DOSA*Sens* CCF1 chlorine sensor

Sensor for measuring free inorganic chlorine compounds without membrane. Amperometric 3-electrode system with integrated electronics

Product description:

- Measured variable(s): NaClO (sodium hypochlorite), $Ca(ClO)_2$ (calcium hypochlorite), Cl_2 (chlorine gas)
- Calibration: at the controller, via analytical chlorine determination by DPD 1 method
- Interferences: ClO_2 is measured as well, O_3 is measured as well
- Iodine/bromine cause a zero point shift
- Significant changes in CO_2 concentration (dissolved) influence the sensor signal
- pH range: 6 … 9, pH dependence. Observe HOCl dissociation curve.
- Pressure range:
  - operation without securing collar: 0… 0.5 bar, no pressure surges and/or fluctuations
  - operation with securing collar: 0 … 8.0 bar, no pressure surges and/or fluctuations
- Temperature range: 0 … 45 °C (no ice crystals allowed in the sample water)
- Ambient temperature: 0 ... 55 °C
- Integrated automatic temperature compensation
- Analogue version with non-isolated electronics
- Digital version with isolated electronics
- Run-in period: approx. 15 min
- Response time: T_{90} approx. 20 s
- Zero point calibration not required
- Conductivity 0.2 to 10 mS/cm
- Absence of disinfectant: max. 2 months
- Flow rate: approx. 15 ...100 l/h, low flow dependence
- Diameter: approx. 25 mm
- Shaft length: mV and mA analogue signal processing: 131 mm, mV digital signal processing/ ModBus: 179 mm
- Connection: 5 pole M12 threaded coupling connector (all models)
- Material: PVC-U
- Max. length of sensor cable: analogue < 30 m, digital > 30 m are permissible. Maximum cable length depends on the application
- EMC tested / RoHS compliant

Areas of application:

- Swimming pool water, drinking water.

Scope of supply:

- **DOSA*Sens* CCF1.0N** sensor

Ordering data:

Model:	Measuring range: ppm	Resolution: ppm	Output signal:	Power supply:	Item No.:
CCF1.0N-**M12**	0.05 … 10.00	0.01	0 … –2.000 mV 1 kΩ	±5 … ±15 VDC 10 mA	3726010
CCF1.0N-**An-M12**	0.05 … 10.00	0.01		±9 … ±30 VDC 7 ... 30 mA	3726030
CCF1.0N-**M0c**	0.05 … 10.00	0.01	Modbus RTU		3726000
CCF1.0H-**M0c**	0.005 ... 2.00	0.001			3726005
CCF1.0**MA2-M12**	0.05 ... 2.00	0.01	4 – 20 mA	12 ... 30 V DC R_L = 50 ... 900 Ω	3726018
CCF1.0**MA5-M12**	0.05 ... 5.00	0.01			3726019
CCF1.0**MA20-M12**	0.05 … 10.00	0.01			3726020

Subject to technical modifications and printing errors. Images may vary slightly from actual product.
May 2025

Additional technical data:

Model:	Nominal slope: (at pH 7.2)	Connection: Allocation at sensor	Special characteristics:
CCF1.0N-**M12**	–100 mV/ppm (+/- 50 %)	5 pole M12 threaded coupling connector PIN1: measurement signal PIN2: +U PIN3: –U PIN4: signal GND PIN5: n. c.	Only connect to a controller with electrically isolated power supply.
CCF1.0N-**An-M12**			
CCF1.0N-**M0c**	Modbus RTU	5 pole M12 threaded coupling connector PIN1: reserved PIN2: +U PIN3: voltage GND PIN4: RS485-B PIN5: RS485-A.	
CCF1.0H-**M0c**			
CCF1.0**MA2-M12**	8,0 mA/ppm	5 pole M12 threaded coupling connector PIN1: n. c. PIN2: +U PIN3: –U PIN4: n. c. PIN5: n. c	Only connect to a controller with electrically isolated power supply.
CCF1.0**MA5-M12**	3,2 mA/ppm		
CCF1.0**MA20-M12**	8,0 mA/ppm		

Maintenance:

- Regular check of the measurement signal at least once a week

Transport and storage:

- Can be stored indefinitely if dry and at 5 ... 40 °C