

Chlorine Amperometric Sensors



With the exception of the 4-20mA sensors, where the length is 220mm, the sensors have a length of 175mm and a diameter of 25mm, with plug adaptor connection.

They are designed to fit into the available flow cells.

The low current produced by the sensors is electronically amplified in the measurement cell.

No zero point calibration is necessary, and measurements can be taken in pressure up to 1 BAR.

The sensors are temperature compensated, and will operate in the range 0 to 45 degrees C (for the 7 Series, 0-55).

The water has to be flowing to obtain a reading, which is why flow cells are recommended.

Changes to the minimum flow rate will only slightly affect the measurement signal.

Surfactants should not be present in the water being measured (does not apply to the 7 Series probes).

For the dual electrode system, the measurement cell is made of gold, and the counter and reference electrodes of silver with silver halogenid coating. A bias voltage (polarisation) is applied between the two electrodes.

For the potentiostatic 3 electrode system, the measurement electrode is made of gold, the reference electrode is made of silver with a silver halogenid coating, and the counter electrode of stainless steel.

MS CL52 - Application: Free Chlorine, Inorganic Chlorine

Cannot measure with Cyanuric Acid present



- Amperometric Two and Three electrode systems with replacement membranes.
- 30/40 L/h Flow rate required.
- 1 Bar permissible pressure
- Single point calibration
- Sample must be free of surfactants

SPECIFICATION

4 Pole Sensors

| | | |
|-------------------|---|-----------------|
| Range: | N | : 0.05 – 20 ppm |
| | H | : 0.005 – 2 ppm |
| Resolution: | N | : 0.01ppm |
| | H | : 0.001ppm |
| Slope: | N | : -100 mV/ppm |
| | H | : -1000 mV/ppm |
| pH Range | | : 4 – 8 pH |
| No. of Electrodes | | : 2 |
| Membrane Cap | | : M20 |

2 Pole Sensors for 4-20mA Instruments

| | | |
|-------------------|-------|---------------|
| Range: | MA0.5 | : 0 – 0.5 ppm |
| | MA2 | : 0 – 2 ppm |
| | MA5 | : 0 – 5 ppm |
| | MA10 | : 0 – 10 ppm |
| | MA20 | : 0 – 20 ppm |
| Resolution | | : 0.01 ppm |
| pH Range | | : 4 – 8 pH |
| No. of Electrodes | | : 2 |
| Membrane Cap | | : M20 |

- Handling, commissioning and service are extremely easy. The electrode system has a very long working life, with just the membrane cap subject to wear and tear. This needs to be replaced every year. However, maintenance costs are very low.
- The time needed to polarise most of the probes is less than 2 hours.
- No zero point calibration is necessary, and it is only necessary to have a single point calibration, only a slope test is required.
- Because the flow dependence is so low, various in-line probe housings can be used, and it is possible to fit "in-line".
- For most of the probes it is possible to operate up to 1 Bar (higher on request), and this enables the water to be easily returned.
- Temperature compensation is integrated in every probe.
- 90% of the final value of the measurement can be reached in less than 2 minutes for most measurement probes.
- Long term stability is excellent; slope loss is approximately 1% per month.
- Due to low impedance of the probes, long cables can be used without problems.
- Because the probes are available with different ranges, and power supplies, they can be used with a customer's existing controllers.