


Compact DVL500, 300 m found or type unknown

Bottom-track from 0.3 to 175 m range; 300 m operational depth

The DVL500 is a universal Doppler Velocity Log that combines compact design with unprecedented functionality. It can fly higher in the water column and closer to the seabed than similar equipment. This 500 kHz Doppler Velocity Log is used by industry leaders in the subsea market because of its high accuracy and state-of-the-art technology.

Highlights

-  Bottom-track from 0.3-175 m range
- [/] Per-ping and per-beam data quality estimates
- [/] 300 m operational depth

Applications

- [/] Small vehicles requiring longer bottom track range
- [/] Compact AUVs with high accuracy requirements
- [/] Easy integration with leading inertial navigation systems (INS)

Technical specifications

Bottom velocity

Single ping std @ 3 m/s 0.5 cm/s
 Long-term accuracy ±0.1% / ±0.1 cm/s
 Minimum altitude 0.3 m
 Maximum altitude 175 m
 Velocity resolution 0.01 mm/s
 Maximum ping rate 8 Hz max

[arrow] Water tracking

Minimum accuracy 0.3% of measured value ± 0.3 cm/s
 Minimum range 4.0 m

[arrow] Current profiling

Minimum accuracy 0.3% of measured value ± 0.3 cm/s
 Velocity resolution 0.1 cm/s

Interval User-specified Nth ping
 Maximum range 70 m
 Blanking 0.5 m
 Cell size 0.5-4.0 m
 Max # cells 140

[arrow] 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
[arrow]

Mechanical

Depth rating 300 m
Weight 1.30 kg
Weight in water 0.15 kg
Height 158 mm
Diameter ø 114 mm
[arrow]

Hardware

Frequency of operation 500 kHz
Beam width 5.8°
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
[arrow]

Interfaces

Serial (either serial or Ethernet) Configurable RS232 or RS422 SubConn connector, 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.

Data formats Nortek proprietary w/ 1 ms timestamp 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)
[arrow]

Sensors

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

Power

DC input 12-48 V
Maximum continuous current 1.5 A

[arrow]

Power

Average power 3.0 W*

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

[arrow]

Materials

Standard models POM housing