


	<h1>TARAline CP4.0</h1>												
indicator	Total chlorine (= free chlorine + bound chlorine) Reduced dependence on pH												
Application	Swimming pool water, drinking water, sea water, brine (15% NaCl) Surfactants (tensides) are partially tolerated.												
Chlorination agents	inorganic chlorine compounds: NaOCl (=sodium hypochlorite), Ca(OCl) ₂ , chlorine gas, electrolytically generated chlorine												
Measuring system	Membrane covered, amperometric potentiostatic 3-electrode system with electronic inside												
Electronic	<p>Analog version:</p> <ul style="list-style-type: none"> - voltage output - not galvanically isolated electronics - analog internal data processing <p>Digital version:</p> <ul style="list-style-type: none"> - output signal: analog (analog-out/analog) - electronic is completely galvanically isolated - digital internal data processing - output signal: analog (analog-out/digital) or digital (digital-out/digital) <p>mA-version:</p> <ul style="list-style-type: none"> - current output analog - not galvanically isolated electronics - output signal: analog (analog-out/analog) 												
Information about the measuring range	<p>The actual slope of a sensor can vary production-related between 65% and 150% of the nominal slope</p> <p>Note: With a slope > 100% the measuring range is reduced accordingly. (Ex.: 150% slope → 67% of the specified measuring range)</p>												
Accuracy after calibration at repeatability conditions (25°C, pH 7.2 in drinking water) of the upper full scale	<table border="0"> <tr> <td>- Measuring range 2 mg/l:</td> <td>at 0.4 mg/l</td> <td><2%</td> </tr> <tr> <td></td> <td>at 1.6 mg/l</td> <td><2%</td> </tr> <tr> <td>- Measuring range 20 mg/l:</td> <td>at 4 mg/l</td> <td><1%</td> </tr> <tr> <td></td> <td>at 16 mg/l</td> <td><3%</td> </tr> </table>	- Measuring range 2 mg/l:	at 0.4 mg/l	<2%		at 1.6 mg/l	<2%	- Measuring range 20 mg/l:	at 4 mg/l	<1%		at 16 mg/l	<3%
- Measuring range 2 mg/l:	at 0.4 mg/l	<2%											
	at 1.6 mg/l	<2%											
- Measuring range 20 mg/l:	at 4 mg/l	<1%											
	at 16 mg/l	<3%											
Slope drift At repeatability conditions (25 °C, pH 7,2 in drinking water)	approx. -1% per month												
Working temperature	Measuring water temperature: 0 ... +45 °C (no ice crystals in the measuring water)												
	Ambient temperature: 0 ... +55 °C												
Temperature compensation	Automatically, by an integrated temperature sensor Sudden temperature changes must be avoided												
Max. allowed working pressure	Operation without retaining ring: <ul style="list-style-type: none"> - 0.5 bar - no pressure impulses and/or vibrations 												
	Operation with retaining ring in TARAlflow FLC: <ul style="list-style-type: none"> - 3 bar, - no pressure impulses and/or vibrations (see option 2)												

	<h1>TARAline CP4.0</h1>						
<p>Transport</p>	<p>+5 ... +50 °C (Sensor, electrolyte, membrane cap)</p>						
<p>storage</p>	<table border="0"> <tr> <td style="padding-right: 20px;">Sensor:</td> <td>dry and without electrolyte no limit at +5 ... +40 °C</td> </tr> <tr> <td>Electrolyte:</td> <td>in original bottle protected from sunlight at +5 ... +35 °C min. 1 year or until the specified EXP-Date</td> </tr> <tr> <td>Membrane cap:</td> <td>in original packing no limit at +5 ... +40 °C (used membrane caps can not be stored)</td> </tr> </table>	Sensor:	dry and without electrolyte no limit at +5 ... +40 °C	Electrolyte:	in original bottle protected from sunlight at +5 ... +35 °C min. 1 year or until the specified EXP-Date	Membrane cap:	in original packing no limit at +5 ... +40 °C (used membrane caps can not be stored)
Sensor:	dry and without electrolyte no limit at +5 ... +40 °C						
Electrolyte:	in original bottle protected from sunlight at +5 ... +35 °C min. 1 year or until the specified EXP-Date						
Membrane cap:	in original packing no limit at +5 ... +40 °C (used membrane caps can not be stored)						
<p>maintenance</p>	<p>Regularly control of the measuring signal, min. once a week The following specifications depend on the water quality: Change of the membrane cap: once a year Change of the electrolyte: once a year</p>						
	<p>EMC tested RoHS compliant</p>						

<p>Option 1: Membrane cap M48.4S</p>	<p>especially for applications in sea water or brine</p>	
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<p>Option 2: Retaining ring</p>	<ul style="list-style-type: none"> - When operating with pressures >0.5 bar in TARAflow FLC - Dimensions retaining ring 29 x 23.4 x 2.5 mm, slitted, PETP - Different positions for groove selectable (on request) 	
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Spare parts

Type	Membrane cap	Electrolyte	Emery	O-ring
All CP4.0	M48.4E Art. No. 11051-E	ECP1.4/GEL, 100 ml Art. No. 11006.1	S1 Art. No. 11908	14 x 1.8 NBR Art. No. 11806
	For sea water or brine applications: M48.4S Art. No. 11051-S			

(Subject to technical changes!)

Technical Data

1. CP4.0 (analog output, analog internal signal processing)


	Measuring range in ppm	Resolution in ppm	Output Output resistance	Nominal slope (at pH 7.2) in mV/ppm	Power supply	Galvanic isolation required in the measuring device/controller *	Connection
CP4.0H-M12	0.005...2.000	0.001	0...-2000 mV	-1000	±5 - ±15 VDC 10 mA	yes	5-pole M12 plug-on flange Function of wires: PIN1: measuring signal PIN2: +U PIN3: -U PIN4: signal GND PIN5: n. c.
CP4.0N-M12	0.05...20.00	0.01	1 kΩ	-100			
CP4.0Up-M12	0.05...20.00	0.01	0...+2000 mV 1 kΩ	+100	10 - 30 VDC 10 mA		5-pole M12 plug-on flange Function of wires: PIN1: measuring signal PIN2: +U PIN3: power GND PIN4: signal GND PIN5: n. c.

* for further information see brochure 'Technical information // galvanic isolation' (in the download area of our website www.reiss-gmbh.com)

(Subject to technical changes!)

2. CP4.0 (analog output, digital internal signal processing)


analog-out / digital

	Measuring range in ppm	Resolution in ppm	Output Output resistance	Nominal slope (at pH 7.2) in mV/ppm	Power supply	Galvanic isolation required in the measuring device/controller *	Connection
CP4.0H-An-M12	0.005... 2.000	0.001	analog 0...-2 V (max. -2.5 V)	-1000	9-30 VDC approx. 7-30 mA	no	5-pole M12 plug-on flange Function of wires: PIN1: measuring signal PIN2: +U PIN3: power GND PIN4: signal GND PIN5: n. c.
CP4.0N-An-M12	0.05... 20.00	0.01	1 kΩ	-100			
CP4.0H-Ap-M12	0.005... 2.000	0.001	analog 0...+2 V (max. +2.5 V)	+1000			
CP4.0N-Ap-M12	0.05... 20.00	0.01	1 kΩ	+100			

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(Subject to technical changes!)

3. CP4.0 (digital output, digital internal signal processing)

	Measuring range in ppm	Resolution in ppm	Output Output resistance	Power supply	Galvanic isolation required in the measuring device/controller **	Connection
CP4.0H-M0c	0.005... 2.000	0.001	Modbus RTU There are no terminating resistors in the sensor.	9-30 VDC approx. 7-30 mA	no	5-pole M12 plug-on flange
CP4.0N-M0c	0.05... 20.00	0.01				Function of wires: PIN1: reserved PIN2: +U PIN3: power GND PIN4: RS485B PIN5: RS485A
CP4.0H-M4c *	0,005... 2,000	0.001				


* only for TARAsys MT10

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(Subject to technical changes!)

4. CP4.0 4-20 mA (analog output, analog internal signal processing)


4.1 Electrical connection: 2 pole terminal clamp

	Measuring range	Resolution	Output Output resistance	Nominal slope (at pH 7.2)	Power supply	Galvanic isolation required in the measuring device/controller *	Connection
	in ppm	in ppm		in mA/ppm			
CP4.0MA0.5	0.005...0.500	0.001	4...20 mA uncalibrated	32.0	12...30 VDC R _L 50Ω...R _L 900Ω	yes	2-pole terminal (2 x 1 mm ²) Recommended: Round cable ∅ 4 mm 2 x 0.34 mm ²
CP4.0MA2	0.005...2.000	0.001		8.0			
CP4.0MA5	0.05...5.00	0.01		3.2			
CP4.0MA10	0.05...10.00	0.01		1.6			
CP4.0MA20	0.05...20.00	0.01		0.8			

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(Subject to technical changes!)

4.2 Electrical connection: 5 pole M12 plug-on flange

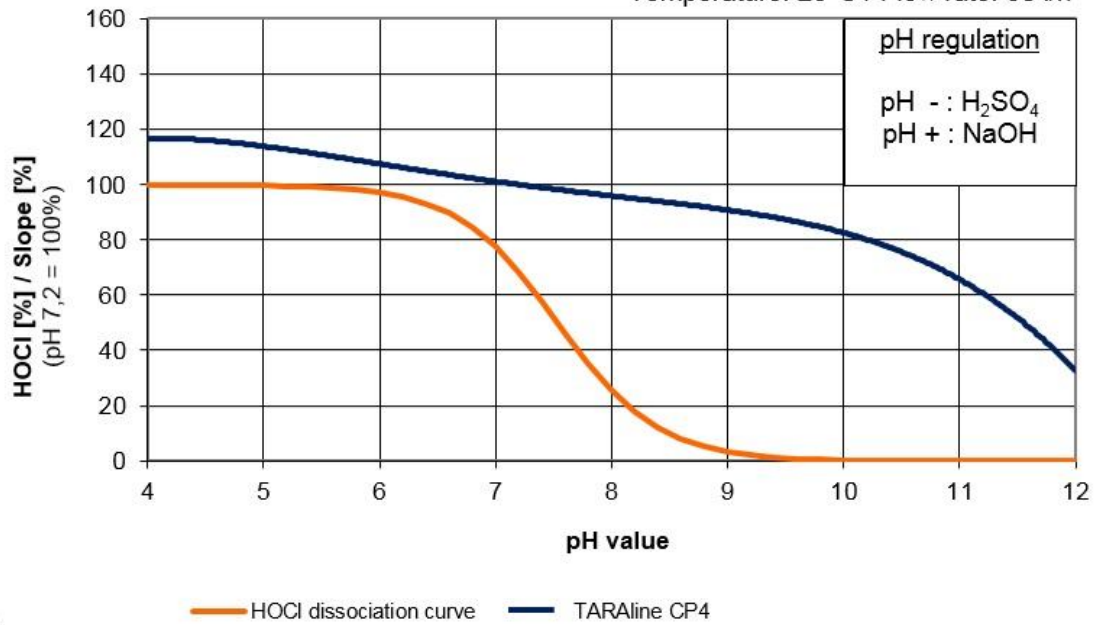
	Measuring range in ppm	Resolution in ppm	Output Output resistance	Nominal slope (at pH 7.2) in mA/ppm	Power supply	Galvanic isolation required in the measuring device/controller *	Connection
CP4.0MA0.5-M12	0.005...0.500	0.001	4...20 mA uncalibrated	32.0	12...30 VDC R _L 50Ω...R _L 900Ω	yes	5-pole M12 plug-on flange Function of wires: PIN1: n. c. PIN2: +U PIN3: -U PIN4: n c. PIN5: n. c.
CP4.0MA2-M12	0.005...2.000	0.001		8.0			
CP4.0MA5-M12	0.05...5.00	0.01		3.2			
CP4.0MA10-M12	0.05...10.00	0.01		1.6			
CP4.0MA20-M12	0.05...20.00	0.01		0.8			

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Slope of TARAline CP4 versus pH

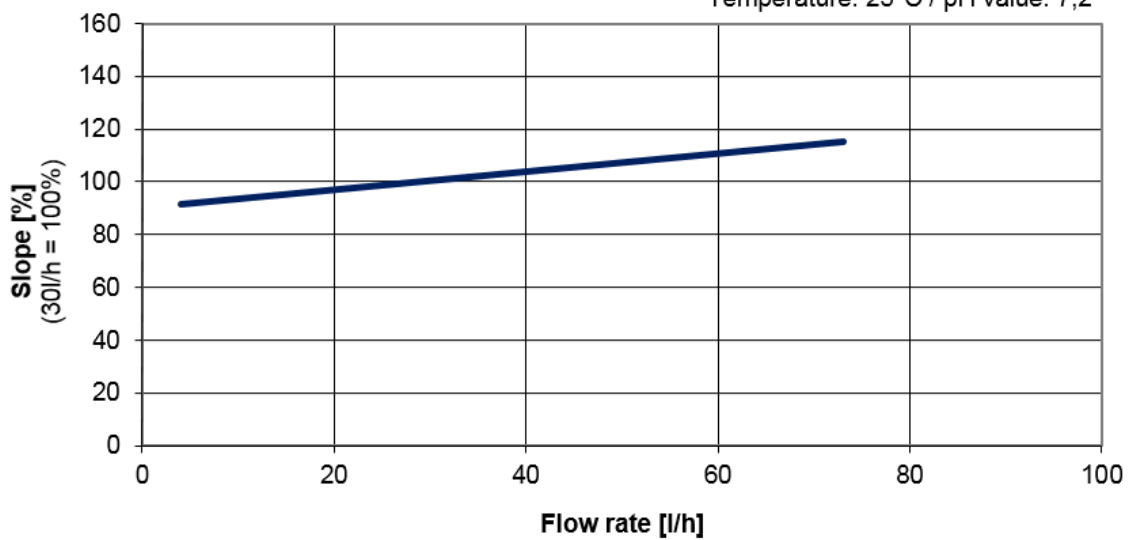
Temperature: 25°C / Flow rate: 30 l/h



CP4_005

Slope of TARAline CP4 versus flow rate

Temperature: 25°C / pH value: 7,2



CP4_005

This values are only valid for the probe housing FLC1 / FLC3