

# SBE 5M

## MINI SUBMERSIBLE PUMP

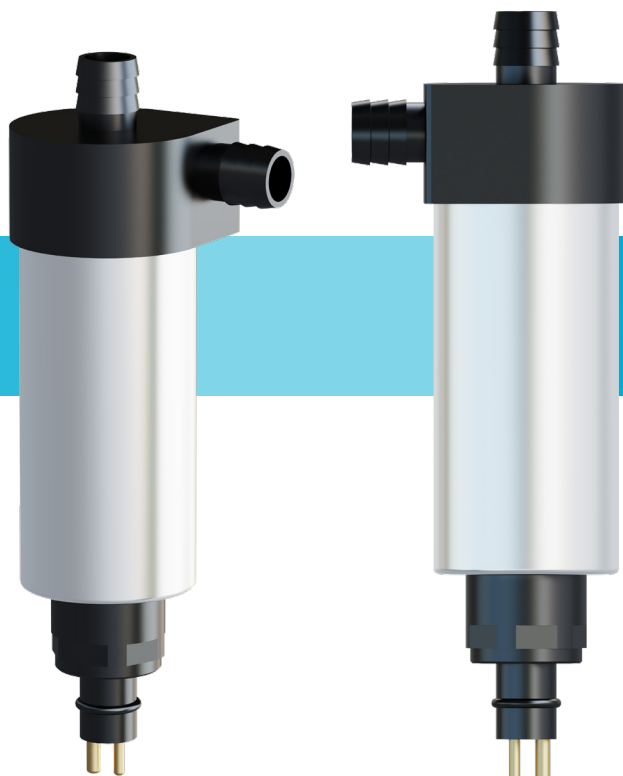
### Overview

The SBE 5M Mini Submersible Pump is a modular component used on several Sea-Bird CTD packages. The highly reliable pump flushes water through the conductivity cell at a constant rate, independent of the CTD's motion, improving dynamic performance. The SBE 5M is standard on the SBE 19plus V2 SeaCAT Profiler CTD, and is optional on the SBE 16plus V2 and 16plus-IM V2 SeaCAT CT(D) Recorders. For applications requiring pumping through additional sensors (for example, a dissolved oxygen sensor), use the SBE 5T or 5P pump instead.

The SBE 5M may also be suitable for custom applications.

### Features

- Centrifugal pump head.
- Long-life, DC, ball-bearing motor.
- Pump impeller and electric drive motor coupled magnetically through housing, providing high reliability by eliminating moving seals.
- Motor speed and pumping rate remain constant over entire input voltage range.
- Motor drive electronics intrinsically protected against accidental reversed polarity.
- Depths to 600 or 10,500 m.
- Five-year limited warranty.



### Options

- Profiling (continuous duty) or moored (pulsed duty) applications.
- Plastic (600 m) or titanium (10,500 m) housing.
- XSG or wet-pluggable MCBH connector.

## 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.

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Performance			
5M.xx1x (pulsed duty for moored instruments)	Input voltage range 6 - 18 VDC		
	Pulse Duration	Flow Volume	Electrical Charge*
	0.5 sec	14 mL	0.018 Amp-sec
	1.0 sec	27 mL	0.040 Amp-sec
	1.5 sec	40 mL	0.062 Amp-sec
	2.0 sec	53 mL	0.085 Amp-sec

\*Measured with 10 V input power.

5M.xx2x (continuous duty for profiling instruments)	Input voltage range 9 - 18 VDC		
	Flow Rate 25 mL/s		
	Supply current 95 mA		
	Note: Supply current is independent of operating voltage.		

Mechanical	
Plastic housing, 600 m	Weight in air 0.3 kg, in water 0.1 kg
Titanium housing, 10,500 m	Weight in air 0.4 kg, in water 0.3 kg

