



Online Conductivity Meter

T-EC100-02



Features

- Easy operation
- NEMA-4X enclosure for field mounting and panel mounting
- Microprocessor based with self diagnostic feature
- Automatically Temperature Compensation
- Directly switchable to conductivity or TDS
- 4.3 inch Large LCD display with background lighting
- Conductivity or TDS sensors can be connected thanks to the sensor supply integrated in the output
- Using the setup program: user-friendly programming
- Data logging capacity
- 4-20mA analog output & RS485 communication

Product Overview

The TIPL T-EC100 is used in industrial measuring of the temperature, conductivity, Resistivity, salinity and total dissolved solids, such as waste-water treatment, environmental monitoring, pure water, sea farming, food production process, etc. The instrument can be panel, wall or pipe mounted. The instrument provides two current outputs. The maximum load is 500Ω. The instrument provides 3 relays. It can pass through a maximum of 5A/250VAC or 5A/30VDC.



Conductivity meter Technical Specifications

Parameter	Description
Measuring Range	Cond. 0.00uS-2000mS TDS 0-133000 ppm
Resolution	0.01/0.1/1 1
Accuracy	±1%F.S. ±1%F.S.
Temp. compensation	Automatic with Inbuilt Sensor and Manual
Temp. sensor	PT100/PT 1000/NTC30K
Temp. compensation range	-10.0 to +130.0°C
Temp. resolution	0.1°C
Temp. accuracy	±0.2°C
Ambient temperature range	0 to +70°C
Storage temp.	-20 to +70°C
Display	LCD Backlight, dot matrix
Analog output1	Isolated 4 to 20mA output , max. load 500Ω
RS485	Modbus RTU protocol
Calibration	Auto / Manual
Maximum relay contacts capacity	2 Nos ,5A/250VAC,5A/30VDC
Cleaning setting	ON: 1 to 1000 seconds, OFF: 0.1 to 1000.0 hours
One multi-function relay	clean/period alarm/error alarm
Data logging capacity	500,000
Enclosure rating	IP65/IP66
Power supply	From 90 to 260 VAC, power consumption < 7 Watts
Weight	0.85Kg
Dimensions	144*144 mm
Mounting	Wall mount, Pipe mounted with 2" C clamp (customized the clamp size)

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Conductivity Sensor Technical Specifications

Parameter	Description
Cell constant	0.01
Range	0-5 μ S/cm ,0-10 μ S/cm, 0-20 μ S/cm (Customized the range)
Sensor material	SS316
Sensor Thread	G3/4 NPT
Sensor IP rating	IP68
Response time (T90)	<5 sec
Sensor Pressure resistance	Up to 10 bar (Can be customized)
Sensor Operation Temp range	Up to 100 deg C
Sensor Cable Length	5 mtr ,10 mtr or Customized
Sensor type	Flow through type
Sensor chamber MOC	SS316
Sensor chamber process connection	1/4" NPT for Inlet and outlet, Inlet at bottom and outlet at Top (Customized the process connection)

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Conductivity Meter

EC100-03



Features

- Extremely quickly and precision Acid-base concentration sensor.
 - Multi-function: measure conductivity, TDS, salinity and different acid or alkali concentration.
 - It's suitable for harsh application and free-maintenance, save cost.
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- Two ways of 4-20mA output for Acid-base concentration and temperature.
 - Digital Inductive conductivity sensor, precision for harsh application.
 - With a data recording function, users can easily check history data and history curves.

Product Overview

The EC-100-03 Acid and Alkali Concentration Meter is a brand-new online smart digital acid and alkali concentration meter with digital inductive conductivity sensor and independently developed and manufactured by TIPL. It covers the measurement of various solutions like electrical conductivity, sodium chloride, hydrochloric acid, nitric acid, sodium hydroxide and dilute; concentrated sulfuric acid etc. It's with digital acid-base concentration sensor, which can be widely used in thermal power generation, chemical industry, ion exchange method to produce high-purity water in the process of regenerating liquid concentration, or used to configure boiler pipe pickling liquid, to control the acid-base salt concentration in the solution continuous monitoring.



Transmitter Technical Specifications

Parameter	Description
Measuring range	0.00uS/cm~2000.00 mS/cm and TDS: 0~999,999 mg/L(ppm)
Accuracy	±1%FS,±0.5°C
Isolated output	4-20mA isolated
Communication mode	RS485 Modbus RTU
Protection	IP65
Enclosure material	ABS plastic
Power	90V ~ 260V AC 50/60Hz/ 24VDC
Size	144 (length) x 144(width) x 104(depth) mm
Working condition	Ambient temperature: 0-60°C; relative humidity <85%

Digital Conductivity Sensor (Model: TOR-EC-1000)



Conductivity sensors are generally divided into two broad categories: contact and electromagnetic. The latter is also called non-polar, non-contact (ring) or electric induction and so on.

The measuring principle of the inductive sensor uses a pair of wire wound alloy toroids, and the probe of the sensor is completely isolated (non-contact) from the body of the process being tested. Two coils, one as the transmitter and the other as the receiver. When the transmitter coil is energized, the electrolyte solution conducts an induced current, which is proportional to the conductivity of the solution, and the receiver coil detects the magnitude of the current to determine the conductivity value of the solution. The conductivity probe is tailored to two wire wound alloy toroids in an annular mold with corrosion resistance. Because the sensor's probe is completely isolated (non-contact) from the process being tested (liquid), frequent maintenance and maintenance is not required. Compared with the traditional electrode conductivity measurement process, ion deposition and coverage on the electrode surface are fundamentally avoided, and polarization, oil pollution or pollution problems do not affect the performance of the electrodeless sensor. The service life can be as long as 10 years.

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Among them, the new generation TUR-1000 series inductive conductivity sensor overcomes many difficulties of the existing sensor, and integrates the signal processing line into an embedded integrated circuit ASIC with MCU, which has all the functions of conductivity measurement and digitization. This allows the sensor to be pre-calibrated before shipment and the calibration value is permanently stored in the probe. The low-voltage and low-power design of the probe allows the probe to be directly applied to a single 5V power supply. The typical power consumption is only 0.1W, and the minimum power can be 0.08W. If the intermittent operation mode is used, the power consumption is lower, which is convenient for portable or Application in battery equipment.

TIPL has introduced the advanced technology of "electrodeless (electromagnetic induction) conductivity sensor", which is extremely advantageous in terms of cost performance or delivery time.

Conductivity Sensor Technical Specifications

Parameter	Description
Measuring range	□0~2mS/cm ; □0~20mS/cm; □0~200mS/cm ; □0~2000mS/cm
Accuracy	±1%FS, ±0.5°C
Resolution	1uS / 1mS
Sensor	Digital Inductive Conductivity Sensor (Toroidal sensor)
Sensor Housing material	PP (up to 90°C) and PFA (up to 150°C)
Sensor cable length	5 mtr (Can be customized)
Temp compensation	Automatic (PT100/PT1000/Thermistor)
Signal Processor	Built In / External
Communication mode	RS232/RS485 Modbus RTU
Sensor Power Supply	5.25V(Min) ~ 15.5V(Max) dc @20mA typ
Protection	IP68

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