



DioSense HR

Chlorine Dioxide in Water 0-3500mg/L

The DioSense HR (high range) range of chlorine dioxide in water analysers use an optical sensor which covers the range 0-3500mg/L (0-0.35%). They are optical devices which are specifically designed to withstand the harsh chemical environment of ClO₂ solutions. They are insensitive to changing pH, use no reagents, are extremely stable and have reduced maintenance and reduced whole life costs. An in-built temperature sensor means that they are automatically temperature compensated.

- **Optical sensors** - solid state and no moving parts
- **No chemical reagents** - lower cost of ownership
- **Stable and reliable** - excellent process control
- **Zero maintenance** - reduced costs
- **Up to 15 years life** - reduced costs

*"Low cost, simple to use
and great results!"*

Mike Riding, UK



The DioSense HR sensor and flow cell are available with different controllers giving you the same great performance with different communication, display and control options, including; relays, digital inputs, analogue outputs, LAN and modem connections with Modbus, Profibus and MQTT comms protocols.

CRONOS® DioSense HR



- 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®4.0 DioSense HR



- High Quality - Lowest Cost
- Multilingual
- High resolution colour display
- Intuitive user interface
- Downloadable data logs
- Customisable home pages
- All CRONOS® 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® and CRIUS® 4.0**

Mounting Options



**In pipe mounting in a 3/4" PVC T
fitting. Simple to install, rugged
and reliable**

Principle of Operation

The optical sensor shines light of a particular wavelength (near UV) through the chlorine dioxide solution and the amount that is absorbed is proportional to the concentration of chlorine in the ClO₂ solution. The sensor has a reference light source and detector for stability and an in-built temperature sensor for integrated temperature compensation.

The chlorine dioxide keeps the sensor clean and bubbles are encouraged to flow through the sensor and not settle on the optical surfaces by orienting the flow through the T such that the flow path is vertical.

Calibration is by comparison to titration test kits, and is generally on a 3 or 6 month schedule. Calibration input is via a simple wizard on the controller display.

Applications

- **Chlorine Dioxide Generation**

The DioSense HR sensor is being successfully used in many harsh and demanding applications where the concentration of the ClO₂ is important for the efficiency of the process.

Installation

Typically on the inlet or outlet of a dosing pump using the PVC T fitting supplied.

Controller Integration

The DioSense HR sensor communicates with the CRIUS®4.0 or CRONOS® controller using Modbus which gives full communication with the sensor. Please see the separate controller brochures for details of the I/O, communications, control and remote access capabilities of the controllers.

Key Benefits

- **Low cost of ownership**
- **Fully integrated with the controller**
- **Temperature compensated**
- **Stable and reliable**
- **No Reagents**

For more information and to discuss your application, process control requirements and any remote communications please contact Pi and talk to one of our technical specialists.

Specification*

DioSense HR Chlorine Dioxide Sensor

Type:	Optical, near UV absorption
Range (ppm):	0.3500mg/L, 0.01-0.35%
Resolution:	0.01%
Stability:	Approx. +/-1% per month
Flow rate:	No min or max
Temperature range:	0-45°C
Temperature compensation:	Automatically by an integrated thermistor
Installation:	3/4" Inline T
Calibration:	Off line titration
Housing material:	CPVC, fused silica
Maintenance intervals:	No maintenance

**All subject to change without notice*

