RBR

MEASURE THE BLUE PLANET

LONG TERM, HIGH ACCURACY TIDE AND WAVE LOGGER

LOW DRIFT
QUARTZ BASED
PRESSURE SENSOR

The RBR*quartz*³ Q|plus tide and wave logger integrates the Paroscientific Digiquartz® pressure sensor for best-in-class initial accuracy and low drift performance. Intended for long-term autonomous or realtime observations of water level, tides and waves, this incredibly stable pressure sensor in the RBR*quartz*³ Q|plus 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|plus 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, sea level, and temperature measurements are standard with every RBR*quartz*³ Q|plus.

The RBR*quartz*³ Q|plus is ideal for applications such as long-term wave, tide, and sea level measurements, high accuracy depth sensing in ROVs and AUVs, and offshore critical engineering. Realtime data applications are enabled via USB and RS-232 or RS-485 communications. Data transmission to a surface buoy can be performed inexpensively and reliably using the RBR MLM inductive modem system. Innovative canister design allows for easy access to the battery compartment and fast data download via USB-C. Dataset export to Excel, OceanDataView®, or text files makes post processing with your own algorithms effortless.

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Specifications

Physical

Storage	240M readings
Power	24 D cells
External power	4.5 to 30 VDC
Communication	Internal: USB-C External: USB and RS-232/485
Clock drift	±60 seconds/year
Depth rating	260m
Housing	Plastic
Size	~562.5mm x Ø140mm
Weight	~11.7kg in air (with batteries) ~2.8kg in water (with batteries)

Marine temperature (standard)

Range	-5 to 35°C
Accuracy	±0.002°C
Time constant	<2min (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	64 days	88M
4Hz	4096	120min	4.9 years	88M
1s	-	Continuous	2.8 years	88M
1s	512	30min	5.3 years	88M
1s	512	60min	10+ years	88M

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RBR#0009911revE 12/2024