

## 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 -  $\pm 2.7$  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

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

