

Two Channel Recorder

Measure more, deploy longer, download faster

RBRduo dual channel loggers offer flexible measurement schedules, sampling up to 1Hz, large memory, extra power for extended deployments, and fast USB download for large data files. Optional features: sample averaging and up to 6Hz sampling.

Features

- Long deployment
- 30M readings
- Fast USB download speed
- Optional averaging and fast sampling



The RBRduo is a dual channel logger available in the following standard configurations:

RBRduo T.D	measures temperature and depth
RBRduo T.DO	measures temperature and dissolved oxygen
RBRduo C.T	measures conductivity and temperature (salinity)

For tide and wave recorders please see the Tide and Wave Data Sheet.

Additionally the RBRduo can be fitted with any two sensors/functions*:

- | | | | |
|--------------------|----------------------------|----------------|-------|
| • Temperature | • Tide | • Turbidity | • pH |
| • Depth (Pressure) | • Wave | • Fluorescence | • ORP |
| • Conductivity | • Dissolved O ₂ | • T-string | • PAR |

* Contact RBR for sensor availability

The RBRduo makes it easy to configure the optimum sampling regime for your measurements. The large data storage capacity and fast download ability facilitate long deployments with higher sampling rates. The RBRduo is available in a standard body or extended body with more power for long deployments. Almost every sensor from RBR can be interfaced to the RBRduo. Dataset export to Matlab®, Excel®, or text files make post processing with your own algorithms easy.

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Specifications

Physical

Power: 8 or 16 3V CR123A cells
Communication: True USB or RS-232/485
Storage: ~30M readings
Clock accuracy: ± 60 seconds/year
Depth rating: Up to 10,000m
Size: ~260 or 395mm x \varnothing 63.5mm without sensors
Weight: Varies per sensor configuration
Sampling period: 1s to 24h
Sampling rate: 1, 2, 3, 4, 5 or 6Hz
Averaging rate: >1s, 1, 2, 3, 4, 5 or 6Hz
Avg duration: 1s to 24h
Housing: Plastic or titanium

Pressure (Depth)

Range: 20 / 50 / 100 / 200 / 500 / 1000 / 2000 / 4000 / 6000 / 10000m (dbar)
Accuracy: $\pm 0.05\%$ full scale
Resolution: $< 0.001\%$ full scale
Time constant: $< 0.01s$
Typical stability: $\sim 0.05\%$ /year - typical

Temperature

Range: -5°C to 35°C
Accuracy: $\pm 0.002^{\circ}$
Resolution: $< 0.00005^{\circ}\text{C}$
Time constant: $\sim 1s$ (standard) or $\sim 0.1s$ (optional)
Typical stability: $\sim 0.002^{\circ}\text{C}$ /year - typical

Conductivity

Range: 0 – 85mS/cm
Initial accuracy: ± 0.003 mS/cm
Typical stability: 0.010 mS/cm/year
Resolution: ~ 0.001 mS/cm
Time Constant: Set by flow through cell. Cell length is 40mm.

Dissolved Oxygen (Oxyguard®)

Range: 0 to 600%
Accuracy: $\pm 2\%$ O₂ saturation (5°C to 25°C)
Resolution: 0.5% of saturation
Response time: $\sim 10s$, 90% step change @ 20°C

