DVL 500 Compact, Schilling

6000 m

Bottom-track from 0.1 to 175 m range; 6000 m operational depth, Seanet connector.



This special version of the DVL 500 Compact comes fitted with a Seanet connector, allowing for seamless integration with TechnipFMC's Schilling Robotics work-class ROVs. Nortek has worked closely with TechnipFMC Schilling Robotics to extensively test and integrate this DVL with their ROVs, enabling users to enjoy extended range in a compact package.

The DVL 500 Compact combines the compact design of the standard DVL 1000 with the superior bottom-track range of the DVL 500.

Download our guide to Nortek DVLs here.

Highlights

- Specially equipped with Seanet connector for TechnipFMC's Schilling Robotics ROVs
- Bottom-track from 0.1 to 175 m range
- Per-ping and per-beam data quality estimates

Applications

- Navigation and control for TechnipFMC Schilling Robotics work-class ROVs
- Drop-in replacement for existing DVLs with little configuration effort

Technical specifications

Bottom velocity	
Single ping std @ 1.5 m/s	0.8 cm/s at 1/2 max altitude
Long-term accuracy	±0.1% / ±0.1 cm/s (export-controlled), >1% (license-free)
Minimum altitude	0.1 m
Maximum altitude	175 m
Velocity resolution	0.01 mm/s
Maximum ping rate	8 Hz max
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

Current profiling

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

*Dependent on measurement conditions

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 kg
Weight in water	3.1 kg
Height	217 mm
Diameter	ø124 mm with connector

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
Bandwidth	25% centered at transmit frequency

Interfaces

Serial (either serial or Ethernet)	Configurable RS232 or RS422, Seanet connector
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. EEE1588/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

Power

Average power	3.0 W*

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

Materials

Materials	POM and titanium housing