



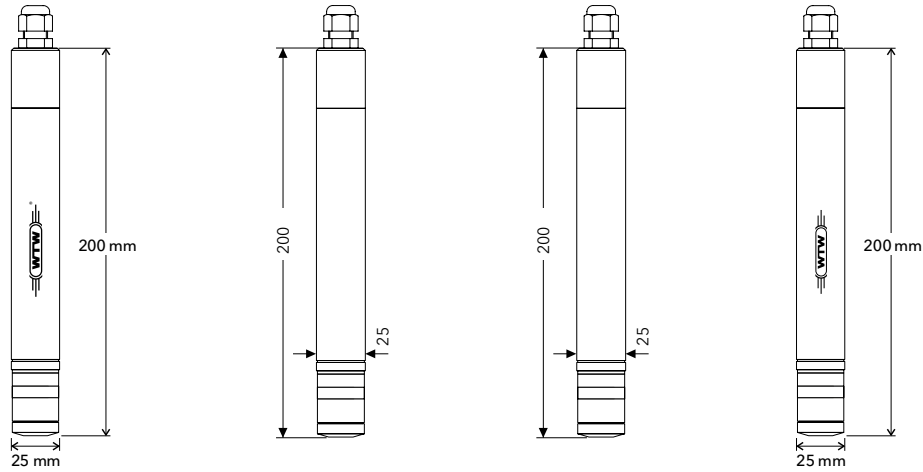
# Analog chlorine sensors



## For free and total chlorine

The electrochemical WTW chlorine sensors can be applied for measurements in drinking water or swimming pools. Connectable via MIQ/IDS module to the IQ SENSOR NET or directly to the controller CI 298.

We would like to inform you about the application range on our website



Model	FCML 412 N	FCML 412-M12-2	FCML 412-M12-20	TCML N
<b>Measuring principle</b>	Amperometric			Total chlorine
<b>Measured value</b>	Free chlorine			Total chlorine
<b>Measuring range</b>	0.01 ... 2.00 mg/l Cl <sub>2</sub>	0.005 ... 2.000 mg/l Cl <sub>2</sub>	0.05 ... 20.00 mg/l Cl <sub>2</sub>	0.01 ... 2.00 mg/l Cl <sub>2</sub>
<b>Response time</b>	t <sub>90</sub> approx. 120 s			
<b>Minimum flow rate</b>	Recommended minimum flow rate in flow cell D 19: 15 l/h, or alternatively in flow cell D-CL: > 30 l/h			
<b>Temperature measurement</b>	0 ... 45 °C			
<b>Temperature compensation</b>	Automatically via integrated sensor			
<b>pH range</b>	4 ... 9			4 ... 12
<b>Polarization time</b>	Approx. 1 hour after new installation or change of electrolyte			
<b>Calibration method</b>	1-point-calibration (according to DPD method as reference)			
<b>Pressure resistance</b>	3 bar			
<b>Electrical connection</b>	2-wire-connection*	M12 plug**	M12 plug**	2-wire-connection*
<b>Certifications</b>	CE, UKCA			
<b>Mechanical</b>	Shaft: PVC Membrane cap: PVC Working electrode: Gold Reference electrode: Ag/AgCl Cable connection: Polyamid Protection rate: IP64			
<b>Weight</b>	Approx. 0.5 kg			
<b>Warranty</b>	½ year with intended use			

\* for direct connection to the controller CL 298

\*\* Sensor with M12 plug for connection to the IQ SENSOR NET, please order adapter ADA CI/IDS separately

Model	Description	Order No.
<b>FCML 412 N</b>	Chlorine electrode according to electrochemical principle, suitable for measurements of free chlorine in drinking water and swimming pools. Measuring range: 0-2 mg/l, pH range 4-9, independent from pH value. Please order cable separately.	201187
<b>FCML 412-M12-2</b>	Chlorine electrode according to electrochemical principle, measuring range: 0-2 mg/l, pH range 4-9, independent from pH value (please order adapter to connect with IQ SENSOR NET module MIQ/IDS separately)	201189
<b>FCML 412-M12-20</b>	Like FDML 412-M12-2, but with measuring range: 0-20 mg/l (please order adapter to connect with IQ SENSOR NET module MIQ/IDS separately)	201194
<b>TCML N</b>	Chlorine electrode according to electrochemical principle, suitable for measurements of total chlorine in drinking water and swimming pools. Measuring range: 0-2 mg/l. Please order cable separately.	201192



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