Conductivity Inductive

90S4401X0

The inductive conductivity sensor has two toroidal coils that are located in a plastic housing and therefore do not come into contact with the surrounding solution. For this reason, it is physically impossible for the sensor surface to become dirty, coated or contaminated.

As the conductivity is not determined via electrodes but via electric fields, no polarization effects can occur. As a result, the sensor delivers more accurate measurement results, especially for measuring media with high conductivities.

The housing of the sensor is made of Noryl, which is extremely resistant to chemicals.

Advantages

- No soiling, coating or contamination of the sensor surface
- No polarization effects
- Low maintenance requirements

Applications

- Monitoring of concentrations in aggressive media (e.g. acids, alkalis)
- Monitoring of process liquids
- Monitoring of chemical dosages

Technical specifications

Measurement technology	Change in inductance
Measurement principle	Change in inductance with two toroidal coils

Parameters	Conductivity
Measurement range	0.5 – 2000 mS⁄cm
Measuring accuracy	± (2 % + 20 µS/cm)
Drift	0.1 % / year

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Temperature compensation		Via NTC	
Turbidity compensation		No	
Data logger		No	
Response time		T90, depending on the equilibrium position	
Measurement interval		10 s	
Housing material		Noryl	
Dimensions (L x Ø)		119 mm x 52 mm	~ 4.6" x 2.0"
Weight		0.1 kg	~ 0.22 lbs
Interface		RS-485 Modbus RTU (baud rate = 9600)	
Power consumption		< 75 mW	
Power supply		7 - 40 VDC	
Connection		8-pin M12 plug	
Maintenance effort		≤ 0.5 h/month typical	
Maintenance interval		24 months	
Calibration method		Two-point calibration in air and with standard measuring solution during initial installation, followed by validation	
System compatibility		Modbus RTU	
Warranty		1 year (EU & USA: 2 years)	
Max. Pressure	**with fixed cable**	10 bar	150 psi
Degree of protection		IP68	
Temperature	**Probe**	-10 ... +70 °C (max. 85 °C)	14 ... 158 °F (max. 185 °F)
	Ambient temperature	-10 ... +70 °C (max. 85 °C)	14 ... 158 °F (max. 185 °F)
	Bearing	-20 ... +80 °C	-4 ... 176 °F
Inflow velocity		Max. 3 m/s, uniform and constant flow	

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