

Sound Velocity Sensors

miniSVS Range



Miniaturised versions of Valeport's "time of flight" sensor - the most accurate sound velocity sensor in the world

FEATURES

- Time of flight measurement
- Exceptionally low signal noise
- High resolution data
- Titanium construction
- Temperature compensated
- Selection of sensor sizes
- OEM versions available

APPLICATIONS

- Multibeam Echosounder calibration
- Single beam Echosounder calibration
- Acoustic positioning calibration
- Bathymetry packages
- Military applications
- Seismic operations
- Hydrographic surveys
- AUVs and ROVs

INTRODUCTION

We are pleased to introduce the latest version of our world-beating "time of flight" sound velocity sensor. Following the unprecedented success of the Model 650 Profiler, the SoundBar Digital Bar Checker, and the intelligent Modus SVS packages, we have succeeded in miniaturising our revolutionary sensor to suit even more application requirements.

The unique features of the existing "time of flight" method are retained, with the Digital Signal Processing technique reducing noise levels to less than a tenth of the nearest

competitor. The miniSVS is available with three different sensor sizes (100mm, 50mm and 25mm) to suit available space, and in both housed and OEM configurations. Output formats have been specifically chosen to allow interface to existing packages.

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SPECIFICATION

Power:

Requires 8 - 15v DC input
Uses 20mA at 12v

Data Resolution:

Up to 1mm/sec

Data Accuracy:

100mm sensor: ±3cm/sec (rms)
50mm sensor: ±6cm/sec (rms)
25mm sensor: ±10cm/sec (rms)

Output Type:

RS232, selectable baud rate to 38400

Output format:

ASCII text string. Choose between sound speed in mm/s (e.g. 1510123), sound speed in m/s to three decimal places (e.g. 1510.123), or sound speed in m/s to two decimal places (e.g. 1510.12). The last format is offered since it exactly mimics other manufacturers' outputs, and therefore allows easy sensor replacement. However, in restricting the output to 2 decimal places, the full resolution of the miniSVS is not used.

Materials:

| | |
|---------------------|---------------|
| Sensor Bulkhead | Titanium |
| Sensor Reflector | Titanium |
| Sensor Pillars | Invar |
| Housing (if fitted) | Titanium |
| Sensor Window | Polycarbonate |

Sensors (and housing if fitted) are rated to 6000m depth.

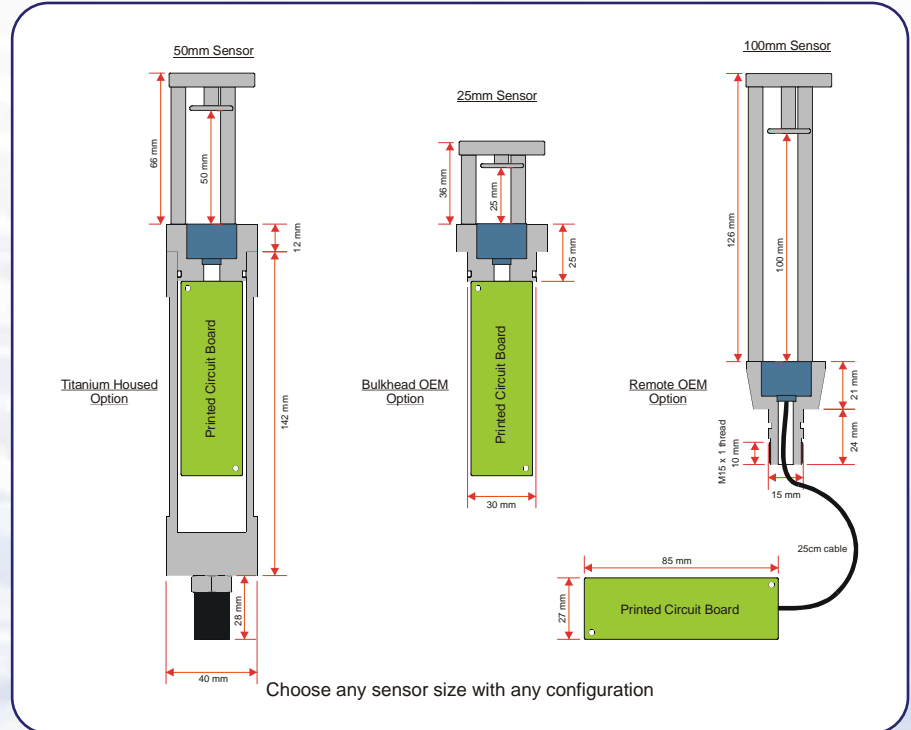
Dimensions:

See diagram

Sampling Rate:

Selectable, dependent on sensor size:

| Rate | 100mm | 50mm | 25mm |
|---------------------|--------|------|--------|
| Single Sample | ● | ● | ● |
| 1Hz | ● | ● | ● |
| 2Hz | ● | ● | ● |
| 4Hz | ● | ● | ● |
| 8Hz | ● | ● | ● |
| 16Hz | | ● | ● |
| As fast as possible | 11.3Hz | 16Hz | 21.8Hz |



ORDERING

Bulkhead OEM Type

All supplied with test lead, operating manual and carry case.

0652001 100mm sensor type
0652002 50mm sensor type
0652003 25mm sensor type

Titanium Housed Type

All supplied with test lead, operating manual and carry case.

0652004 100mm sensor type
0652005 50mm sensor type
0652006 25mm sensor type

0652010 0.5m pigtail

Remote OEM Type

All supplied with test lead, operating manual and carry case. Sensor is fitted with nominal 25cm lead to pcb.

0652007 100mm sensor type
0652008 50mm sensor type
0652009 25mm sensor type

Valeport manufactures a wide range of oceanographic and hydrometric instruments including self-recording and direct reading multi-parameter current meters, sound velocity probes, CTD probes, wave recorders, tide gauges, open channel flow meters, water and plankton samplers, winches, sinker weights, connectors and accessories.

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