

DR-1050

Depth Recorder



The DR-1050 is a small, self-contained, submersible depth or pressure recorder. Pressure measurements are made to 24-bit resolution. The DR-1050 is calibrated to an accuracy of $\pm 0.05\%$ full scale using NIST traceable standards. Each unit employs an absolute pressure gauge, with ranges selectable from 10 dBar (10 metres of water) to 6,600 dBar making the unit suitable for a wide range of applications from borehole testing to groundwater monitoring. For groundwater measurement, a barometric reference may be used to record the atmospheric pressure over the local area. An optional underwater serial output permits triggering of sampling apparatus at preset depths.

Flash memory ensures data retention for 20 years even if the batteries run out. 8MB of storage provides sufficient memory for 2,400,000 samples and a full set of samples can be taken by a single set of batteries. The two high-powered 3V lithium cell batteries (CR123A) are widely available, and provide enough capacity for deployments up to three years or more.

There are two external casings for the DR-1050: plastic and titanium. Both models are compact, measuring 230mm in length and have an outer diameter of 38mm. The plastic logger weighs 310g and the titanium 500g. The depth ratings for the different casings are: 740m (plastic); 6,600m (titanium).

The DR-1050 has a clock accuracy of ± 32 seconds/year. It conforms to European Directive 89/336/EEC for EMC and EMI compatibility.

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

Technical

General

Power:	QTY 2, 3V CR123A cells
Communications:	RS-232/485; logged, cable, or telemetry
Download Speed:	~115,000 samples/minute
Clock Accuracy:	± 32 seconds/year
Size:	230mm x 38mm
Memory:	8Mbyte Flash (2,400,000 samples)
Weight:	310g; 30g in water (plastic) 500g; 200g in water (titanium)
Calibration:	NIST traceable standards

Depth

Range:	10/25/60/100/250/740/1000/ 2000/4000/6600m (dBar)
Accuracy:	$\pm 0.05\%$ full scale
Resolution:	<0.001% full scale
Time Constant:	< 10 msec

Features:

- Small Size
- High Accuracy
- Large Memory
- Low Power
- High-speed Data Download

Software

The DR-1050 uses integrated RBR Windows software. Please see the "RBR Logger Software" datasheet, or visit the RBR website (www.rbr-global.com) for more information.

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