Instruments for Measuring Tides and Waves

Tide & Wave Recorders

RBR offers instruments to measure tides and waves by pressure or a direct capacitive sensor. If pressure is measured, the electronics package may be mounted on the sea floor or at the surface. A capacitive sensor may be provided with a USB interface.

Sea Bed Recorders



Models TGR-1050P, TGR-2050P and TWR-2050 are autonomous instruments which are intended to be mounted on the sea bed. They will record to internal memory for periods of up to two years,

and contain 8Mbytes of flash memory. Temperature is measured in the 2050 models.

Surface Recorders

Both the TGR and TWR are available in a surface version - models TGR-1050HT and TWR-2050HT. Pressure only is measured on the sea bed using a vented transducer for automatic atmospheric compensation.



The instruments have a NEMA4X case and full functionality for use with RF or cellular (CDMA or GSM) modem. They may also be connected via RS-232 or RS-485 direct communications. These units can run for five years on internal batteries.

Software

Ruskin software is available at no additional charge for all of our instruments. Go to our website for details, downloads and upgrades.

Sea Bed Recorders

Power:
Communications:
Download speed:
Clock accuracy:
Size:
Memory:
Weight:

QTY 2, 3V CR123A cells RS-232/485 or telemetry option ~115,000 samples/minute ± 32 seconds/year 265mm x 38mm diameter 8Mbyte Flash 364g in air, 70g in water

Temperature

Depth

Range: 10/20/50/100m (dBar)Range: -5 °C to 35 °CAccuracy: ± 0.05% full scaleAccuracy: ± 0.002 °CResolution: <0.001% full scale</td>Resolution: <0.00005 °C</td>Time Constant: < 10 msec</td>Time Constant: < 3 sec</td>Drift ~0.1%/year - typicalDrift: ~0.002 °C/year - typicalAveraging period:1 sec to 8 hoursBursts (wave recorder)512, 1024, 2048, 4096 samplesBurst sampling rate1, 2, or 4 Hz

Surface Recorders

Specifications similar to those above, with the following changes: Power: QTY 8, C size alkaline cells / 12V ext. RS-232/485 or modems **Communications:** Size: 255x205x120mm Weight: <5kg (excluding sensor and cable) Pressure Sensor: Druck PDCR 1830 Range: 10 dBar; 15 or 25m cable Other ranges and sizes to special order ±0.05% full scale Accuracy:

Ordering Information

TGR-1050PSpecify depth rangeTGR-2050PSpecify depth rangeTWR-2050PSpecify depth rangeTGR-1050HTSpecify sensor cable lengthTWR-2050HTSpecify sensor cable lengthFor further information on sensor performance please consultRBR.

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Ruskin RBR Software

RBR

RUSKIN

Made to make measurement simple.

Ruskin is a multi-platform instrument configuration and analysis software package from RBR. The new graphical user interface is designed for optimal use while providing all the necessary features for instrument configuration, data retrieval and analysis.

Features:

- Automatic instrument detection
- Automatic software update
- **Deployment simulation**
- Multi-lingual
- PC or Mac compatible
- Multiple logger configuration cloning
- Data export to Matlab, Excel and ASCII

Overview

Ruskin runs on a PC or a Mac in your native language: Chinese, English, French, Spanish, Polish – or your request. Ruskin is web enabled and informs you when updates are available. Ruskin always has the latest features. Furthermore you can comment on Ruskin capabilities and suggest improvements with a couple of mouse clicks.

Deployment

Ruskin automatically detects instrument connections and displays the instrument configuration. Ruskin allows you to optimize the sample rate for the deployment time or to optimize the sample rate to maximize the deployment duration. Ruskin can simulate any RBR instruments to confirm deployment details. Multiple instruments may be connected at one time and Ruskin can clone the deployment settings.

Download a copy today: www.rbr-global.com

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Derived Channels:

- depth
- speed of sound
- density
- density anomaly
- dissolved oxygen concentration
- specific conductivity

Download

Data are downloaded in the background from one or more instruments. Each instrument's data may be exported as Matlab[®], Excel[®] or as raw or engineering valued text files. Numerous derived channels are available.

Tide and wave data include: mean level, tidal slope, significant wave height, mean period, significant wave period and total energy.

Display

The display easily allows you to view all the sensors connected to the instrument along with the instrument identifiers, the deployment schedule, memory and battery use, and the calibration coefficients for each sensor. You can quickly switch between data sets and analyze and compare data. Single data point values, average values and standard deviation are reported. Pan and zoom is available to display fine features of the dataset. Plots are exported as PNG or PDF.





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