

Continuous Online ORP Meter

The ORPSense range of ORP Meters from Equip-Solutions 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 electrode 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



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

CRIUS® Controller



- High resolution color display
- Intuitive user interface
- Graphing and datalogging
- NEMA 4X Enclosure
- Options:
 - Modbus RS485/LAN
 - Profibus
 - PID/flow controls
 - Remote sensors
 - Downloadable data logs
 - Up to 4 sensors
 - Remote access via LAN
 - Remote access via GPRS
 - Expandable to 16 sensors

Additional controller information may be found on the CRIUS product data sheet.

Sensor Selection

ORP1



- Suitable for pools and spas
- Max temp 176° F
- Flow cell mounting options

ORP2



- Suitable for potable and process waters
- Max temp 176° F
- Flow cell, at line tee, handrail and welding stub mounting options

ORP3



- Suitable for waste water
- Max temp 176° F
- 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.

Automatic Cleaning

As described in a separate Autoflush brochure, 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 and Auto-clean pipe versions.

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.

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.

Installation

The ORPSense can be installed in a variety of auxiliary flow cells and self-cleaning devices.



ORP2 sensor in a single closed flow cell



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

Specifications

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 1200 mV	-1200 to 1200 mV	-1200 to 1200 mV
Pressure Range	0-100 psi	0-100 psi	0-100 psi
Impedence	< 100KΩ	< 100KΩ	< 100KΩ
Response Time	Application specific, typically full response within 30-45 sec		
Temperature Range	32° - 176° F	32° - 176° F	32° - 176° F
Conductivity	> 100 μS/cm	> 100 μS/cm	> 100 μS/cm
Wetted Surface	PVC / Glass / Pt	PVC / Glass / Pt	PVC / Glass / Pt
Junction	Single Gelled	Single Gelled	Double Gelled
Cable Length	3 ft	3 ft	10 ft
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