

Water Quality Sensors Catalogue


Shandong Renke Control Technology Co.,Ltd.

Our water quality sensor types list:

- **Water PH Sensor**
- **Water Conductivity Sensor**
- **ORP Sensor**
- **Dissolved Oxygen Sensor**
- **Turbidity Sensor**
- **Ammonia Nitrogen Sensor**
- **COD Sensor**
- **Residual Chlorine Sensor**
- **Chlorophyll Sensor**
- **Blue-green Algae Sensor**
- **Ion Probe Sensor**

1. Water ph sensor

RS-PH-N01-2-*pH sensor is our series of products for PH monitoring in different environments. We have different probes corresponding to different use environments. There are corresponding products for industrial sewage, domestic sewage, agriculture, aquaculture, biological engineering, pharmaceuticals, mineral suspension, flue gas desulfurization and other environments.


	<p>Power supply: DC 10~30V Output signal: RS485/4~20mA/0~5V/0~10V pH measurement range: 0~14.00pH pH measurement error: ± 0.15pH Repeatability error: ± 0.02pH Temperature measurement range: 0~80°C; resolution: 0.1°C (set temperature for manual temperature compensation, default 25°C) Temperature measurement error: ± 0.5°C Equipment working conditions: Ambient temperature: 0-60°C, relative humidity: <85% Applicable temperature of electrode: 0~80°C Electrode wire length: default 5m (10m, 15m, 20m can be customized) Electrode life cycle: 1 year</p>
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Advantages:

- Complete variety, covering a wide range
- High precision, high sensitivity and high stability
- With automatic temperature compensation function, automatic temperature compensation and manual temperature compensation can be switched at will.
- Obvious price advantage

2. Water conductivity sensor

RS-EC-N01-2-* water conductivity sensor is a device for measuring the conductivity of a solution. It has an automatic temperature compensation function and has two ranges: 1~2000 μ s/cm and 10~20000 μ s/cm. It is widely used in continuous monitoring of the conductivity value of aqueous solutions such as section water quality, aquaculture, sewage treatment, environmental protection, pharmaceuticals, food and tap water.


	<p>Power supply: DC 7~30V Output mode: 4~20mA/0~5V/0~10V/RS485 Conductivity measurement range: K=1: 1~2000μs/cm; resolution: 0.1μs/cm K=10: 10~20000μs/cm; resolution: 1μs/cm Conductivity measurement error: \pm1%FS Temperature measurement range: -20~100$^{\circ}$C; resolution: 0.1$^{\circ}$C Temperature measurement error: \pm0.5$^{\circ}$C Temperature compensation range: -20~100$^{\circ}$C (default compensation temperature is 25$^{\circ}$C) Temperature compensation coefficient: default 0.02 Electrode wire length: default 5m (10m, 15m, 20m can be customized)</p>
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Advantages:

- With automatic temperature compensation function, the current temperature conductivity can be compensated to the specified temperature.
- High precision, high sensitivity and high stability
- It can monitor EC and temperature at the same time, and one device can monitor multiple elements
- Obvious price advantage

3. ORP sensor

The RS-ORP-N01-2-300ORP sensor is used to measure the oxidation-reduction potential of a solution. The ORP value is an important indicator of water quality. It is generally integrated with other water quality indicators to reflect the ecological environment in the aquarium system, but cannot independently reflect water quality. Good or bad. Suitable for on-line monitoring of the oxidation-reduction potential of agricultural water, aquaculture, surface water, cyanide-containing, chromium-containing wastewater, etc.


	<p>Power supply: DC 10~30V Measuring range: -1999~1999mV Resolution: 1mV Measurement error: ± 1mV Equipment working conditions: Ambient temperature: 0-60°C, relative humidity: <85% Applicable temperature of electrode: 0~80°C Output mode: RS485/4-20ma/0-5V/0-10V Electrode withstand voltage: 0.6MPa Electrode wire length: default 5m (10m, 15m, 20m can be customized) Electrode life cycle: 1 year</p>
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Advantages:

- Made of high-purity platinum, it has strong anti-acid and alkali ability and anti-oxidation ability
- With automatic compensation function
- High precision, high sensitivity and high stability

4. Dissolved Oxygen Sensor

RS-LDO-N01 Dissolved Oxygen Sensor is a device for measuring the concentration of dissolved oxygen in a solution. It adopts the principle of fluorescence measurement, does not consume oxygen, and does not require electrolyte. It is divided into two types: sea water and fresh water. It is suitable for scenarios where maintenance is inconvenient and requires long-term monitoring, such as industrial water quality monitoring, aquaculture monitoring, and river and lake seawater quality parameter monitoring.

	<p>Power supply: DC 10~30V Measuring principle: fluorescence method Measuring range: 0~20mg/L (0~200% saturation) Measurement error: $\pm 3\%$FS; $\pm 0.5^{\circ}\text{C}$ (25°C) Resolution: 0.01mg/L; 0.1%; 0.1$^{\circ}\text{C}$ Response time: $\leq 60\text{sec}$ Equipment working conditions: 0~40$^{\circ}\text{C}$ Output mode: RS485 Fluorescent film life: 1 year in normal use Storage conditions: -10~60$^{\circ}\text{C}$ Electrode wire length: default 5m Shell material: polyoxymethylene (POM), stainless steel</p>
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Advantages:

- Built-in temperature transmitter with automatic temperature compensation function
- Using German imported membrane head, high precision, high sensitivity and high stability
- There is no need to replace the diaphragm regularly, frequent calibration problems, and long-term maintenance-free (compared to the extremely popular method)
- Simultaneously monitor dissolved oxygen, saturation, and temperature, and one device measures multiple factors.

5. Turbidity Sensor

The RS-ZD-N01 turbidity sensor is designed and manufactured using the principle of laser scattering turbidity measurement. The laser scattering method can overcome the shortcomings of traditional classical measurement methods that cannot be continuously measured online. The laser scattering method is stable in measurement and is not subject to magnetic field interference. It has been widely used. It is suitable for agricultural water, industrial water, sewage discharge in mining area, aquaculture, surface water, domestic sewage treatment terminal and other places.

	<p>Measuring principle: scattered light method</p> <p>Range/resolution:</p> <p>0~20.00NTU, 0.01NTU/0.1℃</p> <p>0~100.0NTU, 0.1NTU/0.1℃</p> <p>0~1000.0NTU, 0.1NTU/0.1℃</p> <p>Accuracy:</p> <p>±5% or ±3NTU (0~1000.0NTU)</p> <p>±3% or ±2NTU (0~100.0NTU)</p> <p>±3% or ±1.5NTU (0~20.00NTU)</p> <p>Temperature compensation: automatic temperature compensation (Pt1000)</p> <p>Output mode: RS-485 (Modbus/RTU)</p> <p>Shell material: POM, ABS</p> <p>Cable length: 5 meters, other lengths can be customized</p> <p>Power supply: 12~24VDC</p> <p>Protection level: IP68</p>
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Advantages:

- 90° angle scattered light principle, built-in temperature sensor optical fiber structure, strong resistance to external light interference.
- Infrared LED light source, high stability, convenient, fast, stable and easy to maintain.
- Simultaneous monitoring of turbidity and temperature, one device measures multiple elements.
- No probe consumption, high sensitivity, low detection limit, long life, continuous online monitoring.

6. Ammonia Nitrogen Sensor

The RS-NHN-N01 ammonia nitrogen sensor is made of ammonium ion selective electrode based on PVC membrane, and is used to test the ammonium ion content in water. It is suitable for aquaculture, sewage monitoring, surface water monitoring, and river section monitoring. Ammonia nitrogen in water can be converted into nitrite under certain conditions. If consumed for a long time, nitrite in water will combine with protein to form nitrosamine, which is a strong carcinogen and is extremely harmful to human health. Fish are more sensitive to ammonia nitrogen in water, and high levels of ammonia nitrogen will cause fish death. Ammonia nitrogen is one of the must-test items in sewage monitoring.



Range: 0~10mg/L (0~100mg/L)
Resolution: 0.01mg/L
Accuracy: $\pm 10\%$ or $\pm 1\text{mg/L}$
Working temperature: 0~40°C
The pH range of the medium: 4~10pH
Compensation: automatic temperature compensation (Pt1000)
Power supply: 12~24VDC $\pm 10\%$
Signal output: RS-485
Wetted material: PVC and POM
Cable length: 5 meters, other lengths can be customized
Protection level: IP68

Advantages:

- Stable signal and high precision
- Easy to use and easy to install
- Wide measuring range, good linearity
- Simultaneous monitoring of ammonium ions and temperature by default, one device measures multiple elements
- With automatic temperature compensation function, to ensure that the test is fast, simple, accurate and economical

7. COD Sensor

KH-COD-N01 COD sensor adopts dual-wavelength ultraviolet absorption method to accurately measure the content of dissolved organic pollutants in water. The COD sensor uses two light sources, one is UV light to measure COD content in water, and the other is reference light to measure water turbidity. The light path attenuation is compensated by a specific algorithm and the interference of particulate suspended impurities can be eliminated to a certain extent, so as to achieve more Stable and reliable measurement. It is suitable for sewage monitoring and surface water monitoring.



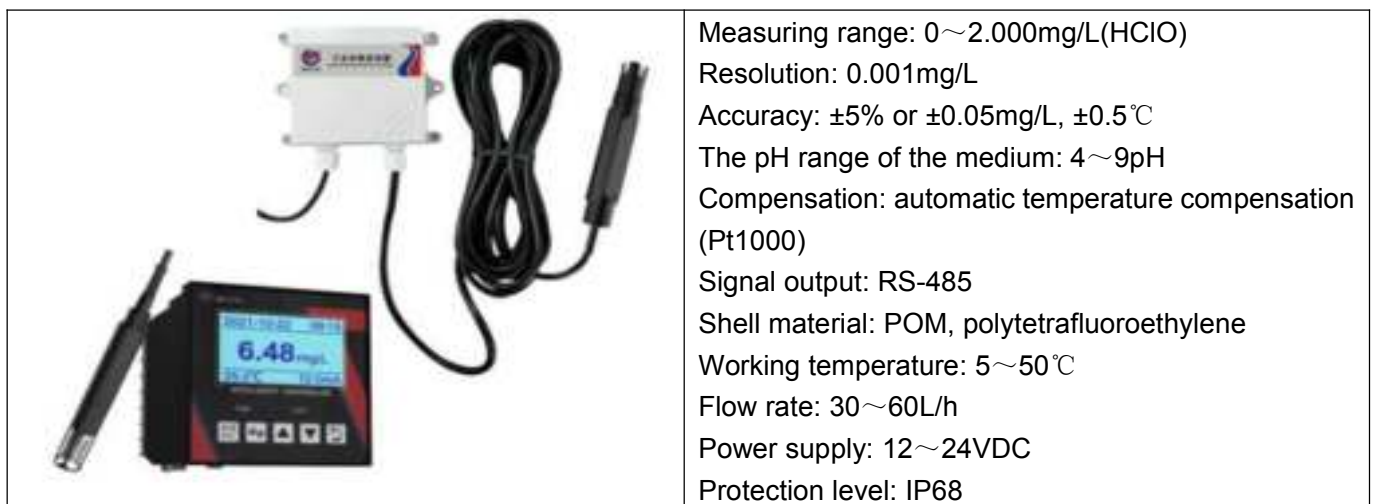
Measuring range:
0-200mg/L equiv.KHP 0~100NTU
0-500mg/L equiv.KHP 0~200NTU
COD accuracy: $\pm 5\%$ F.S.
COD resolution: 0.1mg/L
Turbidity accuracy: $\pm 5\%$ F.S.
Turbidity resolution: 0.1NTU
Output mode: RS-485 (Modbus/RTU)
Power supply: 12~24VDC
Protection level: IP68

Advantages:

- No reagents, no pollution, economical and environmentally friendly.
- With a cleaning brush, it can prevent organisms from attaching.
- Maintenance-free, long service life, and low use cost.
- The drift is small, the response is fast, the measurement is more accurate, and it still has excellent stability even for long-term monitoring.
- By default, it monitors turbidity, COD, and temperature at the same time, and one device measures multiple elements.

8. Residual Chlorine Sensor

The residual chlorine electrode used in the KH-CL-N01 residual chlorine sensor is a diaphragm polarographic sensor. The residual chlorine in the measured liquid diffuses to the cathode through the diaphragm. The appropriate polarization voltage between the cathode and the anode can be The residual chlorine is reduced, and these chemical reactions generate an electric current proportional to the residual chlorine in the measured solution. It is suitable for online monitoring of residual chlorine concentration in medicine, environmental protection, tap water monitoring, drinking water, and industrial process water disinfection and sterilization processes. It can also be used in swimming pools, aquaculture and other places where residual chlorine concentration needs to be measured.



Advantages:

- The product does not need to be calibrated at one time.
- The measurement principle of the constant voltage method does not consume reagents and replace the diaphragm, and the maintenance is simple.
- By default, residual chlorine and temperature are monitored at the same time, and one device measures multiple elements.

9. Chlorophyll Sensor

KH-CH-N01 chlorophyll sensor uses fluorescence method to monitor chlorophyll in water. Mainly used in the research, investigation and monitoring of rivers, lakes, ponds, marine surveys, aquaculture, drinking water sources, algae and phytoplankton conditions.



- Robust structure, stable sensor performance
- Free of maintenance and frequent calibration, long-term online use
- Integrated design of automatic cleaning brush to prevent contamination and eliminate air bubbles
- Direct measurement, simpler than the traditional manual counting method, online continuous monitoring, real-time control of water quality dynamics

10. Blue-green Algae Sensor

The KH-BA-N01 online blue-green algae sensor adopts the principle of fluorescence method, which is more efficient and faster than the traditional manual counting method, and can be monitored online in real time. It can act as an early warning to the growth of algae. Mainly used in the research, investigation and monitoring of rivers, lakes, ponds, marine surveys, aquaculture, drinking water sources, algae and phytoplankton conditions.



- The sensor has better repeatability and stability.
- Longer maintenance period, long-term online use can also maintain excellent stability
- With automatic cleaning brush, it can eliminate air bubbles and reduce the influence of contamination on the measurement

11. Ion Probe Sensor

Potassium ion: RS-LK-N01-2

Mainly used in mineral water, drinking water, surface water, sea water, boiler feed water, tea, honey, feed, milk powder and other agricultural products, saliva, serum, urine and other biological samples, and the determination of potassium ions in ceramic raw materials.

Nitrate ion: RS-LNO3-N01-2

Mainly used in the determination of nitrate ions in solid leachate, rainfall and surface water, and pickled products.

Chloride ion: RS-LCL-N01-2

Mainly used in mineral water, drinking water, surface water, sea water, boiler feed water, tea, honey, feed, milk powder and other agricultural products, saliva, serum, urine and other biological samples, as well as the determination of chloride content in soil extract.

Calcium ion: RS-LCA-N01-2

Mainly used in mineral water, drinking water, surface water, sea water, boiler feed water, tea, honey, feed, milk powder and other agricultural products, saliva, serum, urine and other biological samples, and the determination of calcium ions in ceramic raw materials.

Ammonium ion: RS-LNH-N01-2

Mainly used in the measurement of ammonium ions in boiler feed water, surface water and fertilizers.

Nitrite ion: RS-LNO2-N01-2

Mainly used in the determination of nitrite ions in solid extracts and pickled products.

Magnesium ion: RS-LMG-N01-2

Mainly used in the monitoring of magnesium ions in mineral water, drinking water, surface water and sea water.

