

RBRquartz3 Q

LONG TERM TIDE AND WAVE LOGGER

QUARTZ PRESSURE SENSOR FOR VERY LOW DRIFT



The RBRquartz³ Q tide and wave logger uses the integrated Paroscientific Digiquartz® pressure sensor for best-in-class initial accuracy and low drift performance. The RBRquartz³ 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





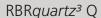








The RBRquartz³ Q can record instantaneous pressure measurements, average pressure samples to remove wave action, and burst-sample pressure at up to 16Hz for wave height and period calculations. Wave measurements are made by burst sampling, with programmable sample rate, number of samples, and burst interval. High accuracy marine temperature data are recorded with each measurement. Wave, tide, and temperature measurements are standard with every RBRquartz³ 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 RBRquartz³ 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 modern 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% FS (full scale)
Resolution	100ppb (at 1Hz sampling rate)

Deployment estimates with lithium thionyl chloride cells

Speed	Burst samples	Interval	Time	# samples
16Hz	-	Continuous	~58 days	~79.5M
4Hz	4096	120min	~400 days	~19.5M
1s	60	30min	~4 years	~4.5M



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