

CONDUCTIVITY PRODUCT SELECTION GUIDE

Professional • Accurate • Reliable

Complete Solutions for Conductivity Monitoring

Analog & Digital • Customizable to Your Needs



SURFACE WATER
Monitoring



MUNICIPAL WASTEWATER
Monitoring



INDUSTRIAL WASTEWATER
Monitoring



PURE WATER
Applications

**FOCUS ON
PROCESS ANALYSIS
SOLUTIONS**



ACCURATE
MEASUREMENT



RELIABLE
PERFORMANCE



EASY
INTEGRATION



SUPPORT
CUSTOMIZATION

PEC-500 Conductivity Online Analyzer

Introduction

Conductivity sensor is a kind of glass platinum electrode. Its principle is putting 2 conductance pieces in which a voltage is added into the sample solution to measure current in the solution. Then calculate the conductivity by voltage and current.

Main Features

- ◇ Good repeatability and stability.
- ◇ Simple cleaning and activation, quite high balance speed.
- ◇ Automatic temperature compensation;
- ◇ Quick and easy field installation, adopting terminal connection.

Application

- ◇ Conductivity monitoring of tap water, municipal sewage and aquaculture and etc.
- ◇ Conductivity monitoring of industrial process water and in wastewater treatment process.



Technical Specifications

Main materials	Black polypropylene shell, glass platinum electrode
Measurement range	Conductivity: 10-5,000 us/cm; Temperature: 0-80°C
Linear error	3% of the measurement value
Pressure range	≤0.6Mpa
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
Measuring temperature	0- 80°C (Non-freezing)
Dimension	Sensor: Dia28.7mm*L 195mm Transmitter: 145*125*162mm(L*W*H)
Weight	Sensor: 0.2KG; Transmitter: 1.35KG
Cable length	Standard: 10m, the maximum can be extended

PEC-500B Conductivity Online Analyzer

Introduction

PEC-500B digital quadrupole conductivity online analyzer, suitable for all kinds of harsh working environment. It has the advantages of high precision, long life and small drift. Widely used in surface water, municipal sewage, industrial wastewater, sewage treatment, waterworks, industrial process, aquaculture and other industries.

Main Features

- ✧ Corrosion-resistant shell, waterproof grade IP68, can work underwater for a long time.
- ✧ RS485 communication interface, the standard Modbus protocol, ease of integration.
- ✧ Standard digital signal output can be realized in the case of no controller and other equipment integration and networking.
- ✧ Convenient and quick installation, easy plug and play.
- ✧ Time display, data storage and the function of historical data view.
- ✧ Optional data wireless transmission module.
- ✧ Controller can be hanging installation/panel/clip pipe installation.



Application

- ✧ Surface water, water plant, aquaculture.
- ✧ Municipal sewage and industrial wastewater, sewage treatment, industrial process.

Technical Specifications

Measuring range	10 us/cm -200 ms/cm (automatic switching)
Main material	316L Stainless Steel
Resolution	0.01us/cm-1us/cm depends on measure range
Repeatability	±1% or 1us/cm bigger one
Accuracy	±1% or 1 us/cm bigger one
Temp. measuring range	0-100℃
Electrode voltage resistance	0-0.1Mpa
Electrode temp. resistance	0-45℃ (no icing)
Communication protocol	MODBUS RS485
Power supply	AC:85-500VAC ;DC:9-36VDC
Output	3-way 4-20mA
Relay	Three-way relays, programmed parameter & value response.
Protective rate	Sensor:IP68/NEMA6P;Transmitter:IP66/ NEMA4X
Dimensions	Sensor:Dia34mm*L 230mm;Transmitter:145*125*162mm(L*W*H)
Mounting thread	Upper R3/4
Cable length	Standard: 10m, up to 200m

PEC-500A Digital Conductivity Sensor

Measurement Principle

The conductivity sensor is a glass platinum electrode. In general, the voltage is in the form of a sine wave. Conductivity is determined by the ohmic formula based on voltage and current values.

Features

- ✧ Power supply and output isolation design to ensure electrical safety.
- ✧ Power supply and communication chip built-in protection circuit, strong anti-interference ability.
- ✧ With a comprehensive protection circuit design, it can work reliably without additional isolation equipment.
- ✧ The circuit part is designed inside the electrode, the environment is well tolerated, and the installation operation is easier.
- ✧ RS-485 transmission interface, MODBUS-RTU communication protocol, two-way.
- ✧ Communications, can receive remote commands.
- ✧ Output more electrode diagnostic information, more intelligent.
- ✧ Internal integrated memory, memory calibration and setting.
- ✧ Information can be memorized after power off.



Applications

- ✧ It is widely used in the monitoring of conductivity in water treatment, hydrological monitoring, wastewater treatment,
- ✧ It is widely used in the monitoring of conductivity in swimming pools
- ✧ It is widely used in the monitoring of conductivity in fish ponds
- ✧ The monitoring of conductivity in fertilizers, chemicals, and biology.

Technical Specifications

Main materials	PPS Shell
Measurement range	0.0-200.0 us/cm ; 0-2000us/cm ; 0.01-20.00ms/cm (Automatic switch)
Accuracy	±2%F.S.
Resolution	Depending on the range 0.01ms/cm,0.1us/cm,1us/cm(Automatic switch)
Repeatability	±1%
Temperature compensation	0-60℃
Pressure range	0-0.1 Mpa
Electrode Temp. resistance	0-60℃(Non-freezing)
Power supply	12VDC
Communication Protocol	MODBUS RS485
Dimension	Dia26mm*L 166mm
Protective rate	IP68 (Protective casing)
Mounting thread	3/4" thread
Cable length	Standard:10M,the maximum can be extended 200m

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

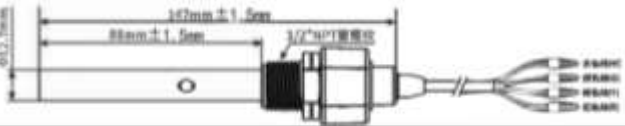
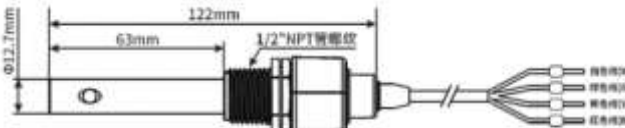
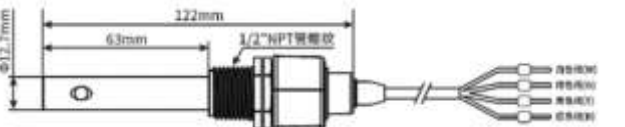
- ✧ Suitable for seawater and wastewater treatment, electroplating processes, film production processes, cooling tower monitoring, internal wastewater treatment processes, acid and alkali solution and conductivity monitoring, tanneries, corrosive treatment processes, washers, automotive engineering,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

Technical Specifications

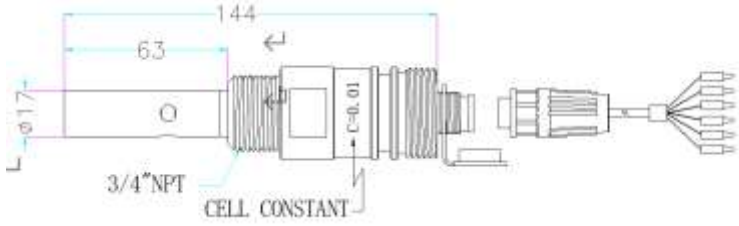
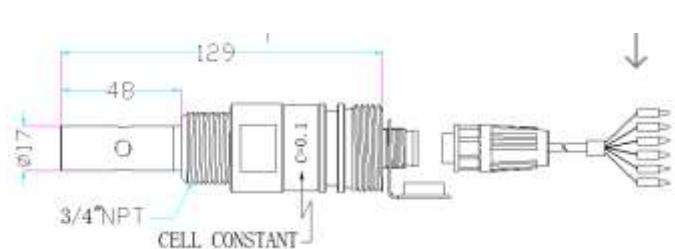
Item Description		PEC-600B inductive conductivity sensor
Test Range	Conductivity	0-2000ms/cm
	Salinity	0-72ppt(0-100ms/cm)
	Temperature	PP Material: 0-50°C; PFA Material: 0-100°C
	Acid concentration	1. Hydrochloric acid (HCL): 0-20% or 25-40% 2. Nitric acid (HNO3): 0-25% 3. Sulfuric acid (H2SO4): 0-25% 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°C

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	0.055~20μS/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	10m (Max. 30m)	10m (Max. 30m)	10m (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)		

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