



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 cost-effective, reliable solution that will appeal to both coastal surveyors and academia alike.

Sensors

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

Pressure

Type:	Temperature compensated piezo-resistive
Range:	10, 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	Up to 200m cable, direct to serial port
RS485	Up to 1000m cable
Baud Rate:	4800 - 460800
Protocol:	8 data, 1 stop, No parity, No flow control

Memory

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

Electrical

Internal:	1x C cell, 1.5V alkaline or 3.6V lithium
External:	9 – 28V DC
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)
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 Supplied with: • Switch plug • Deployment frame • 3m communications lead • DataLog x2 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 Supplied with: • Switch plug • Deployment frame • 3m communications lead • DataLog x2 software • Manual and transit case.
Note:	XX denotes pressure transducer range. Select from 10, 30, 50, 100, 300 or 600bar