

# DVS Doppler Volume Sampler™

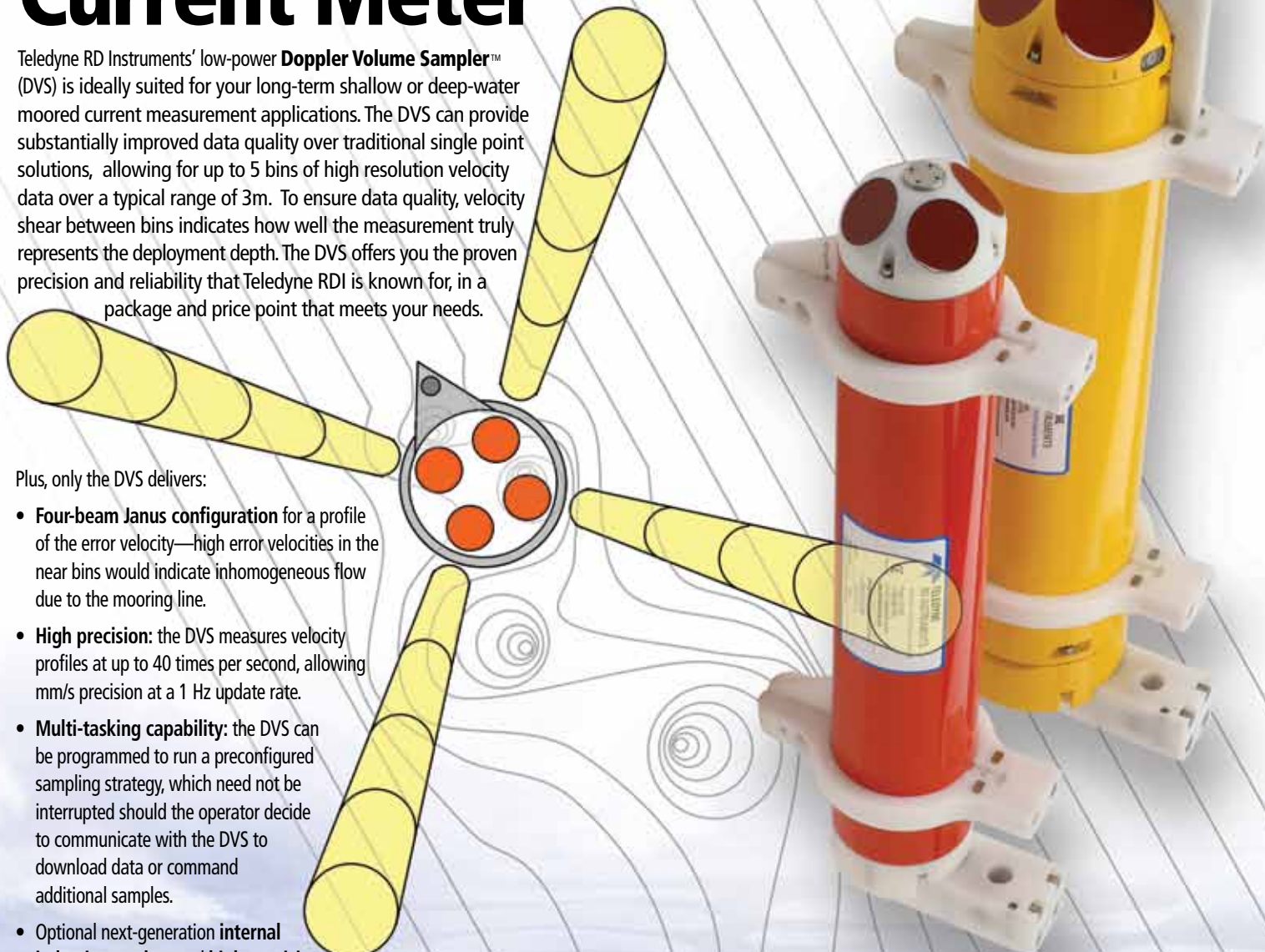
## MOORED CURRENT MEASUREMENT

### A New Breed of Current Meter

Teledyne RD Instruments' low-power **Doppler Volume Sampler™** (DVS) is ideally suited for your long-term shallow or deep-water moored current measurement applications. The DVS can provide substantially improved data quality over traditional single point solutions, allowing for up to 5 bins of high resolution velocity data over a typical range of 3m. To ensure data quality, velocity shear between bins indicates how well the measurement truly represents the deployment depth. The DVS offers you the proven precision and reliability that Teledyne RD I is known for, in a package and price point that meets your needs.

Plus, only the DVS delivers:

- **Four-beam Janus configuration** for 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.
- Optional next-generation **internal inductive modem** and **high-precision (0.005°C) thermistor**.
- **High sample-rate solid-state compass/tilt sensor:** measures at up to 15 Hz, which we use to help identify periods of mooring line strumming in the data.



DVS 750m with optional OEM Thermistor (left), and without (right).

DVS 6000m

# DVS Doppler Volume Sampler



## MOORED CURRENT MEASUREMENT

### Technical Specifications

Velocity Profiling	
Typical range	3m
Number bins	1-5
Profile Parameters	
Velocity accuracy	1.0% ± 0.5cm/s
Velocity resolution	0.1cm/s
Velocity range	±6m/s
Sample time	1s
Transducer and Hardware	
Frequency	2400kHz
Beam angle	45°
Configuration	4-beam, convex
Internal memory	16MB
Communications	RS232, inductive
Depth ratings	750m, 6000m

### Software

Windows™-based planning, testing, setup, download, and viewing

### Standard Sensors

**Temperature:**  
 Range: -4° to 45°C  
 Precision: ±0.1°C  
 Resolution: 0.01°C

**Compass/Tilt:**  
 Heading accuracy: < ±2.0°  
 Tilt accuracy: ±1.0°  
 Resolution: 0.01°

### Operating Modes

**Autonomous:** Preprogrammed  
**Polled:** Sample on command  
**Combination:** Autonomous and Polled

### Available Options

- Pressure Sensor
  - High-precision temperature (OEM)<sup>1</sup>  
 Range: -5° to 35°C  
 Precision: ±0.005°C  
 Resolution: 0.001°C
  - Internal inductive modem
  - Mooring line clamp and fin
- <sup>1</sup> 750m only

### Power

10.6-28VDC

### Environmental

Operating temperature: -5°C to 40°C  
 Storage: -25°C to 60°C

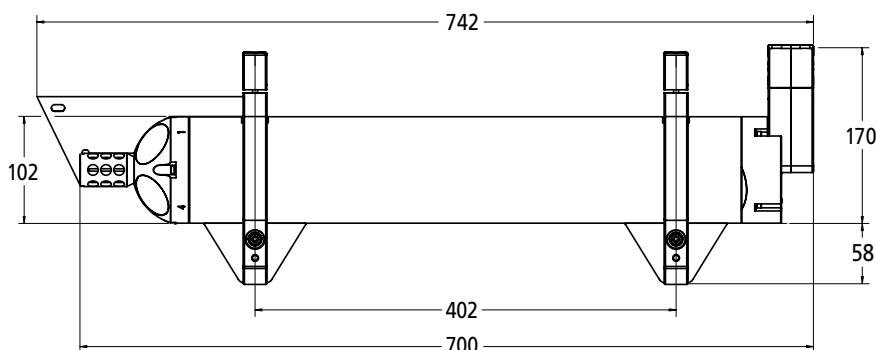
**750m** Weight in air: 7.6kg  
 Weight in water: 2.6kg  
 Weight in air with mooring accessories: 8.4kg  
 Weight in water with mooring accessories: 2.7kg

**6000m** Weight in air: 19kg  
 Weight in water: 10.0kg  
 Weight in air with mooring accessories: 20.0kg  
 Weight in water with mooring accessories: 10.3kg

### Dimensions All dimensions in mm

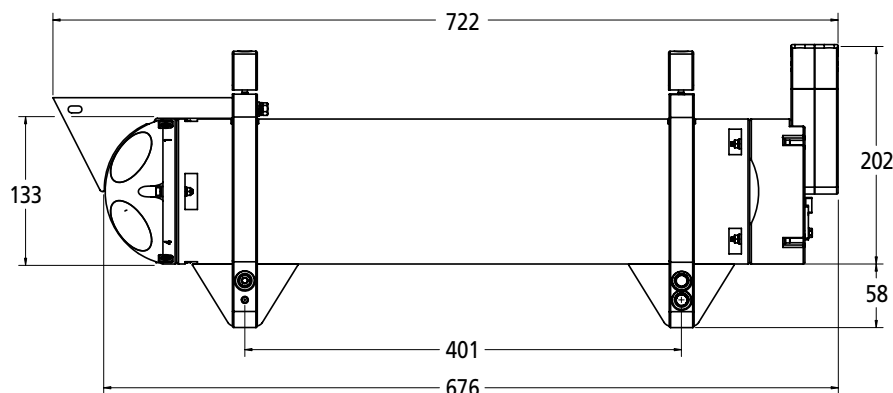
#### DVS 750m

shown with optional Sea-Bird thermistor and optional inductive modem.



#### DVS 6000m

shown with optional inductive modem



Left: DVS 750m end cap.  
 Right: DVS 750m end cap with optional inductive modem.



Left: DVS 6000m end cap.  
 Right: DVS 6000m end cap with optional inductive modem.



**TELEDYNE**  
**RD INSTRUMENTS**  
 Everywheretheyoulook™  
[www.rdinstruments.com](http://www.rdinstruments.com)



Free 24/7 emergency support

#### Teledyne RD Instruments

14020 Stowe Drive, Poway, CA 92064 USA  
 Tel. +1-858-842-2600 • Fax +1-858-842-2822 • E-mail: rdisales@teledyne.com  
 Les Nertieres 5 Avenue Hector Pintus 06610 La Gaude France  
 Tel. +33-49-211-0930 • Fax +33-49-211-0931 • E-mail: rdie@teledyne.com

Specifications subject to change without notice. ISO 9001:2008 certification applicable to Poway, CA facility only. DVS Doppler Volume Sampler is a registered trademark of Teledyne RD Instruments. All rights reserved. © 2009 Teledyne RD Instruments, Inc. MM-1010, Rev. 12/11

