



ORPSense

Continuous Online ORP Meter

The ORPSense range of ORP Meters from Pi utilize the very latest and best ORP sensors available in the world today for measuring the online Redox potential of any aqueous solution. They are platinum based sensors with integral reference electrodes which use no reagents, are extremely stable, and have reduced maintenance and reduced whole life costs.

- **Up to 3 years continuous operation**
- **Stable and reliable - excellent process control**
- **Suitable for all potable and process waters**
- **Suitable for very low conductivity waters**
- **Suitable for use in Autoflush (see separate brochure)**



"The ORP sensors from Pi are much more reliable than others and they have a very long life." **Bhupendra Patel, Africa**

The ORPSense sensors and flow cells are available with different controllers giving you the same great performance with different communication, display, and control options. With the ORPSense range of redox controllers, you get everything that you need - and nothing that you don't.

CRONOS® ORPSense



- 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
 - Color display
 - Downloadable data logs

CRIUS® ORPSense



- Highest Quality - Low Cost
- Multilingual
- High resolution color display
- Intuitive user interface
- Downloadable data logs
- Customizable 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®

Sensor Selection

ORP1

- Suitable for pools and spas
- Max. temp 80°C
- Flow cell mounting options



ORP2

- Suitable for potable and process waters
- Max. temp 80°C
- Flow cell, at line tee, handrail and welding stub mounting options



ORP3

- Suitable for waste water
- Max. temp 80°C
- Autoclean immersion, at line tee, handrail and welding stub mounting options



Principle of Operation

At the heart of the ORPSense are the ORP electrodes. These electrodes are filled with a polymeric gel. This innovative design makes the electrodes more responsive and with a longer life than ordinary electrodes (up to three years).

ORP operates by measuring the potential between two electrodes. The potential tells operators the tendency of the water to oxidize (or reduce) pollutants. Tendency can be seen as a useful measure of the rate of oxidation.

Despite all of the additional functionality that this unit has to offer, the purchase costs are less than, or comparable to, its competitors!

Automatic Cleaning

As described in a separate brochure (ISB36 Autoflush), the ORPSense can come equipped to automatically clean itself at user defined intervals. The Autoflush 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. Automatic cleaning is available for at line, and in line versions including dip and screw in Autoclean pipe versions. Please see the Autoflush brochure (ISB36) available on our website, or if you are online, please [click here](#).

Water Treatment

- Remote Sites
- Food Preparation
- Chemical Process
- Cooling Towers
- Paper Mills
- Mining

Anywhere you have a requirement to measure ORP is a suitable application for the ORPSense. The ORPSense ORP meter range is particularly suited to working in sites where reliability and ease of use are most important.

Specification*

ORP Electrodes

	ORP1	ORP2	ORP3
Type:	Combined reference, and measuring electrode		
Reference Type:	Ag/AgCl gel filled	Ag/AgCl gel filled	Ag/AgCl gel filled
ORP Range:	-1200 to 1200mV	-1200 to 1200mV	-1200 to 1200mV
Pressure Range:	0-7 Bar	0-7 Bar	0-7 Bar
Impedance:	<100 KOhm	<100 KOhm	<100 KOhm
Response Time:	Application specific, typically full response within 30-45 seconds		
Temperature Range:	0-80°C	0-80°C	0-80°C
Conductivity:	>100µS/cm	>100µS/cm	>100µS/cm
Wetted Surface:	PVC/Glass/Pt	PVC/Glass/Pt	PVC/Glass/Pt
Junction:	Single Gelled	Single Gelled	Double Gelled
Cable Length:	1m	3m	6m
Shelf Life:	12 months	12 months	12 months
Estimated Life (Application Dependent):	12-18 months	12-18 months	12-18 months
Warranty:	3 months	3 months	3 months

**All subject to change without notice*

Multi-Sensor Systems

The whole range of ORPSense ORP meters can be fitted with additional sensors such as chlorine or pH. Please ask your local distributor for more details.

"Multi-sensor systems can save considerable sums without compromising measurement integrity"

Dr Craig Stracey, UK

Installation

The ORPSense can be installed in a variety of auxiliary flow cells and self-cleaning devices. Please see the ORP Selection guide (ISB57) available on our website, or if you are online, please [click here](#).

Recommended Reading

An ORP Selection Guide is available on our website, or if you are online, please [click here](#).



ORP2 sensor in a single closed flow cell



ORP2 sensor in a double open flow cell alongside a total chlorine probe