



# Chloribrid®

## Free and Total Residual Chlorine Analyser

Chloribrid® is a novel, innovative and unique, patented solution to the shortcomings of both electrochemical sensors and DPD for the online measurement of free or total residual chlorine.

To improve the resilience of online residual chlorine measurement and therefore the resilience of water disinfection, the Chloribrid® has been created as a hybrid giving the user all the benefits of both electrochemical and online DPD technology.

### Online DPD Advantages

- Standard Method
- Works right out of the box
- No routine calibration

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### Online Electrochemical Sensor Advantages

- Infrequent maintenance (6 months)
- Fast response
- Low TOTEX

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### Chloribrid® Advantages

- Self checking
- Infrequent maintenance (6 months)\*
- Works right out of the box
- No routine calibration
- Self calibrating
- Low TOTEX

\*By using long life DPD reagents with enhanced stability reagents last up to 6 months.

### CRIUS® 4.0 Chloribrid® Controller

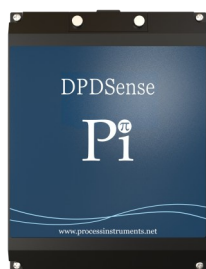


- High Quality - Lowest Cost
- Multilingual
- High resolution colour display
- 9 buttons for easy navigation
- Graphing and datalogging
- Enclosure; wall, panel, pipe or pole mounting. IP65/Nema 4x.
- Options:
  - Modbus RS485/LAN
  - Profibus DPV 1
  - Up to 8 sensors
  - PID/flow proportional controls
  - Remote sensors
  - Remote Access
  - Downloadable data logs

### CRIUS® 4.0 Chloribrid® Sensors



- Installed thousands of applications worldwide.



- Industry standard method in use worldwide.

**For more information please  
see the individual brochure  
CRIUS® 4.0**

### CRIUS® 4.0 Chloribrid®



- Model shown is a Chloribrid® free chlorine incorporating both an electrochemical sensor and an online DPD sensor.
- Chloribrid® can also come as a total chlorine measurement system.
- Separate drain for the DPD chemicals
- Reliable and robust

## Principle of Operation

The concept behind the Chloribrid® is to be able to take advantage of the benefits of both electrochemical sensors and online DPD measurements.

On initial installation the Chloribrid® would use the output from the online DPD as its primary output with the sample frequency running as fast as possible (once every 2.5 minutes). As the electrochemical sensor comes into condition the Chloribrid® monitors the rate of change of the difference between the readings from the electrochemical sensor and the online DPD and as soon as that difference is stable the Chloribrid® uses the DPD sensor to calibrate the electrochemical sensor. After the electrochemical sensor has been calibrated, the Chloribrid® switches its main output to that of the electrochemical sensor and reduces the frequency of DPD readings to e.g. once every hour, thereby providing faster response times, frequent self checks using the online DPD, and extended maintenance intervals six monthly.

By using specially developed, enhanced stability DPD reagent, the reagent replacement interval can be extended from monthly to 6 monthly.

[Click here](#) to see an animation explaining Chloribrid®

## Specification\*

|                                       | Chloribrid®                                                             |
|---------------------------------------|-------------------------------------------------------------------------|
| <b>Type:</b>                          | DPD colorimetric analyser / Electrochemical sensor                      |
| <b>Range (ppm):</b>                   | 0.005-2, 0.05-5                                                         |
| <b>DPD sample frequency:</b>          | 2.50 - 100 minutes / continues                                          |
| <b>Resolution:</b>                    | 0.01 / 0.01                                                             |
| <b>Stability:</b>                     | Approx. +/-1% per month / ± 2% per month                                |
| <b>Wavelength:</b>                    | 515nm / NA                                                              |
| <b>Zero / Turbidity alarm:</b>        | ✓ / NA                                                                  |
| <b>Flow rate:</b>                     | Approx. 300ml min <sup>-1</sup>                                         |
| <b>Temperature range:</b>             | 0-45°C                                                                  |
| <b>pH-range:</b>                      | pH 4-9 (Free Chlorine)<br>pH 4-12 (Total Chlorine)                      |
| <b>Initial stabilisation time:</b>    | 0 minutes                                                               |
| <b>Response time:</b>                 | T <sub>100</sub> = sample frequency / T <sub>90</sub> = 90 <sub>s</sub> |
| <b>Zero-point adjustment:</b>         | Not necessary                                                           |
| <b>Calibration:</b>                   | None                                                                    |
| <b>Dimensions DPDSense backboard:</b> | Width: 300mm<br>Height: 675mm                                           |
| <b>Maintenance intervals:</b>         | Reagent 6 monthly                                                       |
| <b>Peristaltic pump tube:</b>         | 6 monthly                                                               |
| <b>Cuvette + dosing head</b>          | Once a year                                                             |
| <b>Interferences:</b>                 | ClO <sub>2</sub> , O <sub>3</sub> , Mn, Organochlorines                 |

*\*All subject to change without notice*

## Options

The Chloribrid® can be configured to monitor either Free Chlorine, or Total Chlorine.

- Chloribrid® is available on multi-parameter controllers. This means that other measurands can be added such as pH, Turbidity etc.

## Applications

- Drinking Water
- Remote Sites
- Secondary Chlorination

The Chloribrid® chlorine analyser range is particularly suited to sites where reliability, accuracy and resilience are most important.

## Installation

Chloribrid® comes pre-mounted on a 10mm backboard with four mounting stand offs for wall mounting.

## Key Benefits

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.

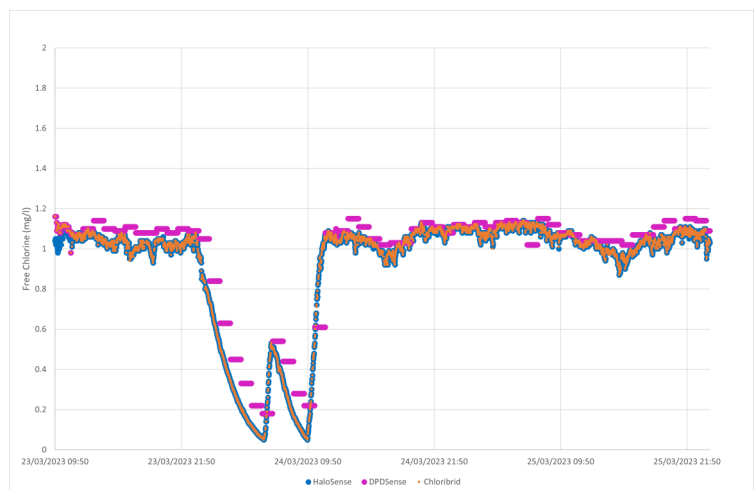


Fig 1. shows the output from the Chloribrid® (far left) being supplied from the DPD output. After several hours the differential between the output from the DPD and the electrochemical sensor remains constant and the DPD signal is used to calibrate the electrochemical sensor. At this point the output from the Chloribrid® swaps over to the electrochemical output and the DPD takes a recording every hour and is compared to the electrochemical sensor. If the reading is more than x% away from the electrochemical reading then an alarm is triggered where 'x' is chosen by the customer.