	<h1>TARAline CN1.1</h1>	
indicator	Free chlorine	
Application	For monitoring the absence of chlorine in water (up to 4 weeks) with drinking water quality (e. g. reverse osmosis)	
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	Digital version: electronic is completely galvanically isolated, digital internal data processing output signal: analog (analog-out/digital) or digital (digital-out/digital)	
Slope drift At repeatability conditions (25 °C, pH 7,2 in drinking water)	approx. <-3% per month	
Working temperature	Measuring water temperature:	0 ... +40 °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: - 0.5 bar - no pressure impulses and/or vibrations	
	Operation with retaining ring in TARAline FLC: - 0.5 bar, - no pressure impulses and/or vibrations (see option 1)	
Flow rate (Incoming flow velocity)	approx. 15-30L/h (15 – 30 cm/s) in TARAline FLC, small flow rate dependence is given	
pH-range	pH 6.5 – pH 9 (see diagram “Slope of TARAline CN1.1 versus pH”)	
Run-in time	First start-up approx. 2 h	
Response time	T ₉₀ : approx. 2 min.	
Zero point adjustment	Not necessary	
calibration	1. Generate a stable chlorine concentration in the measuring water, use DPD-1-method 2. If no chlorine in the measuring water is allowed, use external calibration equipment EKV-1 and DPD-1-method	

	<h1>TARAline CN1.1</h1>	
<p>Cross sensitivities/ interferences</p>	<p>ClO₂ O₃ Bound chlorine can increase the measuring value.</p> <p>Reducing agents can lead to a loss in slope. Corrosion inhibitors can lead to measuring errors. Stabilisers for water hardness can lead to measuring errors.</p>	
<p>Absence of the disinfectant</p>	<p>Max. 4 weeks</p>	
<p>Connection</p>	<p>mV version: 5-pole M12, plug-on flange Modbus version: 5-pole M12, plug-on flange</p>	
<p>max. length of sensor cable (depending on internal signal processing)</p>	<p>analog</p>	<p>< 30 m</p>
	<p>digital</p>	<p>> 30 m are permissible Maximum cable length depends on application</p>
<p>Protection type</p>	<p>5-pole M12 plug-on flange: IP68 2-pole terminal with mA-hood: IP65</p>	
<p>Material</p>	<p>Microporous hydrophilic Membrane, PVC-U, PEEK, stainless steel 1.4571</p>	
<p>Size</p>	<p>diameter: approx. 25 mm Length: mV version approx.. 205 mm (digital signal processing) Modbus version approx. 205 mm</p>	
<p>Transport</p>	<p>+5 ... +50 °C (Sensor, electrolyte, membrane cap)</p>	
<p>Storage</p>	<p>Sensor: dry and without electrolyte no limit at +5 ... +40 °C</p>	
	<p>Electrolyte: in original bottle protected from sunlight at +5 ... +35 °C min. 1 year or until the specified EXP-Date</p>	
	<p>Membrane cap: in original packing no limit at +5 ... +40 °C (used membrane caps can not be stored)</p>	
<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 (depending on the water quality) Change of the electrolyte: every 3 - 6 months</p>	
	<p>EMC tested RoHS compliant</p>	

<p>Option 1: 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
For all CN1	M48.2 with G-holder Art. No. 11048	EMST1/GEL, 100 ml Art. No. 11202	S1 Art. No. 11908	14 x 1.8 NBR Art. No. 11806

(Subject to technical changes.)

Technical Data


1. CN1.1 (analog output, digital internal signal processing)
analog-out / digital

	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 mV/ppm			
CN1.1H-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.
CN1.1N-An-M12	0.05... 20.00	0.01	1 kΩ	-100			
CN1.1H-Ap-M12	0.005... 2.000	0.001	analog 0...+2 V (max. +2.5 V)	+1000			
CN1.1N-Ap-M12	0.05... 20.00	0.01	1 kΩ	+100			

* 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. CN1.1 (digital output, digital internal signal processing)

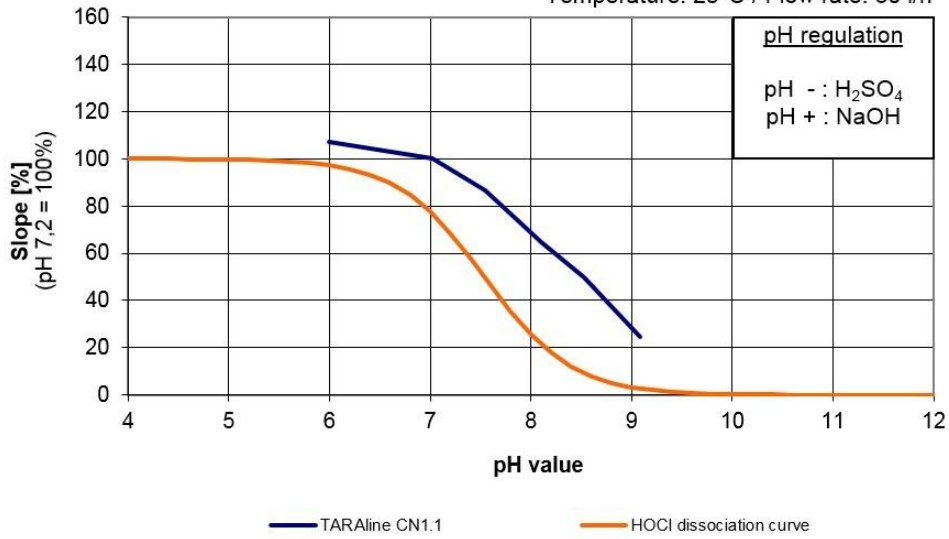
	Measuring range in ppm	Resolution in ppm	Output Output resistance	Power supply	Galvanic isolation required in the measuring device/controller *	Connection
CN1.1H-M0c	0.005... 2.000	0.001	Modbus RTU	9-30 VDC	no	5-pole M12 plug-on flange Function of wires: PIN1: reserved PIN2: +U PIN3: power GND PIN4: RS485B PIN5: RS485A
CN1.1N-M0c	0.05... 20.00	0.01	There are no terminating resistors in the sensor.	approx. 7-30 mA		

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

(Subject to technical changes.)

Slope of TARAline CN1.1 versus pH

Temperature: 25°C / Flow rate: 30 l/h



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