

XR-420/620

up to 6 or more channel data logger

The XR-420 and XR-620 are small, autonomous 24-bit profiling loggers with 1Hz (6Hz for the XR-620) sampling and capacity to support up to six sensors in the standard enclosure, and 11 or more in custom configurations. These include, Conductivity, Temperature, Depth, pH/ORP, Dissolved Oxygen, Fluorescence, Turbidity, Transmittance, PAR, etc. in any combination. All calibration constants are stored in the logger, and recalibration is possible by the end-user under suitable conditions.

Conductivity, Temperature, and Depth is measured using RBR sensors calibrated to NIST traceable standards. Please see the other side of this sheet for a listing of some of the third party sensors available for XR-series logger platform.

Real time clock accuracy is ± 32 seconds/year. 8MB of nonvolatile flash (2GB MMC card optional) provides sufficient memory for 2,400,000 readings, which can be logged using one set of high-powered 3V lithium cell batteries.



Software

The XR-420 and XR-620 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.

Features:

- High Accuracy
- Large Memory (< 2GB)
- Low Power
- High-speed Data Download (USB)
- Custom Configuration

Technical

Base Logger

Power:	QTY 4, 3V CR123A cells
Communications:	RS-232/485; logged, cable, or telemetry
Download Speed:	~115,000 samples/minute (or USB option)
Clock Accuracy:	± 32 seconds/year
Size:	400mm x 64mm
Memory:	8Mbyte Flash (2,400,000 samples)
Weight:	1.2kg; 389g in water (plastic)
Calibration:	NIST traceable standards

Temperature

Range:	-5 °C to 35 °C
Accuracy:	± 0.002 °C
Resolution:	<0.00005 °C
Time Constant:	< 3 sec (standard); or 0.095 sec (option) < 20 sec (internal)
Drift:	<0.002 °C/year

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

Conductivity

Range:	Depends on sensor
Accuracy:	± 0.03 to ± 0.003 mS/cm
Resolution:	up to 0.0001 mS/cm
Time Constant:	< 95 msec

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

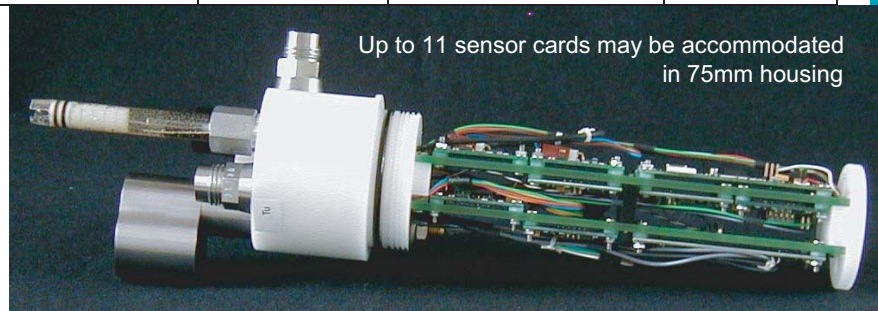
The XR logger range is able to support sensors to measure Conductivity, Temperature, Depth, pH/ORP, Dissolved Oxygen, Fluorescence, Turbidity, Transmittance, and PAR. A selection of those which have been supplied is illustrated in the table below. We are able to interface many other sensors which are not mentioned in this table. The typical requirements are that the external sensor accepts 12V power (or is self-powered), and either gives a voltage output or serial data. The voltage output may either be low impedance (typically 0 to 5 volts) or high impedance, as from a pH or ORP electrode. Please do not hesitate to consult with us for further information.

Additional Sensors

Specifications

*this table lists some of the sensors available for the XR-series logger. Please contact RBR for further options.

Parameter	Sensor manufacturer	Max Depth(m)	Range	Accuracy
Conductivity	RBR Inductive	6,600	0-70 mS/cm	±0.003
Conductivity	RBR 3 Electrode	2,000	0-2 mS/cm	±0.003
Temperature	RBR Thermometrics	10,500	-40 to +35°C or more	±0.002
T 8,16,24	RBR thermistor chain	6,600	-40 to +35°C	±0.005
Depth	RBR Sensym	6,600	0 to 6,600 various	±0.05%
Depth	Paroscientific / Serial	10,000	0 to 10,000 various	±0.015%
pH	AMT	1,200 / 6,000	0 to 14 pH	±0.1
ORP	AMT	1,200 / 6,000	-2 to +2 V	±0.01
DO	Oxyguard	100 / 2,000	0 to 150%	±1%
DO	Aanderaa Optode	6,000	0 to 120%	±5%
Turbidity	Seapoint	6,000	0 to 2,000 FTU	<±2%
Fluorometer	Seapoint	6,000	0.02 – 150 µg/L	<±2%
Transmissometer	Wetlabs	600 / 6,000	660, 530, 470, 370 nm	±0.1%
PAR	Licor	560	0-10,000µmol/s-m ²	<±2%
PAR (5 decade)	BioSpherical	2,000	0-5,000µmol/s-m ²	<±2%
Heading	True North	Internal	0-360°	±0.5
Tilt	True North	Internal	±40°	±0.2
Tilt	RST Instr	Geological	±40°	±0.01°
Altitude	Benthos	1,000 / 6,000	0-100m	±0.05m



Up to 11 sensor cards may be accommodated in 75mm housing