


DVL1000 - 4000 m [logo not found or type unknown]

Bottom-track from over 0.2 to 75 m range; 4000 m max. operational depth

The DVL1000 is the world's smallest survey-grade Doppler Velocity Log. It combines compact design with unprecedented functionality, being able to fly higher in the water column and closer to the seabed than similar equipment. It has a maximum operational depth of 4000 m and is ideally suited for subsea navigation where size and weight are a concern. This 1 MHz Doppler Velocity Log is used by industry leaders in the subsea market because of its high accuracy and state-of-the-art technology.

Highlights

-  [arrow not found or type unknown] Industry-wide acceptance
- [/] Bottom track from 0.2-75 m range
- [/] Quality estimates - per beam and ping

Applications

- [/] Observation-class ROVs and AUVs
- [/] Near-bottom operations
- [/] Highly accurate subsea surveys
- [/] Easy integration with high-grade INS

Technical specifications

[arrow not found or type unknown] Bottom velocity

Single ping std @ 3 m/s 0.5 cm/s
 Long-term accuracy ±0.1% / ±0.1 cm/s
 Minimum altitude 0.2 m
 Maximum altitude 75 m
 Velocity resolution 0.01 mm/s
 Maximum ping rate 8 Hz max

[arrow not found or type unknown] Water tracking

Minimum accuracy 0.3% of measured value ± 0.3 cm/s
 Minimum range 2.0 m

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Current profiling

Minimum accuracy 0.3% of measured value \pm 0.3 cm/s

Velocity resolution 0.1 cm/s

Interval User-specified Nth ping

Maximum range 30 m

Blanking 0.1 m

Cell size 0.2-2.0 m

Max # cells 150

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Environmental

Operating temperature -4 to +40 °C

Storage temperature -20 to +60 °C

Vibration IEC60068-2-64

EMC approval IEC/EN 61000-6-2, 61000-6-3

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Mechanical

Depth rating 4000 m

Weight 2.7 kg

Weight in water 1.7 kg

Height 164 mm

Diameter \varnothing 114 mm

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Hardware

Frequency of operation 1 MHz

Beam width 2.9° 2.9°

Configuration 4-beam Janus array convex transducer, 25° beam angle

Internal memory 16 GB / 64 GB optional

Frequency of operation 500 kHz

Bandwidth 25% centered at transmit frequency

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Interfaces

Serial (either serial or ethernet) Configurable RS232 or RS422, 8-pin male

Ethernet 10/100 Mbits Auto MDI-X. TCP/IP, UDP/IP, HTTP protocols. Fixed IP / DHCP client / Auto IP address assignment. UPnP and Nortek proprietary instrument discovery over Ethernet. IEEE1588/PTP and NTP for absolute time stamping. Multiple simultaneous data format transmission possible.

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Interfaces

Data formats Nortek proprietary w/ 1 ms time stamp accuracy, NMEA0183, Variants of PDX
Trigger Internal 1, 2, 3, 4, 5, 6, 7 or 8 Hz or Trigger In. Trigger option through command
(Ethernet or serial) External TTL or 485 lines: (configurable Rising/Falling/Edges)
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Sensors

Pressure 0.1% FS /precision better than 0.002% of full scale per sample
Temperature -4° to +40 °C ± 0.1 °C
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Power

DC input	12-48 V
Maximum continuous current	1.5 A
Average power	1.3 W*

* Power based on 1 Hz sampling and altitude with greatest transmit pulse.
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Materials

Standard models POM and titanium housing