



**SEA-BIRD**  
SCIENTIFIC

## SBE16plusV2 SeaCAT Moored

### Instrument Configuration

Instrument Serial Number: 16-50669  
Instrument Firmware Version: 3.2.1  
Zero Conductivity Frequency: 2616.96  
Communications Format: RS232  
Communications Settings: 9600 baud, 8 Data Bits, No Parity

### Installed Devices/Sensors

<i>Data Format</i>	<i>Measurement</i>	<i>Sensor Type</i>	<i>Serial Number</i>	<i>Rating</i>
Count	Temperature	Internal	N/A	N/A
Frequency	Conductivity	Internal	N/A	N/A
Count	Pressure Sensor	Druck	12120860	600m(600 dBar)
NONE	N/A	SBE 5	12676	600m

**Maximum Depth: 600m**

**CAUTION** - The maximum deployment depth will be limited by the measurement range of the pressure sensor, if installed, an attached sensor, if installed, or the housing.



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SENSOR SERIAL NUMBER: 50669  
CALIBRATION DATE: 03-Aug-25

SBE 16plus V2 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

a0 = 1.242199e-03  
a1 = 2.738484e-04  
a2 = -7.781302e-07  
a3 = 1.654133e-07

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	563719.300	1.0000	0.0000
4.5000	498168.364	4.5000	-0.0000
15.0000	337757.300	15.0001	0.0001
18.5000	295228.200	18.4999	-0.0001
24.0000	237840.800	24.0001	0.0001
29.0000	194426.100	29.0000	-0.0000
32.5000	168310.600	32.5000	0.0000

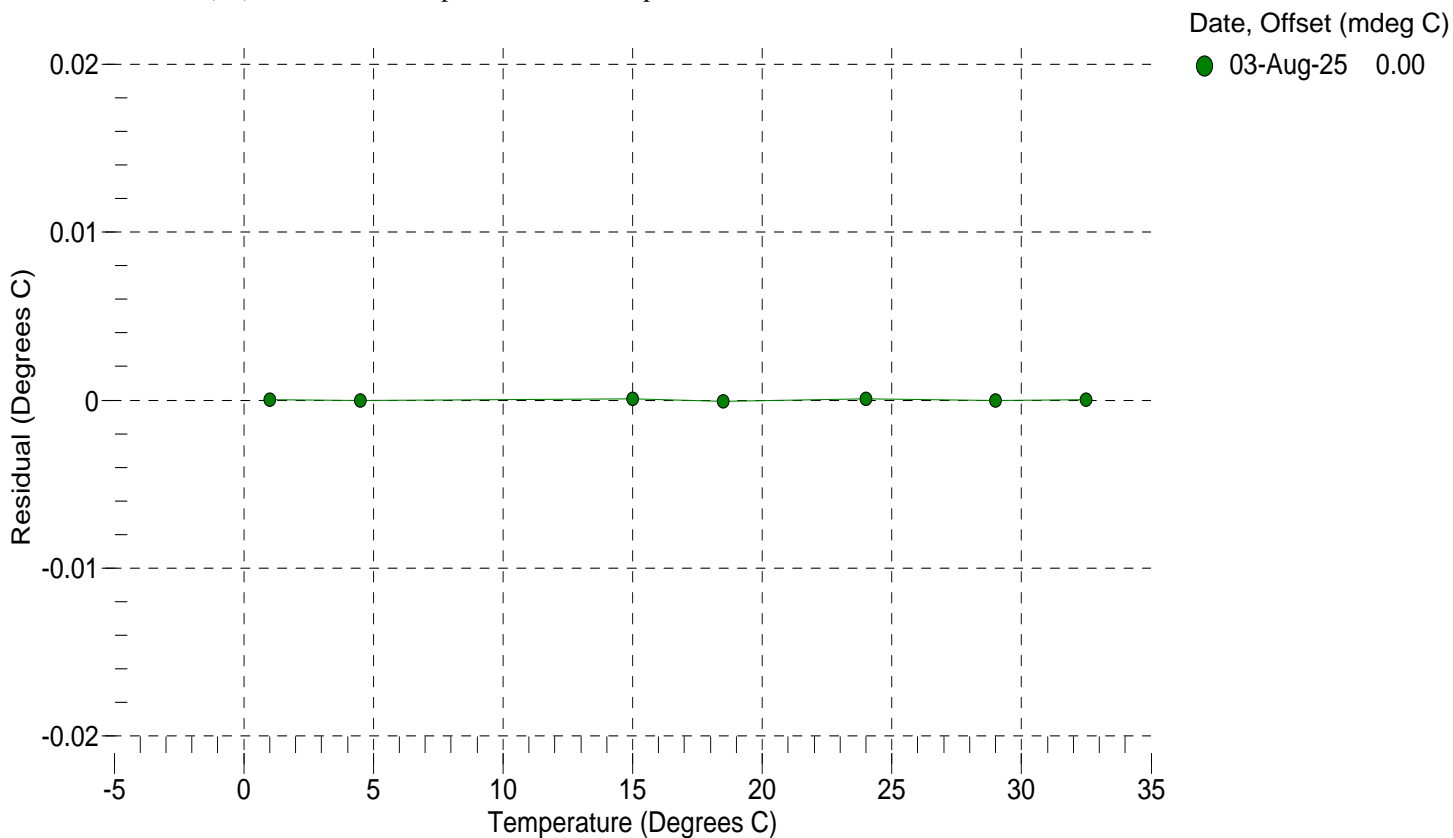
n = Instrument Output (counts)

$MV = (n - 524288) / 1.6e+007$

$R = (MV * 2.900e+009 + 1.024e+008) / (2.048e+004 - MV * 2.0e+005)$

Temperature ITS-90 (°C) =  $1 / \{a0 + a1[\ln(R)] + a2[\ln^2(R)] + a3[\ln^3(R)]\} - 273.15$

Residual (°C) = instrument temperature - bath temperature





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SENSOR SERIAL NUMBER: 50669  
CALIBRATION DATE: 03-Aug-25

SBE 16plus V2 CONDUCTIVITY CALIBRATION DATA  
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

#### COEFFICIENTS:

g = -9.899086e-01  
h = 1.446597e-01  
i = -1.250154e-04  
j = 3.085192e-05

CPcor = -9.5700e-008  
CTcor = 3.2500e-006

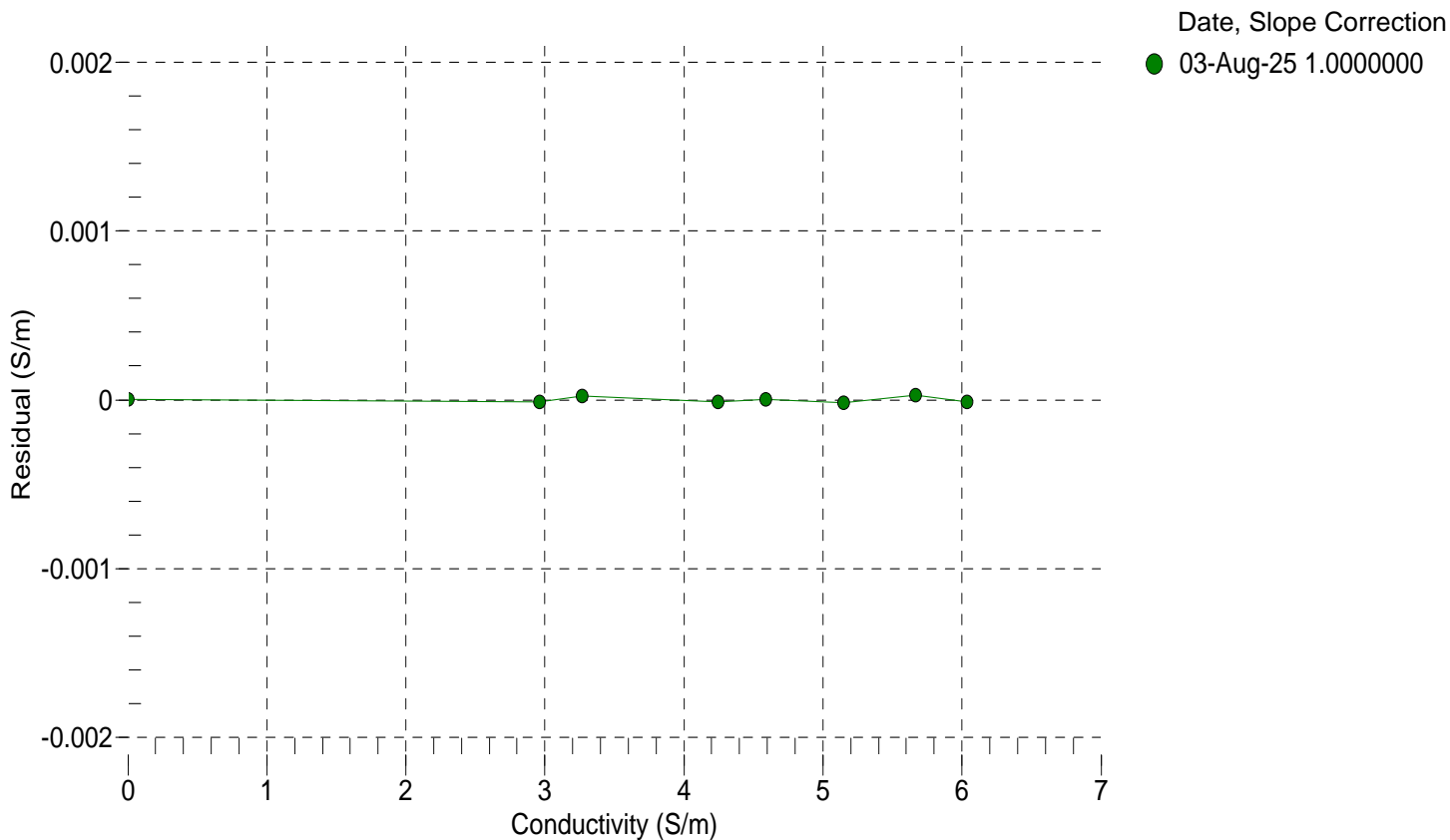
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2616.96	0.0000	0.00000
1.0000	34.6462	2.96281	5223.85	2.9628	-0.00001
4.5000	34.6273	3.26864	5421.47	3.2687	0.00002
15.0000	34.5868	4.24643	6009.03	4.2464	-0.00001
18.5000	34.5782	4.59018	6202.13	4.5902	0.00000
24.0000	34.5687	5.14585	6501.86	5.1458	-0.00002
29.0000	34.5628	5.66545	6769.86	5.6655	0.00003
32.5000	34.5582	6.03605	6954.49	6.0360	-0.00001

f = Instrument Output (Hz) / 1000.0

t = temperature (°C); p = pressure (decibars);  $\delta$  = CTcor;  $\epsilon$  = CPcor;

Conductivity (S/m) =  $(g + h * f^2 + i * f^3 + j * f^4) / (1 + \delta * t + \epsilon * p)$

Residual (Siemens/meter) = instrument conductivity - bath conductivity





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SENSOR SERIAL NUMBER: 50669  
CALIBRATION DATE: 29-Jul-25

SBE 16plus V2 PRESSURE CALIBRATION DATA  
870 psia S/N 12120860

#### COEFFICIENTS:

PA0 =	1.210623e+00	PTCA0 =	5.247506e+05
PA1 =	2.629647e-03	PTCA1 =	3.420309e+01
PA2 =	2.506266e-11	PTCA2 =	-6.036359e-01
PTEMPA0 =	-6.060735e+01	PTCB0 =	2.522613e+01
PTEMPA1 =	5.408471e+01	PTCB1 =	2.250000e-04
PTEMPA2 =	-5.211645e-01	PTCB2 =	0.000000e+00

#### PRESSURE SPAN CALIBRATION

#### THERMAL CORRECTION

PRESSURE (PSIA)	INSTRUMENT OUTPUT (counts)	THERMISTOR OUTPUT (volts)	COMPUTED PRESSURE (PSIA)	RESIDUAL (%FSR)	TEMP (°C)	THERMISTOR OUTPUT (volts)	INSTRUMENT OUTPUT (counts)
14.59	530312.0	1.6	14.62	0.00	32.50	1.75	530474.30
179.58	592973.0	1.6	179.47	-0.01	29.00	1.68	530471.33
359.20	661171.0	1.6	359.12	-0.01	24.00	1.59	530454.75
538.91	729336.0	1.6	538.91	0.00	18.50	1.48	530418.17
718.60	797370.0	1.6	718.59	-0.00	15.00	1.42	530377.14
868.34	853983.0	1.6	868.29	-0.01	4.50	1.22	530141.23
718.74	797450.0	1.6	718.80	0.01	1.00	1.15	530018.45
539.04	729412.0	1.6	539.11	0.01	TEMPERATURE (°C)		SPAN
359.37	661275.0	1.6	359.39	0.00			
179.65	593051.0	1.6	179.67	0.00			
14.59	530318.0	1.6	14.63	0.00			
					-5.00		25.23
					35.00		25.23

y = thermistor output (counts)

t = PTEMPA0 + PTEMPA1 \* y + PTEMPA2 \* y<sup>2</sup>

x = instrument output - PTCA0 - PTCA1 \* t - PTCA2 \* t<sup>2</sup>

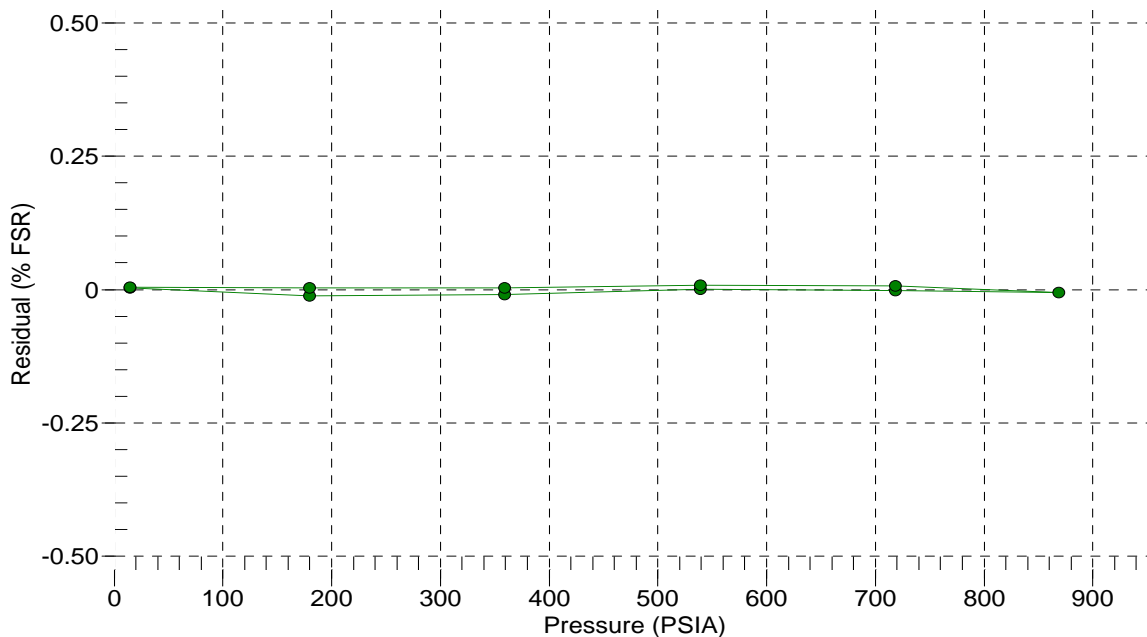
n = x \* PTCB0 / (PTCB0 + PTCB1 \* t + PTCB2 \* t<sup>2</sup>)

pressure (PSIA) = PA0 + PA1 \* n + PA2 \* n<sup>2</sup>

Residual (%FSR) = (computed pressure - true pressure) \* 100 / Full Scale Range

Date, Offset (%FSR)

● 29-Jul-25 -0.00





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## Pressure Test Certificate

Test Date: **2025-07-22**

Description: **SBE-5M Submersible Pump**

### Sensor Information:

Model Number: **SBE-5M**

Serial Number: **12676**

### Pressure Test Protocol:

Low Pressure Test: **40** PSI Held For: **15** Minutes

High Pressure Test: **870** PSI Held For: **15** Minutes

Passed Test: **True**

Tested By: **AM**

