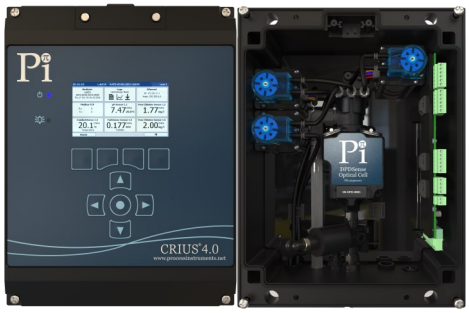
DPDSense

Free and Total Chlorine Analyser

The DPDSense range of Free and Total Residual Chlorine Analysers are based on the industry standard DPD colorimetric measurement.



- **Online DPD method -** no calibration required
- **Works out of the box -** plug it in and off you go!
- **Stable and reliable -** excellent process control
- **Suitable for all potable and process waters**
- **Up to 6 months between maintenance**
- **One month reagent life**

The DPDSense is 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. In addition the DPDSense can come with additional sensors such as Turbidity, pH, etc.

Coupling the DPDSense with the CRONOS® and CRIUS®4.0 controller also allows for multi-parameter monitoring and datalogging.

Online DPD instruments have the reputation of being difficult to work on. Not so the DPDSense from Pi. With full easy access to tubes and pumps the minimal maintenance is quick, easy and inexpensive to do!

CRONOS® DPDSense



- 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 DPDSense



- 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



Model shown is a DPDSense FC Free Chlorine.



Mounted with controller

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Principle of Operation

DPDSense uses 515nm emitted light to detect the colour change when DPD (N,N-diethyl-p-phenylenediamine) reacts with the chlorine in the water to form a pink coloured solution. The depth of the colour pink (absorption of the light) is proportional to the amount of Free Chlorine and/or Total Chlorine present in the sample. This technique is accepted worldwide as a standard method for online monitoring of Residual Chlorine levels in water. The DPDSense can measure Free Chlorine, or Total Chlorine.

Options

- The DPDSense can be configured to monitor either Free Chlorine or Total Chlorine DPDSense is available on multi-parameter controllers. This means that other measurands can be added such as pH, Turbidity etc.

Applications

- **Drinking Water**
- **Cooling Towers**
- **Distribution monitoring**
- **Remote Sites**
- **Food Preparation**
- **Secondary Chlorination**

Installation

The DPDSense chlorine analyser range is particularly suited to sites where reliability and accuracy are most important.

DPDSense comes pre-mounted on a backboard with four mounting stand offs for wall mounting. A bespoke manual comes with every instrument and wiring instructions are on the controller itself.

Key Benefits

- **Free Chlorine or Total Chlorine**
- **Low cost of ownership**
- **Variable sample frequency from 150 seconds up**
- **Stable and reliable**
- **Easy and simple maintenance**
- **Automatic reagent efficacy colour check**
- **Turbidity alarm - for when the measurement is compromised by high turbidity**
- **Flow cell cleanliness alarm**
- **Reagent warning and empty alarms**

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*

	Free Chlorine Sensor	Total Chlorine Sensor
Type:	DPD colorimetric analyser	DPD colorimetric analyser
Range (ppm):	0-5	0-5
Sample frequency:	2.5 - 100 minutes	2.5 - 100 minutes
Resolution:	0.01	0.01
Stability:	Approx. +/-1% per month	Approx. +/-1% per month
Wavelength:	515nm	515nm
Zero / Turbidity alarm:	√	√
Flow rate:	Approx. 300ml min	Approx. 300ml min
Temperature range:	0-45°C	0-45°C
pH-range:	pH 4 up to pH 12	pH 4 up to pH 12
Initial stabilisation time:	0 minutes	0 minutes
Response time:	T_{100} = sample frequency	T_{100} = sample frequency
Zero-point adjustment:	Not necessary	Not necessary
Calibration:	None	None
Dimensions DPDSense backboard:	Height: 675mm (26.57 inch) Width: 300mm (11.81 inch) Depth: 2 bottle system 133mm (5.23 inch)	Height: 675mm (26.57 inch) Width: 300mm (11.81 inch) Depth: 2 bottle system 133mm (5.23 inch)
Maintenance intervals:	Reagent once a month	Reagent once a month
Peristaltic pump tubes:	Once per 6 months	Once per 6 months
	Cuvette + dosing head once a year	Cuvette + dosing head once a year
Interferences:	ClO_2, O_3 , Mn, Organochlorines	ClO_2, O_3 , Mn, Organochlorines

All subject to change without notice