ABYSSAL RECORDERS

TEMPERATURE, DEPTH & TIDES

The RBR*solo³* T|deep, RBR*solo³* D|deep, and RBR*duet³* T.D|deep in titanium are small but incredibly strong. Deployable to the bottom of the Marianas Trench, they still provide temperature accuracy of ±0.002°C and are capable of storing 25 million readings on a single battery. Flexible measurement schedules, standard sampling up to 2Hz, optionally up to 32Hz, and USB-C download complement the raw capabilities of this design.

FEATURES

Any AA battery	~25M readings	Up to 32Hz sampling	USB-C download	Cabled RBR*coda³* variant available

The RBR |deep series is available in a number of configurations. Examples:

▶ RBR*solo³* T|deep   temperature recorder with up to 2Hz sampling
▶ RBR*solo³* T|fast32|deep   temperature recorder with up to 32Hz sampling
▶ RBR*solo³* D|deep   depth recorder with up to 2Hz sampling
▶ RBR*duet³* T.D|deep   temperature and depth recorder with up to 2Hz sampling
▶ RBR*duet³* T.D|tide16|deep   temperature and tide recorder with up to 16Hz sampling
▶ RBR*duet³* T.D|fast32|deep   temperature and depth recorder with up to 32Hz sampling

Designed for deployments in the most challenging environments the two-part titanium alloy housing resists all forms of marine corrosion. Available with either an embedded thermistor that has a 10s time constant or an open thermistor with a 1s time constant, its long deployment autonomy means less ship time is required. Newly designed circuitry provides exceptional signal-to-noise measurement, negligible power consumption, and extended schedules. A dedicated desiccant holder makes it simple to replace desiccant before each deployment.

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The RBR*solo³* T|deep, RBR*solo³* D|deep, and RBR*duet³* T.D|deep are three of the most flexible recorders available from RBR and, like all RBR instruments, the calibration coefficients are stored with the logger. Dataset export to Matlab, Excel, OceanDataView®, or text files makes post processing with your own algorithms effortless.

Specifications

Physical

Storage:	~25M readings
Power:	Any AA cell
Communication:	USB-C
Clock drift:	±60 seconds/year
Diameter:	25mm
Length:	230mm
Weight (air):	<400g
Weight (water):	<70g

Temperature

Range:	-5°C to 35°C
Accuracy:	±0.002°C
Resolution:	<0.00005°C
Time constant:	1s (open) 10s (embedded)
Typical stability:	0.002°C/year

Pressure

Range	1000/2000/4000/6000/10km
Initial accuracy:	±0.05% FS
Resolution:	0.001% FS
Time constant:	<0.01s
Typical stability:	0.1% FS per year

Sampling rates and Autonomy

RBR*solo³* T|deep

Sampling rate:	24hr to 1s, and 2Hz		
Autonomy:	Rate	Duration	# samples
	5s	5 years	30M
	2Hz	180 days	30M

RBR*solo³* D|deep

Sampling rate:	24hr to 1s, and 2Hz		
Autonomy:	Rate	Duration	# samples
	5s	4 years	25M
	2Hz	140 days	25M

RBR*duet³* T.D|deep

Sampling rate:	24hr to 1s, and 2Hz		
Autonomy:	Rate	Duration	# samples
	5s	4 years	25M
	2Hz	140 days	25M

Realtime variant

Cabled realtime variant available as the RBR*coda³*.

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