

Measuring cells for organic free BROMINE (BCDMH)

Types CAA2513 – 4...20 mA – 0... 10 ppm

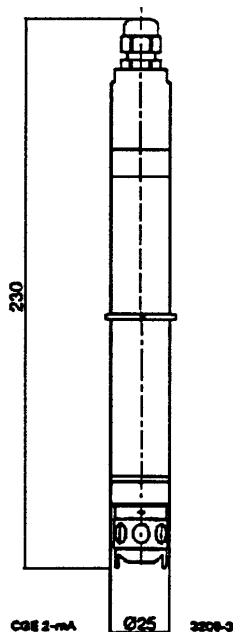
_____CAA2512– 4...20 mA – 0... 2 ppm

1. Overview

The measuring cells CAA2513 are used to measure free Bromine (HOBr, OBr-) coming from organic Bromine (BCDMH), so bromine in cobbles with activator, (1 :Bromine-3 :Chlorine-5,5 : DiMethyl-Hydantoin), in potable water or water of similar quality. It doesn't run with seawater.

2. Technical features

Measured variable:	Free Bromine from BCDMH
Applications:	Swimming pool water or water of similar quality (without surfactants)
Measurement range:	0,1 – 10 ppm, réf. CAA2513 0,1 – 2 ppm, réf. CAA2512
pH range:	5,5 - 9,5 pH
Conductivity range:	0,03 à 40 mS/cm
Cross-sensitivity:	Chlorine, chloramines, iodine, ozone, ClO ₂ , permanganate and others oxidising
Temperature range:	5 - 50 °C (temperature compensated)
Run-in period:	4 to 24 h
Time after membrane cap changing:	1 to 6 h
Maximal pressure: (no pressure surges)	3 bars
Supply flow:	Mini: 20 l/h Maxi: 100 l/h Recommended: 30 l/h
Starting time:	First calibration after 2 H
Total stability for definitive calibration	After 24 H
Membrane cap lifetime:	Currently 1 year (according to water quality)
Internal chemical reagent:	KI gel, ref. CAA2511
Membrane cap material:	Blue PVC, ref. CAA2509
Electrode shaft material:	Black PVC
Electrical protection type:	I P 65
Supply voltage:	16 - 24VDC
Output signal:	4-20mA



3. Electric installation

Turn the upper part of the sensor a quarter of a turn anticlockwise and remove it. Loosen the PG-7 threaded connector and guide the 2-lead cable through, providing a spare 5 cm of bare cable inside the sensor. Connect the cable to the terminal: 1 = plus, 2 = minus. Tighten the PG-7 threaded connection. Push the upper part of the sensor right into the housing and turn it clockwise as far as it will go. After you've locked the PG nut, insert the cell measurement into the measuring chamber.



Caution: The probe output signal has not galvanic isolation

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4. Assembly/installation



Caution: Neither the membrane, nor the electrode must be touched or damaged.

Depressurise the system before assembling the probe. Close stop valves in front of and behind the in-line probe housing.

Take care with any handling of chemicals products and bromine liquids.

4.1 Filling the cap with electrolyte

Open the electrolyte bottle (KI Gel), plug the white nozzle on the top of bottle and screw it. Squeeze out excess air. (Caution: electrolyte is light sensitive). Place the electrolyte bottle nozzle completely over the membrane cap and fill it slowly with electrolyte avoiding air bubbles. At the same time, pull the bottle back steadily. The cap is completely full when the electrolyte can be seen at the low level of threading.



Caution: Avoid air bubbles when pouring the electrolyte. The membrane cap must be used only once.

Place the electrode shaft on the full membrane cap in a vertical position. Turn the membrane cap by hand as far as it will go.

In first time excess air then electrolyte will escape through a hole below the rubber seal in the groove of the membrane cap while you are turning it. Wipe away any electrolyte with a soft paper towel or other similar item.

4.2 Plugging into probe housing

Before the assembly in probe housing, pass the O ring around the shaft, below the washer on membrane side. Then slip the ring of tightening over the stem. Block the retaining nut until the O ring ensures the sealing. The correct depth of assembly of the probe is determined by the ring of tightening.

5. Calibration

A zero point calibration is not necessary. The slope calibration is performed by the chlorine content according to the DPD method using an appropriate instrument for measuring chlorine. Set the controller/measuring device to the value obtained in accordance with the operating instructions.

In order to carry out a correct calibration, the probe must be used in probe housing with recommended flows.

Repeat calibration at regular intervals. Repeating period is function of the probe. Use currently 3 or 4 weeks for the water treatment of swimming pool.



Caution: In all case, after changing the membrane, a slope calibration must be performed.

6. Connections identification

1: White wire 2: Blue wire

7. Accessories

Blue membrane cap: reference. CAA2509

KI electrolyte gel: reference. CAA2511

Fixation kit 1"(O ring + nut): reference. CAA2510

Maintenance kit: reference. CAA2549

Transport case: reference. FTH2500