

DVL-300K

Piston-type 4-Beam Doppler Velocity Log 300kHz



Overview

The DVL-300K Doppler Velocity Log measures high-precision motion velocity of the platform relative to the seabed. When integrated with a gyrocompass or inertial navigation system (INS), it forms an autonomous navigation system for control and high-accuracy navigation of surface vessels, underwater tow-bodies, AUVs and UUVs.

Tailored for medium-to-large-size underwater platforms, it excels in missions requiring high stand-off altitude, deep-water operation, long-range cruise and challenging seabed conditions. It maintains stable bottom-lock performance even over complex bottom substrates during long-distance voyages.

The device supports an optional current-profiling function to measure flow-field profiles in the surrounding area. It enables underway observation along the carrier's navigation track, as well as fixed-point flow-field observation deployed on submersible moorings and buoys.

Technical Specifications

Parameter	Specification
Operating Frequency	300 kHz $\pm$ 0.5 kHz
Beam Configuration	4 Beams
Velocity Accuracy	$\pm$ 0.5% /V $\pm$ 0.5 cm/s (export-controlled), >1% (license-free)
Max. Altitude Above Bottom	250 m
Min. Altitude Above Bottom	1 m
Velocity Range	$\pm$ 10 m/s (default); $\pm$ 20 m/s (max)
Data Update Rate	1 – 2 Hz
Supply Voltage	DC 11 – 32 V
Power Consumption (Average)	8 W
Interface	Ethernet, RS-232, RS-422, RS-485
Data Format	PD6, custom
Dimensions	$\leq$ $\varnothing$ 260 $\times$ 190 mm (Dia. $\times$ H, excluding connector)
Weight in Air	$\leq$ 15 kg
Housing Material	Titanium alloy
Depth Rating	100 m (Optional 300 m / 1000 m / 3000 m)