



Sea-Bird Electronics, Inc.  
13431 NE 20<sup>th</sup> Street  
Bellevue, WA 98005  
USA

Phone: +1 425-643-9866  
Fax: +1 425-643-9954  
E-mail: seabird@seabird.com  
Web: www.seabird.com

## Sea-Bird Products At a Glance

### Profiling Instruments (all measure Conductivity, Temperature, and Pressure)

SBE	Sampling Rate	Channels for Auxiliary Sensors	Memory	Power		Real-Time Data	Comments
				Internal	External		
<b>911 plus</b>	24 Hz	8 A/D	16 Mb (with optional 17plus V2)	√ (with optional 17plus V2)	√	√	World's most accurate, high resolution CTD, premium sensors, multi-parameter support, water sampler control
<b>25plus</b>	16 Hz	8 A/D; 2 RS-232	2 Gb	√	√	√ (may require SBE 36 Deck Unit & PDIM)	High resolution logging CTD with multi-parameter support, water sampler control with SBE 33 Deck Unit
<b>19plus V2</b>	4 Hz	6 A/D; 1 RS-232	64 Mb	√	√	√ (may require SBE 36 Deck Unit & PDIM)	<i>Personal CTD</i> , small, self-contained, adequate resolution, water sampler control with SBE 33 Deck Unit
<b>49</b>	16 Hz				√	√ (may require SBE 36 Deck Unit & PDIM)	For towed vehicle, ROV, AUV, or other autonomous profiling applications. Water sampler control with SBE 33 Deck Unit.
<b>52-MP</b>	1 Hz	1 frequency channel for dissolved oxygen sensor	28,000 samples		√	√	For moored profiling applications on device that is winched up & down from buoy or bottom-mounted platform
<b>41/41CP</b>	OEM CTD for sub-surface oceanographic float that surfaces at regular intervals, transmits new drift position and <i>in situ</i> measurements to ARGOS satellite system. CTD obtains latest temperature and salinity profile for transmission on each ascent.						
<b>Glider CTD</b>	OEM CTD for autonomous gliders. <i>Generic</i> Glider Payload CTD is modular, low-power profiling instrument that measures C, T, P, and (optional) Dissolved Oxygen. Slocum CTD provides retrofit/replacement for CTDs on Slocum gliders. Designs share many features, but there are differences in packaging, sampling abilities, power consumption, and installation (see individual data sheets).						

### Water Samplers (SBE 32 Carousel or SBE 55 ECO) and CTD Configurations

Water Sampler	Number of Bottles	Bottle Size (liters)	CTD	Control		Deployment Depth
				Real-Time Configuration	Self-Contained Configuration (auto firing)	
<b>SBE 32 (full size)</b>	12	1.7 - 30	SBE 9plus	SBE 11plus V2 Deck Unit	SBE 17plus V2	6800 m (aluminum), 7000 m (titanium), or 10,500 m (titanium)
	24	1.7 - 12				
	36	Consult factory				
	12	1.7 - 30	SBE 19, 19plus, 19plus V2, 25, 25plus	SBE 33 Deck Unit (can also be used with SBE 49 CTD)	Auto Fire Module	
	24	1.7 - 12				
<b>SBE 32C (compact)</b>	12	1.7 - 8	SBE 9plus	SBE 11plus V2 Deck Unit	SBE 17plus V2	
			SBE 19, 19plus, 19plus V2, 25, 25plus	SBE 33 Deck Unit (can also be used with SBE 49 CTD)	Auto Fire Module (can also be used with SBE 50 Pressure Sensor)	
<b>SBE 32SC (sub-compact)</b>	12	1.7 or 2.5	SBE 19, 19plus, 19plus V2, 25, 25plus	SBE 33 Deck Unit (can also be used with SBE 49 CTD)	Auto Fire Module (can also be used with SBE 50 Pressure Sensor)	
<b>SBE 55</b>	3 or 6	4	SBE 19, 19plus, 19plus V2, 25, 25plus	SBE 33 Deck Unit (can also be used with SBE 49 CTD)	Built-in auto bottle firing (can also be used with SBE 50 Pressure Sensor), no additional equipment required	600 m

Note: Operation of all Carousel models with SBE 33 Deck Unit requires optional sea cable / serial data interface Carousel.

## Moored / Time Series Recording Instruments

SBE	Measures (C, T, P)	Auxiliary Sensors	Memory	Power		Communication	Real-Time Data	Comments
				Internal	External			
16plus V2	C, T, P*	6 A/D; 1 RS-232	64 Mb	√	√	RS-232 or -485	√	Optional pump
16plus-IM V2	C, T, P*	6 A/D; 1 RS-232	64 Mb	√		Inductive modem	√	Optional pump
19plus V2	C, T, P	6 A/D; 1 RS-232	64 Mb	√	√	RS-232	√	Profiling or moored mode
37-SM	C, T, P*		8 Mb	√	√	RS-232 or -485	√	
37-SMP	C, T, P*		8 Mb	√	√	RS-232 or -485	√	Integral pump
37-SMP- IDO	C, T, P*	Integrated DO	8 Mb	√	√	RS-232 or -485	√	Integral pump
37-IM	C, T, P*		8 Mb	√		Inductive modem	√	
37-IMP	C, T, P*		8 Mb	√		Inductive modem	√	Integral pump
37-IMP- IDO	C, T, P*	Integrated DO	8 Mb	√		Inductive modem	√	Integral pump
37-SI	C, T, P*		8 Mb		√	RS-232 or -485	√	
37-SIP	C, T, P*		8 Mb		√	RS-232 or -485	√	Integral pump
37-SIP- IDO	C, T, P*	Integrated DO	8 Mb		√	RS-232 or -485	√	Integral pump
39	T, P*		32 Mb usable	√	Optional	RS-232	√	
39-IM	T, P*		32 Mb usable	√		Inductive modem	√	
56	T		64 MB	√		USB		
26plus	T, P	C optional	32 Mb	√	√	RS-232	√ (tides, waves, wave statistics)	Wave & tide recorder
53	T, P	C optional	32 Mb	√	√	RS-232	√	Bottom pressure recorder
54	T, P		128 Mb	Optional	√	RS-232	√	Tsunami pressure sensor

C = conductivity, T = temperature, P = pressure, DO = dissolved oxygen, \* = optional

## Inductive Modem (IM) Instruments

SBE	Measures (C, T, P)	Auxiliary Sensors	Memory	Power		Comments
				Internal	External	
16plus-IM V2	C, T, P*	6 A/D; 1 RS-232	64 Mb	√		Optional pump
37-IM	C, T, P*		2 Mb	√		
37-IMP	C, T, P*		2 Mb	√		Integral pump
37-IMP- IDO	C, T, P*	Integrated DO	2 Mb	√		Integral pump
39-IM	T, P*		32 Mb usable	√		
44		1 RS-232	30 Kb FIFO buffer	√	√	Integrates current meter, Doppler profiler, etc. with standard serial interface to IM telemetry system
UIMM		1 RS-232	16 Kb Sample Data Memory		√	Integrates current meter, Doppler profiler, etc. with standard serial interface to IM telemetry system; more flexible & economical than SBE 44

C = conductivity, T = temperature, P = pressure, DO = dissolved oxygen, \* = optional

## Shipboard Salinographs (measure Conductivity & Temperature)

SBE	Auxiliary A/D Sensors	Remote T Sensor Input	NMEA Navigation Data Input	Memory	Power		Communication	Real-Time Data
					Internal	External		
21	4	√	√	64 Mb		√	RS-232	√
45		√*	√*			√	RS-232	√

\* With optional PN 90402 SBE 45 Power, Navigation, and Remote Temperature Interface Box

## Other Products

Sea-Bird manufactures many other products, including: **Data loggers and counters, CTD surface power and telemetry systems, Modular sensors and components.**