

Integrated CTD Profiler

WOCE Accuracy in a Compact Full Ocean Titanium Package

The Falmouth Scientific, Inc. ICTD combines FSI's innovative sensors with self-calibrating electronics to produce a physical measurement system with unparalleled accuracy, stability, and reliability. The FSI conductivity cell provides the long term calibration stability of an inductive cell, while its free flushing design avoids thermal contamination and the need for troublesome pumps. The silicon pressure sensor provides a superior performance and reliability. The ICTD uses a standards-grade platinum resistance thermometer for primary temperature measurement, the world standard (ITS-90) for temperature measurement. The instrument can support up to three temperature sensors configured to meet the user's specific requirements.

The ICTD features exceptional stability and the sensor configuration is designed to eliminate noise and errors. The ICTD consistently produces excellent results, even in harsh environments such as Arctic or polluted waters. With its rugged, maintenance-free sensors, the ICTD dramatically reduces shipboard maintenance and shrinks turnaround time.



FEATURES

- 32 Hz sampling rate
- Plug compatible with a variety of sensors
- 7000 meter titanium housing
- High-Accuracy measurement:
- Optional 4 MB internal memory
- Multiple RS-232 serial inputs for a variety of sensors including: ADCP, Benthos PSA-916 Altimeter, WetLabs SAFire
- 8 A/D inputs for external sensors
- High speed 9600 BPS DPSK uplink for real-time data output and sampler control
- Powerful, easy to use Windows® software
- Compact DT-2000 deck unit
- Water Sampler Control

SPECIFICATIONS

Sensors

| Parameter | Conductivity | Temperature | Pressure |
|------------|---|---|----------------------------|
| Sensor | Inductive Cell | Platinum Thermometer | Precision-machined Silicon |
| Range | 0 - 7.0 S/m (0 - 70 mS/cm) | -2° to 35°C | Customer specified |
| Accuracy* | ±0.0002 S/m (±0.002 mS/cm) | 0.002°C | ±0.01% full scale* |
| Stability | ±0.00005 S/m/month (±0.0005 mS/cm/month) | ±0.0002°C/month | ±.002% full scale/month |
| Resolution | 0.00001 S/m (0.0001 mS/cm) | 0.00005°C | 0.0004% full scale |
| Response | 5.0 cm at 1 m/sec | 150 msec Platinum 20 msec Thermistor** | 25 msec |

* Instrument comparison to calibration standards

**Optional

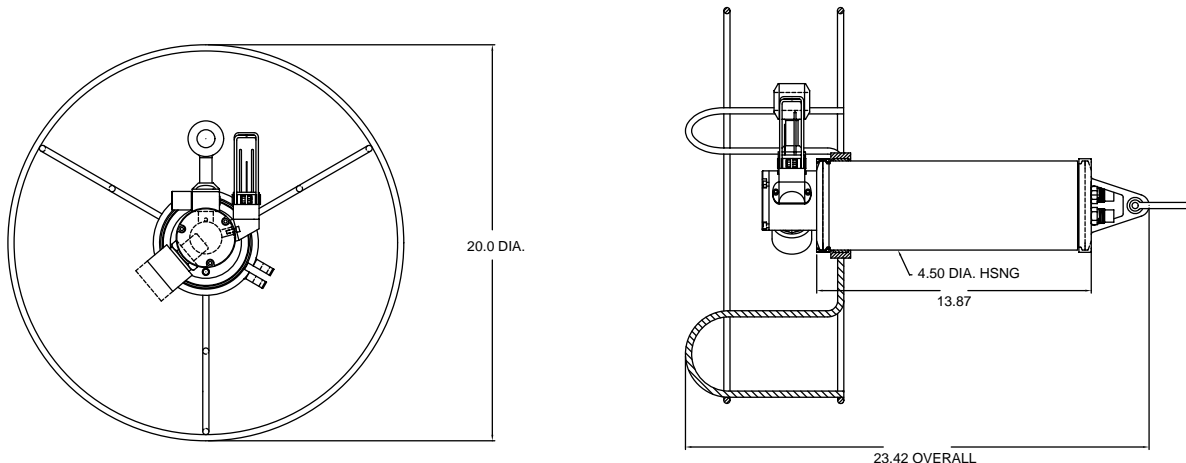
Optional Sensors

The ICTD supports 5 primary sensors and up to 8 additional DC output sensors. FSI offers three basic temperature sensors: Primary platinum (150 msec response), Redundant platinum (150 msec response), and Exposed (20 msec response) thermistor. Any combination of 3 of these sensors can be used in the primary channels. In addition, the 8 DC input channels can support virtually any sensor that has a DC output.

Instrument

| | |
|---------------------------------|--|
| Communication: | Uplinked CTD and sensor data Bi-directional serial interface for command telemetry |
| CTD Output: | 9600 bps DPSK uplink 300 bps bi-directional command telemetry 8 data bits, 1 stop bit, no parity |
| Optional Internal Memory | 4 MB internal memory with battery backup |
| Sampling: | User programmable, 4 to 32 frames per second |
| Power: | 110 - 240 VDC, 6.5 watts |
| Construction: | Titanium housing rated to 7000 meters |

Specifications Subject to Change without Notice



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