



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-19372
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2628.53
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	Druck	12406090	2000m(2000 dBar)



Sea-Bird Scientific
13431 NE 20th Street
Bellevue, WA 98005
USA

+1 425-643-9866
seabird@seabird.com
www.seabird.com

SENSOR SERIAL NUMBER: 19372
CALIBRATION DATE: 24-Jun-23

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

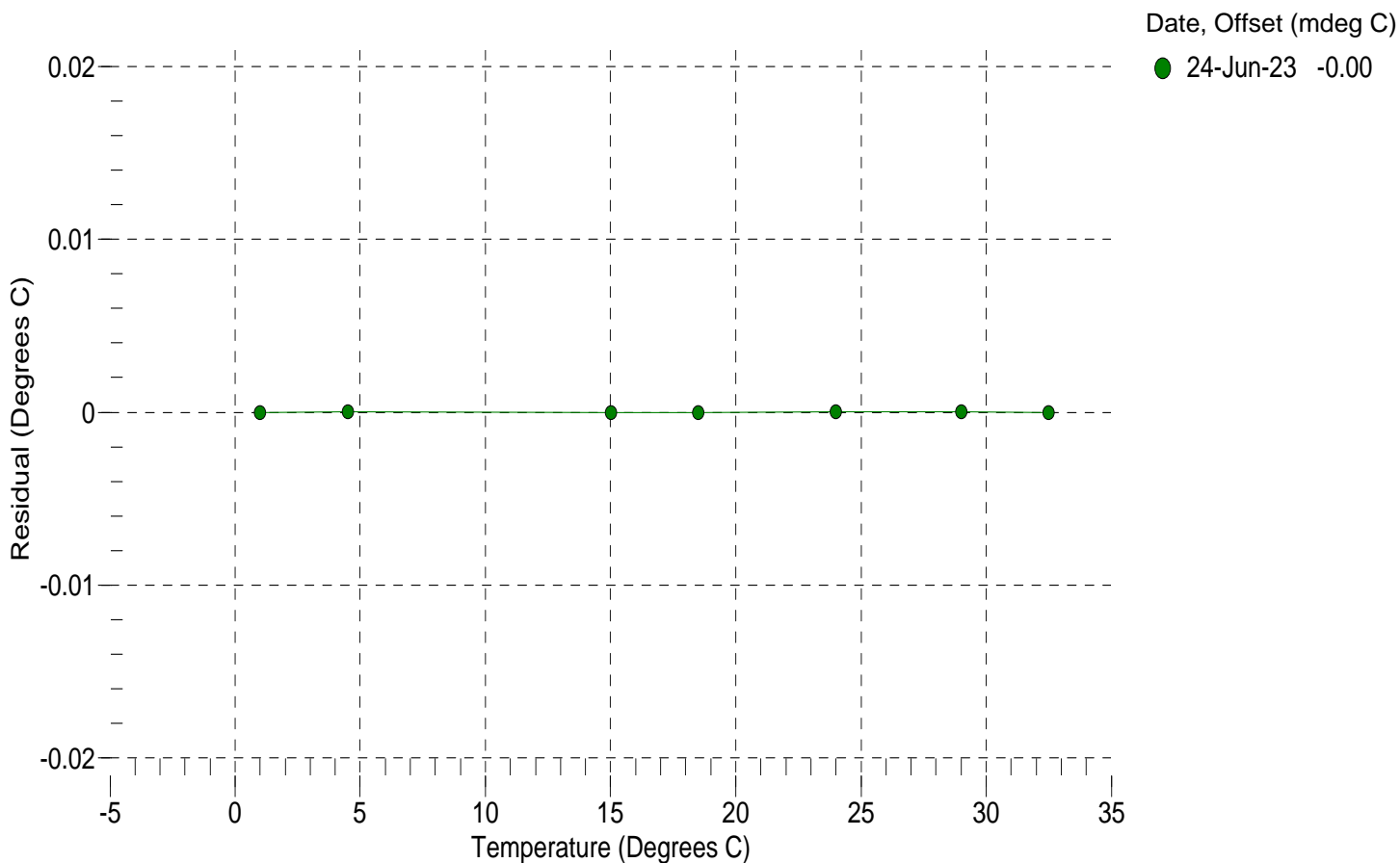
a0 = -9.214105e-004
a1 = 3.054723e-004
a2 = -4.494250e-006
a3 = 1.654518e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0001	15113027.9	1.0001	-0.0000
4.5000	12910740.3	4.5000	0.0000
15.0000	8208107.5	15.0000	-0.0000
18.5000	7101865.4	18.5000	-0.0000
23.9940	5691984.3	23.9940	0.0000
29.0000	4680969.8	29.0000	0.0000
32.5001	4096372.6	32.5001	-0.0000

n = Instrument Output (counts)

Temperature ITS-90 (°C) = $1 / \{a_0 + a_1[\ln(n)] + a_2[\ln^2(n)] + a_3[\ln^3(n)]\} - 273.15$

Residual (°C) = instrument temperature - bath temperature





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SBE 41 CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -1.001993e+000
h = 1.450938e-001
i = -1.042250e-004
j = 3.062560e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = -2.3775e-006

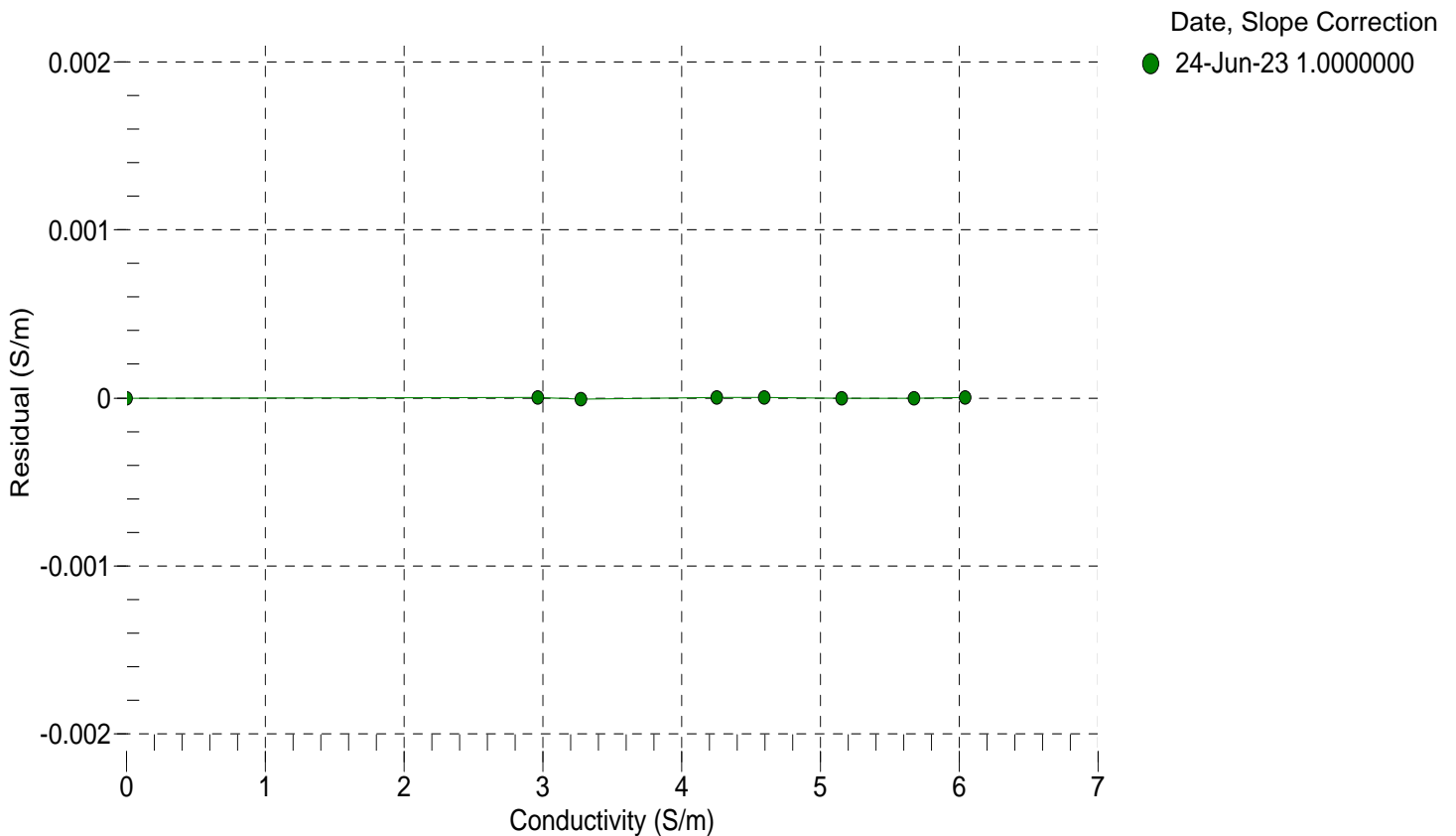
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2628.53	0.00000	0.00000
1.0001	34.7147	2.96812	5225.67	2.96812	0.00000
4.5000	34.6957	3.27447	5422.76	3.27446	-0.00001
15.0000	34.6547	4.25388	6008.94	4.25388	0.00000
18.5000	34.6466	4.59828	6201.64	4.59828	0.00000
23.9940	34.6382	5.15444	6500.48	5.15443	-0.00000
29.0000	34.6341	5.67583	6768.36	5.67582	-0.00000
32.5001	34.6310	6.04733	6952.77	6.04734	0.00000

$f = \text{Instrument Output(Hz)} * \text{sqrt}(1.0 + \text{WBOTC} * t) / 1000.0$

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

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

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





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CALIBRATION DATE: 15-Jun-23

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 12406090

COEFFICIENTS:

PA0 =	3.279080e-001	PTCA0 =	3.120412e+003
PA1 =	3.913069e-004	PTCA1 =	4.549779e+001
PA2 =	-2.600242e-013	PTCA2 =	-2.323576e-001
PTHA0 =	3.002132e+002	PTCB0 =	3.235197e+005
PTHA1 =	-6.253777e-005	PTCB1 =	2.403760e+000
PTHA2 =	-8.930812e-013	PTCB2 =	4.328723e-002

PRESSURE SPAN CALIBRATION

THERMAL CORRECTION

PRESSURE (PSIA)	INSTRUMENT OUTPUT (counts)	THERMISTOR OUTPUT (counts)	COMPUTED PRESSURE (PSIA)	RESIDUAL (%FSR)	TEMP (°C)	THERMISTOR OUTPUT (counts)	INSTRUMENT OUTPUT (counts)
14.59	40286.8	4217327.6	14.54	-0.00	32.50	4046962.20	42265.73
590.22	1513791.2	4211755.6	590.41	0.01	29.00	4097089.60	42214.60
1165.93	2989086.0	4209753.6	1165.85	-0.00	23.99	4168559.80	42055.43
1741.98	4469222.0	4208162.8	1742.04	0.00	18.50	4247178.00	41807.53
2318.09	5952317.0	4206884.8	2318.25	0.01	15.00	4296955.10	41656.46
2894.03	7437112.6	4205782.4	2893.96	-0.00	4.50	4446290.20	41294.09
2318.09	5951849.8	4205971.6	2318.06	-0.00	1.00	4495821.80	41093.47
1741.98	4469031.4	4206159.2	1741.97	-0.00	<div>TEMPERATURE (°C) SPAN</div> <div>2.01 323524.75</div> <div>20.89 323588.84</div> <div>33.01 323646.28</div>		
1166.11	2989392.0	4206418.4	1165.96	-0.00			
590.35	1513468.6	4206709.6	590.28	-0.00			
14.60	40573.0	4206630.0	14.64	0.00			

y = thermistor output (counts)

t = PTHA0 + PTHA1 * y + PTHA2 * y²

x = instrument output - PTCA0 - PTCA1 * t - PTCA2 * t²

n = x * PTCB0 / (PTCB0 + PTCB1 * t + PTCB2 * t²)

pressure (PSIA) = PA0 + PA1 * n + PA2 * n²

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

Date, Offset (%FSR)

● 15-Jun-23 -0.00

