

1D Wave and Tide Meter Data Sheet

A simple easy to use system with selectable sample rate (1 to 5 Hz), the user to acquire accurate point-spectra of waves. Pressure sensor output can also be integrated to obtain water level measurements unaffected by wave action. With 2 GB of on board flash data memory, the WAVETIDE-PLUS can retain the large amounts of data required for highly detailed wave characterisation.



1D Wave and Tide meter with riser clamp assay. Image courtesy of Falmouth Scientific Inc.

The WAVE-TIDE-PLUS is available with an optional Barometric Sensor. This option comes complete with surface housing, reinforced 30 meter cable (or user-specified length) and NEMA weather-proof enclosure with standard marine-grade connectors. The NEMA enclosure houses the barometric sensor with space for two 6V lantern or 7.5 AHr gel cell batteries. Other options include a solar panel charger and radio data telemetry sub-systems.

Features

- High-accuracy wave data provided by fast sampling and a precise pressure sensor.
- Fast Data Sampling up to 5 Hz; Fast Data Download.
- Long-term data logging to 2 GigaByte internal flash SD memory.
- Simultaneous Data Logging and Serial Output via RS-232 (RS-485 optional).
- ?Water Temperature measurement.
- Micro-Machined Silicon Pressure Sensor 0 to 50 PSIA (or optional range).
- Optional Barometric Pressure Sensor.
- Optional conductivity, temperature, pressure sensor package (CTD) may be added.
- Windows-based Micro Tide Software for Configuration and Data Acquisition.

Sensors

Parameter	Type	Range	Accuracy	Resolution
Pressure (Optional):	Resonant Silicon Micro-Machined	0 to 50 psia (23m max depth)	±0.01% FS	0.145 x10 ⁻³ (Dependent upon integration time)
Temperature:	Semiconductor	-2 to 35°C	0.5°C	0.01°C

Optional CTD

Parameter	Range	Accuracy	Resolution	Stability
Conductivity (mS/cm):	0 to 70	±0.01	.001	±0.0005 per month
Temperature (Celsius):	-5 to 32° ITS-90	±0.01°	.001°	±0.0005° per month
Pressure (dBar):	0 to 200 dBar	±0.1% full scale	0.01% full scale	±0.01% per month

Specification subject to change without notice.

Product Dimensions

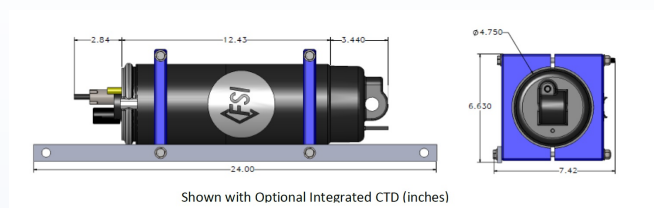
Physical	Dimensions (L x W x H)	Weight
(instrument only)	60cm x 17cm x 19cm	8kg

Technical Specifications

External Power:	8 to 32 VDC
Current Draw:	Typical 60 mA at 1 Hz sample rate; Sleep 1.0 mA battery, 3.5 mA external power.

Battery Power:	Alkaline 5 D Cell Welded Pack, 10 AHR.
Internal Memory:	2.0GB Standard.
Sample Rate:	5 Hz Maximum.
Sampling Modes:	Continuous, Interval, and Delayed Start (continuous or interval).
Vector Averaging Period:	User Selectable up to 59 Min:59 Sec.
Real Time Clock:	Programmable High Accuracy Sampling/Low-power Mode.
Clock Stability:	+/- 2ppm (0-40 degrees C); +/-4ppm (-40 degrees C to +85 degrees C).
Input Channels:	Two (2) 0-5V DC Input Channels with 12 bit A/D resolution available for external sensor input, such as Transmissometer, DO, OBS (Regulated 12 VDC 1.5W provided to power external sensors).
Depth Rating/Physical Material:	200 Meter Epoxy Housing Standard, P/N: WAVE-TIDE-PLUS

Gallery



1D Wave and Tide Meter Schematic drawing. Image courtesy of Falmouth Scientific Inc.