

Small Two Channel Recorder

Temperature and depth, tides and waves

The RBRduet T.D is our accurate, small, and versatile dual channel temperature and depth recorder. The standard temperature and depth logger samples up to 2Hz and optionally up to 16Hz. Tide and wave versions are available. The loggers are designed with large memory for extended deployments, and fast USB download of large data files.

Features

- Light and compact
- Depths up to 10,000m
- Over 20M measurements
- Up to 16Hz sampling
- Fast USB download speed
- Cabled real-time variant |rt



The RBRduet T.D recorder is available in the following configurations:

RBRduet T.D	temperature and depth, up to 2Hz continuous sampling
RBRduet T.D fast16	temperature and depth, up to 16Hz continuous sampling
RBRduet T.D tide	temperature and tide recorder, up to 16Hz averaging
RBRduet T.D wave	temperature, tide, and wave recorder, up to 16Hz burst and continuous sampling
RBRduet10k T.D	temperature and depth, up to 2Hz continuous sampling and up to 10,000m depth

The RBRduet T.D series is our latest small form factor logger with two channels, temperature and pressure. Its large data storage capacity is matched to the battery capacity to facilitate long deployments with higher sampling rates. Large data files can be downloaded quickly using a true USB interface. The tide recorder averages the pressure readings provide accurate tide level and tidal slope readings.

The wave recorder measures tides and bursts continuously or intermittently to measure high frequency waves (wave heights and periods per burst) over long deployment periods. A dedicated desiccant holder makes it easy to replace desiccant before each deployment. The calibration coefficients are stored with the logger and only one software tool, Ruskin, is required to operate the loggers. Datasets can be read directly in Matlab™, or exported to Excel™ or ASCII files.



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Specifications

Physical

Power:	3.6V LiSOCl ₂ AA cell
Communication:	Fast USB
Clock Accuracy:	±60 seconds/year
Depth Rating:	Up to 10,000m
Diameter:	25.4mm
Length:	265mm
Weight (air):	136g (OSP), 334g (Ti)
Weight (water):	<10g (OSP), ~200g (Ti)

Temperature

Range:	-5°C to 35°C
Accuracy:	±0.002°C
Resolution:	<0.00005°C
Time Constant:	~1s (standard) or ~0.1s (fast16)
Drift:	0.002°C/year

Depth

Range (OSP):	20 / 50 / 200 / 500 / 1000m
Range (Ti):	1000 / 2000 / 4000 / 6000 / 10,000m
Accuracy:	±0.05% full scale
Resolution:	<0.001% full scale
Time constant:	<10ms
Drift:	~0.1%/year

Sampling Rates and Storage

RBRduet T.D

Sampling rate:	24hr to 1s and 2Hz
Storage (@ 2Hz):	~22M readings (~10M samples)

RBRduet T.D|fast16

Sampling rate:	24hr to 1s and 2, 4, 8 or 16Hz
Storage (@ 16Hz):	~44M readings (20M samples)

RBRduet T.D|tide

Averaging rate:	24hr to 1s and 2, 4, 8 or 16Hz
Averaging duration:	1s to 24h
Averaging interval:	1s to 24h
Storage (@ 2Hz):	~22M readings (20M samples)

RBRduet T.D|wave*

Sampling rate:	24hr to 1s and 2, 4, 8 or 16Hz
Storage (@ 2Hz):	~22M readings (20M samples)
Burst duration (samples):	512 to 32768 (powers of 2)
Burst interval:	1s to 24hr

*Tide values are the average of the burst readings

|rt real-time variant

External Power:	Requires 6-18V DC ~2mA
Memory:	No on board memory
Data:	RS-232 polled or autonomous streaming
Baud Rate:	1200 to 115k
Connector:	MCBH-6MP