



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 sensor 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 sensor features two graphite electrodes positioned opposite each other. A voltage is applied to the electrodes, generating a current in the measurement medium.

The conductivity sensor can be operated with all TriOS controllers.

Advantages

- Reliable measurement results thanks to durable and corrosion-resistant graphite electrodes
- Measuring principle with two conductivity probes and integrated temperature compensation
- Robust PVC housing
- Low-maintenance
- Quick installation and user-friendly operation
- Modbus RTU

Applications

- Waste water treatment
- Drinking water treatment
- Acid / base neutralization systems
- Environmental monitoring
- Water monitoring
- Airport wastewater treatment

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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	
	±0.5 µS at 20 µS	
	± 5 µS at 200 µS	
	± 50 µS at 2000 µS	
	± 500 µS at 20000 µS	
Measuring accuracy		
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 electronics; 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