The Midas SVX2 is the latest version of Valeport’s unique instrument. Recognising the conflict faced by users requiring the superior Sound Velocity data from an SVP, but still needing the Salinity and Density data from a CTD, the Midas SVX2 combines both technologies to give the best of both worlds. Now fitted with a 0.01% pressure sensor as standard, the SVX2 also uses synchronous sampling to ensure perfect profiles, and since the digital time of flight SV sensor is the most accurate in the world, it’s also possible to compare the true sound velocity data with that generated by commonly used equations.

Sensors
The Midas SVX2 is fitted with Valeport’s digital time of flight sound velocity sensor, high stability conductivity sensor, a high accuracy temperature compensated piezo-resistive pressure transducer, and a fast response PRT temperature sensor.

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

Conductivity
Range: 0 to 80 mS/cm
Resolution: 0.003 mS/cm
Accuracy: ±0.01 mS/cm

Temperature
Range: -5°C to +35°C
Resolution: 0.005°C
Accuracy: ±0.01°C

Pressure
Range: 10, 50, 100, 300 or 600 bar
Resolution: 0.001% range
Accuracy: ±0.01% range

Data Acquisition
The Midas SVX2 uses the concept of distributed processing, where each sensor has its own microprocessor controlling sampling and calibration of readings. Each of these is then controlled by a central processor, which issues global commands and handles all sensor components, stainless steel (316) cage.

Sampling Modes
Continuous: Regular output from all sensors at 1, 2, 4 or 8 Hz
Burst: Regular sampling pattern, where instrument takes a number of readings, then sleeps for a defined time.
Trip/Profile: Data is output as a chosen parameter changes by a set value, usually Pressure for profiling.
Conditional: Instrument sleeps until a selected parameter reaches a set value.
Delay: Instrument sleeps until predefined start time

Electrical
Internal: 8°C cells, 1.5V alkaline or 3.6V lithium
External: 9 - 30V DC
Power: 0.7W (sampling), <1 mW (sleeping)
Battery Life: <100 hours operation (alkaline)
>250 hours operation (lithium)
Connector: SubConn Titanium MCBH10F

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

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 for a variety of cable lengths, all fitted as standard and selected by pin choice on the output connector.

Standard
RS232: Up to 200m cable, direct to serial port via USB adaptor
RS485: Up to 1000m cable, addressable half duplex communication

Optional FSK
2 wire power & communications up to 6000m cable (cable dependent)
Baud Rate: 2400 - 115200 (FSK fixed at 32000, USB 460800)
Protocol: 8 data bits, 1 stop bit, No parity, No flow control

Memory
The Midas SVX2 is fitted with 16Mb solid state non-volatile FLASH memory. Total capacity depends on sampling mode; continuous & burst modes have a single time stamp at the start of the file, trip & profile store a time stamp with each reading. A single line of SVP data uses 10 bytes, and a single line of CTD data uses 7 bytes.

Continuous: >1,600,000 data points
Profile: >980,000 data points (>80 profiles to 6000m)

Physical
Materials: Titanium housing, polycarbonate & composite
Sensor Components: Stainless Steel (316) cage
Depth Rating: 6000m (may be limited by pressure sensor)
Instrument Size: 88mmØ x 665mm long

Shipping:
Cage Size: 750 x 140 x 120mm
Weight: 11.5kg (in air), 8.5kg (in water)
Shipping Weight: 100 x 18 x 49cm, 24kg

Ordering
0650010-XX MIDAS SVX2 Profiler
Supplied with:
• Deployment cage
• SubConn switch plug
• 3m communications lead
• USB adaptor, DataLog x2 software
• Manual, tool kit and transit case
Note: XX denotes transducer range. Select from 10, 50, 100, 300 or 600 bar

Data Sheet Reference: MIDAS SVX2 - May 2016

As part of our policy of continuing development, we reserve the right to alter at any time, without notice, any specifications, designs, prices and conditions of supply of all equipment

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