

CTD FOR GLIDERS AND AUVS

SMALL CTD,
BIG POSSIBILITIES

The RBR/legato⁴ 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. Engineered for precision and efficiency, the RBR/legato⁴ delivers outstanding accuracy while using less power—thanks to advanced electronics, innovative multi-rate sampling, and a streamlined design with no moving parts.

FEATURES



High accuracy



Low power
consumption



Realtime
communications



Multi-rate
sampling $\leq 16\text{Hz}$



Rapid
calibration



Depths up to
1250m

Available configurations

- ▶ RBR/legato⁴ C.T.D 2 Hz instrument, standard thermistor response, realtime data output
- ▶ RBR/legato⁴ C.T.D|fast16 16Hz instrument, fast thermistor response, realtime data output

Optional sensors

- ▶ RBRcoda T.ODO (optical dissolved oxygen)
- ▶ RBRcoda Tu (turbidity)
- ▶ RBRtridente (backscatter, fluorescence)
- ▶ RBRquadrante (radiometry and PAR)

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Designed to determine salinity by measuring conductivity, temperature, and pressure, the RBR/legato⁴ can also incorporate a variety of sensors, including optical dissolved oxygen, turbidity, photosynthetically active radiation, backscatter, radiometry and fluorescence. The instrument ensures totally silent operation allowing for passive acoustic listening and turbulence measurements. Through refined internal design and the addition of multi-rate sampling across sensors, power consumption is 90% lower than that of traditional pumped CTD sensors allowing for substantially longer deployments. The RBR/legato⁴ is unaffected by surface contaminants or freezing conditions, comes pre-calibrated to account for static conductive elements, and is rated to 1250m.

Specifications

Physical

Storage	240 million readings
External power	4.5 to 30V
Communication	RS-232
Clock drift	±60 seconds per year
Depth rating	1250m
Housing	Plastic
Length	195.8mm
Width	63.8mm
Height	78.6mm
Top curvature	Ø220mm or Ø124mm
Weight	~0.8kg in air ~0.17kg in water
Sampling Speed*	Up to 2Hz (16Hz optional)

*Multirate sampling is available across all sensors

Conductivity

Range	0 to 85mS/cm
Initial accuracy*	±0.003mS/cm
Resolution	<0.0001mS/cm
Typical stability	±0.010mS/cm per year

* Vehicle dynamics and geometry may affect measurement accuracy.

Temperature

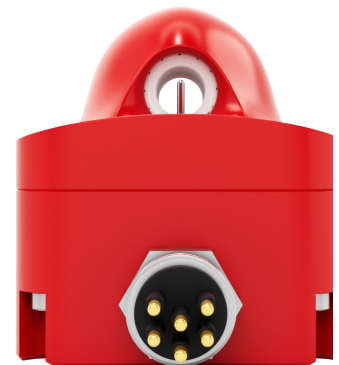
Range	-5°C to 42°C
Initial accuracy	±0.002°C (-5°C to +35°C) ±0.004°C (+35°C to +42°C)
Resolution	<0.00005°C
Typical stability	±0.002°C per year
Time constant	~1s (standard), ~0.1s (fast16)

Pressure

Range	1250dbar
Initial accuracy	±0.01% full scale
Resolution	<0.001% full scale
Typical stability	±0.01% full scale
Time constant	<0.01s

Power consumption

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



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