CODEVINTEC

Tecnologie per le Scienze della Terra e del Mare

45° 27' 39.384" N
9° 07' 30.145" E

RBR Oceanographic sensors
Robust and reliable monitoring instruments

RBR designs and manufactures rugged and high precision oceanographic instrumentation suitable for environmental, geophysical, and oceanographic monitoring.

Parameter

- Conductivity (inductive)
- Temperature
- Thermistor chain
- Pressure
- pH
- ORP
- DO
- Turbidity
- Fluorometer
- Transmissometer
- PAR

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Our instruments are easy to use …

… and require minimal service intervention.
A focus on low power consumption permits long deployments, minimising operational costs.
All instruments support USB connectivity, large storage capacities, and support AA batteries in any chemistry. Onboard calibration coefficients permit engineering unit output without any post processing.

Instruments

- **RBR*solo*³** - compact single channel recorder for T, D, or DO
- **RBR*duet*³** - compact dual channel recorder for T, D, tides and waves
- **RBR*virtuoso*³** - standard single channel recorder supporting any sensor
- **RBR*duo*³** - standard dual channel recorder supporting and sensors
- **RBR*concerto*³** - CTD plus several extra channels
- **RBR*maestro*³** - CTD plus many extra channels
- **Bottom Pressure Recorder** - ultra high 10ppb resolution bottom pressure recorder
- **MLM-1000** - inductive mooring line modem
- **Thermistor chains** - up to 24 nodes, up to 1km long

Options

- Fast sampling, up to 32Hz, for profiling measurements
- Gating: wet switch or twist activation
- Underwater connection for USB, RS-232 or RS-485
- Smart sensors available as the RBR*coda*³

Highlights

- Record up to 240 million readings and fast USB download
- Continuous CTD sampling at up to 32Hz
- Twist activation standard on all standard instruments
- Optional Wi-Fi communication
- Monitor waves or boat-wakes continuously for 2 months
- Temperature measurement using RBRsolo³ T for three years with 5s sampling period
- RBRsolo³ rated to 1700m and RBRsolo³ T deep to 10,000m
- WOCE standard (Conductivity±0.003 mS/cm Temperature±0.002°C Pressure ±0.05%)

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We offer flexible sensor choices …

… in small, lightweight packages, that are equally suitable for carrying to high mountain lakes or sending to deepest ocean depths.

Ruskin software One program, many instruments

Ruskin interface and control software is available for PCs, Macs, iOS, and Android.
It may be freely downloaded to run simulations and experience its intuitive nature.

Deployment estimates are possible without physica instruments.

- Multi-language
- Automatic updates
- Calibration facility
- Deployment simulation
- Derived channel options
- Ethernet addressable TCP/IP socket
- Export to Excel, Matlab or ODV
- Flexible charting engine
- Memory & battery usage indicator
- Tide & wave analysis

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Options and Sensor Specifications

Parameter	Sensor	Max Depth	Range	Accuracy
Conductivity (inductive)	RBR	2000m	0 – 85 mS/cm	±0.003
Temperature	RBR	10,000m	-5 – +35°C *	±0.002
Thermistor chain	RBR	4000m	-5 – +35°C *	±0.005
Pressure	Keller	10,000m	Various	±0.05%
Pressure (high resolution)	Paroscientific	10,000m	Various	±0.01%
pH	IDRONAUT	1500 / 6000m	0 – 14 pH	±0.01
ORP	IDRONAUT	1500 / 6000m	-1000mV to +1000mV	±1.0
DO - galvanic	Oxyguard	2000m	0 – 600%	±2%
DO - optode	RBR	6000m	0 – 120%	±5%
DO - optode	Aanderaa Optode	6000m	0 – 120%	±5%
DO - optode (fast t/c)	JFE Rinko	7000m	0 – 200%	±2%
Turbidity (auto-ranging)	Seapoint	6000m	0 – 2500 FTU, NTU	±2% **
Turbidity (auto-ranging)	Turner (Cyclops)	600m	0.05 – 3000 FTU, NTU	±3%
Fluorometer (auto-ranging)	Seapoint	6000m	Ch-a 0.02 – 150 µg/L	±2%
Fluorometer (auto-ranging)	Turner (Cyclops)	600m	Ch-a 0.025 – 500 µg/L	±3%
Transmissometer	WET Labs	600 / 6000m	660, 530, 470, 370 nm	±0.1%
PAR	Licor	560m	0 – 10,000 µmol/s-m_2	±2%
PAR	BioSpherical	2000m	0 – 5000 µmol/s-m_2	±2%

Derived parameters (using Ruskin software)	
Density anomaly	Kg/m^3
Depth	metres (accounts for density and known atmospheric pressure)
Dissolved Oxygen	Conversions between saturation & concentration (Weiss & Garcia Gordon)
Salinity	PSU (calculated by IAPSO PSS-78)
Specific conductivity	µS/cm (standard methods of examination of water & wastewater)
Speed of Sound	m/s (Using UNESCO, del Grosso or Wilson methods)
Tide & Waves	Significant, 10%, max (pk), average height & period, Energy and Tidal slope

* -40 – +50°C optional ** Applies to 0 to 1250 FTU range

Please contact us to discuss integration of other analogue or serial sensors.

RBR

Codevintec Italiana srl

Milano via Labus, 13 – 20147 Milano
Roma Lungomare P.Toscanelli,64 – 00122 Roma

info@codevintec.it ph +39 02 4830.2175
www.codevintec.it fax +39 02 4830.2169