lower
	Measuring range	0 ~ 5/20mg/L
	Accuracy	± 3%(DPD comparison error ± 10% or ± 0.05mg/L)
	Response time	T90≤ 120s
	Calibration method	Single point calibration, two point calibration
	Sample pH range	4 ~ 9
PH	Measuring method	Electrochemical method
	Measuring range	0-14pH
	Resolution ratio	0.01pH
	Accuracy	± 0.05pH

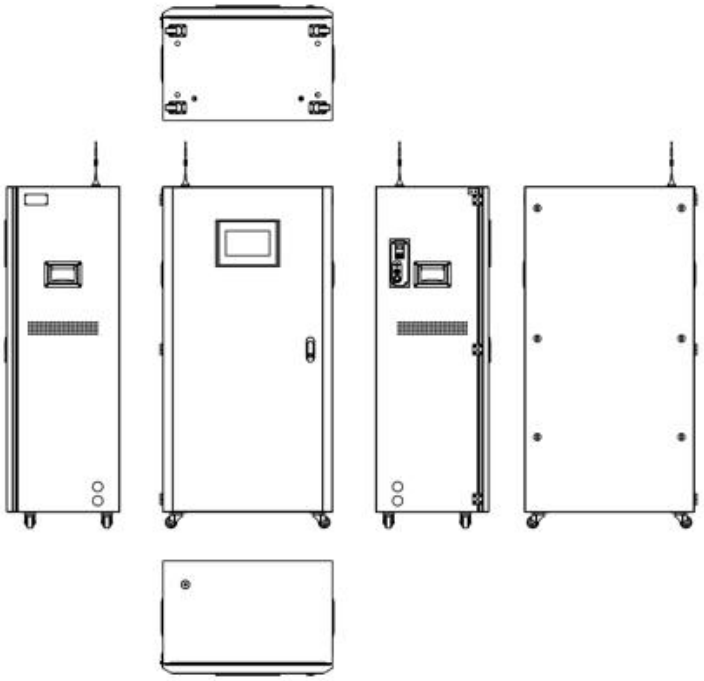
	Repeatability	0.01pH
	Response time	T90≤ 60s
	Calibration method	Single point calibration, two point calibration, three point calibration
Temperature	Measuring method	Thermistor method
	Measuring range	-5~60℃
	Resolution ratio	0.1℃
	Accuracy	±0.4℃
	Repeatability	≤0.2℃
	Response time	≤25s
	Recommended maintenance	12 months
Electric conductivity (optional)	Measuring method	Conductivity cell method
	Measuring range	0~20000uS/cm / 0 ~20mS/cm
	Accuracy	±0.8%FS Pure Water Electrode:3%FS
	Repeatability	≤0.4%FS
	Response time	≤30s
	Recommended maintenance	3~6 months
Dissolved oxygen (optional)	Measuring method	Fluorescence method (optional coated amperometric method)
	Measuring range	0~20mg/L
	Accuracy	±0.3mg/L
	Repeatability	≤±1.5%
	Response time	≤30s
	Recommended maintenance	1~3 months
Expansion port	Port type	RS485、（4~20）mA
	Expansion parameter	Water pressure, water level, flow, etc

Installation

1. Securing Devices

Hang the device vertically on a flat wall and fix it securely.

Note: The device must be installed vertically, otherwise it will affect the measurement accuracy of the sensor, and even stain the sensor.



Each aspect view of the device

2. Installing Drainage

Drainage is to rely on the water's own gravity discharge, so the drainage pipe should be as short, straight, low as possible, the middle can not arch or ring.

3. Installing Water

The water inlet pipe is 25mmPVC water pipe. External valves are set in front of the equipment to facilitate equipment maintenance.

Open the external water valve, drain water from the external pipe for 10 minutes, and then connect the water to the device to prevent dirty water deposited in the pipe from entering the device. Turn the internal needle cutting, adjust the water flow size, so that there is continuous water flow out of the overflow port of the flow pool, the display screen shows that the water is normal.

Note: In poor water quality or unstable environment, it is recommended that users install their own pre-filter to avoid impurities entering the equipment, blocking the internal waterway of the equipment, resulting in failure.

4. Installing Electrodes

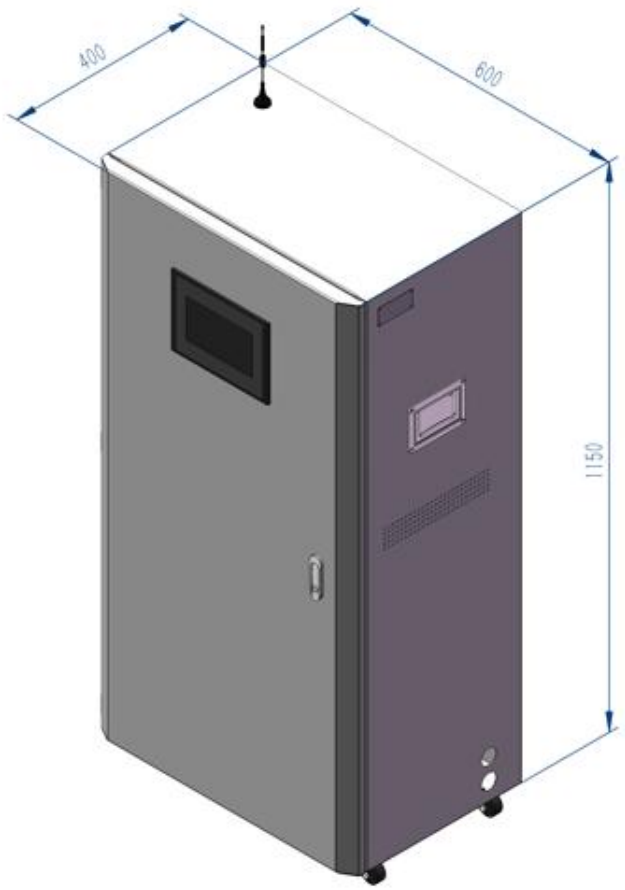
Remove the electrode protective cap and carefully insert it into the corresponding mounting hole of the flow cell.

Note: After the installation of the electrochemical electrode, it is necessary to immediately drain water to keep the sensitive parts of the electrochemical electrode wet (the residual chlorine/chlorine dioxide electrode also needs to keep the water sample with continuous disinfectant, so as to avoid microbial breeding and clogging the electrode sensitive device).

5. Installing Power Supplies

Connect the power cord to a 220VAC power supply.

Dimension



Product dimensions (unit: mm)

Ordering code

SUP-MDX500-3A-E-A-0-5															Description
SUP-MDX500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Measurement Parameter Type	3A														Three Parameters: pH, Turbidity, Temperature
	3B														Three Parameters: pH, Residual Chlorine, Temperature
	4A														Four Parameters: pH, Turbidity, Residual Chlorine, Temperature
	4B														Four Parameters: pH, Turbidity, Chlorine Dioxide, Temperature
	5A														Five Parameters: pH, Turbidity, Residual Chlorine, Conductivity, Temperature
	5B														Five Parameters: pH, Turbidity, Chlorine Dioxide, Conductivity, Temperature
	5C														Five Parameters: pH, Turbidity, Dissolved Oxygen, Conductivity, Temperature
	6A														Six Parameters: pH, Turbidity, Dissolved Oxygen, Conductivity, Temperature, Residual Chlorine
	6B														Six Parameters: pH, Turbidity, Dissolved Oxygen, Conductivity, Temperature, Chlorine Dioxide
	XX														Other
Power Supply		E													220VAC
Output			A												RS485
			B												4-20mA+RS485
Antifreeze Module				0											None
				1											Available
Housing Material and Ingress Protection					5										304SS，IP65

NOTE:
1.Three parameters applied to raw water measurement;
2.Four parameters applied to treated water measurement;
3.Parameters can be customized in combinations. Compatible signal types include: Turbidity, Residual Chlorine/Chlorine Dioxide, pH, Temperature, Conductivity/TDS, Dissolved Oxygen, ORP.