

Single Channel Recorder

Temperature, Depth and Dissolved Oxygen

The 1060 series loggers are compact, extremely rugged and highly accurate devices that are ideal for coastal and deep water oceanography, freshwater, groundwater and ice research. The 1060 series are small diameter loggers that use less power, and have excellent performance with a 24 bit ADC.

Features

- Small size
- 1200 m depth rating
- High accuracy
- 2.4M samples
- Up to 3 years on one battery



The 1060 series loggers may be deployed for a period of up to three years using one high-power 3V lithium cell battery (CR123A). The mechanical design makes for easy battery and desiccant access, and data download. The memory is sufficient for 2,400,000 samples and a full set of samples can be taken by one battery.

Temperature TR-1060

The temperature sensor is calibrated to an accuracy of $\pm 0.002^{\circ}\text{C}$ (ITS-90 and NIST traceable standards). Typical drift has been measured to be better than $0.002^{\circ}\text{C}/\text{year}$. The TR-1060 may be equipped with either a 3s or a 100ms time constant thermistor.

Depth DR-1060

The depth sensor is calibrated to an accuracy of $\pm 0.05\%$ of the full scale reading and is available in ranges up to 1200m. A high-sensitivity piezoresistive silicon chip is used for pressure sensing. The chip is protected against ambient influences by a Hastelloy C-276 housing sealed with a concentrically corrugated diaphragm. The housing is filled with silicone oil for the transfer of the pressure from the diaphragm to the sensing component.

Dissolved Oxygen DO-1060

The dissolved oxygen sensor is calibrated to an accuracy of $\pm 2\%$. The sensor is designed for long-term measurements in ponds, lakes and oceans. The pressure and temperature compensation system makes the sensor insensitive to pressure and temperature changes. Unlike some other types of dissolved oxygen sensors, it is not sensitive to hydrogen sulphide.



Single Channel Recorder

Temperature, Depth and Dissolved Oxygen

General Specifications

Power:	One 3V CR123A cell
Communication:	RS-232
Depth rating:	1200m (1200dBar)
Material:	Delrin™
Download speed:	~115,000 sample/minute
Clock accuracy:	±64 seconds/year
Measurements:	2,400,000 samples
Calibration:	NIST traceable standards

Temperature TR-1060

Range:	-5°C to 35°C (may be calibrated from -40°C to +50°C on request)
Accuracy:	±0.002°C
Resolution:	<0.00005°C
Time constant:	~3s (standard); or ~100ms
Drift:	~0.002°C/year - typical
Size:	240mm x 25mm Ø
Weight:	150g in air, 55g in water

Depth DR-1060

Range:	10 / 20 / 50 / 100 / 200 / 500 / 740 / 1000 / 1200m (dBar)
Accuracy:	±0.05% full scale
Resolution:	<0.001% full scale
Time Constant:	<10ms
Drift:	~0.1%/year - typical
Size:	~230mm x 25mm Ø
Weight:	~150g in air, 55g in water

Dissolved Oxygen DO-1060

Range:	0 to 600%
Accuracy:	±2% O ₂ saturation (5°C to 25°C)
Resolution:	1% of saturation
Response time:	~10s, 90% step change @ 20°C
Size:	~270mm x 25mm Ø
Weight:	~170g in air, 65g in water



RBR Ltd.

27 Monk Street, Ottawa, ON Canada K1S 3Y7
 Tel: +1 613 233-1621 Fax: +1 613 233-4100
 info@rbr-global.com www.rbr-global.com

RBR Europe Ltd.

17 Cratlands Close, Stadhampton,
 Oxfordshire, OX44 7TU United Kingdom
 Tel/Fax: +44 (0)1865 890979
 info@rbr-europe.com www.rbr-europe.com