

TWR-2050

Tide & Wave Recorder



The TWR-2050 is a self-contained, submersible logger, designed to measure tide and wave data. The RBR Tide Wave recorder is very accurate and small (265mm x 38mm OD), and can be mounted on the sea or harbour floor, fastened to an existing structure, or attached to a mooring line.

Wave sampling is achieved by taking 512, 1024, or 2048 samples at the selected burst rate according to a user-selectable interval; burst rates can be 1, 2, or 4Hz. Tide is measured by averaging pressure data, sampled at the selected burst rate, over a user-selectable period and interval.

Calibration constants are stored in the logger and recalibration is possible by the end-user.

Technical

Power:	QTY 2, 3V CR123A cells
Communications:	RS-232/485; logged, cable, or telemetry
Download Speed:	~115,000 samples/minute
Clock Accuracy:	± 32 seconds/year
Size:	265mm x 38mm
Memory:	8Mbyte Flash
Weight:	364g; 70g in water
Calibration:	NIST traceable standards

Temperature

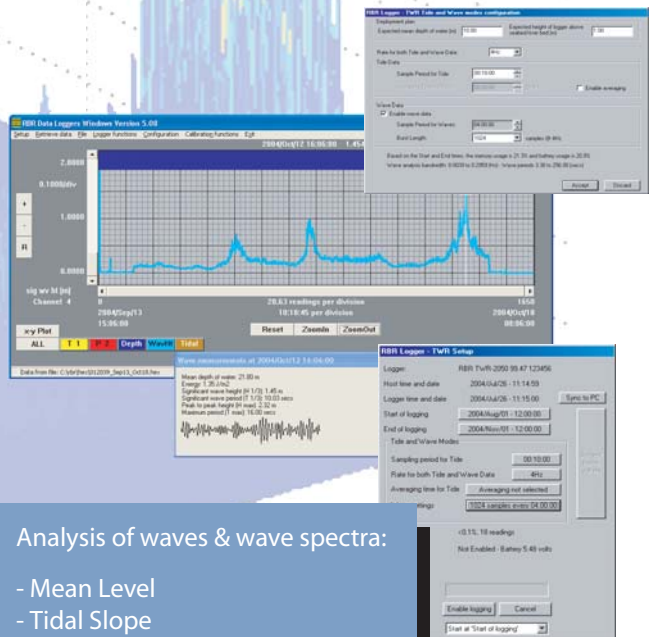
Range: -5 °C to 35 °C
Accuracy: ± 0.002 °C
Resolution: <0.00005 °C
Time Constant: < 3 sec
Drift: <0.002 °C/year

Depth

Range: 10/25/60/100m (dBar)
Accuracy: ± 0.05% full scale
Resolution: <0.001% full scale
Time Constant: < 10 msec

Software

The RBR Windows software package has a straightforward logger setup display menu, which includes options for programming start and stop time, sampling rates for both tides and waves, burst rate, and burst length. Some basic analysis features are included, which allow the user to review the data graphically. Data can also be saved in various file formats for easy import into third party software packages, such as Matlab® or Microsoft® Excel®. Please see 'RBR Software' datasheet for more information.



Analysis of waves & wave spectra:

- Mean Level
- Tidal Slope
- Significant Wave Height
- Min & Max elevation from mean
- Mean Period
- Significant Wave period
- Total Energy

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