

# OCEAN NEWS

July 2016

**35**  
YEARS

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**& TECHNOLOGY**  
*News for the Ocean Industry*

**OE101: QUANTIFYING BATTERY  
CAPACITY FOR MARINE  
APPLICATIONS**

Feature Story - Page 10

## New and exciting measurement possibilities with long-awaited 250 kHz profiler

Nortek is pleased to announce that the long-awaited mid-range profiler Signature250 is now in production.

It has an optional center beam for the patented SUV wave measurement mode—which means it can be deployed on subsurface buoys at depths as great as 150 m.

The Signature family now includes instruments covering ranges from <1 m to >1,000 m (frequencies of 1,000, 500, 250 and 55/75 kHz). The Signature series now covers most needs and requirements in terms of range and application.

With a specified current profiling range of 200 m, the new Signature250 opens up new and exciting measurement possibilities. Additionally, with the optional 5th beam, it has the capability of measuring ice thickness, ice drift and directional waves from an installation depth of up to 150 m. All of this is possible with the same energy-saving technology as the rest of the Signature series products.

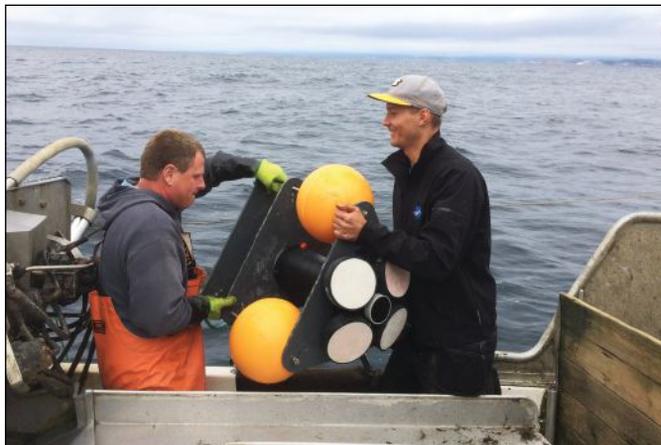
Its features were carefully developed around the needs of scientists and engineers working both within academia and the offshore industry.

One possible application is accurate measurements from subsurface buoy mounts. Here, changes in buoy position is managed by special measurement modes for both ice and waves. The optional 5th beam (Acoustic Surface Tracking [AST]) is optimized by depth so that buoy draw-down is not

an issue and directional wave measurements are unaffected by buoy rotation. This is possible thanks to Nortek's patented SUV measurement mode (US Patent 7,352,651).

Nortek has built a rugged, robust system optimized for operational users while also offering innovation in data investigation capabilities and accuracy to scientific researchers.

For more information, visit [www.nortek.no](http://www.nortek.no).



July 2016

## 62 SBE 39plus-IM temperature, optional pressure recorder

The SBE 39plus-IM is a high-accuracy, fast-sampling temperature with optional pressure recorder with integrated Inductive Modem (IM) interface, internal batteries, and memory. The 39plus-IM is designed for long-duration deployments on moorings.

Data is recorded in memory and can be transmitted when polled through Inductive Modem telemetry. Measured data are output in engineering units.

Memory capacity exceeds 9.5 million samples without pressure, or 5.5 million samples with pressure. Battery endurance varies, depending on the sampling scheme, but the 39plus-IM is usually limited by its memory capacity. Sampling every 7 seconds (without pressure) or 12 seconds (with pressure), the 39plus-IM can be deployed for 2 years.

The SBE 39plus-IM features:

- Moored temperature, pressure (optional), and time, at user-programmable 5-sec to 6-hour intervals.
- Inductive Modem (IM) interface.
- Internal memory and battery pack; internal USB interface for fast upload.
- 600 m plastic or 10,500 m titanium housing.
- Rigorous 11-point temperature calibration of each sensor.
- Seasoft©V2 Windows software package (setup, data upload, and data processing).
- Next generation SBE 39-IM: faster sampling, more power and memory, same diameter housing, compatible output (39plus-IM to 39-IM comparison).
- 5-year limited warranty.

The Inductive Modem (IM) system provides reliable, low-cost, real-time data transmission for up to 100 IM-enabled

instruments using plastic-coated wire rope (typically 3x19 galvanized steel) as both transmission line and mooring tension member. IM instruments clamp anywhere along the mooring, which is easily reconfigured by sliding and re-clamping instruments on the cable. In a typical mooring, an Inductive Modem Module (IMM) in the buoy communicates with IM instruments and interfaces to a computer/data logger (not supplied by Sea-Bird) via RS-232. The data logger is programmed to poll each IM instrument for data and sends the data to a satellite link, cell phone, etc.

The aged and pressure-protected thermistor has a long history of exceptional accuracy and stability. It is available in two configurations: embedded in titanium endcap (25-sec time constant) for rugged conditions or external thermistor in pressure-protected sheath (0.5-sec time constant) for fast sampling.

An optional strain-gauge pressure sensor with temperature compensation is available in eight ranges (maximum depth 7,000 m).

The unit comes in either a plastic (600 m) or titanium (10,500 m) housing. A wire guide and mounting clamp is available in one of nine sizes, and a net fender/fairing with conical ends shaped to shed fishing lines and nets is optional.

For more information, visit [www.seabird.com](http://www.seabird.com).



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