

DEEP CTD FOR GLIDERS AND AUVS

SMALL CTD,
BIG POSSIBILITIES

The RBRcentauro³ offers a new world of measurement opportunities for gliders and AUVs in deepwater. Optimised for vehicle integration applications, the instrument requires no pump to obtain fine structure measurements. The RBRcentauro³ 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



240M
readings



Rapid
calibration



Depths up to
2000m

The following configuration* is available:

► RBRcentauro³ 2 Hz, standard thermistor response, realtime data output, depths up to 2000m

*Other variants may be available upon request.

The RBRcentauro³ measures conductivity using a transverse CTD designed to endure harsh conditions. The CFD-optimised, low aspect ratio conductivity cell is self-flushing and does not require a pump. Datasets can be read directly in Matlab, or exported to Excel, OceanDataView®, or text files.

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The RBRcentauro³ design is optimised for gliders and AUVs. The CTD is used to derive salinity, density, and sound velocity. 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 RBRcentauro³ is unaffected by surface contaminants or freezing conditions, comes pre-calibrated to account for static conductive elements, and is rated to 2000m.

Specifications

Physical

Storage	~240M readings
External power	4.5 to 30V
Communication	RS-232
Clock drift	±60 seconds/year
Housing:	Titanium
Diameter	~60mm
Length	~206mm (instrument only) ~254mm (with connector)
Height	~146mm
Weight	~1600g in air, ~950g in water
Max depth rating	2000m

Pressure

Range	2000 dbar
Initial accuracy	±0.05% full scale
Resolution	<0.001% full scale
Time constant	<10s
Typical stability	±0.05% full scale per year

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	<0.0001mS/cm
Typical stability	0.010mS/cm per year

* Vehicle dynamics and geometry may affect measurement accuracy.

Temperature

Range	-5°C to 35°C
Initial accuracy	±0.002°
Resolution	<0.00005°C
Time constant	~1s
Typical stability	0.002°C per year

* A wider temperature range is available upon request. Contact RBR for more information.



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