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# 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.



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## 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. |

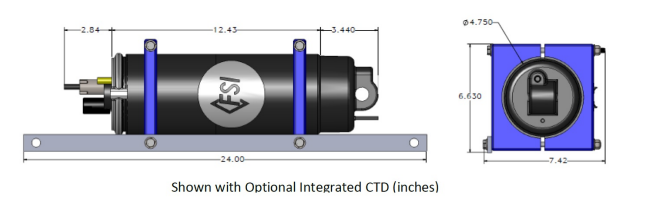


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| | |
|---|---|
| **Battery Power:** | Alkaline 5 D Cell Welded Pack, 10 AHR. |
| **Internal Memory:** | 2.0GB Standard. |
| **Sample Rate:** | 5 Hz Maximum. |
| **Sampling Modes:** | Continuous, Interval, and Delayed Start (continuous or interval). |
| **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.*



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