

Tide Monitor Data Sheet

Tide Monitoring System is a complete tide monitoring system for moorings and other long-duration fixed-site deployments. The pressure module is a precision strain-gauge pressure sensor for measuring water level; barometric pressure compensation is provided by a sensor mounted in the system's surface enclosure, which also incorporates rechargeable battery and system communications. A 20-meter cable connects the underwater and surface enclosure. Non-corroding materials are used to ensure long sensor life with minimal maintenance. An optional solar charger allows for long-term, unattended operation.



Tide Monitoring system deployment with solar panel. Image courtesy of Falmouth Scientific Inc.

Data is recorded in the system's 256MB internal memory and can be output locally in real-time via RS-232 (optional RS-485) or reported remotely via RF (radio, cell) or satellite telemetry.

Features

- High Accuracy tide data - ± 2.7 cm over the range of -2 to 30°C provided by: Precision pressure transducer, Surface barometric pressure. transducer, Correction for local salinity & gravity via user defined inputs.
- Pre-configured for NOS Standard deviation (per NOAA CO-OPS standard).
- On-board data logging and real-time output provide data where/when you need it.
- Telemetry options allow for remote reporting of tide data.
- Low-power operation and rechargeable batteries allow for long-term unattended operation.
- Surface barometer maintains accuracy with lower maintenance than vented cable systems.
- PUCK v1.3 protocol-compliant for "plug-and-work" ease of system configuration.

Parameter	Range	Accuracy	Calibration	Resolution
Pressure (water):	0 to 20m	±0.03% of full scale	3 Point primary with offset adjustment	0.002% of full scale range
Pressure (Air)	600 - 1100 mBar	± 1.5 mB @ -20 - +50°C	M r fg. NIST Trace	0.01 mBar
Tide @ 1 Atmosphere	0 - 20 m	±2.7 cm @ -2 - +30°C	Post corrected using FSI Windows processing software	0.5 cm

Specification subject to change without notice.

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	25cm x 5cm x 5cm (derlin)	0.6kg

Technical Specifications

Power:	150 mW; 240 mW run; 12 mW sleep.
Communication:	Radio/cellular modem; satellite (consult factory).
Telemetry:	RS-232, RS-485 optional.
Power Supply:	12 AHr Gel Cell Battery 110 VAC or 220 VAC charger, 50-60 Hz Solar charger optional (consult factory)
Sample Rate:	1-5 Hz.
Data output modes:	Continuous 1-5 Hz Polled (On receipt of returns a record) NOAA CO-OPS
Memory modes:	Continuous 1-5 Hz Interval Interval with burst Interval with burst and averaging NOAA CO-OPS
Delayed Start:	For all modes.
Memory:	256 MB.

