

1-Dimensional Wave and Tide Meter

High-Speed, High-Resolution Wave Height and Tide Measurement

Enhanced Design, Specifications, Performance

The FSI *WAVE-TIDE-PLUS* is an economical wave and tide monitor, combining a highly stable pressure sensor and state-of-the-art electronics to achieve unprecedented levels of accuracy and stability. Sampling rate is selectable (1 to 5 Hz), which enables 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 16 GB of on board flash data memory, the *WAVE-TIDE-PLUS* can retain the large amounts of data required for highly detailed wave characterization.

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.



FSI WAVE-TIDE-PLUS

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 **16 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



SPECIFICATIONS

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Sensors

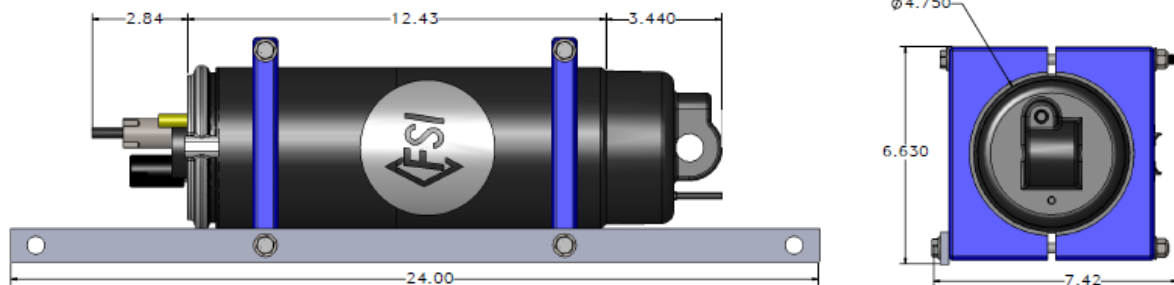
Parameter	Type	Range	Accuracy	Resolution
Pressure (Wave Height)	Resonant Silicon Micro-Machined	0 to 50 psia (23m max depth)	±0.01% FS	0.145 x 10 ⁻³ Dependent upon integration time
Temperature	Semiconductor	-5 to +35°C	±0.5°C	0.01°C

Optional CTD

	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 300 dBar* *Limited to 23m max depth	±0.1% full scale	0.01% full scale	±0.01% per month

Instrument

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:	16GB Standard
Sample Rate:	5 Hz Maximum
Vector Averaging Period:	User Selectable up to 59 Min:59 Sec
Real Time Clock:	Programmable High Accuracy Sampling/Low-power Mode
Sampling Modes:	Continuous, Interval, and Delayed Start (continuous or interval)
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:	300 Meter Epoxy Housing Standard, P/N: B400-304 (Limited to 23m max depth)



Shown with Optional Integrated CTD (inches)

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