

ABYSSAL LOGGERS



**EXTREME DEPTHS,
HIGH PERFORMANCE**

The RBRsolo⁴ and RBRduet⁴|deep in titanium housing are small but highly durable. Deployable to the bottom of the Marianas Trench, they provide exceptional accuracy and resolution with extremely low power consumption, enabling multi-year deployments using any standard AA battery chemistry. Engineered for durability in harsh marine conditions, the |deep delivers reliable, long-term performance across a wide range of oceanographic applications.

FEATURES



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

Available configurations

- ▶ RBRsolo⁴ T|deep temperature; up to 2Hz sampling
- ▶ RBRsolo⁴ T|fast|deep temperature; up to 32Hz sampling
- ▶ RBRsolo⁴ D|deep pressure; up to 2Hz sampling
- ▶ RBRsolo⁴ D|fast|deep pressure; up to 32Hz sampling
- ▶ RBRduet⁴ T.D|deep temperature and pressure; up to 2Hz sampling
- ▶ RBRduet⁴ T.D|fast|deep temperature and pressure; up to 32Hz sampling

2x variant

- ▶ |2x double the autonomy of RBRsolo⁴ and RBRduet⁴

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The RBRsolo⁴ T|deep, RBRsolo⁴ D|deep, and RBRduet⁴ T.D|deep are designed to endure harsh conditions. Titanium housing resists all forms of marine corrosion. Specialized circuitry ensures exceptional signal-to-noise ratio. USB-C enables fast configuration and data download, while support for standard AA battery chemistry provides global power options. Paired with Ruskin software for intuitive setup and retrieval, these loggers are designed for exceptionally long deployments, using RBR's latest ultra-low-power electronics to maximize endurance without compromising precision. Data are stored in RSK format and are accessible using RBR's open Python and MATLAB toolboxes, enabling direct integration into workflows and automated processing pipelines. Ruskin provides Excel exports and publication-ready charts in PNG and PDF formats, ensuring straightforward reporting, analysis, and archiving.

Specifications

Physical

Storage	Infinite memory ¹
Power	Any AA cell
Communication	USB-C
Clock drift	±60 seconds per year
Diameter	25mm
Length ²	232mm (RBRsolo ⁴ D deep) 245mm (RBRsolo ⁴ T deep) 278mm (RBRduet ⁴ T.D deep)
Weight	<400g in air
Sampling rates	Up to 32Hz

¹not really, but we stopped counting at billions of samples.

²For |2x variant + ~70mm

Temperature

Range*	-5°C to 35°C
Initial accuracy	±0.002°C
Resolution	<0.00005°C
Typical stability	±0.002°C per year
Time constant	<0.1s (fast) <1s (standard) <15s (slow, embedded thermistor)

Pressure

Range	2,000 / 6,000 / 10,000dbar
Accuracy*	±0.05% full scale
Resolution	<0.001% full scale
Typical stability	±0.05% full scale / year
Time constant	<10ms

*±0.01% full scale available is available upon request.

Deployment estimates

RBRsolo⁴ T|fast|deep

Speed	Time	# samples
2Hz	150 days	25M
32Hz	55 days	153M

RBRsolo⁴ D|fast|deep

Speed	Time	# samples
2Hz	244 days	42M
32Hz	17 days	47M

RBRduet⁴ T.D|fast|deep

Speed	Time	# samples
2Hz	97 days	16M
32Hz	14 days	39M



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