High-Accuracy Self-Contained Tide Monitoring System

The Falmouth Scientific, Inc. 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.

FSI Tide Monitoring System

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.

BENEFITS

- 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

Tide Monitoring System with Optional Solar Charger

SPECIFICATIONS

Parameter	Range	Accuracy	Calibration	Resolution
Pressure (Water)	0 to 20 m	±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	Mfg. NIST Traceable	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

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

Sampling Modes:

Real Time (directed out Coms Port): Continuous 1-5 Hz
Polled (On receipt of <CR> returns a record)
NOAA CO-OPS

Store to Internal Memory: Continuous 1-5 Hz
Interval
Interval with burst
Interval with burst and averaging
NOAA CO-OPS

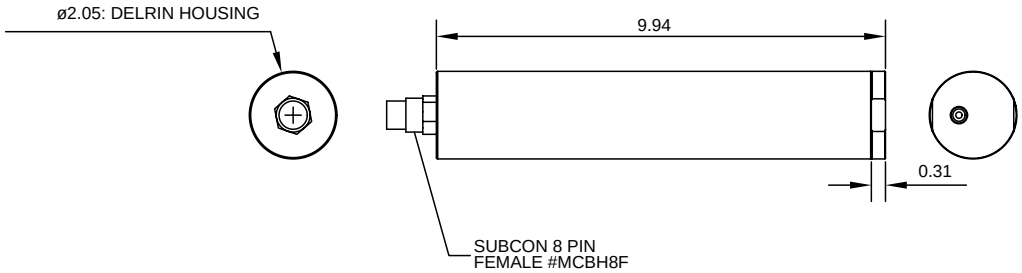
Delayed Start: For all modes

Memory: 256 MB

Weight (Pressure Sensor): Delrin
Underwater unit in air: 0.6 kg (1.26 lbs)
In Water: 0.2 kg (0.5 lbs) buoyant

Dimensions of NEMA Box: 28.575 cm h (11.25”) x 18.415 cm (7.25”) x 14.605 cm d (5.75”)
NBB-15243

Specifications Subject to Change without Notice



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