



ORP3000
Oxygen Reduction
Potential Sensor



Description

The Greenspan ORP3000 is a complete self contained Oxidation Reduction Potential (REDOX) measurement and data logging system for a wide variety of environmental applications. The sensor utilises a robust Platinum electrode together with optical isolation and advanced signal conditioning to ensure long term accurate data. The sensor also features a field replaceable electrode to further improve long term performance and reduce field visits.

The internal data logger provides long term data collection at remote sites, and options for remote telemetry connection. The sensor can be fitted with an external cable, or with an on board battery pack for true stand alone operation. Other cable options can provide serial output in SDI12 format for connection to external data loggers or process controller.

The sensor is ideal for use in environmental water monitoring applications, including tidal and estuary monitoring and water reticulation systems. A durable acetal body with double O ring design ensures suitability for the harshest environment applications.

The ORP3000 sensor is easy to configure and provides a reliable solution for long term monitoring. For more information please contact your nearest sales office.

Features

- Robust platinum electrode
- Optically isolated signal conditioning electronics
- Internal temperature compensation
- Low power energy requirements
- Optional battery pack for true stand alone operation
- Telemetry communication options
- SDI12 cable adaptor unit for connection into data logger or controller.

Benefits

- High reliability and minimal field servicing means lower costs
- Operation for up to 12 months at a remote site
- Internal data logger means no wiring, easy configuration and lower costs
- Easy data collection using a PC with Windows software.

Applications

- Monitoring of streams and rivers, lakes and urban waterways
- Water quality studies and catchment management
- Water supply storage including stratification studies
- Water and wastewater treatment monitoring
- Groundwater analysis and monitoring
- Tidal, estuary and oceanographic monitoring
- Industrial water and chemical dosing monitoring.

Dimensions



ORP3000 Specification

Measurement technique	Platinum electrode with internal reference
Sensor range (factory calibrated)	-1000mV - +1000mV
Sensor Outputs	Internal data logger – serial output via software Optional adaptor provides SDI12 serial output (3 wire)
Resolution	ORP 1mV, temperature 0.05°C
Accuracy	ORP +/- 2% full scale (+/- 20mV) Temperature +/- 0.2°C Battery volts +/- 0.5V
Cable type	Polyurethane sheathed cable, OD 8mm, with 3mm vent tube, moulded entry, bare wire connection
Cable lengths	10, 20, 30, 50, 100, 150m (32, 65, 100, 165, 325, 490 ft)
Power supply	8 to 30vdc external supply or on board battery pack (option)
Reverse polarity protection	Yes
Surge current protected	To 2kV
Warm up time to stable reading	2 sec
Current consumption	Sleep 0.5mA, Logging 21mA, Communicating 30mA
On-board battery pack (option)	Housing screws to sensor size (L x OD) 250mm x 47mm
Battery capacity	9 x Lithium AA (3.6Volt) – Total capacity 5.2Ah @ 10.8v
Typical field life (Battery pack)	Over 6 months remote operation @ 30 min logging
Internal data logger	Non-volatile, battery backed RAM with real time clock
Memory size	2Mb capacity, with user selectable wrap function
Measuring units	User definable
Data Storage	250,000 readings (typically 5 minute data for >12 months)
Logging frequency	User selectable from 1 second up to once per day
Averaging alarms	User selectable via supplied Smartcom software
Operating temperature	0-50°C
Storage temperature	-5°C - +60°C
Depth rating (water column)	100m
Weight	500g plus cable weight (665g per 10m length)
Dimensions (L x OD)	384.20mm x 47mm (15.13" x 1.85") or 584.20mm x 47mm (23.0" x 1.85") with battery housing
Wetted materials	UPVC, acetal, 316 passivated stainless steel, polyurethane, viton



Optional Extras and Accessories

- Moulded cable (specify required length above)
- On-board battery pack (includes housing and battery pack)
- SDI12 Adaptor (connects to end of sensor cable for serial output to logger).

How to Order

The following information will be required:

- Model ORP3000
- Moulded cable length (m)
- Specify any other options.



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