RBR

MEASURE THE BLUE PLANET

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CTD FOR GLIDERS AND AUVS

SMALL CTD, BIG POSSIBILITIES

The RBR*legato*³ C.T.D offers a new world of measurement opportunities for gliders and AUVs. Optimised for flow dynamics, the instrument requires no pump to obtain fine structure measurements. The RBR*legato*³ provides high accuracy while consuming less power due to modern electronic design and the lack of moving parts.

FEATURES

- High accuracy
- Low power consumption
- Realtime communications
- Up to 16Hz sampling
- Rapid calibration
- Depths up to 1000m

The following configurations are available:

▶ RBR*legato*³ C.T.D	2 Hz instrument, standard thermistor response, realtime data output
▶ RBR*legato*³ C.T.D|fast16	16Hz instrument, fast thermistor response, realtime data output

Additional sensors:

- ▶ Optical dissolved oxygen
- ▶ Photosynthetically active radiation
- ▶ Radiometer
- ▶ Turbidity
- ▶ Fluorescence
- ▶ Backscatter
- ▶ Chlorophyll *a*
- ▶ Transmittance
- ▶ pH

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Designed to determine salinity by measuring the conductivity, temperature, and pressure, the RBR*legato*³ can also incorporate a variety of sensors, such as optical dissolved oxygen, photosynthetically active radiation, turbidity, backscatter, and more. The instrument ensures totally silent operation allowing for passive acoustic listening and turbulence measurements. Power consumption is 90% lower than that of traditional pumped CTD sensors and allows for substantially longer deployments. The RBR*legato*³ is unaffected by surface contaminants or freezing conditions, comes pre-calibrated to account for static conductive elements, and is rated to 1000m.

Specifications

Physical

Storage	240 million readings
External power	4.5 to 30V
Communication	RS-232
Clock drift	±60 seconds per year
Depth rating	1000m
Housing	Plastic
Length	195.8mm
Width	63.8mm
Height	78.6mm
Top curvature	Ø220mm or Ø124mm
Weight	~0.8kg in air ~0.2kg in water

Pressure

Range	1000dbar
Initial accuracy	±0.05% full scale
Resolution	<0.001% full scale
Typical stability	±0.05% full scale
Time constant	<0.01s

Power consumption

≤1Hz sampling	22.8mJ per sample
≥2Hz sampling	46mW
Sleep power	180µW

Conductivity

Range	0 to 85mS/cm
Initial accuracy*	±0.003mS/cm
Resolution	<0.001mS/cm
Typical stability	±0.010mS/cm per year

* Vehicle dynamics and geometry may affect measurement accuracy.

Temperature

Range	-5°C to 42°C
Initial accuracy	±0.002°C (-5°C to +35°C) ±0.004°C (+35°C to +42°C)
Resolution	<0.00005°C
Typical stability	±0.002°C per year
Time constant	<1s (standard), <0.1s (|fast16)

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