

SINGLE-SENSOR LOGGER



COMPACT,
ACCURATE,
DEPENDABLE

The RBRsolo⁴ is a compact, lightweight logger designed for high-precision oceanographic measurements in demanding environments. It combines exceptional accuracy and resolution using any standard AA battery chemistry. Engineered for durability in harsh marine conditions, the RBRsolo⁴ delivers reliable, long-term performance across a wide range of oceanographic applications.

FEATURES

Compact and lightweight

Two AA batteries

Up to 32Hz sampling

USB-C download

Infinite memory*

*not really, but we stopped counting at billions of samples.

Available configurations

- ▶ RBRsolo⁴ ODO | 2x dissolved oxygen, depths up to 1700m
- ▶ RBRsolo⁴ Tu | 2x turbidity, depths up to 1700m
- ▶ RBRsolo⁴ chl-a | 2x chlorophyll-a, depths up to 1700m

Deep variant

- ▶ | deep depths up to 6000m

SMALL SINGLE-SENSOR LOGGER

COMPACT, ACCURATE, DEPENDABLE

Specifications

Physical

Configuration	RBRsolo ⁴ Tu	RBRsolo ⁴ chl-a	RBRsolo ⁴ ODO
Storage	Infinite memory*		
Power	Any AA battery		
Communication	USB-C		
Clock drift	±60 seconds per year		
Housing	Plastic (pl) or Titanium (Ti)		
Max depth rating	1700m (pl) 6000m (Ti)		
Diameter	25.4mm (pl) 25mm (Ti)		
Length	329mm (pl) 338mm (Ti)	369mm (pl) 377m (Ti)	
Weight in air	215g (pl) 440g (Ti)	249g (pl) 510g (Ti)	
Weight in water	60g (pl) 270g (Ti)	40g (pl) 310g (Ti)	

*Not really, but we stopped counting at billions of samples

Temperature

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

Chlorophyll-a

Wavelength	470nm/695nm (excitation/emission)
Calibrated range*	0-50µg/L
Measurement range*	0-500µg/L
Detection limit	0.020µg/L
Optical	
Linearity, R ²	0.99
Initial accuracy	5%

*Scaled to the fluorescence response from a monoculture of *Thalassiosira weissflogii*.

Dissolved oxygen

Measurement range	0-1000µmol/L
Calibrated range	0-500µmol/L concentration 0 - 120% saturation 1.5°C to 30°C temperature
Initial accuracy	Max of ±8µmol/L or ±5% fast Max of ±2µmol/L or ±1.5% standard Max of ±2µmol/L or ±1.5% slow
Resolution	<1µmol/L (saturation 0.4%) fast <0.5µmol/L (saturation 0.2%) standard <0.1µmol/L (saturation 0.04%) slow
Time constant	<1s fast, <8s standard, or <30s slow
Sampling rates	24hr to 1Hz
Output Values	Temperature (°C) Dissolved O ₂ concentration (µmol/L) Dissolved O ₂ concentration (salinity compensated, µmol/L) Dissolved O ₂ saturation (%) Dissolved O ₂ phase (°)

Turbidity

Wavelength	880nm
Centroid angle	90°
Linearity, R ²	0.99
Initial accuracy	5%
Calibrated range	0 - 1000FTU
Measurement range	0 - 1500FTU ¹
Detection limit	0.005FTU
Optical backscatter	
Wavelength	880nm
Centroid angle	135°
Linearity, R ²	0.99
Initial accuracy	5%
Calibrated range	1000 - 4000FTU
Measurement range	0 - 20000FTU ²
Detection limit	2.0FTU

¹Response becomes non-linear above 1000FTU.

²Response is linear between 500 and 15000 FTU



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