

# SBE 37-IMP

MICROCAT CT(D)

## Overview

The SBE 37-IMP pumped MicroCAT is a high-accuracy conductivity and temperature (pressure optional) recorder with integrated Inductive Modem (IM) interface, internal batteries, memory, and integral Pump. The MicroCAT 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 530,000 samples. Battery endurance varies, depending on sampling scheme. Sampling every 3 minutes, the MicroCAT can be deployed for 2 years (380,000 samples).

## Components

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.

Unique internal-field conductivity cell permits use of expendable anti-foulant devices, for long-term bio-fouling protection.

Aged and pressure-protected thermistor has a long history of exceptional accuracy and stability.

Optional strain-gauge pressure sensor with temperature compensation is available in eight ranges (maximum depth 7000 m).

Pump runs for 1 second for each sample, providing improved conductivity response and bio-fouling protection.



## Features

- Moored Conductivity, Temperature, and Pressure (optional), at user-programmable 6-sec to 6-hour intervals
- Integral pump
- Inductive Modem (IM) interface
- Internal RS-232 Connector
- Internal memory and battery pack
- Expendable anti-foulant devices, unique flow path, and pumping regimen for bio-fouling protection
- 350 m plastic or 7000 m titanium housing
- Seasoft® V2 Windows software package (setup, data upload, and data processing).
- Field-proven MicroCAT family, with more than 10,000 instruments deployed
- Five-year limited warranty



## Options

- Plastic (350 m) or titanium (7000 m) housing
- No pressure, or strain-gauge pressure sensor in one of 8 ranges
- Wire guide and mounting clamp in one of 10 sizes

## Field Specifications

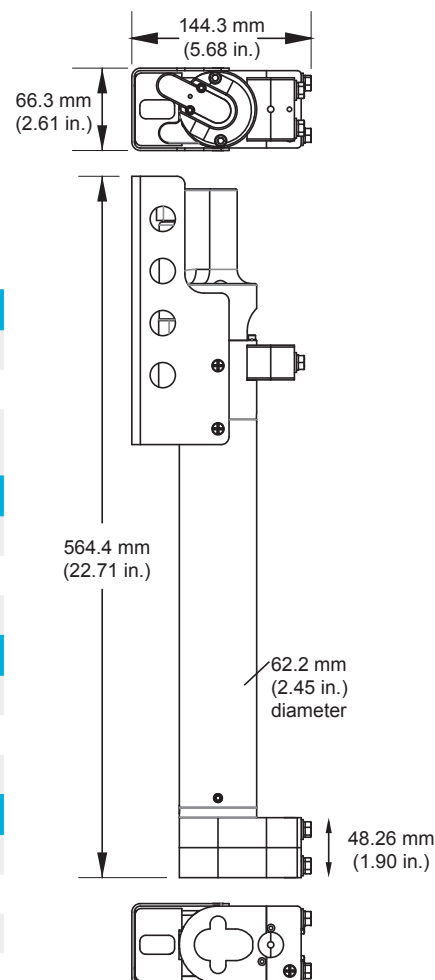
The specifications below represent the expected performance of the instrument when deployed in the field. Under controlled circumstances in a lab, we would expect the instrument to outperform these specifications.

We have chosen to display field specifications to give our users a true measure of how Sea-Bird Scientific instruments perform in harsh environments and applications. It is critical to keep this in mind when comparing specifications with instruments from other manufacturers.

Measurement Range	
Conductivity	0 to 7 S/m (0 to 70 mS/cm)
Temperature	-5 to 45 °C
Optional Pressure	20/100/350/600/1000/2000/3500/7000 (meters of deployment depth capability)
Initial Accuracy	
Conductivity	± 0.0003 S/m (0.003 mS/cm)
Temperature	± 0.002 °C (-5 to to 35 °C); ± 0.01 °C (35 °C to 45 °C)
Optional Pressure	± 0.1% of full scale range
Typical Stability	
Conductivity	0.0003 S/m (0.003 mS/cm) per month
Temperature	0.0002 °C per month
Optional Pressure	0.05% of full scale range per year
Resolution	
Conductivity	0.00001 S/m (0.0001 mS/cm)
Temperature	0.0001 °C
Optional Pressure	0.002% of full scale range
Acquisition Time	
Acquisition Time	1.9 - 2.6 sec/sample (see manual)
Power Supply & Consumption	
Power Supply & Consumption	7.8 Amp-hour (nominal) battery pack (derated for calculations); 380,000 samples CTD (see manual)
Memory Capacity	
Memory Capacity	530,000 samples CTD
Housing, Depth Rating, & Weight	
Housing, Depth Rating, & Weight	Plastic: 350 m, 3.6 kg in air, 1.7 kg in water Titanium: 7000 m

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Pumped flow through conductivity cell  
(conductivity cell guard removed)

