



# DioSense

## Chlorine Dioxide Analyser

The DioSense range of Chlorine Dioxide Analysers, and Chlorine Dioxide Monitors use the very latest and best chlorine dioxide sensors available in the world today. The DioSense sensors are membraned devices which are insensitive to chlorine, use no reagents, are extremely stable, and have reduced maintenance and reduced whole life costs.

- **Amperometric sensors - continuous online ClO<sub>2</sub> analyser**
- **No chemical reagents - lower cost of ownership**
- **Stable and reliable - excellent process control**
- **Suitable for all potable and process waters**
- **Up to 6 months between maintenance**
- **No interference from residual chlorine**
- **Tolerant of water containing detergents**
- **Chlorite sensors also available**



*"These are the best chlorine dioxide sensors we've ever used and we've tested most"*

**Alistair Cameron, UK**

The DioSense sensors and flow cells are available with different controllers giving you the same great performance with different communication, display, and control options.

### CRONOS<sup>®</sup> DioSense



- High Quality - Lowest Cost
- Multilingual
- High resolution grayscale display
- 9 buttons for easy navigation
- Graphing and datalogging
- Enclosure; wall, panel, pipe or pole mounting. IP65/Nema 4x.
- Options:
  - **Modbus RS485/LAN**
  - **Profibus DPV 1**
  - **Up to 2 sensors**
  - **PID/flow proportional controls**
  - **Remote sensors**
  - **Colour display**
  - **Downloadable data logs**

### CRIUS<sup>®</sup>4.0 DioSense



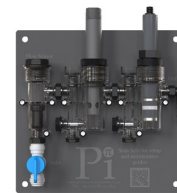
- High Quality - Lowest Cost
- Multilingual
- High resolution colour display
- Intuitive user interface
- Downloadable data logs
- Customisable home pages
- All CRONOS<sup>®</sup> options plus:
  - **Up to 4 sensors**
  - **Remote access via LAN**
  - **Remote access via 3G/4G**
  - **Expandable to 16 sensors**

***For more information please see the individual brochures for CRONOS<sup>®</sup> and CRIUS<sup>®</sup> 4.0***

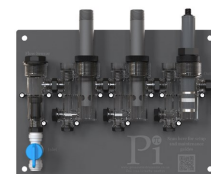
### Mounting Options



**Single flow cell (open or closed)**



**Double flow cell (open or closed)**



**Triple flow cell (open or closed)**



**Single or double sensor Autoflush**

## Principle of Operation

The membraned amperometric chlorine dioxide sensor is a 2 electrode sensor which operates at an elevated applied potential which eliminates zero drift. Its unique design means that no reagents or buffers are required at all and calibration is a simple one point (no zero required) operation.

In addition to the state of the art amperometric chlorine dioxide sensors the DioSense range of controllers has all the functionality that you need. Choose from the CRONOS® or CRIUS®4.0 controller to give you the highest quality chlorine dioxide monitor, with all the functionality you need, at the lowest price possible. This means that you pay for everything that you need, and nothing you don't, without sacrificing the quality of measurement.

## AutoFlush

As described in a separate brochure, the DioSense can come equipped to automatically clean itself at user defined intervals. The AutoFlush for DioSense is particularly useful in food preparation, pulp and paper, and many applications where there is likely to be a build up of solids in the sample. The membraned sensors are particularly resistant to tensides and are therefore applicable in food washing applications.

## Multi-Sensor Systems

The whole range of DioSense Residual Chlorine Dioxide Monitors and Controllers can be fitted with additional sensors such as chlorite or pH. Please ask your local distributor for more details.

## Specification\*

<b>Application:</b>	All kinds of water treatment (e.g. bottle washing machine, CIP-plants, hot water systems)
<b>Type:</b>	Membrane covered, amperometric 2 electrode system
<b>Sensor ranges:</b>	0.005-0.5mg/l; 0.005-2mg/l; 0.05-5mg/l; 0.05-10mg/l; 0.05-20mg/l
<b>Resolution:</b>	0.001mg/L; 0.01mg/L
<b>Repeatability:</b>	<1%
<b>Working Temperature:</b>	0-50°C
<b>Temperature Compensation:</b>	Automatically, by an integral temperature sensor (temp changes <5°C/h)
<b>Max. allowed Working Pressure:</b>	1 Bar, no pressure impulses and/or vibrations
<b>Flow Rate:</b>	Approx. 0.5l/min
<b>pH Range:</b>	pH1 to pH12
<b>Run-in Time:</b>	First start-up approx. 1h
<b>Response Time:</b>	T <sub>90</sub> : approx. 60 seconds
<b>Zero Point Adjustment:</b>	Not necessary
<b>Calibration:</b>	Manual using a suitable ClO <sub>2</sub> test kit Every 1 week to 3 months, application dependent
<b>Interferences:</b>	Cl <sub>2</sub> : 0.1 O <sub>3</sub> : is measured with a sensitivity 25 times higher than ClO <sub>2</sub> 1% sulfuric acid or 1% nitric acid in the water have no influence to the measuring behaviour
<b>Storage:</b>	Frost-protected, dry and without electrolyte no limit Used membrane caps can not be stored
<b>Maintenance:</b>	Change of membrane cap: Yearly Electrolyte: Every 3-6 months
<b>Housing:</b>	Open flow cell

## Cost of Ownership

With its reduced maintenance, reduced calibration and reduced spares requirements the DioSense ClO<sub>2</sub> analysers are undeniably the most cost effective ClO<sub>2</sub> analysers available.

## Water Treatment

- ClO<sub>2</sub> Dosing Control
- Cooling Towers
- Hospitals
- Remote Sites
- Food Preparation
- Secondary Disinfection

Anywhere you have a requirement to measure residual ClO<sub>2</sub> is a suitable application for the DioSense. The DioSense chlorine dioxide controller range is particularly suited to working in sites where reliability and ease of use are most important. Contact us for advice on which sensor to use.

## Installation

The DioSense can be installed in a variety of auxiliary flow cells and self-cleaning devices. Please visit our website or refer to our ISB36 AutoFlush brochure.

*DioSense in an AutoFlush flow cell*



**\*All subject to change without notice**