



## miniTIDE



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

**Range:** 10, 30, 100, 300 or 600 Bar  
**Resolution:** 0.001% range  
**Accuracy:**  $\pm 0.01\%$  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, addressable half duplex  
**Baud Rate:** 4800 - 460800  
**Protocol:** 8 data, 1 stop, No parity, No flow control  
**Bluetooth:** Optional Bluetooth adapter available for cable free data recovery (adapter not designed for immersion)

### Memory

The 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:** 48mm $\varnothing$ , 270mm long (including connector)  
**Weight:** 0.7kg (acetal)  
 1.4kg (titanium)  
**Shipping:** 52 x 39 x 16cm, 6kg (acetal) / 7kg (titanium)

### Software

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

### Ordering

**0660007** miniTIDE Water Level Recorder in acetal housing, supplied with switch plug, 3m communications lead, DataLog Express software, manual and transit case.  
*Specify required pressure range*  
**0660008** miniTIDE Water Level Recorder in titanium housing, supplied with switch plug, 3m communications lead, DataLog Express software, manual and transit case.  
*Specify required pressure range*  
**0400029** Optional RS485 communications adapter  
**04000536** Optional Bluetooth adapter