PROBEST®

A TRUST WORTHY

Water Analyzer Instruments ISO Factory



Fuzhou Probest Intelligent Technology Co., Ltd.

CE,ROHS, ISO(All products are 100% test before shipment.)

COMPANY BRIEF INTRODUCTION

Fuzhou Probest Intelligent Technology Co., Ltd. was established in September 2015, headquartered in Fuzhou, Fujian. The company's production base is more than 10,000㎡. We are a high-tech enterprise focusing on water quality sensors, instruments and automation equipment, integrating scientific research, manufacturing, marketing and services.

THE COMPANY'S HISTORY



2023 Integrated project department is established.

2022 Products are exported to more than 30 countries, and sales exceed 100 million.

2021 The plant area expanded to 7,000㎡, with more than 200 employees.

2020 The cumulative sales of water quality analyzers exceeded 50,000 units.

2019 The plant area expanded to 4,000㎡, and an optical laboratory was established. Sales exceeded 50 million, and Probest products began exporting

2018 Established a precision machining center, obtained ISO9001 certification, obtained national and provincial high-tech enterprise certification, and the cumulative sales of water quality analyzers exceeded 10,000 units.

2017 Sales exceeded 10 million, and a chemical laboratory was established.

2016 Released MP301 integrated multi-parameter, residual chlorine, low turbidity and other

2015 The company was established, and released optical sensors and transmitters for fluorescence method dissolved oxygen, turbidity, suspended solids, chlorophyll, blue-green algae, etc.

2013 R&D+Products Team were established.

WHY CHOOSE US PROBEST?

A direct reliable ISO9001 authorized water analysis manufacturer.
Strong 50+ professional R&D, 10+QA and 16+ QC team ensure superior quality.
Many patents and software copyrights ensure products meet markets requirements.
The most importance is our united team as a PROBEST family.
Worthy to be trusted as long terms partners.

Note: Product information may be subject to change, and Probest has the final interpretation.

FACTORY





TEAM BUILDING





MARKET ACTIVITIES






PROBEST CERTIFICATIONS







PROBEST CASES

In recent years, guided by market demand, we PROBEST have focused on the research and development of environmental water analyzer monitoring and laboratory monitoring equipments, which has been widely used in tap water, sewage treatment, surface and groundwater monitoring, aquaculture monitoring, industrial process water monitoring, laboratory water quality analysis, smart water services and other fields.













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MUC-200 Multi-parameter Controller

Introduction



MUC-200 multi-parameter transmitter can simultaneously monitor multiple different parameters according to customers' different needs, including Temperature / PH / ORP / Conductivity/Dissolved oxygen/Turbidity/Sludge concentration/Chlorophyll/ Blue-green algae / UVCOD / UVNO3 / Ionic ammonia nitrogen / Transparency / Residual chlorine and other parameters. It is widely used in water quality monitoring in wastewater treatment plants, waterworks, water stations, surface water, and industrial fields.

The transmitter software interface parameter display is adaptive, the operation interface menu is simple to set up, the user operation is convenient; the sensor is plug and play; the electrode installation and replacement is fast and convenient; various data transmission modes are optional, and the data storage and export are available.

Features

- Up to 7 sensors can be connected to improve integration and reduce operating and maintenance costs.
- High versatility, all digital sensor interfaces are common, and analog sensors can be configured with different modules
- according to different sensor types;
- Sensor plugs and operates, quick and convenient electrode installation and replacement;
- With 4-20mA, MODBUS RS485, wireless transmission and other data transmission methods;
- 7-inch color touch screen, easy operate, easy learn, reliable system and low maintenance;
- With data storage and curve display function, master the dynamics of monitoring parameters;
- Automatically prompt error and warning information, and upload alarm signals;
- Have three levels of management authority;
- Wall mounting or panel mounting;
- With optional wireless data transmission module.

Technical Specifications

Display	7 inch touch screen with LED strong backlight, can operate in direct sunlight
Power supply	AC power supply: 85-500VAC;DC power supply:9-36VDC
Output	Standard 8 channels 4-20mA analog output. Program setting response parameters and response values
Relay	Four-way relay, program setting response parameters and response values
Communication protocol	Standard MODBUS RS485 communication for real-time transmission of measured value. Optional wireless communication method:4G:UDP/TCP NB:UDP
Main Material	PA66+GF25+FR (top cover); aluminum powder dusting (lower shell)
Storage Temperature	-20-70℃
Operation temperature	-15-60℃
Protective rate	IP65/ NEMA4X
Dimension	260mm*200mm*123.3mm (L*W*H)
Weight	About 2.0KG

UNI-20 Universal Transmitter

Introduction



The UNI-20 transmitter is highly versatile, and the existing digital and analog sensors from the company can be freely connected. Measurable parameters include pH, DO, ORP, Conductivity, Turbidity, SS, Chlorophyll, Blue-green algae, Residual chlorine, UVCOD, Ionic ammonia nitrogen, Nitrate nitrogen, Transparency and other parameters. UNI-20 can also choose single channel or dual channel configuration according to requirements. One transmitter can connect up to two sensors, reducing transmitter cost and installation space.

Features

- High versatility, all digital sensor interfaces are common, and analog sensors can be configured with different modules according to different sensor types;
- Optional dual channel: select single channel or dual channel configuration according to requirements;
- Realize sensor plug and play, quick and convenient electrode installation and replacement;
- Easy use, reliable results, interface operation instructions can reduce operational errors;
- LCD screen visualization operation, rich and comprehensive interface;
- With 4-20mA, MODBUS RS485 multiple data output modes;
- Automatically prompt error and warning information, and upload alarm signals;
- The transmitter supports wall mounting/panel mounting/pinch installation;
- With time display, data storage;
- And historical data viewing function;
- Optional data wireless transmission module.

Technical Specifications

Display	160*160 LCD
Power supply	AC:85-500VAC;DC:9-36VDC
Output	3-way 4-20mA
Relay	Three-way relays, programmed parameter & value response
Communication protocol	MODBUS RS485
Main material	PA66+GF25+FR(Cover);Aluminum alloy powder(Lower casing)
Storage temperature	-20-70℃
Operation temperature	-15-60℃
Protective rate	IP66/ NEMA4X
Dimension	145*125*162mm(L*W*H)
Weight	1.35KG

DXC20 Universal Transmitter

Introduction



The DXC20 transmitter is highly versatile, and the existing digital and analog sensors from the company can be freely connected. Measurable parameters include pH, DO, ORP, Conductivity, Turbidity, SS, Chlorophyll, Blue-green algae, Residual chlorine, UVCOD, Ionic ammonia nitrogen, Nitrate nitrogen, Transparency and other parameters. DXC20 can also choose single channel or dual channel configuration according to requirements. One transmitter can connect up to two sensors, reducing transmitter cost and installation space.

Features

- High versatility, all digital sensor interfaces are common, and analog sensors can be configured with different modules according to different sensor types;
- Optional dual channel: select single channel or dual channel configuration according to requirements;
- Realize sensor plug and play, quick and convenient electrode installation and replacement;
- Easy use, reliable results, interface operation instructions can reduce operational errors;
- LCD screen visualization operation, rich and comprehensive interface;
- With 4-20mA, MODBUS RS485 multiple data output modes;
- Automatically prompt error and warning information, and upload alarm signals;
- The transmitter supports wall mounting/panel mounting/pinch installation;
- With time display, data storage;
- And historical data viewing function;
- Optional data wireless transmission module.

Technical Specifications

Display	160*160 LCD
Power supply	AC:85-500VAC;DC:9-36VDC
Output	3-way 4-20mA
Relay	Three-way relays, programmed parameter & value response.
Communication protocol	MODBUS RS485
Main material	PA66+GF25+FR(Cover);Aluminum alloy powder(Lower casing)
Storage temperature	-20-70℃
Operation temperature	-15-60℃
Protective rate	IP66/ NEMA4X
Dimension	145*125*162mm(L*W*H)
Weight	1.35KG

PPH-500F Industrial PH Online Analyzer

Introduction



The PPH-500F industrial pH sensor is made of an acid- and alkali-resistant sensitive membrane blown into a cylindrical pH sensitive membrane. It has a large sensitive area and is resistant to mechanical shock. A variety of different intermediate electrolytes are specially made for different complex working conditions, so that it can maintain normal pH measurement and service life in extremely special measuring media. It is competent for high-salt, high-heavy metal ion, high-organic matter, high-ammonium ion and other occasions where conventional electrodes on the market are not well applicable.

Main Features

- Good repeatability and stability;
- Strong medium targeting and low maintenance;
- Double liquid junction structure design, strong anti-pollution ability;
- IP68 waterproof;
- 0-14pH full range measurement, long-term acid and alkali medium resistance;
- Strong sensitive membrane, resistant to mechanical shock;
- Customizable electrode insertion depth, salt bridge material can be customized according to site requirements;
- Cable length can be extended to 60 meters;
- With time display, data storage and historical data viewing function;
- Optional data wireless transmission module.

Application

- Applicable to electronic electroplating, chemical industry, high-salt wastewater, printing and dyeing, ammonia water and other industries.

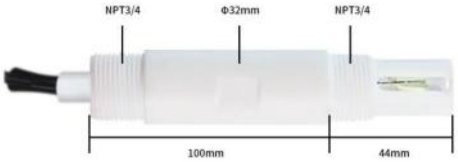
Technical Specifications

Measuring range	0-14pH
Temperature range	0-100℃、0-130℃ Optional
Withstand voltage range	0-3Bar,6Bar MAX
Temperature compensation type	PT1000
Factory slope	>95%
Zero potential	7±0.25pH
Response time	<30S
Reference electrolyte	GFT Polymer gel (customized)
Casing material	ABS、PPS、 PTFE sheath optional
Power supply	AC power supply: 85-500VAC; DC power supply: 9-36VDC
Output	3 ways 4-20mA
Relay	Three-way relay, program setting response parameters and response values
Communication protocol	MODBUS RS485
Cable	Standard cable length 10 meters
Measuring range	0-14pH
Temperature range	0-100℃、0-130℃ Optional
Withstand voltage range	0-3Bar,6Bar MAX

PPS shell size



PTFE sheath shell size



PPH-500F electrode optional types

Model	pH Sensitive Membrane Type	Typical Application
PPH-500F-CG	Acid and alkali resistant sensitive membrane(HA)	Conventional type, suitable for conventional sewage and wastewater, with optional temperatures of 0~100 ℃, 0~130 ℃, and -15~80℃
PPH-500F-PW	Low resistance glass sensitive membrane(HL)	Applicable to pure water, tap water, swimming pool, surface water, secondary water supply, circulating water and other industries
PPH-500F-HG/ZJS/GL/AS…..	Acid and alkali resistant sensitive membrane(HA)	Applicable to chemical industry, heavy metal, high salt wastewater, ammonia water, electronic electroplating, printing and dyeing and other industries
PPH-500F-HF	Hydrofluoric acid resistant sensitive membrane(HF)	Applicable to semiconductor industry, petrochemical industry, steel wastewater, metal processing, electronic electroplating
PPH-500F-TS	High temperature resistant sensitive membrane(HT)	Applicable to desulfurization, denitrification, waste gas treatment and other industries
PPH-500F-FJ	High temperature resistant sensitive membrane(HT)	Applicable to biopharmaceuticals, food and beverage, sugar, chlor-alkali, petrochemical, electric power, semiconductor electronics and other industries
More industrial pH can be customized according to site needs		

POP-500A RS485 Digital ORP Sensor

Main Features



- Power supply and output isolation design to ensure electrical safety
- Power supply and communication chip built-in protection circuit, anti-interference ability
- With comprehensive protection circuit design, without additional isolation equipment can work reliably
- The circuit is built inside the electrode, which has good environmental tolerance and is easier to install and operate
- RS485 transmission interface, MODBUS RTU communication protocol, two-way communication, can receive remote instructions
- The communication protocol is simple and practical, and it is extremely convenient to use
- Output more electrode diagnosis information, more intelligent
- Internal integrated memory, can still remember the stored calibration and setting information after power off.

Technical Specifications

Shell material	PPS
Measuring range	-2000-2000 mV
Resolution	1 mV
Precision	2 mV
Temp. compensation mode	Automatic or manual
Temp. compensation	10.0 ~ 110.0℃
Resolution	0.1℃
Precision	0.5℃
Electrode voltage resistance	0 -4 bar
Electrode temp. resistance	0.0-60.0℃
Mounting thread	3/4 inch Fore and aft thread
Power	12VDC
Cable length	Standard: 10 M

POP-500 ORP Online Analyzer

Measurement Principle



POP-500 ORP sensor is a combination electrode combined precious metals indicator electrode with reference electrode. Firstly measure the potential difference of working battery made up of measuring electrode and reference electrode in the solution,then use linear relation of ORP value of the measuring solution and potential of working battery to realize the ORP on-line monitoring.

Main Features

- Good repeatability and stablity.
- Simple cleaning and activation,quite high balance speed.
- Optional analog-digital conversion module to achieve digital signal output,high anti-jamming capacity and far transmission distance.
- Optional analog-digital conversion module to achieve standard digital signal output(RS485),can achieve integration and networking with other equipment without controller.
- Quick and easy field installation,adopting terminal connection.
- Sensor power supply positive and negative reverse connection protection
- Sensor RS485 A/B terminal is connected to the power supply protection
- With time display, data storage and historical data viewing function;
- Optional data wireless transmission module.

Application

- ORP monitoring of tap water,municipal sewage and surface water and etc.
- ORP monitoring of industrial process water and in wastewater treatment process.

Technical Specifications

Main materials	Black Polypropylene,Ag/Agcl Reference Gel
Measurement range	-2000mV-+2000mV
Pressure range	≤0.6Mpa
Zero potential mV value	86±15mV(25℃)(in pH 7.00 solution containing saturated quinhydrone)
Range	≥170mV(25℃)(in PH 4 solution containing saturated quinhydrone)
Response time	≤10 sec (Reach 95% of the end value)(After stirring)
Power supply	AC:85-500VAC;DC:9-36VDC
Output	3-way 4-20mA
Relay	Three-way relays,programmed response parameter and response value
Communication Protocol	MODBUS RS485
Medium temperature	0-80℃(Non-freezing)
Dimensions	Sensor:Dia28.7mm*L 195mm Transmitter:145*125*162mm(L*W*H)
Weight	Sensor:0.2KG;Transmitter:1.35KG
Cable length	Standard:10 m, can be extended 20 m

PEC-600B Inductive Conductivity Sensor

Measurement Principle



PEC-600B inductive conductivity sensor has the function of measuring conductivity and various salinity, acid and alkali concentrations and digitally outputting them. The signal processing circuit is integrated into an ASIC with an embedded MCU, so that the sensor has been calibrated before leaving the factory, and the calibration value is permanently stored in the probe. It has its own temperature compensation function, and the temperature value is also directly output digitally.

The inductive sensor has the ability to resist contamination from oil-contaminated and process-coated media. The sensor has no plates directly contacting the test solution, there is no polarization phenomenon, and it is not affected by the coating or film form; the material of the sensor has the advantages of anti-pollution and corrosion resistance.

Features

- The sensor probe is non-contact with the measured solution, and does not require frequent maintenance and care;
- Can directly output RS485 signals;
- Low voltage and low power design, the probe can be directly applied to a single 3.5V power supply;
- No metal material is in contact with the water body, and polarization or scaling will not occur;
- Suitable for medium and high conductivity, up to 2000ms/cm can be measured;
- With built-in temperature compensation function;
- With digital filtering function, strong anti-interference ability;
- The electrode shell is made of high-quality material with good corrosion resistance, electrical insulation and anti-aging endurance.

Applications

- Suitable for seawater and wastewater treatment, electroplating processes, film production processes, cooling tower monitoring, internal wastewater treatment processes, acid and alkali solution and conductivity monitoring, tanneries, corrosive treatment processes, washers, automotive engineering, conductivity monitoring of cleaning processes (CIP).

Technical Specifications

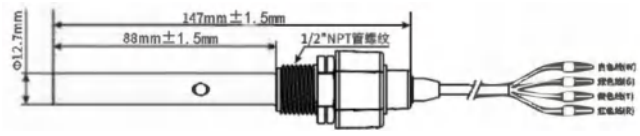
Item Description		PEC-600B inductive conductivity sensor
Test Range	**Conductivity**	0-2000ms/cm
	Salinity	0-72ppt(0-100ms/cm)
	Temperature	PP Material：0-50℃；PFA Material：0-100℃
	Acid concentration	1. Hydrochloric acid (HCL): 0-20% or 25-40% 2. Nitric acid (HNO3): 0-25% 3. Sulfuric acid (H2SO4): 0-25% or 35-85% or 85-92% or 92-100%
	Base concentration	1. Caustic soda (NaOH): 0-18% or 20-40% 2. Potassium hydroxide (KOH): 0-30%
	Salt concentration	Sodium chloride(NaCL):0-30%
Accuracy	**Conductivity**	±1.5% FS
	Salinity	±1.5% FS

Temperature	±0.5℃
Temperature compensation	PT1000
Communication	Standard MODBUS RTU protocol
Supply voltage	DC 12V
Cable length	Standard 10 meters, can be extended to a maximum of 100 meters

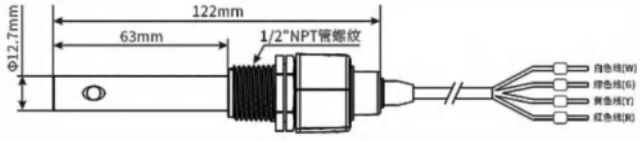
PEC-500E Conductivity Sensor

Product Images			
Model	**PEC-500E-A**	**PEC-500E-C**	**PEC-500E-D**
Electrode constant	K=0.01	K=0.1	K=1.0
Measurement range	0.05~20μS/cm	0.5~200μS/cm	1.0~2000μS/cm
Linear error	1.5%FS	1.5%FS	1.5%FS
Temperature compensation	NTC10K	NTC10K	NTC10K
Pressure range	0.6MPa (Max)	0.6MPa (Max)	0.6MPa (Max)
Tolerance temperature	0~50℃	0~50℃	0~50℃
Main material	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel
Mounting thread	1/2"NPT	1/2"NPT	1/2"NPT
Cable length	5m (Max. 30m)	5m (Max. 30m)	5m (Max. 30m)

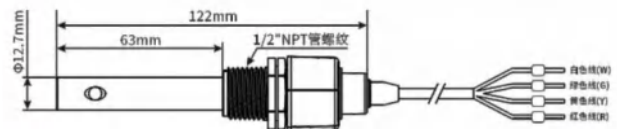
Electrode Dimensions



PEC-500E-A(K=0.01)



PEC-500E-C(K=0.1)

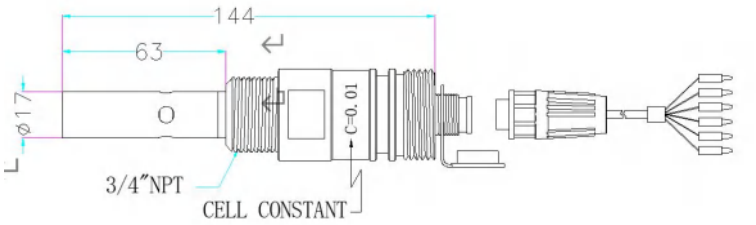


PEC-500E-D(K=1.0)

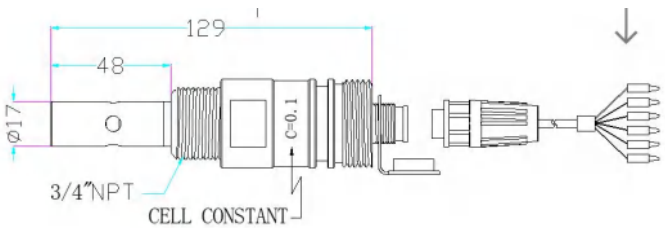
PEC-500F Conductivity Sensor

Product Images			
Model	**PEC-500F-A**	**PEC-500F-B**	**PEC-500F-C**
Electrode constant	K=0.01	K=0.05	K=0.1
Measurement range	0.05~20.0μS/cm	0.05~100.0μS/cm	0.1~200.0μS/cm
Linear error	1.0%FS	1.0%FS	1.0%FS
Temperature compensation	NTC30K	NTC30K	NTC30K
Pressure range	0.6MPa (Max)	0.6MPa (Max)	0.6MPa (Max)
Tolerance temperature	0~80℃	0~80℃	0~80℃
Main material	Titanium Alloy + CPVC	Titanium Alloy + CPVC	Titanium Alloy + CPVC
Mounting thread	3/4"NPT	3/4"NPT	3/4"NPT
Cable length	5m (Max. 30m)	5m (Max. 30m)	5m (Max. 30m)

Electrode Dimensions



PEC-500F-A(K=0.01)、PEC-500F-B(K=0.05)



PEC-500F-C(K=0.1)

PMDO-700 Series On-line Trace Dissolved Oxygen Analyzer

Measurement Principle



The trace dissolved oxygen analyzer is a highly sensitive on-line analytical instrument. Composed of a main unit, sensor, flow cell, and cable, it features high sensitivity, fast response, and user-friendly operation, specifically designed for measuring trace-level (ppb-level) oxygen concentration in gas-water/gas media.

Oxygen measurement adopts the electrochemical polarography method. During measurement, the oxygen sensor undergoes a redox reaction to generate a diffusion current, whose magnitude is proportional to the oxygen concentration in the sample.

Features

- High-resolution color touch screen: 800×480 resolution, Chinese menu, easy operation.
- Real-time curve display: Simultaneous digital and curve presentation for intuitive results.
- Multi-channel setting: Supports 4 oxygen sensors for cost efficiency..
- Convenient installation & maintenance: Direct fixed mounting (no base needed); rear wiring for reliability
- Plug-in sensor design: Facilitates easy maintenance and replacement.
- High precision & sensitivity: Detection limit down to 0.1μg/L or 0.01μg/L; resolution 0.1μg/L or 0.01μg/L.
- Fast response: Typically 3 minutes from air to μg/L-level concentration.
- Long maintenance cycle & low consumable cost: Electrode maintenance every 6–8 months under normal use.
- Large data storage: Holds 1.5 million records with historical curve query function.
- 4–20mA current output and RS485 communication.

Applications

- Trace dissolved oxygen analysis for deoxygenated water in power plants and waste heat boilers.
- Trace oxygen monitoring in ultra-pure water processes for semiconductor chip packaging and high-end PCB manufacturing.

Technical Specifications

Display	800*480 color touch screen
Channels	Up to 4 dissolved oxygen channels
Measurement Range	0.01μg/L–20.00mg/L
Resolution	0.1μg/L or 0.01μg/L (optional)
Measurement Error	±1.5%FS or 1.0μg/L (whichever is larger)
Response Time (T90)	<30s
Medium Temperature	0–50℃
Temperature Resolution	0.1℃
Sample Flow Rate	100–400mL/min
Working Environment	Temperature: 0–50℃; RH: ≤90%
Output Current	0/4–20mA
Current Error	±0.01mA
Max. Load Resistance	800Ω (at 20mA)

Alarm Outputs	2-way alarm relays
Power Supply	AC 220V / DC 24V
Data Storage	1.5 million records
Communication	RS485
Weight	800g
Installation	Cutout/wall-mounted/pipeline
Cutout Size	138mm*138mm

PMDO-800 Series Portable Trace Dissolved Oxygen Analyzer

Measurement Principle



The portable trace dissolved oxygen analyzer is a highly sensitive analytical instrument. Comprising a handheld controller, sensor, flow cell, and cable, it features high sensitivity, rapid response, and user-friendly operation, specifically designed for measuring trace-level (ppb-level) oxygen concentration in gas-water/gas media.

Dissolved oxygen measurement is based on the electrochemical polarography method (Clark electrode). During measurement, the oxygen sensor undergoes a redox reaction to generate a diffusion current, with its magnitude proportional to the oxygen concentration in the sample.

Features

- Fastest Response & Measurement: Typically takes only 3 minutes to transition from air to μg/L-level concentration.
- High precision & sensitivity: Detection limit reaches 0.1 μg/L or 0.01 μg/L; resolution 0.1 μg/L or 0.01 μg/L.
- Plug-in Sensor Design: Enables easy maintenance and replacement.
- Long-life electrode technology: Prolongs service life, reducing replacement costs.
- Simplest Operation & Calibration: Ready for measurement on startup—no prolonged electrode polarization needed.
- Long maintenance cycle & low-cost consumables: Electrode maintenance every 4–8 months under normal use.
- Low-power Design & Extended Operation: Dry battery-powered, lasting over 1,200 hours continuously.
- High protection rating & humanized design: Full-body waterproofing; magnetic attachment for portability.

Applications

- Trace dissolved oxygen analysis for deoxygenated water in power plants and waste heat boilers.
- Trace oxygen monitoring in ultra-pure water processes for semiconductor chip packaging and high-end PCB manufacturing.

Technical Specifications

Measurement Range	0.01 μg/L–20.00 mg/L
Resolution	0.1 μg/L or 0.01 μg/L (optional)
Zero Error	< 1 μg/L
Response Time (T90)	< 20 s
Measured Medium Temperature	0–45℃
Temperature Resolution	NTC thermistor, accuracy: 0.1℃
Sample Flow Rate	160–500 mL/min (constant)
Calibration	Air slope calibration, zero-point calibration
Compensation	Automatic temperature compensation; manual atmospheric pressure & salinity setting
Working Environment	Temperature: 0–45℃; RH: ≤90%

Power Supply	4× AA alkaline batteries (≥1,200 hours)
Protection Rating	Instrument: IP67; probe: IP68
Dimensions	164 mm (L) × 75 mm (W) × 17 mm (H)
Weight	300 g (with instrument, probe, flow cell)
Accessory Kit	Electrolyte, permeable membrane, flow cell

PAM100C-Na On-line Sodium Ion Monitor (Cation Bed)

Measurement Principle



This instrument is used for continuous monitoring of sodium ions in water, and can be widely applied in industries such as electric power and petrochemicals. It can monitor the sodium ion content at the outlet of the cation bed during the pure water production process by ion exchange method. Especially, the unique alkalization structure design enables it to efficiently measure the sodium ion content at the cation bed outlet, featuring fast response, accurate measurement, easy operation, and low maintenance.

The response of the sodium electrode potential to changes in sodium ion concentration can be described by the Nernst equation:

$$E = E_0 + 2.3\frac{RT}{nF}\lg a_{Na^+}$$

Where:

E — Potential generated by the sodium electrode, in mV;

E0 — Potential generated by the sodium electrode when the sodium ion activity is 1 mol/L, in mV;

R — Ideal gas constant, 8.314JK-1mol-1;

T — Absolute temperature of the sample water, in K;

F — Faraday constant, 9.649×10⁴ C·mol-1;

n — Number of electrons gained or lost in the reaction (sodium ion is +1);

a_{Na^+} — Activity of sodium ions in the solution, in mol/L.

The above equation shows that the measured potential changes with temperature and the concentration of related ions. To eliminate errors caused by fluctuations in sample water temperature, the cation bed sodium ion monitor adjusts the temperature compensation value in real-time based on the temperature measured by the ATC temperature probe.

Features

- Advanced embedded single-chip microcomputer technology;
- High-quality electrode, effective alkalization method, and unique automatic stability judgment function ensure measurement stability and reliability;
- Advanced surface mount technology (SMT) and integrated design improve cost-performance and reliability;
- Compact structure, panel-mounted installation, all-aluminum frame case, beautiful and sturdy, with strong anti-interference capability;
- Simultaneous display of multiple parameters, rich content, and easy to understand;
- Automatic or manual temperature compensation;
- Two isolated current outputs and two alarm signals;
- Standard RS485 digital communication;
- Large-capacity historical data storage and historical curve query function.

Applications

- In thermal power plants, real-time monitoring of sodium ion concentration in boiler feed water and steam condensate to prevent scaling from reducing heat exchange efficiency or causing equipment corrosion.

- Monitoring sodium ion concentration in circulating water or water supply systems in petrochemical, metallurgical, and other industries to optimize the dosage of scale inhibitors and prevent pipeline blockage and equipment corrosion.

Technical Specifications

Electronic Unit

Display	Chinese/English display, 192*64 dot matrix LCD
Measurement Range	(0.03–9.36) pNa, 0.01 μg/L–21.4 g/L, (–1000–1000) mV
Minimum Resolution	0.01 pNa, 0.01 μg/L, 0.1 mV
Indication Error	0.01 pNa, 1 display character, ±0.5 mV
Stability	±0.01 pNa/24h, ±1 display character/24h, ±0.5 mV/24h
Current Output	(4–20) mA (two isolated outputs)
Output Error	±1% F.S
Maximum Output Load Resistance	800 Ω
Power Supply	AC (100–240) V, frequency (50/60) Hz or 24 VDC
Power Consumption	No more than 8 W
Insulation Strength	1500 V between power supply and ground, no arcing within 1 minute
Alarm Output	Concentration upper limit alarm, concentration lower limit alarm, high-temperature alarm, low-temperature alarm; (alarm values can be programmed, and alarm outputs can be set to 2 of the 4 items)
Automatic Data Storage	Can be set to automatically record historical data, historical events, and calibration records

Electronic Unit

Measurement Range	(1.00–8.00) pNa (0.23 μg/L–2300 mg/L)
Minimum Resolution	0.01 pNa or 0.01 μg/L
Instrument Indication Error	±0.05 pNa or ±5 μg/L (within ±10℃ of the calibration temperature)
Response Time (T90)	No more than 2 min (25℃)
Temperature Sensor	Pt1000
Temperature Measurement Range	(0.0–99.9) ℃
Temperature Measurement Accuracy	±0.5℃
Temperature Measurement Resolution	0.1℃
Temperature Compensation Range	(0.1–60.0) ℃ (manual or automatic)
Sample Conditions - Temperature	(5–50) ℃
Sample Conditions - Pressure	(50–300) kPa
Sample Conditions - Flow Rate	(20–30) cc/min
Allowable Solid Content in Water Sample	No more than 5 microns (no gelatinous substances or grease allowed)
Ambient Temperature	(5–45) ℃
Ambient Humidity	No more than 90% RH (no condensation)
Storage and Transportation Temperature	–20℃–55℃ (excluding the electrode, which should be above 0℃)
Dimensions	450 mm * 690 mm * 190 mm (width * height* depth)
Cutout Size	410 mm * 645 mm
Weight	20 kg

PAM100V-Na On-line Sodium Ion Monitor (for Steam)

Measurement Principle



The PAM100V-Na on-line sodium ion monitor is a new-generation on-line analytical instrument developed with the latest domestic and international technologies. It can continuously monitor sodium ions in water, featuring fast response, accurate measurement, and easy operation, ensuring the safe and economical operation of equipment. It is widely applicable to industries such as electric power, petroleum, steel, and chemical engineering.

The response of the sodium electrode's potential to changes in sodium ion concentration can be described by the Nernst equation:

$$E = E_0 + 2.3\frac{RT}{nF}\lg a_{Na^+}$$

Where:

E — Potential generated by the sodium electrode, in mV.

E0 — Potential generated by the sodium electrode when the sodium ion activity is 1 mol/L, in mV.

R — Ideal gas constant, 8.314JK-1mol-1.

T — Absolute temperature of the sample water, in K.

F — Faraday constant, 9.649×10⁴ C·mol-1.

n — Number of electrons gained or lost in the reaction (sodium ion is +1).

a_{Na^+} — Activity of sodium ions in the solution, in mol/L.

The equation indicates that the measured potential varies with temperature and the concentration of related ions. To eliminate errors caused by temperature fluctuations in the sample water, the steam sodium ion monitor continuously corrects temperature compensation based on the temperature value measured by the ATC temperature probe.

Features

- Advanced embedded single-chip microcomputer technology.
- High-quality electrode, effective alkalization method, and unique automatic stability determination function ensure measurement stability and reliability.
- Advanced surface mount technology (SMT) and integrated design improve cost-performance and reliability.
- Compact structure, panel-mounted installation, all-aluminum frame case, beautiful and sturdy, with strong anti-interference capability.
- Simultaneous display of multiple parameters, rich content, and easy to understand.
- Automatic or manual temperature compensation.
- Two isolated current outputs and two alarm signals.
- Standard RS485 digital communication.
- Large-capacity historical data storage and historical curve query function.

Applications

- In thermal power plants, real-time monitoring of sodium ion concentration in boiler feedwater and steam condensate water to prevent scaling from causing reduced heat exchange efficiency or equipment corrosion.
- Monitoring sodium ion concentration in circulating water or water supply systems in petrochemical, metallurgical, and other industries to optimize the dosage of scale inhibitors and prevent pipeline blockage and equipment corrosion.

Technical Specifications

Electronic Unit

Display	Chinese and English display, 192*64 dot matrix LCD
Measurement Range	(0.03-9.36) pNa, 0.01 μg/L-21.4 g/L, (-1000-1000) mV
Minimum Resolution	0.01 pNa, 0.01 μg/L, 0.1 mV
Indication Error	0.01 pNa, 1 display character, ±0.5 mV
Stability	±0.01 pNa/24h, ±1 display character/24h, ±0.5 mV/24h
Current Output	(4-20) mA (two isolated outputs)
Output Error	±1% F.S
Maximum Output Load Resistance	800 Ω
Power Supply	AC (100-240) V, frequency (50/60) Hz or 24 VDC
Power Consumption	No more than 8 W
Insulation Strength	1500 V between power supply and ground, no arcing within 1 minute
Alarm Output	Concentration upper limit alarm, concentration lower limit alarm, high-temperature alarm, low-temperature alarm; (alarm values can be programmed, and alarm outputs can be set to 2 of the 4 items)
Automatic Data Storage	Can be set to automatically record historical data, historical events, and calibration records

Electronic Unit

Measurement Range	(1.00-8.00) pNa (0.23 μg/L-2300 mg/L)
Minimum Resolution	0.01 pNa or 0.01 μg/L
Instrument Indication Error	±0.03 pNa or ±5 μg/L (within ±10℃ of the calibration temperature)
Response Time (T90)	No more than 2 min (25℃)
Temperature Sensor	Pt1000
Temperature Measurement Range	(0.0-99.9) ℃
Temperature Measurement Accuracy	±0.5℃
Temperature Measurement Resolution	0.1℃
Temperature Compensation Range	(0.1-60.0) ℃ (manual or automatic)
Sample Conditions - Temperature	(5-50) ℃
Sample Conditions - Pressure	(50-300) kPa
Sample Conditions - Flow Rate	(6-20) L/h
Allowed Solid Components in Water Sample	No more than 5 μm (no jelly-like substances or grease allowed)
Ambient Temperature	(5-45) ℃
Ambient Humidity	No more than 90% RH (no condensation)
Storage and Transportation Temperature	-20℃-55℃ (excluding the electrode, which should be above 0℃)
Overall Dimensions	450 mm * 690 mm * 190 mm (width* height * depth)
Cutout Size	410 mm * 645 mm
Weight	18 kg

PAM100-P On-line Phosphate Monitor

Measurement Principle



This instrument adopts the phosphorus vanadium molybdenum yellow photoelectric colorimetry. According to the Beer-Lambert Law, when a monochromatic light with corresponding wavelength passes through a colored solution, the light intensity will decrease because part of the light is absorbed by the light-absorbing particles in the solution. The relationship is as follows:

$$-Lg\frac{I_T}{I_0}=KLC$$

Where:

- I_T is the transmitted light intensity,
- I_0 is the incident light intensity,
- L is the liquid layer thickness,
- C is the solution concentration,
- K is a constant.

This is the Beer-Lambert Law, and the instrument analyzes and calculates the measured substance in the water sample based on the above formula.

Features

- Advanced embedded single-chip microcomputer technology;
- Compact structure, panel-mounted, full aluminum frame case, beautiful and sturdy, with strong anti-interference ability;
- Large dot-matrix liquid crystal display, intuitive and rich display content;
- Programmable 1-6 channels switching;
- Programmable modification of channel measurement cycle to effectively save reagents;
- With temperature measurement function, which can compensate measurement data according to temperature;
- Adopts imported light source and photocell, with long service life, small drift, stability and reliability;
- With black box function, which can query historical data, operation records and calibration records;
- Wide voltage (85～265VAC) and wide frequency (45～65 Hz), able to adapt to multiple conditions.

Applications

- In thermal power plants, real-time monitoring of phosphate concentration in boiler feed water and steam condensate to prevent scale formation caused by phosphates, which leads to reduced heat exchange efficiency or equipment corrosion.
- Monitoring phosphate concentration in circulating water or water supply systems in petrochemical, metallurgical and other industries to optimize the dosage of scale inhibitors and prevent pipeline blockage and equipment corrosion.

Technical Specifications

Measurement Range	(0-5) mg/L or (0-20) mg/L or (0-50) mg/L (specified when ordering)
Instrument Indication Error	±2% of full scale (F.S)
Repeatability	No more than 1%
Measurement Cycle	Programmable setting of 1-99 minutes, minimum 5 minutes
Stability (Baseline Drift)	Using blank calibration, blank drift has no effect
Stability (Chemical Drift)	±1% F.S/24h (depending on reagent stability)

Sample Conditions (Flow Rate)	(150-300) mL/min
Sample Conditions (Temperature)	(5-50)℃
Allowed Solid Components in Water Sample	No more than 5 microns (no jelly-like substances allowed)
Ambient Temperature	(5-45)℃
Ambient Humidity	No more than 90% RH (no condensation)
Reagent Consumption	No more than 3 liters/30 days per type (1 type of reagent)
Display	320*240 dot-matrix liquid crystal, Chinese menu
Isolated Output	(4-20) mA (isolated output, one per channel)
Power Supply	AC (100-240) V, frequency (50/60) Hz or 24 VDC
Power	60 W
Dimensions	690 mm*450 mm*300 mm (height*length*depth)
Cutout Size	645 mm*410 mm
Weight	22 kg

PAM100-Si On-line Silicate Monitor

Measurement Principle

This instrument adopts the silicomolybdate blue photometric colorimetry According to the Beer-Lambert Law, when a monochromatic light with corresponding wavelength passes through a colored solution, the light intensity will decrease because part of the light is absorbed by the light-absorbing particles in the colored solution. The relationship is as follows:



$$-Lg\frac{I_T}{I_0}=KLC$$

Where: I_T is the transmitted light intensity, I_0 is the incident light intensity, L is the liquid layer thickness, C is the solution concentration, and K is a constant.

This is the Beer-Lambert Law, and this instrument analyzes and calculates the measured substance in the water sample according to the above formula.

Features

- Advanced embedded single-chip microcomputer technology
- Compact structure, panel mounting, all-aluminum frame enclosure, beautiful and firm, with strong anti-interference ability
- Large-screen dot-matrix liquid crystal, intuitive and rich display content
- Programmable to realize 1-6 channel switching
- Programmable to modify the channel measurement cycle, effectively saving reagents
- With temperature measurement function, which can compensate the measurement data according to the temperature
- Adopting imported light source and photocell, with long service life, small drift, stability and reliability
- With black box function, which can query historical data, operation records and calibration records
- Wide voltage (85-265VAC), wide frequency (45-65Hz), able to adapt to multiple conditions.

Applications

- In thermal power plants, real-time monitoring of the silicate concentration in boiler feed water and steam condensate water to prevent silicate scaling from causing a decrease in heat exchange efficiency or equipment corrosion.
- Monitoring the silicate concentration in circulating water or water supply systems in petrochemical, metallurgical and other industries, optimizing the dosage of scale inhibitors, and preventing pipeline blockage and equipment corrosion.

Technical Specifications

Measurement Range	(0-100) μg/L or (0-200) μg/L or (0-2000) μg/L (specified when ordering)
Instrument Indicated Value Error	±2% F.S
Repeatability	1%
Measurement Cycle	Programmable setting of 1-99 minutes, minimum 10 minutes
Stability (Baseline Drift)	Using blank calibration, blank drift has no effect
Stability (Chemical Drift)	±1% F.S/24h (depending on reagent stability)
Sample Conditions (Flow Rate)	(150-300) mL/min

Sample Conditions (Temperature)	(5-50) ° C
Allowed Solid Components in Water Sample	No more than 5 microns (no gelatinous substances are allowed)
Ambient Temperature	(5-45) ° C
Ambient Humidity	No more than 90% RH (no condensation)
Reagent Consumption	No more than 3 liters/30 days/type (3 types of reagents)
Display	320*240 dot-matrix liquid crystal, Chinese menu
Isolated Output	(4-20) mA (isolated output, one for each channel)
Power Supply	AC (100-240) V, frequency (50/60) Hz or 24 VDC
Power	60 W
Dimensions	690 mm*450 mm*300 mm (height*length*depth)
Cutout Size	645 mm*410 mm
Weight	22 kg

Product Center

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