RBR

MEASURE THE BLUE PLANET

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RBR*quartz*³ Q

LONG TERM TIDE AND WAVE LOGGER

QUARTZ PRESSURE SENSOR FOR VERY LOW DRIFT

The RBR*quartz*³ Q tide and wave logger uses the integrated Paroscientific Digiquartz® pressure sensor for best-in-class initial accuracy and low drift performance. The RBR*quartz*³ Q is intended for long-term autonomous or real-time observations of water level, tides and waves. The stable pressure sensor can resolve small changes over long deployments.

FEATURES

- Long deployments
- Quartz stability
- 240M readings
- Up to 16Hz sampling rate
- USB-C download
- High accuracy

The RBR*quartz*³ Q can record instantaneous pressure measurements, average pressure samples to remove wave action, and burst-sample pressure at up to 16Hz for wave height and period calculations. Wave measurements are made by burst sampling, with programmable sample rate, number of samples, and burst interval. High accuracy marine temperature data are recorded with each measurement. Wave, tide, and temperature measurements are standard with every RBR*quartz*³ Q. The RBRquartz³ Q has a large memory capacity, sufficient power for extended deployments, and USB-C or Wi-Fi download for large data files.

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The RBR*quartz*³ Q is ideal for applications such as long-term wave, tide, and sea level measurements, high-accuracy depth sensing in ROVs and AUVs, and critical engineering projects such as offshore platform leveling, dam and reservoir level sensing, and underwater pipe surveying. Online applications are enabled via USB and RS-232 or RS-485 communications. Data transmission to a surface buoy can be performed reliably using the RBR inductive modem system. Dataset export to Excel, OceanDataView®, or text files makes post processing with your own algorithms effortless.

Specifications

Physical

Storage	240M readings
Power	8 AA cells
External power	4.5-30 VDC
Communication	Internal: USB-C External: USB and RS-232/485
Clock drift	±60 seconds/year
Depth rating	260m
Housing	Plastic
Size	~510mm x Ø100mm
Weight	~2.3kg in air ~-0.25kg in water

Marine temperature (standard)

Range	-5 to 35°C
Accuracy	±0.002°C
Time constant	<30s (embedded)
Typical stability	±0.002°C/year

Pressure

Range	20 / 55 / 125 / 190 / 260dbar
Initial accuracy	±0.01% full scale
Resolution	100ppb (at 1Hz sampling rate)

Deployment estimates with lithium thionyl chloride cells

Speed	Burst samples	Interval	Time	# samples
16Hz	-	Continuous	~61 days	~84M
4Hz	4096	120min	~422 days	~21M
1s	60	30min	~2.1 years	~2.4M

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