

TDO-2050

Temperature & Dissolved Oxygen Recorder



The TDO-2050 is a self-contained, submersible logger, designed to measure temperature and dissolved oxygen. It is very accurate and small (265mm x 38mm OD). The TDO-2050 can be mounted on the sea or harbour floor, fastened to an existing structure, or attached to a mooring line. It may also be used for freshwater and aquaculture applications.

Features:

- Small Size
- High Accuracy
- Large Memory
- High-speed download

The temperature channel of the TDO-2050 is calibrated to an accuracy of $\pm 0.002^{\circ}\text{C}$ (ITS-90). Based on long-term tests the drift has been measured at better than $0.002^{\circ}\text{C}/\text{year}$. The standard thermistor has a time constant of <3 seconds; a fast thermistor probe is also available (0.095 sec). The dissolved oxygen channel is calibrated to an accuracy of $\pm 1\%$ O_2 Saturation. Calibration constants are stored in the logger and recalibration of the DO sensor is easily carried out by the end-user.

The TDO-2050 is available in plastic or titanium casing. The depth rating of the plastic case is 740m, and the titanium 2,000m (limited by the dissolved oxygen sensor).

Technical

General

Power:	QTY 2, 3V CR123A cells
Communications:	RS-232/485; logged, cable, or telemetry
Download Speed:	$\sim 115,000$ samples/minute
Clock Accuracy:	± 32 seconds/year
Size:	265mm x 38mm
Memory:	8Mbyte Flash (2,400,000 samples)
Weight:	364g; 70g in water (plastic)
Calibration:	NIST traceable standards

Temperature

Range:	-5°C to 35°C
Accuracy:	$\pm 0.002^{\circ}\text{C}$
Resolution:	$<0.00005^{\circ}\text{C}$
Time Constant:	<3 sec
Drift:	$<0.002^{\circ}\text{C}/\text{year}$

Dissolved Oxygen

Range:	0 to 150%
Accuracy:	$\pm 1\%$ O_2 Saturation

For more details, please visit our website: www.rbr-global.com

Software

The TDO-2050 uses fully integrated Windows[®] software. Please see 'RBR Software' datasheet for more information.

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