



OEM Sound Velocity Sensors

Valeport's "Time of Flight" sound velocity technology is available in a number of standard instrument packages, which we believe cater for the majority of applications requiring the ultimate in SV measurement.

However, our in-house design and manufacture capability means that we are able to provide customized versions of this technology to suit less mainstream or emerging applications, or for integration into third party systems either as stand alone systems or those that are require a separate PCB and sensor.

Please contact Valeport to discuss your requirements.

DATA SHEET

Product Details



SOUND
SPEED

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Sensor Specification

Instantaneous response; the digital measurement is also entirely linear, giving predictable performance under all conditions.

Acoustic Frequency	2.5 MHz	
Range	1375 - 1900m/s	
Resolution	0.001m/s	
Accuracy	Dependent on sensor size	
100mm	Random noise (point to point)	±0.002m/s
	Max systematic calibration error	±0.013m/s
	Max systematic clock error	±0.002m/s
Total max theoretical error		±0.017m/s
50mm	Total max theoretical error	±0.019m/s
25mm	Total max theoretical error	±0.020m/s

The accuracy figure quoted is a worst case scenario based on Total Error Budget, as detailed above. Accuracy is independent of sample rate, since each reading is derived from a single acoustic pulse. No RMS filtering or data averaging is used to derive the quoted accuracy.

Data Output

Type	RS232 & RS485 output, selected by command code
Baud Rate	2400 - 115200 (NB. Low baud rates may limit data rate)
Protocol#	8 data bits, 1 stop bit, No parity, No flow control
Sample Rate	1, 2, 4, 8, 16, 32 or 60Hz, or sample on demand
Format	Choose from mm/s (1510123), m/s to 3 decimal places (1510.123), or m/s to 2 decimal places (1510.12)

Electrical

Voltage	8 - 30V DC
Power	0.25W

Physical

Please refer to factory for detailed dimensions if required.

Depth Rating	2000m (potted) 6000m (standard)	
Bulkhead & Reflector	Titanium	
Transducer Window	Polycarbonate	
Sensor Legs	Carbon Composite	
Circuit Board	85 x 27mm	

Ordering

OEM units come with a test lead only.

Configuration	100mm	25mm
Bulkhead OEM	0652001	0652003
Remote OEM	0652007	0652009

Example Custom & OEM Applications

- Bespoke engineering solutions
- Acoustic Positioning Transponders
- Seismic Streamers
- AUVs
- Gliders
- Ultra-Deep water
- Defense
- Non-Aquatic Environments