

Sensor for free chlorine with stabilizers CC1



- For swimming pools
- Low incidence of pH changes
- Surfactants: partial tolerance
- Temperature: 45 °C max.
- Pressure: 0,5 bar (3 bar with ring)

APPLICATIONS

Swimming pool and spa water treatment (freshwater or seawater)

DESCRIPTION

The CC1 closed-cell amperometric chlorine sensor detects and quantifies chlorine concentration in water. Equipped with three electrodes (measure, reference and auxiliary electrodes) immersed in an electrolyte, this probe ensures a controlled environment for the electrodes, optimizing measurement accuracy and stability.

Suitable for swimming pools :

The CC1 probe is particularly suitable for swimming pools, as it tolerates up to 500 mg/l of isocyanuric acid, a stabilizer commonly used in pool water.

Installation recommendations :

The need to maintain and control a constant flow rate of the water analyzed requires the use of an appropriate measuring cell (see datasheet 193-95). To simplify the installation of your control and measurement system, we propose to preinstall the components on a wall mounted panel.

Option for in-line measurement up to 3 bar :

The probe is designed to operate at a maximum pressure of 0.5 bar. However, with the optional retaining ring, maximum pressure can be increased up to 3 bar. This option must be specified prior to manufacture, so that the probe can be properly fitted to the measuring chamber.



Option: wall mounted panoply

CODES AND REFERENCES

Code	Reference	Measuring range	Resolution	Pressure
193 063	CC1.MA2	0.01...2 mg/l	0.01 mg/l	0,5 bar
193 064	CC1.MA5	0.01...5 mg/l		
193 065	CC1.MA10	0,01...10 mg/l		
Spare parts				
193 903	M48.2	Sensor end with diaphragm for CC1 sensor		
193 xxx	ECC1.1/GEL	Electrolyte for CC1 (100 ml)		
If pressure > 0.5 bar (Caution: factory-made)				
193 xxx	Groove machining on probe and split retaining ring in PETP			

Information on measuring range

The actual slope of a sensor can vary between 65% and 150% of the nominal slope.

Consequently, if the slope is greater than 100%, the measuring range is reduced.

Example: 150% slope => 67% of specified measuring range

See influence diagrams on page 2

BAMO INTERNATIONAL

22, Rue de la Voie des Bans · Z.I. de la gare · 95100 ARGENTEUIL

Tel +33 (0)1 30 25 83 20 Web www.bamo.eu

Fax +33 (0)1 34 10 16 05 E-mail export@bamo.fr

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stabilizers
CC1

15-04-2025

D-193.06-EN-AD

CL

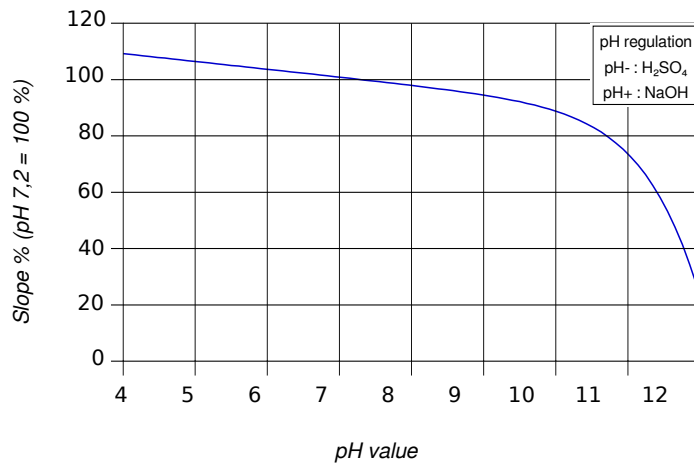
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TECHNICAL FEATURES

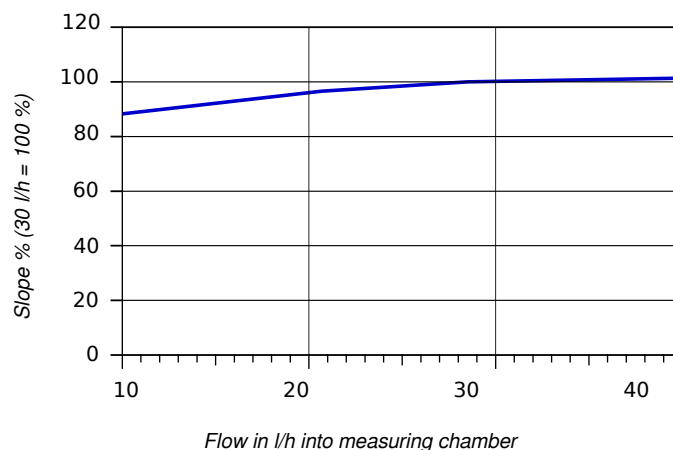
Measured parameter	Free chlorine
Chlorinating agents	Inorganic compounds, such as NaOCl - Ca(OCl) ₂ - gaseous chlorine, chlorine by electrolysis, plus stabilizer isocyanuric acid up to 500 mg/l . Surfactants: partial tolerance
Measuring system	Closed cell with 3 electrodes and electrolyte
Supply voltage	12 ... 30 V DC, (Load = 500 to 900Ω)
Output signal	4...20 mA, 2-pole terminal block (2x1 mm ²) No galvanic insulation
Working temperature	0...+45 °C (Automatic signal compensation) Avoid sudden temperature changes
Operating pressure	Max. 0.5 bar (without vibration and/or pulsation) Max. 3 bar with retaining ring (29 x 23.4 x 2.5 mm)
Flow rate	About 30 l/h
pH operating range	Between 4 and 12 pH (low incidence of pH changes)
Zero adjustment	Not necessary (from factory)
Slope calibration	Only 1 point with BAMOPHAR 194 according to directive DPD-1
Interferences	Incidence of ClO ₂ and O ₃ on measuring signal
Materials	PVC-U, PEEK and AISI 316 Ti
Dimensions	Dia 25 mm, length 220 mm (4-20 mA)

CE Conformity: The instrument meets the legal requirements of the current European Directives.

Influence of pH on CC1 sensor slope



Flow influence curve on CC1 sensor slope



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