

## 3D Wave/Current Meter

### *Wave Height, Speed, Direction and Current Data in a Single Instrument*

The Falmouth Scientific, Inc. 3D Wave/Current Meter combines an acoustic current meter with a state-of-the-art micro-machined silicon pressure sensor. This enables the 3D Wave meter to measure current speed and direction, as well as wave height, direction and frequency. The high-accuracy, high-speed sampling of the direct-path acoustic current meter offers substantial advantages over other non-linear sensors. The 3D Wave can be deployed in a multiple mode format to allow periodic burst sampling of wave data as well as long-term averaging. The 3D Wave can also internally post-process the data to allow simplified telemetry of wave data. The 3D Wave comes complete with Windows software for Configuration and Real-Time Graphics display and advanced post-processing.



**3D Wave**

### FEATURES

- User programmable sampling rates: 1, 2, 3, 4, and 5 Hz
- Long deployment with alkaline battery pack
- 3-Axis velocity measurement
- 0-50 psia silicon micro-machined pressure sensor
- 3-Axis fluxgate magnetometer with 2 axis tilt sensor
- ASCII serial data output via RS-232, Optional RS-485
- Low-maintenance construction
- Built-in real-time clock with "on/off" power control
- Internal 32 MB flash memory
- Optional bottom mount tripod frame, 316 s.s.
- 23 meter operating depth
- On-board processing of spectral data for simplified data telemetry
- Optional CTD
- Optional high-accuracy temperature calibration

# SPECIFICATIONS

## Sensors

Parameter	Type	Range	Accuracy	Resolution
Velocity	Acoustic	0 to 300 cm/s	±2% of Reading max ±1 cm/s	0.01 cm/s
Direction	3 Axis Fluxgate	0 to 360°	±2.0°	0.01°
Tilt	2 Axis	0 to 45°	±0.5°	0.01°
Temperature	Thermistor	-2 to 35°C	0.5°C ±0.05°C*	0.01°C
Pressure	Silicon Micro-Machined	0-50 psia (23m max depth)	±0.01% full scale	0.145 10 <sup>-3</sup>

\*Optional

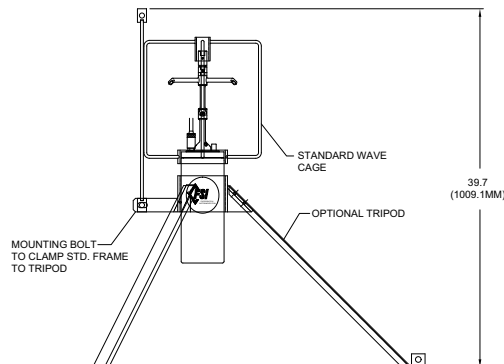
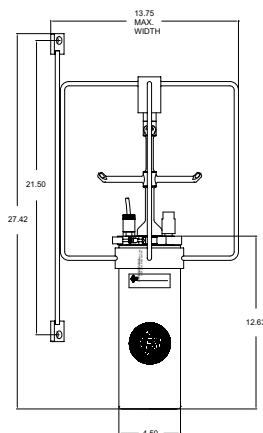
## Optional CTD

	Range	Accuracy	Resolution	Stability
Conductivity (S/m)	0 to 7.0	±0.002	.0001	±0.005
Temperature (Celsius)	-5° to 32° ITS-90	±0.03°	.001°	±0.005°
Pressure (dBar)	0 to 200 dBar 0 to 2000 dBar	±0.3% full scale	0.01% full scale	±0.01% full scale

## Instrument

<b>External Power:</b>	7 to 24 VDC, 35 mA
<b>Battery Power:</b>	Alkaline 10 D Cell Welded Pack
<b>Sample Rate:</b>	1, 2, 3, 4, or 5 Hz (Burst)
<b>Vector Averaging Period:</b>	15 Seconds to 1 Hour
<b>Burst Sampling:</b>	15 Seconds to 1 Hour
<b>Physical Material:</b>	500 PVC Housing 316 SS Mooring Frame 316 SS Bottom Mount Tripod
<b>Real Time Clock:</b>	Programmable Sampling/Low-power Mode
<b>Input Channels:</b>	Two (2) DC Input Channels Available for External Sensor Input, such as Transmissometer, DO, OBS (Regulated 12 VDC Output to Power Other Sensors)
<b>Weight:</b>	3D Wave: Air-13 lbs (5.9 kg) Water-4 lbs (1.81 kg) 3D Wave w/ Tripod: Air-37.3 lbs (16.92 kg) Water-32.5 lbs (14.76 kg)

*Specifications Subject to Change without Notice*



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