Conductivity

90S4301X0

Conductivity sensors are measuring devices that measure the ability of a medium to conduct electrical current between two electrodes. The current flow takes place through the transport of ions - the higher the concentration of charged particles in the medium, the better it can conduct electricity.

The TriOS conductivity detector is used for the digital measurement of electrical conductivity in ultrapure water or process water and provides precise data for monitoring and controlling technical processes. The conductive measuring sensor has two graphite electrodes positioned opposite each other. A voltage is applied to the electrodes so that a current is generated in the measured medium.

The conductivity sensor can be operated with all TriOS controllers.

Advantages

- Reliable measurement results thanks to durable graphite electrodes
- Measuring principle with two conductivity probes and integrated temperature compensation
- Robust PVC housing with corrosion-resistant graphite electrodes
- No mechanically moving parts - low-maintenance and durable
- Quick installation and user-friendly operation
- Modbus RTU

Applications

- Environmental technology
- Water and waste water treatment
- Chemical and pharmaceutical industry
- Semiconductor and electronics industry
- Food and beverage industry
- Energy and power plants

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Technical specifications

Measurement technology	Conductivity	
Measuring principle	Conductivity with two graphite electrodes	
Parameters	Conductivity	
Measuring range	0.00 µS... 20000 µS	
Measuring accuracy	±0.5 µS at 20 µS	
	± 5 µS at 200 µS	
	± 50 µS at 2000 µS	
	± 500 µS at 20000 µS	
Response time	T90 < 60s	
Temperature compensation	Via NTC	
Housing material	PVC housing, graphite electrodes	
Dimensions (L x Ø)	220 mm x 33 mm	~ 8.7" x 1.3"
Interface	RS-485 Modbus RTU	
Power supply	12 - 24 VDC	
Connection	8-pin M12 plug, cable length 2 m or 10 m	
Maintenance interval	2 years	
System compatibility	Modbus RTU	
Warranty	1 year (EU&US: 2 years) on electrons; wearing parts are excluded from the warranty	
Process pressure	10 bar	~ 145 psi
Calibration method	One-point calibration with standard measuring solution	
Process temperature	0...50°C	~ +32 to +122 °F

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