Teledyne RD Instruments

DVS Doppler Volume Sampler

Moored Current Measurement

A Current Meter Ahead of its Time

Teledyne RD Instruments' DOPPLER VOLUME SAMPLER™ (DVS) is suited for your long-term shallow or deep-water moored current measurement applications.

The DVS provides improved data over traditional single-point solutions because it measures a profile of up to 3m with a user selectable number of high-resolution velocity bins (maximum 5). These bins ensure data quality by allowing the user to measure and see the shear between bins. Shear that might be caused by eddies created by the mooring line as the water currents pass by. The DVS allows the user to see this and use only the data that represents the true currents.

PRODUCT FEATURES

- **Four beam solution:** Four beam Janus configuration provides a profile of the error velocity - high error velocities in the near bins would indicate inhomogeneous flow due to the mooring line.
- **High precision:** The DVS measures velocity profiles at up to 40 times per second, allowing mm/s precision at a 1 Hz update rate.
- **Multi-tasking capability:** The DVS can be programmed to run a preconfigured sampling strategy, which need not be interrupted should the operator decide to communicate with the DVS to download data or command additional samples.
- **Options:** Optional next-generation internal inductive modem and high precision (0.005 C) thermistor, both from Sea-Bird Electronics , ensure built-in quality and reliability.
- **Compass/Tilt:** High sample-rate solid-state compass/tilt sensor measures at up to 15 Hz, which helps to identify periods of mooring line strumming in the data.

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TECHNICAL SPECIFICATIONS

Velocity Profiling	Typical/max range Number of bins	3m/5m 1-5
Profile Parameters	Velocity accuracy Velocity resolution Velocity range Sample time	1.0% ± 0.5cm/s 0.1cm/s ±6m/s 1s
Transducer and Hardware	Frequency Beam angle Configuration Internal memory Communications Depth ratings	2457.6kHz 45° 4-beam, convex 16MB RS232, inductive 750m, 6000m
Software	Windows™-based planning, testing, setup, download, and viewing	
Standard Sensors	Temperature: Compass/Tilt:	Range: -4° to 45°C; Precision: ±0.5°C; Resolution: 0.5°C, Accuracy ±0.5°C Heading accuracy: 1°; Tilt accuracy: ±0.3°; Resolution: 0.1°
Operating Modes	Autonomous: Polled: Combination:	Preprogrammed Sample on command Autonomous and Polled
Available Options	• Pressure Sensor • High-precision temperature (OEM-SBE)[1] • Internal inductive modem • Mooring line clamp and fin	 Range: -5° to 35°C; Precision: ±0.005°C; Resolution: 0.001°C
Power	10.6-28VDC	
Environmental	Operating temperature: -5°C to 40°C; Storage: -25°C to 60°C	
Weight	750m 6000m	In air 7kg; in water 2kg With accessories: in air: 8kg; in water 2kg In air 19kg; in water 10kg With accessories: in air: 20kg; in water 10kg
Dimensions (mm)	DVS 750m: length 635, diameter 102; DVS 6000m: length 658, diameter 133 *(line drawings available upon request)*	

1 750m only.

From left: DVS 750m end cap; DVS 750m end cap with optional inductive modem; DVS 6000m end cap; DVS 6000m end cap with optional inductive modem.

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RD INSTRUMENTS
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