

TR-1050

Temperature Recorder



The TR-1050 is a small, self-contained, submersible temperature recorder. TR-1050s are calibrated to an accuracy of $\pm 0.002^{\circ}\text{C}$ (ITS-90 and NIST traceable standards). Drift has been measured at better than $0.002^{\circ}\text{C}/\text{year}$, and extended temperature ranges are available for temperatures from -40°C to $+50^{\circ}\text{C}$. Special probes have been supplied to measure up to $+300^{\circ}\text{C}$.

The thermistors used in the TR-1050 are stable and aged, and are available in three housings. The standard model has a time constant of less than 3 seconds. The optional fast thermistor model has a time constant of less than 0.095 seconds. The third model comes standard in the titanium TR-1050, which has its thermistor embedded in the head of the logger; it has a time constant of less than 20 seconds.

8MB of Flash memory provides sufficient storage for 2,400,000 samples, which can be taken by a single set of batteries. The two high-powered 3V lithium cell batteries (CR123A) are standard camera batteries available world-wide, and provide sufficient power for deployments of more than 3 years.

There are two casings for the TR-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); 10,500m (titanium).

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

Technical

General

Power:	QTY 2, 3V CR123A cells
Communications:	RS-232/485
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

Temperature

Range:	-5°C to 35°C
Accuracy:	$\pm 0.002^{\circ}\text{C}$
Resolution:	$< 0.00005^{\circ}\text{C}$
Time Constant:	< 3 sec (standard); or 0.095 sec (option) < 20 sec (internal)
Drift:	$< 0.002^{\circ}\text{C}/\text{year}$

Features:

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

Software

The TR-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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