

XR-420 CTf

Freshwater Conductivity and Temperature Logger

Features:

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

The XR-420 CT Freshwater is a small (475mm x 64mm OD), autonomous data logger designed to monitor conductivity and temperature in the freshwater conductivity range. It can be used in moored applications 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. It has an accuracy of ± 0.003 mS/cm and resolution to better than 0.0001mS/cm. The response time of the conductivity cell is better than 95 msec when profiling.

The temperature channel 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 $0.002^\circ\text{C}/\text{year}$. Calibration constants are stored in the logger and under suitable conditions recalibration is possible by the end-user.



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:	$\pm 0.002^\circ\text{C}$
Resolution:	$< 0.00005^\circ\text{C}$
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:	< 95 msec

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.

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

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