# DVL333 - 300 m copy

**Bottom-track from 0.3 to 380 m range; 6000 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 0.3-380 m range
- Per-ping and per-beam data quality estimates
- 6000 m operational depth

## Applications

- Highly accurate subsea surveys
- AUVs with long missions or 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 | >380 m2) |
| Velocity resolution | Better than 0.01 mm/s |
| Maximum ping rate | 8 Hz |

| Water tracking | |
|---|---|
| Minimum accuracy | 0.3% of measured value ± 0.3 cm/s |
| Minimum range | 4.0 m |

| 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 | 100 m |
| Blanking | 0.5 m |
| Cell size | 0.5-4.0 m |

## Current profiling

| | |
|---|---|
| Max # cells | 140 |

## 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 |

## Mechanical

| | |
|---|---|
| Depth rating | 6000 m |
| Weight | 5.9 kg |
| Weight in water | 3.1 kg |
| Height | 203 mm |
| Diameter | ø186 mm |

## Hardware

| | |
|---|---|
| Frequency of operation | 333 kHz |
| Beam width | 4.3° |
| 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 |

## Interfaces

| | |
|---|---|
| Serial (either serial or ethernet) | Configurable RS-232 or RS-422 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 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) |

## Sensors

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

## Power

| | |
|---|---|
| DC input | 12-48 V |
| Maximum continuous current | 1.5 A |
| Average power | 4.0 W* |

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

## Materials

| | |
|---|---|
| Standard models | POM and titanium housing |