

LUMINSENS

SELF-INNOVATION, RESEARCH AND DEVELOPMENT COMPARABLE TO THE WORLD

SCIENCE AND TECHNOLOGY CHANGE THE WORLD

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Reliable Water quality sensor
Water quality meter



COMPANY INTRODUCTION

- Qingdao LuminSens Marine Technology Co., Ltd. is an enterprise transforming scientific and technological achievements of the Institute of Marine Instrumentation of Shandong Academy of Sciences, with a registered capital of 12.97 million yuan. The company focuses on marine monitoring technology research and equipment development, mainly engaged in the series of fluorescent sensitive components and high-end water quality optical sensors OEM R & D, production, sales and services. We can provide personalized design services and monitoring system integration solutions according to customers' special requirements. Our products and services are widely used in aquaculture, environmental monitoring, biomedicine, industrial production and scientific research and education.
- The team has strong R & D strength, now has a number of doctors, undertake a number of national natural science foundation, science and technology projects, including more than 10 projects; published more than 30 sci papers; more than 10 applications for authorization of invention patents; won 8 software copyrights. The company has won one scientific and technological progress award for fluorescence sensors.
- The company successfully broke through the fluorescence method of dissolved oxygen, optical turbidity, chlorophyll, blue-green algae, oil in the water and other series of sensitive components and water quality sensor research, solved the indicator leakage, slow response, low sensitivity and other problems, with a very high cost-effective advantage. We also provide various types of ion sensors such as pH, ORP, salinity, conductivity, TDS, ammonia nitrogen, etc., as well as various types of hand-held, online, 4G multi-parameter analyzers, which can realize real-time continuous monitoring and send the data to the remote control center through wireless transmission, providing a strong support for the management and protection of water resources.
- LuminSens is committed to providing the best service and support to all customers worldwide.



BRAND



PRODUCTION



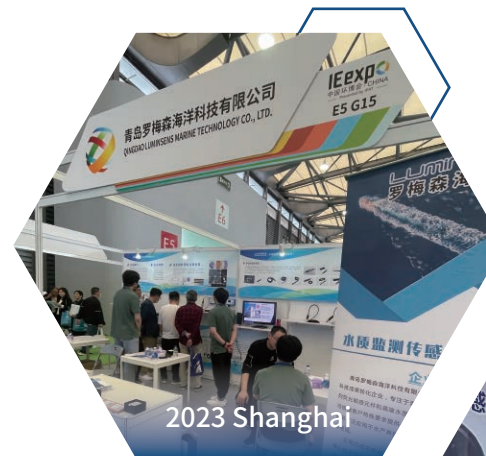
TEAM



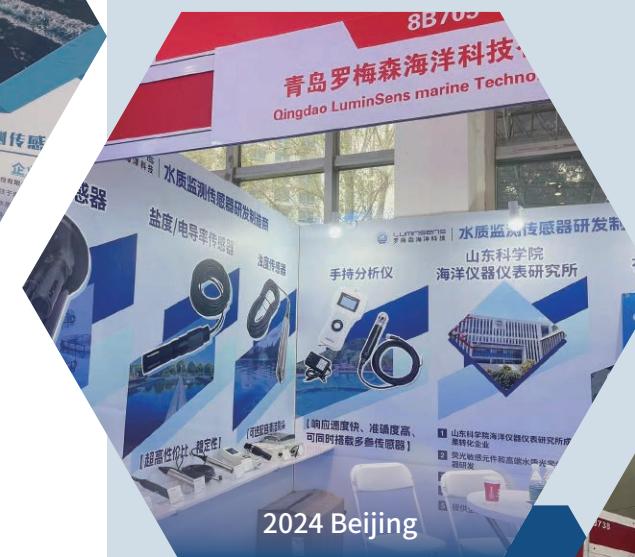
SERVICE



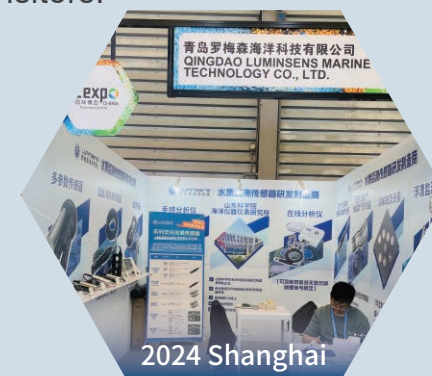
2023 Guangzhou



2023 Shanghai



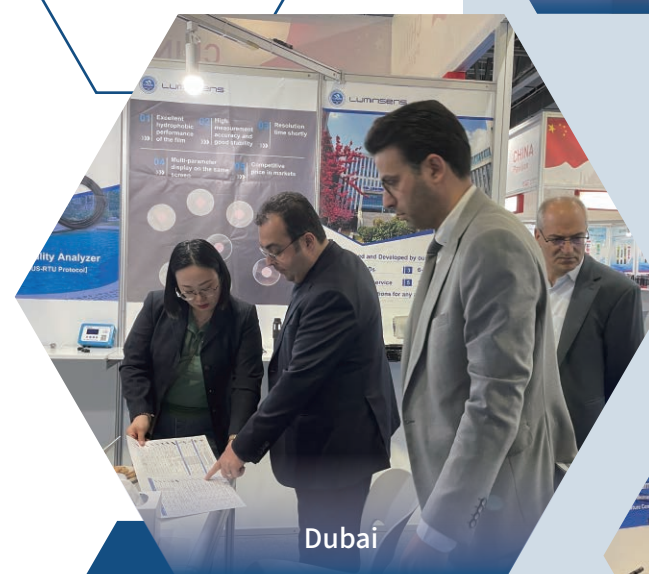
2024 Beijing



2024 Shanghai



2024 Malaysia



Dubai

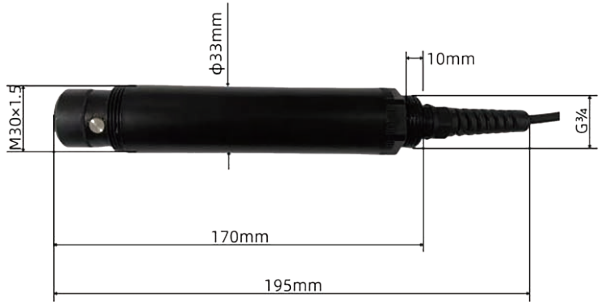


Indonesia

As a leader in the field of environmental protection, LuminSens Marine Technology Ltd. actively participates in domestic and international exhibitions and displays water quality monitoring instruments used in many fields such as water environmental protection, wastewater treatment, industrial process monitoring, aquaculture, food fermentation and pharmaceuticals, etc., based on its excellent product technology and professional services. Attracted the attention of many visitors.

LuminSens Series Dissolved Oxygen Sensors

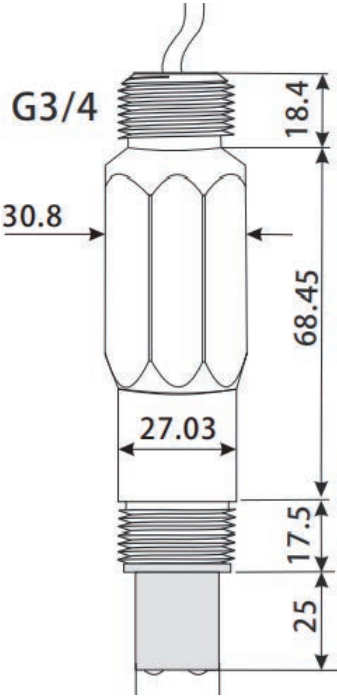
Dissolved Oxygen sensors utilize fluorescence lifetime technology, which is based on the physics principle of specific substances quenching the active fluorescence. The significant advantages of this fluorescence method of measuring dissolved oxygen are that there is no oxygen consumption during the measurement process and therefore no flow rate limitation, as well as no need for preheating and no electrolyte, free from maintenance and frequent calibration, making the dissolved oxygen measurement more accurate, more stable, more rapid and more convenient. The following three models, A, B and C, can be selected according to the application environment.



Model	DO sensor type A	DO sensor type B	DO sensor type C
Product Description	Suitable for handheld detection needs, super fast and accurate. External temperature, fast response of dissolved oxygen and temperature.	Suitable for online monitoring of clean water quality. Temperature built-in or external.	Special for aquaculture online, suitable for harsh water bodies; Fluorescent film has the advantages of bacteriostasis, scratch resistance, and good anti-interference ability. The temperature is built in.
Respond Time	< 60s	< 120s	>120s
Accuracy	±0.1-0.3mg/L	±0.1-0.3mg/L	±0.3mg/L
Range	0~60℃、0~20mg/L		
Temperature Accuracy	<0.3℃		
Working Temperature	0~40℃		
Storage Temperature	-5~70℃		
Size	φ32mm*170mm		
Output	RS-485, MODBUS protocol		
Power	9-24VDC (Recommend12 VDC)		
Material	Polymer Plastic		

pH Sensor

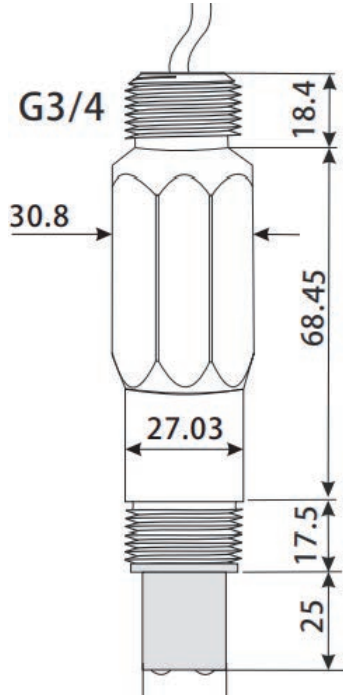
●Isolated power supply design, stable data, strong anti-interference ability	●pH supports automatic temperature compensation/manual temperaturecompensation
●Supports USA/NIST/custom pH, ORP calibration solutions	●Communication: RS485 interface (supports Modbus RTU protocol)
●Flat bubble structure, easier to clean	●Single salt bridge, ceramic sand core liquid junction
●Flat structure not easy to break	●Compact size and easy to use



Product name	pH sensor
Measurement method	Ionic electrode
Range	0-14pH
Accuracy	±0.02pH
Power	9-24VDC (Recommend12 VDC)
Material	Polymer Plastic
Size	31mm*140mm
Output	RS-485, MODBUS protocol

ORP Sensor

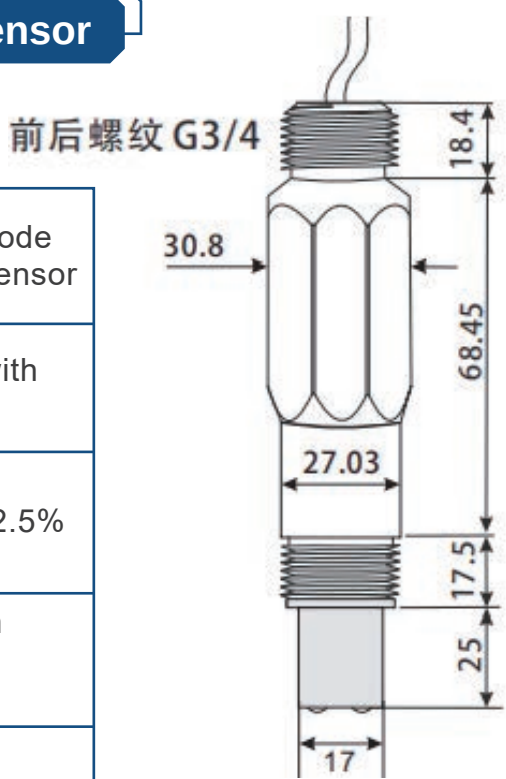
●Isolated power supply design, stable data, strong anti-interference ability	●pH supports automatic temperature compensation/manual temperaturecompensation
●Supports USA/NIST/custom pH, ORP calibration solutions	●Communication: RS485 interface (supports Modbus RTU protocol)
●Flat bubble structure, easier to clean	●Single salt bridge, ceramic sand core liquid junction
●Flat structure not easy to break	●Compact size and easy to use



Product name	ORP sensor
Measurement method	Lonic electrode
Range	±1000.0mV
Accuracy	0.1mV
Power	9-24VDC (Recommend12 VDC)
Material	Polymer Plastic
Size	31mm*140mm
Output	RS-485, MODBUS protocol

Two-Electrode Conductivity Sensor/TDS Sensor

●Isolated power supply design, stable data, strong anti-interference ability	●Corrosion Resistant Diode Graphite Conductivity Sensor
●Adoption of corrosion-resistant housing material	●Constants are stable with good consistency
●Wider measurement range (10us/cm~100ms/cm)	●Single-point calibration technology guarantees 2.5% accuracy over full range
●Built-in high accuracy NTC temperature sensor	●Optional high precision temperature (resolution 0.01℃ accuracy 0.2℃)
●Communication: RS485 interface (supports Modbus RTU protocol)	●Communication rate: 4800/9600(default)/ 14400/19200 optional



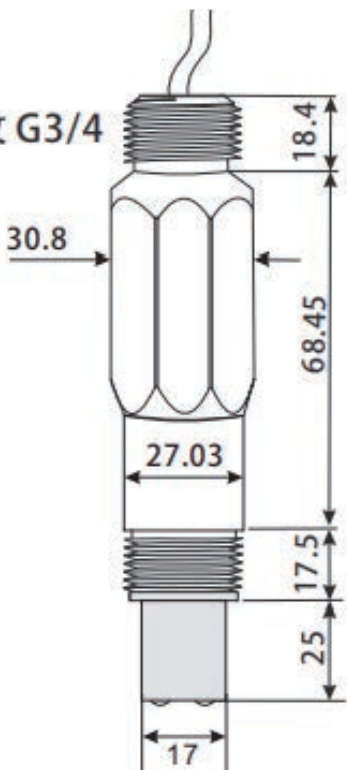
单位：mm



Product name	Conductivity sensor
Measurement method	Lonic electrode
Range	CT: 0-9999uS/cm; 0-100mS/cm; TDS: 0-10000ppm
Accuracy	2.5%F.S.
Power	9-24VDC (Recommend12 VDC)
Material	Polymer Plastic
Size	31mm*140mm
Output	RS-485, MODBUS protocol

Four-electrode salinity/conductivity/TDS sensor

前后螺纹 G3/4

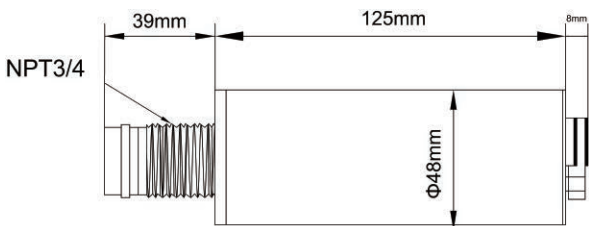


单位：mm



Product name	Salinity sensor
Measurement method	Four electrode
Range	Conductivity: 0.1~500ms/cm; Salinity:0-500ppt; TDS:0-500ppt
Accuracy	1.5%F.S.
Power	9-24VDC (Recommend12 VDC)
Material	Polymer Plastic
Size	31mm*140mm
Output	RS-485, MODBUS protocol

Total Suspended Solid Sensor
(TSS Sensor)

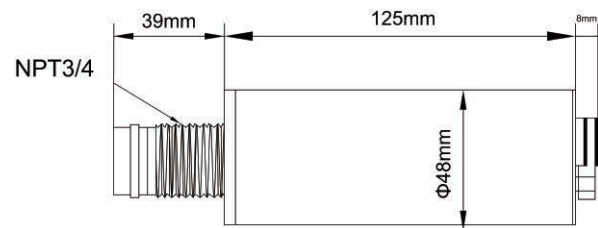


- ① Adopting 135 degree backlight principle, conforming to ISO7027 international standard.
- ② Strong anti-interference ability, adopting fiber optic as the main body of light path, unique polishing and light path processing, as well as software algorithms, with small drift, and can be used directly under the sunlight.
- ③ Low requirements for the distance of the surrounding obstacles, less than 5cm.
- ④ Able to be free from chromaticity interference, with the function of temperature compensation of the light source.
- ⑤ Accurate optical path design and manufacturing, low requirements for the distance of the surrounding obstacles, a minimum of only 30mL of standard liquid can be completed calibration.
- ⑥ With automatic cleaning brush, to prevent contamination, eliminate air bubbles.



Product name	Total Suspended Solid Sensor
Measurement method	135°backlight
Range	0-50000mg/L; 0-120000mg/L
Accuracy	Less than ±10% of measured value (depending on sludge homogeneity) or 10mg/L, whichever is greater
Power	9-24VDC (Recommend12 VDC)
Material	316L
Size	50mm*200mm
Output	RS-485, MODBUS protocol

Turbidity Sensor

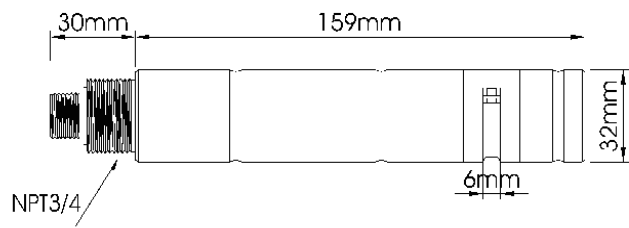


- ① Adopting 90 degree infrared light scattering principle.
- ② Strong resistance to external light interference, adopting optical fibre as the main body of the light path, unique polishing and light path processing, as well as software algorithms, with small drift, can be used directly under the sunlight.
- ③ Low distance requirement to surrounding obstacles, less than 5cm.
- ④ No chromaticity interference, comes with light source temperature compensation function.
- ⑤ Precision optical paths are designed and manufactured to require a low distance from surrounding obstacles, with a minimum of only 30 mL of standard solution required for calibration.



Product name	Turbidity Sensor
Measurement method	90°light scattering method
Range	0-3000NTU
Accuracy	Less than ±10% of measured value or 0.3 NTU, whichever is greater
Power	9-24VDC (Recommend12 VDC)
Material	316L
Size	50mm*200mm
Output	RS-485, MODBUS protocol

COD Sensor

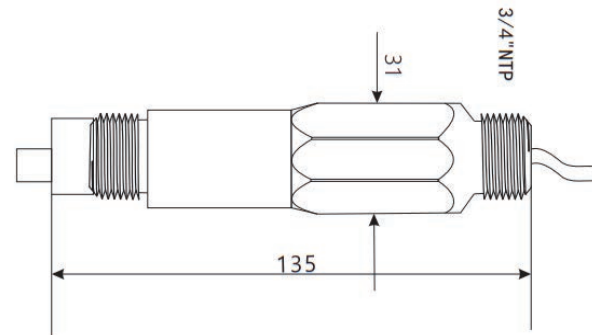


- ① digital sensor, digital RS-485 output, Modbus negotiation;
- ② no reagents, no pollution, more economical and environmentally friendly;
- ③ can measure COD, TOC, BOD turbidity and temperature and other parameters;
- ④ automatically compensate for turbidity interference with excellent test performance;
- ⑤ with a self-cleaning brush, which prevents biological adherence, the maintenance cycle is more longer
- ⑥ simple operation and maintenance, Low failure rate, short test time, response time is generally in tens of seconds, good instrument stability. High reliability, not subject to the interference of chloride ions.



Product name	COD Sensor
Measurement method	Ultraviolet orption method
Range	COD: 0.1~1500mg/L ; 0.1~500mg/L ; TOC: 0.1~750mg/L BOD: 0.1~900mg/L Turbidity: 0.1 ~ 4000 NTU Temperature range: 0 to 50 ℃
Accuracy	<5% equiv.KHP temperature:±0.5 ℃
Power	9-24VDC (Recommend12 VDC)
Material	316L
Size	32mm * 200mm
Output	RS-485, MODBUS protocol

Ammonia Nitrogen Sensor NH4-N

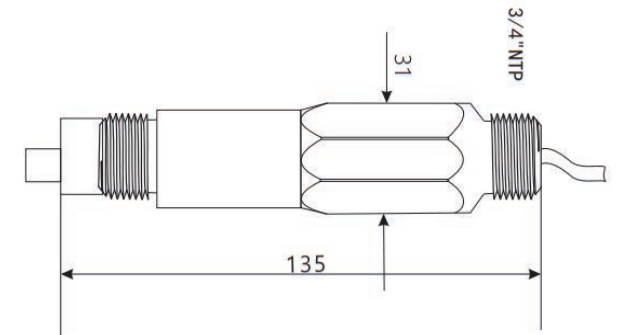


- ① Green, non-polluting, economic and environment
- ② Custom standard liquid calibration, support for forward and reverse curves
- ③ environmentally friendly design, can be easily integrated into the water quality monitoring system to meet the different needs of customers, can be directly into the type of installation, applicable to a wide range of surface water, sewage, water and other scenarios of water quality testing.
- ④ isolation of the power supply design, data stability, anti-jamming ability
- ⑤ support for the ion type (NH4+, NO3+, K+, Ca+, etc.),) # Specify before ordering#



Product name	NH4 Sensor
Measurement method	Ionic electrode
Range	0 ~ 10000 mg/L
Accuracy	±5%F.S.
Power	9-24VDC (Recommend12 VDC)
Material	Polymer plastics
Size	31mm*200mm
Output	RS-485, MODBUS protocol

Ion Selective Sensor

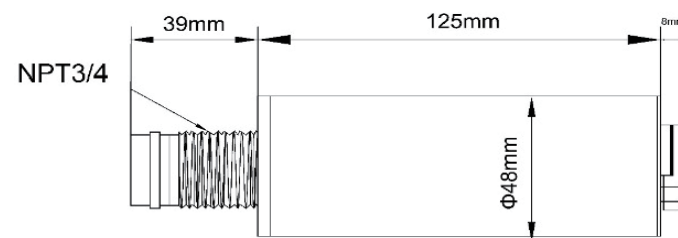


- ① Green, non-polluting, economic and environment
- ② Custom standard liquid calibration, support for forward and reverse curves
- ③ environmentally friendly design, can be easily integrated into the water quality monitoring system to meet the different needs of customers, can be directly into the type of installation, applicable to a wide range of surface water, sewage, water and other scenarios of water quality testing.
- ④ isolation of the power supply design, data stability, anti-jamming ability
- ⑤ support for the ion type (NH4+, NO3+, K+, Ca+, etc.),) # Specify before ordering#



Product name	Ion Selective Sensor
Measurement method	Ionic electrode
Range	0 ~ 10000 mg/L
Accuracy	±5%F.S.
Power	9-24VDC (Recommend12 VDC)
Material	Polymer plastics
Size	31mm*200mm
Output	RS-485, MODBUS protocol

Oil In Water Sensor (OIW)

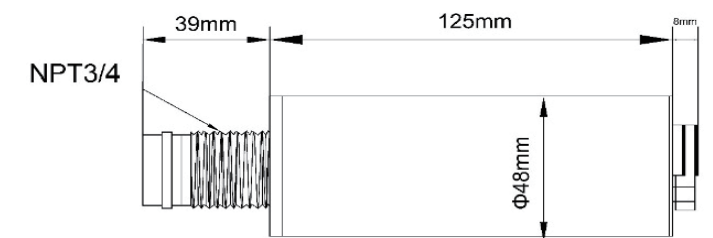


- ① The sensor uses a single light source, one UV, which automatically eliminates interference from suspended substances, resulting in more stable and reliable measurement values.
- ② No reagents, no pollution, more economical and environmentally friendly.
- ③ Water quality monitoring can be carried out online without interruption.
- ④ Automatic compensation for turbidity disturbances and an automatic cleaning device provide excellent stability even for long-term monitoring.

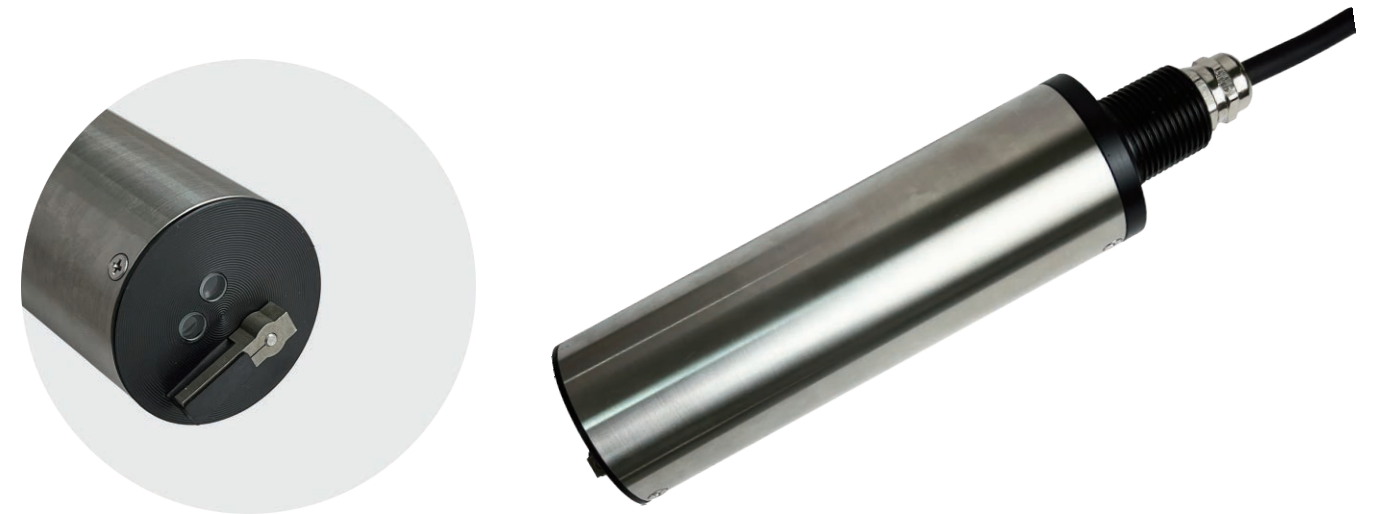


Product name	Oil in water sensor
Measurement method	Fluorescent
Range	0-50 mg/L ; 0-5 mg/L ; Temperature: 0-50 ℃
Accuracy	±3%F.S. Temperature: ±0.5 ℃
Power	9-24VDC (Recommend12 VDC)
Material	316L
Size	48mm*125mm
Output	RS-485, MODBUS protocol

Chlorophyll Sensor

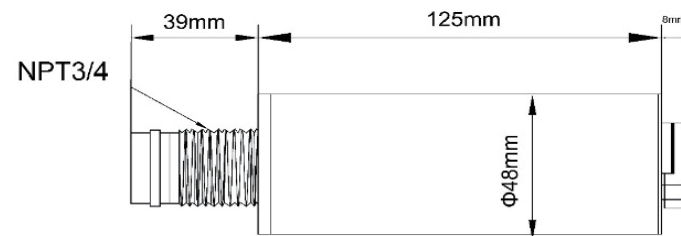


- ① Using modulation and coherent detection technology to improve the measurement sensitivity and anti-interference performance.
- ② No reagents, no pollution, more economical and environmentally friendly.
- ③ On-line uninterrupted water quality monitoring.
- ④ With an automatic cleaning device, even if the long-term monitoring still has excellent stability.



Product name	Chlorophyll sensor
Measurement method	Fluorescent
Range	0-500ug/L Temperature: 0-50 ℃
Accuracy	±3%F.S. Temperature: ±0.5 ℃
Power	9-24VDC (Recommend12 VDC)
Material	316L
Size	48mm*125mm
Output	RS-485, MODBUS protocol

Blue-Green Algae sensor

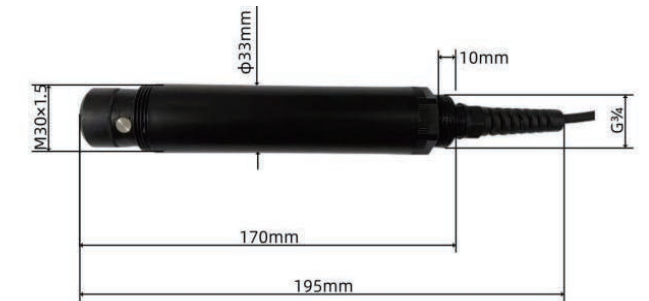


- ① The sensor uses a single light source, one UV, which automatically eliminates interference from suspended substances, resulting in more stable and reliable measurement values.
- ② No reagents, no pollution, more economical and environmentally friendly.
- ③ Water quality monitoring can be carried out online without interruption.
- ④ Automatic compensation for turbidity disturbances and an automatic cleaning device provide excellent stability even for long-term monitoring.



Product name	Blue-Green Algae sensor
Measurement method	Fluorescent
Range	0-2000,000 cells/ml Temperature: 0-50℃
Accuracy	±3%F.S. Temperature: ±0.5℃
Power	9-24VDC (Recommend12 VDC)
Material	316L
Size	48mm*125mm
Output	RS-485, MODBUS protocol

Fluorescence trace dissolved oxygen sensor



- ① Adopting self-developed fluorescent material, no oxygen consumption, free of maintenance.
- ② Long life span, fast response and strong anti-interference ability, with good stability.
- ③ Can be equipped with fluorescent dissolved oxygen portable analyser or on-line analyser according to the demand, in order to realize the detection of trace dissolved oxygen.



Product name	Fluorescence trace dissolved oxygen sensor
Measurement method	Fluorescent
Range	0~2000ppb, Temperature: 0-50℃.
Accuracy	±1 ppb or 3% of the reading, whichever is greater.
Power	9-24VDC (Recommend12 VDC)
Material	Polymer plastics and 316L
Size	32mm*180mm
Output	RS-485, MODBUS protocol

Portable Fluorescence Dissolved Oxygen Analyzer

- ① The fluorescent membrane of dissolved oxygen probe can be replaced.
- ② One key measurement, press the measurement key, observe the data at any time.
- ③ Night backlight, clearly visible at night.
- ④ Long standby time, the device automatically shuts down after the test is completed.
- ⑤ The display adopts ink screen. Looking at this screen is like reading paper books with eye protection and clear visible under strong light.



Product name	Portable Fluorescence Dissolved Oxygen Analyzer
Measurement method	Fluorescence
Range	0-20mg/L
Accuracy	DO: $\pm 1\sim 3\%$
Power	< 0.5 W Power supply 7.5V , 5 batteries
Material	Polymer plastics
Size	100mm*204mm
Output	RS-485, MODBUS protocol

Portable Multi-Parameter Analyser pH+DO

- ① one machine multi-purpose, support Luminsens a variety of digital sensors, this product can measure DO, PH
- ② can be automatically compensated for dissolved oxygen, automatic identification of the sensor type, power on can be measured
- ③ this instrument with the operation of the keyboard buttons, full-featured operation is simple, simple interface, but also be able to achieve at the same time the sensor calibration function



Product name	Portable Multi-parameter Water Quality Analyzer Two sensor(DO+pH+Temperature)
Size	220mm*120mm*100mm
Range	DO: 0-20mg/L or 0-200 % saturation; pH: 0-14pH
Accuracy	DO: $\pm 1\sim 3\%$; pH: ± 0.02
Power	Sensors: DC 9~24V; Analyzer: Rechargeable lithium battery with 220v to dc charging adapter
Temperature	Working Conditions 0-50℃ Storage Temperature -40~85℃;
Cable length	5m, can be extended according to user need
Sensor Interface Supports	RS-485, MODBUS protocol

Portable Multi-Parameter Analyzer

- ① This product can measure parameters: DO / PH / SAL / CT / TUR / TEMPERATURE
- ② Universal platform, can be arbitrarily plugged into the Luminsens sensors, automatic identification
- ③ All calibration parameters are stored in the independent sensor, are supported by the RS485 Modbus, maintenance and calibration is convenient.
- ④ All sensor compartments are sub-compartmentalised design, a failure does not affect the work of other sensors, and are equipped with internal humidity detection alarm function.
- ⑤ Strong compatibility, can support the subsequent development of Luminsens sensor products.



Product name	Portable Multi-parameter Water Quality Analyzer Four sensor (DO+pH+Temperature +Conductivity+Salinity+Turbidity)
Size	220mm*120mm*100mm
Range	DO: 0-20mg/L or 0-200 % saturation; pH: 0-14pH; CT: 0-500mS/cm; SAL: 0-500.00ppt; TUR : 0-3000 NTU
Accuracy	DO: ±1~3%; pH: ±0.02 CT: 0-9999uS/cm; 10.00-70.00mS/cm; SAL: <1.5% F.S. or 1% of reading, whichever is smaller TUR : Less than ±10% of measured value or 0.3 NTU, whichever is greater
Power	Sensors: DC 12~24V; Analyzer: Rechargeable lithium battery with 220v to dc charging adapter
Temperature	Working Conditions 0-50 ℃ Storage Temperature -40~85 ℃;
Cable length	5m, can be extended according to user need
Sensor Interface Supports	RS-485, MODBUS protocol

Handheld Trace Dissolved Oxygen

- ① The instrument with operating keyboard keys, comprehensive functions and simple operation, simple interface, but also able to achieve the sensor calibration function at the same time.
- ② The sensor uses self-developed fluorescent material, does not consume oxygen.
- ③ Maintenance-free, long life.
- ④ Fast response and strong anti-interference ability, with very good stability.



Product name	Portable analyzer for fluorescence method trace dissolved oxygen
Measurement method	Fluorescent
Range	0~2000ppb, Temperature: 0-50 ℃.
Accuracy	± 1 ppb or 3% of the reading, whichever is greater.
Power	7.4v-24VDC
Material	Polymer Plastic
Size	32mm*180mm
Output	RS-485, MODBUS protocol

Economic version online Multi-Parameter analyzer

The online analyzer is an intelligent online chemical analysis instrument, which is widely used in thermal power, chemical fertilizer, metallurgy, environmental protection, pharmaceutical, biochemical, food and tap water industries to continuously monitor parameters such as pH/ dissolved oxygen /temperature/turbidity in the solution.



Product name	Economic version online Multi-Parameter analyzer
Show	2.8-inch monochrome LCD display resolution :256*128
Dimensions	160mm×110mm×47mm
Weight	0.5kg
Protection level	IP65
Measured variables	Specified parameters such as pH/ DO /turbidity/temperature
Relative humidity	10~85%RHRH (no condensation)
Operating temperature	0~50 ℃, Accuracy: ±0.4℃
Power supply	DC : 12V±10%
Storage conditions	Temperature: -25~50℃ Relative humidity:5~95%RHRH(no condensation)

Online Multi-Parameter Analyzer

- ① 7-inch colour touch screen, simple operation interface, easy to learn, low maintenance;
- ② sensors plug and play; electrode installation, replacement of fast and convenient;
- ③ Modbus RS485, such as a variety of data transmission options, and has a data storage function.
- ④ up to 5 sensors can be connected to any of our company at the same time, to improve the integration, reduce operating and maintenance costs; (or custom) (or other number, can be greater than 5)
- ⑤ strong versatility, all digital sensor interface common, analogue sensors according to different sensor types can be configured with different modules;
- ⑥ provide OEM custom services

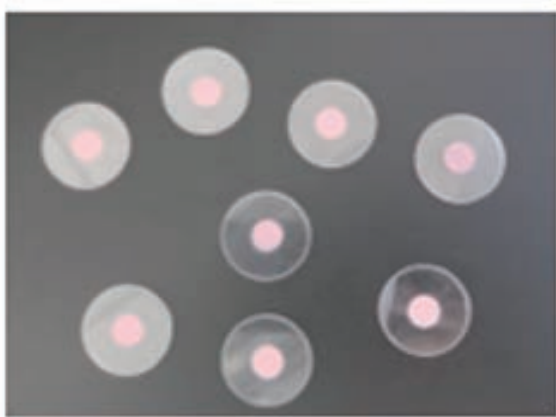


Product name	Online water quality multi-parameter analyzer
Display Output	7-inch touch screen
Power supply	AC power supply: 220 VAC
Output	MODBUS RS485 digital communication
Storage temperature	-20 to 70℃
Size	180mmx230mmx100 mm (height x width x depth)
Weight	About 1.7 KG
Main material	Plastic shell, fully transparent cover

Dissolved oxygen fluorescence sensing membrane

Dissolved oxygen fluorescence sensing membrane adopts fluorescence method to measure dissolved oxygen in water and oxygen in air, based on the principle of fluorescence burst, the excited fluorescence burst time is inversely proportional to the oxygen concentration.

The fluorescence sensing membrane is developed independently, which does not consume oxygen, is maintenance-free, with long service life, fast response, anti-bacterial function and strong anti-interference ability, and has very good stability. It can be customized according to user requirements.



Product name	Dissolved oxygen fluorescence sensing membrane
Excitation wavelength	$\lambda = 390\text{nm}-470\text{nm}$
Emission wavelength	$\lambda = 650\text{nm}$
Response time	T90 < 120s (Model B - fast rigid membrane) T90 > 120s (C type - online antibacterial rigid membrane, special for aquaculture)
Measurement range	Dissolved oxygen 0-20 mg/L or 0-200%.
Resolution	0.01mg/L
Accuracy	0.1-0.3 mg/L
Sensor Membrane	Front Color Pink
Operating Temperature	0-50 °C
Storage condition	5 years in dry place, protected from light
Clearly non-interfering substances	Gases such as carbon dioxide, hydrogen sulfide, sulfur dioxide, etc. Metal ions, anions
Application	On-line water quality monitoring, aquaculture, wastewater treatment
Size	Can be customized

Accessory parameters

Sensor	Cleaning cycle	Checking internal humidity	Replacing O-rings	Calibration cycle	Replacing consumables cycle
DO	1-4 days*	6 months	12-24 months	6 months	24-36 months for fluorescent film replacement
SAL/CT/TDS	4-8 weeks*	-----	-----	6 months	none
pH/ORP	1-3 days*	-----	-----	4-8 weeks*	none
COD	0.5-3days*	6 months	12-24 months	3 months	none
TUR	0.5-3days*	6 months	12-24 months	3 months	none
Chlorophyll	0.5-3days*	6 months	12-24 months	3 months	none
blue-green algae	0.5-3days*	6 months	12-24 months	3 months	none
NH4-N	1-3 days*	-----	-----	2-3 weeks*	none
Oil in water	0.5-3days*	6 months	12-24 months	3 months	none

OEM/ODM Support

According to the specific needs of customers, we provide OEM and ODM services.

Company fotos



Patents and certifications

