

miniTIDE

Water level recorder



The miniTIDE is a high accuracy, low cost water level recorder, designed to operate throughout a minimum of one lunar cycle. Combining the 0.01% pressure measurement technology utilised on Valeport's larger instruments with novel low power, high volume data logging, the miniTIDE provides a costeffective, reliable solution that will appeal to both coastal surveyors and academia alike

Specifications

Product	miniTIDE water level recorder
Country of origin	UK
Manufacturer	Valeport Limited

Sensors

The miniTIDE is fitted with a novel temperature compensated piezoresistive pressure transducer that offers levels of performance previously only available from costly resonant quartz transducers.

Pressure

Range	0, 30, 50, 100, 300 or 600 Bar
Resolution	0.001% range
Accuracy	±0.01% range

Data acquisition

The miniTIDE features a selection of pre-programmed sampling patterns, allowing the device to monitor (and average) pressure readings for a number of seconds at regular time intervals, e.g. 40 seconds sampling every 10 minutes. Alternatively, the instrument may be set to output data at a fixed sample rate of 1 or 2 Hz, for continuous monitoring applications.

Communications

The instrument will operate autonomously, with setup and data extraction performed by direct communications with PC before and after deployment. It also operates in real time, with a choice of communication protocols fitted as standard and selected by pin choice on the output connector:

RS232	Titanium housed PRT
RS485	-5°C to +35°C
Baud Rate	±0.01°C
Protocol	8 data, 1 stop, No parity, No flow control

Memory

MiniTIDE is fitted with a solid state non-volatile Flash memory, capable of storing over 30 million lines of data.

Electrical

Internal	1 x C cell, 1.5v alkaline or 3.6v lithium
External	9 - 28vDC
Power	<200mW
Battery Life	30 days (alkaline) @ 40 secs / 10 mins 80 days (lithium) @ 40 secs / 10 mins
Connector	Subconn MCBH10F

Physical

Materials	Acetal or titanium housing (as ordered), acetal lock ring and transducer cap
Depth Rating	500m (acetal) 6000m (titanium) NB: Maximum deployment depth may be limited by transducer range
Instrument Size	48mmØ, 270mm long (including connector)
Deployment cage	110mmØ x 450mm long
Weight	0.7kg (acetal) 1.4kg (titanium)
Shipping	51 x 42 x 27cm, 10kg

Software

System is supplied with DataLog Express Windows based PC software, for instrument setup, data extraction and display. DataLog Express is license free.

Ordering

0660007-XX	miniTIDE Water Level Recorder in acetal housing, supplied with switch plug, deployment frame, 3m communications lead, DataLog Express software, manual and transit case.
Note	XX denotes pressure transducer range. Select from 10, 30 or 50bar
0660008-XX	miniTIDE Water Level Recorder in titanium housing, supplied with switch plug, deployment frame, 3m communications lead, DataLog Express software, manual and transit case.
Note	XX denotes pressure transducer range. Select from 10, 30, 50, 100, 300 or 600bar