

**Chlorine dioxide (ClO<sub>2</sub>) measurement cells (without surfactant)**

Types CAA2540 – 4...20 mA – 0...10 ppm and

CAA2541 – 4...20 mA – 0...2 ppm

Chlorine dioxide cells type CAA2540 and CAA2541 are used to measure chlorine dioxide (ClO<sub>2</sub>) in drinking water, industrial processes or in water with a similar quality.

**2. Technical characteristics**

Measured product:	Chlorine dioxide (ClO <sub>2</sub> )
Applications :	Potable water, sanitizing water or water with similar quality (Without surfactant)
Measurement ranges :	0,02 - 2 ppm, ref. CAA2541 0,1 - 10 ppm, ref. CAA2540
pH range :	5,5 - 11 pH
Temperature using range :	5 - 45 °C (With internal compensation)
Storage and transport temperature:	+5 to +45 °C
Max pressure :	1 bar
Flow rate supply :	mini : 20 l/h Maxi : 100 l/h Recommended : 30 l/h
Start time :	First calibration after 2 H
Total stability for definitive calibration :	after 24 H
Membrane cap life time :	normally 1 year (depending of the water quality)
Electrolyte :	Electrolyte, ref. CAA2538
Material of membrane cap :	Translucid PVC , ref. CAA2539
Shaft material :	Black PVC
Protection type :	IP 65
Power supply :	16-24VDC
Output signal (without isolation) :	4-20mA

**3. Electric connection**

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 housing.



**Caution:** The probe output signal has not galvanic isolation

**4. Assembly/installation**



**Caution:** Don't touch the membrane or the electrodes. Risk of definitive damage.

Depressurize 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 or chlorine liquids.



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### 4.1 Filling the cap with electrolyte



Open the electrolyte bottle (KI), 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 after cleaning. (See technical maintenance manual)

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 Placing the cell 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 dioxide content according to the (DPD+Glycine) method using an appropriate instrument for measuring chlorine dioxide. 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 flow (see technical characteristics).

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

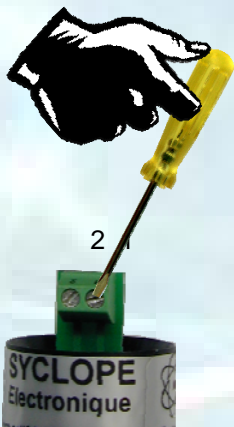


**Caution:**

In all cases, after changing the membrane, a slope calibration must be performed.

### 6. Connections cable identification

1 : (+) Fil blanc    2: (-) Fil bleu



### 7. Accessories

Clear membrane cap : ref. CAA2539

Electrolyte : ref. CAA2538

Fixation kit 1" : ref. CAA2510

Maintenance kit : ref. CAA2572

Transport holding kit : ref. FTH2500