

Free Chlorine Sensor Digital

90S210001 · 90S210000



The chlorine sensor from the eCHEM sensors product range is an electrochemical sensor for measuring the chlorine concentration in water. This sensor detects free chlorine from inorganic chlorine products (chlorine gas, hypochlorite, etc.). The measuring method has a reduced pH dependency, so that pH fluctuations only have a limited impact on the measurement signal. pH value increases only lead to an approximately 10% reduction of the measuring signal per pH unit.

Benefits

- Stable signals even with fluctuating pH values
- Abrasive particles are tolerated
- Surfactants are partially tolerated

Applications

- Swimming pools, drinking water, seawater

Accessories

- Cable: Extension cables of 0.3 m, 2 m, 10 m, 25 m
- Controller: TriBox3, TriBox Mini, HS100
- Fittings: FlowCell

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Technical Specifications

Measurement technology	Membrane-covered, amperometric potentiostatic 3-electrode system	
Measurement principle	Amperometry	
Parameters	Free chlorine with reduced pH dependency	
Measurement range	0...2 mg/L, 0...20 mg/L	
Accuracy	Measuring range 2 mg/L: at 0.4 mg/L & 1.6 mg/L < 1% Measuring range 20 mg/L: at 4 mg/L < 1% at 16 mg/L < 3 %	
Response time	T90: approx. 2 min	
Running-in period	Approx. 2 h prior to initial operation	
Drift	approx. -1 % per month	
Temperature compensation	Automatic through integrated temperature sensor Pt100	
Housing material	Micro-porous hydrophilic membrane, UPVC, stainless steel 1.4571	
Dimensions (L x Ø)	Approx. 205 mm x approx. 25 mm	~ 8.1" x 1"
Interface	RS-485, Modbus RTU	
Power supply	9...30 VDC	
Connection	8-pin M12 plug	
Maintenance interval	typically once per week	
System compatibility	Modbus RTU	
Warranty	1 year (EU & US: 2 years) on electronics; wear parts are excluded from the warranty	
Process pressure	1 bar, no pressure shocks or vibrations, with retaining ring	~ 14.5 psig
Calibration method	Determination of chlorine with DPD-1 method	
Process temperature	0...+45 °C (no ice crystals in the test water)	~ +32 °F... +113 °F
Flow rate	Approx. 15..30L/h in FLC-3, minimum flow dependence exists	
pH range	pH 4 ... pH 9, reduced pH dependence	
Conductivity	10 µS/cm...50 mS/cm (sea water)	
Cross influences	Combined chlorine increases measured value	