XR-420 CTDf

Freshwater Conductivity, Temperature and Depth Logger

Features:

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

The XR-420 CTD Freshwater is a small, autonomous data logger designed to monitor conductivity, temperature & depth in the freshwater conductivity range. It can be used in a moored application or as a profiler with the XR-620 option.

The normal freshwater conductivity range of 0 to 2mS/cm is measured by a three electrode cell. The conductivity channel is calibrated to an accuracy of ± 0.003 mS/cm and has a resolution of better than 0.0001 mS/cm. The response time of the conductivity cell is less than 95 milliseconds when profiling.

The temperature channel in the XR-420 CTD Freshwater is calibrated to an accuracy of ±0.002°C (ITS-90). Based on long-term tests the drift has been measured at better than 0.002°C/year. Calibration constants are stored in the logger and recalibration is possible by the end-user under suitable conditions.

Software

The XR-420 use fully integrated RBR Windows® software, which is compatible with Windows® 95/98/NT/2000/XP. Please see the "RBR Logger Software" datasheet, or visit the RBR website (www.rbr-global.com) for more information.

8MB of nonvolatile flash memory provides sufficient memory for 2,400,000 readings, which can be logged on one set of high-powered 3V lithium batteries. The batteries are common camera batteries (CR123A), which are readily available. Power consumption can vary significantly depending on the sampling rate, and operating temperature. A fresh set of batteries will usually permit collection of a full complement of readings over periods exceeding one year.

Technical

Base Logger

Power:	QTY 4, 3V CR123A cells
Communications:	RS-232/485; logged, cable, or telemetry
Download Speed:	~115,000 samples/minute
Clock Accuracy:	± 32 seconds/year
Size:	475mm x 64mm
Memory:	8Mbyte Flash (2,400,000 samples)
Calibration:	NIST traceable standards

Temperature

Range:	-5 °C to 35 °C; extended range to -40 °C
Accuracy:	± 0.002 °C
Resolution:	<0.00005 °C
Time Constant:	depends on probe construction

Conductivity

Range:	0 to 2 mS/cm
Accuracy:	± 0.003 mS/cm
Resolution:	<0.0001 mS/cm
Time Constant:	< 95msec

Depth

Range:	10/25/60/150/250/740/1000/2000 m
Accuracy:	± 0.05% full scale
Resolution:	<0.001% full scale

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

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