

Wallace & Tiernan® Analyzers/Controllers CD7 membrane sensor for chlorine dioxide measurement

General

The Wallace & Tiernan® chlorine dioxide measurement module can be used with either the SFC electronic package for single point analysis and control or the versatile MFC electronic package for multiple measurements and control. It consists of a plug-in sensor card and a membrane-type sensor probe that can be mounted in a variety of flow cells. It is suitable for typical chlorine dioxide water applications, ranging from simple measuring/monitoring tasks to complex control processes for treating potable water, process water, pool water and waste water. The standard measuring range is 0.2 to 10 mg/l.

Typical applications

- Measurement and control in industrial and municipal water treatment
- Process measurement, final inspection and testing, neutralization plants
- Monitoring of potable water, well water, pool water as well as other clean water applications where a chlorine dioxide residual measurement is required

Features

The chlorine dioxide measurement sensor consists of a membrane-covered potentiostatic 2-electrode system with a gold working electrode and a silver-silver halogenide reference electrode. It includes an integral temperature sensor for temperature compensation between +5 and 45 °C (41 and 113 °F). Zero point calibration is not necessary. The sensor is supplied with a 0.9 m (3.0 ft.) screened coaxial cable. Extension cables up to 50 m (164 ft.) in length are available as optional accessories. Utilizing "plug and play" technology allows the SFC or MFC controller to automatically recognize the sensor card and provide the correct display information. An analog output (0/4 to 20 mA) is available along with user configurable alarm contacts.

Benefits:

- Continuous, on-line measurement of chlorine dioxide without sensitivity to chlorine, bromine or hydrogen peroxide
- Independent of pH
- Integrated temperature compensation
- Economical, reagent free analysis
- Low operating and maintenance costs
- Intuitive programming for user-friendly operation



VariaSens™ flow module with membrane sensor and MFC electronic module






Product Sheet

Water Technologies

SIEMENS

| Sensor CD7 | |
|--------------------------------------|---|
| Measuring principle | Membrane-covered 2-electrode potentiostatic system |
| Measuring parameter | Chlorine dioxide, ClO ₂ |
| Electrolyte | Diluted potassium halide solution |
| Reference electrode | Silver/silver halide/potassium halide solution |
| Water quality | All types of water, potable, industrial, process and salt water |
| External dimensions | ø 25 mm (1 "), length 175 mm (6.9 ") |
| Models | Non-pressurized or pressurized up to max. 1 bar |
| Measuring range | 0.05 to 20 ppm |
| Response time (T ₉₀) | approx. 20 s |
| Temperature range Measuring water | +5 to 45 °C (41 to 113 °F), temp. compensation |
| Influence of the pH value | No signal influence up to the chlorine dioxide stability limit |
| Conductivity | > 1 µS/cm to max. 40 mS/cm |

| Electronics | |
|--------------------------|---|
| Measurement input | Sensor Card for MFC and SFC |
| Input data | For membrane sensor CD7, pre-calibrated |
| Input data | -7 to 1000 µA |
| Measuring accuracy/drift | Linearity < 0.1 % FS/max. 0.2 %/10 K |
| Measuring cable | Customized cable-plug combo |

| Flow Module | View | Slots Non-pressurized | Slots Pressurized | Technical Data |
|---|---|---|---|--|
| DEPOLOX® 5 flow-through adapter with integrated, open sensor for oxidation and disinfection chemicals and compatible with additional measurements of the MFC/SFC series |  |  1 x membrane sensor | | Sample water flow: Controlled to 33 l/h (0.15 US gpm) with max. 4 bar (58 psi) inlet pressure* Integrated multi-sensor with flow monitor and compatible with temperature sensor max. sample water temperature: +50 °C (122 °F) |
| VariaSens™ Flow-through adapter in combination with membrane sensors and additional measurements of the MFC/SFC series |  |  2 x membrane sensor |  2 x membrane sensor, up to 1 bar back pressure | Sample water flow: Controlled to 33 l/h (0.15 US gpm) with max. 4 bar (58 psi) inlet pressure* Integrated multi-sensor with flow monitor and compatible with temperature sensor max. sample water temperature: +50 °C (122 °F) |

● Membrane sensor ● pH/redox sensor ● Sensor for fluoride or conductivity

*: Sample water pressures of up to 40 bar (580 psi) can be adapted with special equipment.

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