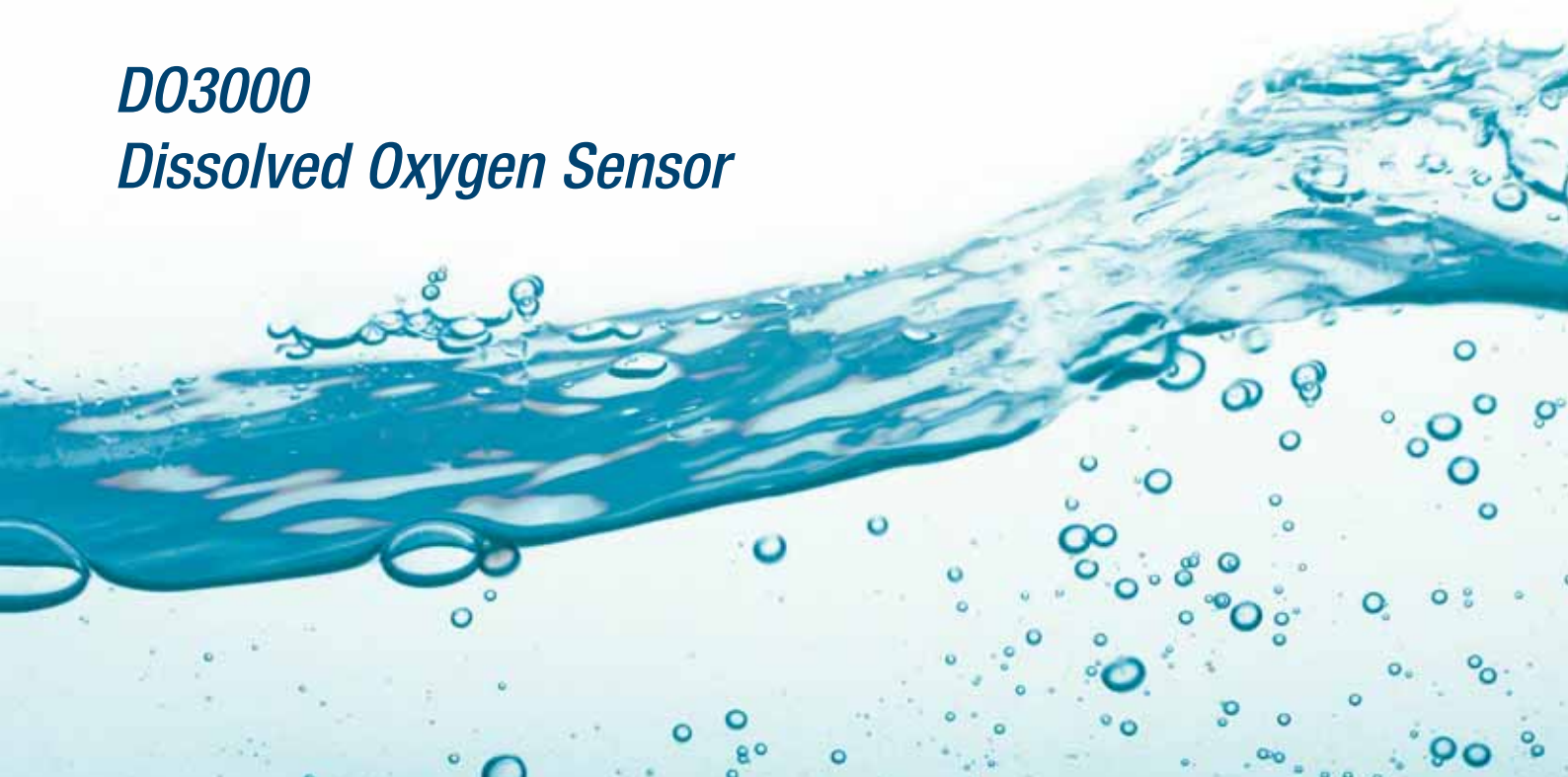




D03000
Dissolved Oxygen Sensor



Description

The Greenspan DO3000 is a complete self contained Dissolved Oxygen measurement and data logging system for environmental applications. The sensor uses a patented diffusion cell technology to provide continuous in-situ dissolved oxygen measurements with minimal maintenance requirements.

The internal data logger provides long term unattended data collection at remote sites, as well as 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 clean freshwater water environmental monitoring applications, including river and lake monitoring. Waters with active marine growth may require fitting of optional copper shroud to minimise fouling of the membrane.

A durable acetal body with double O ring design ensures suitability for the harshest environment applications.

The DO3000 sensor is easy to configure and provides a reliable solution for long term monitoring. For more information please contact your nearest sales office.

Dimensions



Sensor Body – L 350 mm x OD 47 mm
Membrane Shroud 160 mm x 20 mm)

Features

- Membrane based Diffusion Cell technology
- No moving parts and no stirrer required
- Low power consumption
- Low power energy requirements
- Telemetry communication options.

Benefits

- Internal data logger means no wiring, easy configuration and lower cost
- Easy data collection using a PC with Windows software
- Automated polling and data collection and display via Smartcom software
- Optional battery pack for fully self-contained operation
- Optional SDI12 serial cable adapter.

Applications

- Monitoring of streams, rivers, lakes and urban waterways
- Water quality studies and catchment management
- Water supply storages including stratification studies
- Water and wastewater treatment monitoring
- Groundwater analysis and monitoring
- May not be suitable for rapid response DO applications or water bodies with active biological or marine growth.

DO3000 Specification

Measurement technique	DO- Silicon membrane over sintered rod and internal diffusion cell Temp – integrated precision thermistor
Operating ranges	DO - 0-20ppm or 0-200% Temperature - 0-50°C Max water depth 100m
Sensor outputs	Internal data logger – serial data via Smartcom software Optional adaptor provides SDI12 serial output (3 wire)
Sensor response time (T90)	<40 minutes (time taken to reach 90% of a step change in DO)
Overall accuracy (combined linearity, hysteresis and repeatability)	Dissolved Oxygen +/- 0.2ppm or +/- 1% Full scale range Temperature +/- 0.2°C
Long term stability	0.2% full scale per annum
Resolution	Dissolved Oxygen - 0.1%, Temp - 0.05°C
Storage temperature	-5°C - +60°C
Cable type	Polyurethane sheathed cable, OD 8mm, with 3mm vent tube, moulded entry, HS7 connector for serial connection.
Cable lengths	10, 20, 30, 50, 100, 150m (32, 65, 100, 165, 325, 490 ft)
Power supply	9 -30 Vdc (at sensor), or on-board battery pack (option)
Power ESD protection	2000 volts
Current consumption	Sleep <0.2mA, logging 20mA, communicating 30mA
Sensor warm up time	2 seconds
On-board battery pack (option)	Housing screws to sensor size (OD x L) 47 mm x 250 mm
Battery capacity	9 x Lithium AA (3.6Volt) – Total capacity 5.2Ah @ 10.8v
Typical field life (battery pack)	Over 12 months remote operation @ 15 minute data logging.
Internal data logger	Non-volatile, battery backed RAM with real time clock
Memory size	2Mb capacity, with user selectable wrap function
Measuring units	DO ppm and DO % saturation
Data storage	250,000 readings. (Typically 5 minute data for >12 months)
Logging frequency	User selectable from 1 second up to once per day
Dimensions (L x OD)	510mm x 47mm (20" x 1.78")
Weight	850g plus cable weight (665g per 10m length)
Wetted materials	Acetal, ceramic, 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 adapter (connects to end of sensor cable for serial output to logger)
- Protective copper nose cone (resists biological growth)

How to Order

The following information will be required:

- Model DO3000
- Cable length (m)
- Specify battery pack or any other options



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