miniSVP

The miniSVP has been developed to provide a cost effective tool for the collection of Sound Velocity Profiles, without compromising the quality of the data. Ideally suited to ROV, coastal, or small boat applications, the miniSVP will appeal to survey companies, the military and academia alike, being simple to use, easy to handle, and featuring the most accurate SV sensor in the world.

Sensors

The miniSVP is fitted with Valeport's digital time of flight sound velocity sensor, a PRT temperature sensor, and strain gauge pressure transducer.

Sound Velocity

Range:	1375 - 1900m/s
Resolution:	0.001m/s
Accuracy :	±0.02m/s

Temperature

Range:	-5°C to +35°C
Resolution:	0.001°C
Accuracy:	±0.01°C

Pressure

Range:	10, 50, 100, 300 or 600 Bar
Resolution:	0.001% range
Accuracy:	±0.05% range

Data Acquisition

The miniSVP features a selection of pre-programmed sampling regimes, covering many standard applications. Data may be sampled from 1 to 16Hz, making it suitable for rapid profiling or for continuous measurement at a fixed point

Sampling Modes

Continuous:	Regular output from all sensors at 1, 2, 4, 8, 16Hz.
Profile:	Logs data as the device falls (or rises) by a defined amount through the water column.

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 bits, 1 stop bit, No parity, No flow control
Bluetooth:	Optional Bluetooth adapter available for cable free data recovery (adapter not designed for immersion)

Memory

The miniSVP is fitted with a solid state non-volatile Flash memory, capable of storing over 10 million lines of data (equivalent to 10,000 profiles to 500m, at 1m profile resolution).

Electrical

Internal:	1 x C cell, 1.5v alkaline or 3.6v lithium
External:	9 - 28vDC
Power:	<250mW
Battery Life:	approx 30 hours operation (alkaline) approx 90 hours operation (lithium)
Connector:	Subconn MCBH10F

Physical

Materials:	Acetal or titanium housing (as ordered), polycarbonate & composite sensor components
Depth Rating:	500m (acetal) 6000m (titanium) NB: Maximum deployment depth may be limited by transducer range
Instrument Size:	Main Housing 48mmØ Sensor Body 54mmØ Length 435mm (including connector)
Weight:	0.8kg (acetal) 1.6kg (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 licence free.

Ordering

0660001	miniSVP Sound Velocity Profiler in acetal housing, switch plug, deployment cage, 3m communications lead, DataLog Express software, manual and transit case. *Specify required pressure range*
0660002	miniSVP Sound Velocity Profiler in titanium housing, switch plug, deployment cage, 3m communications lead, DataLog Express software, manual and transit case. *Specify required pressure range*

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Valeport Limited, St. Peter's Quay Totnes, Devon, TQ9 5EW UK
t. +44 (0)1803 869292 f. +44 (0)1803 869293 e. sales@valeport.co.uk w. www.valeport.co.uk