



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-14429
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2591.24
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	11890053	2000m(2000 dBar)



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www.seabird.com

SENSOR SERIAL NUMBER: 14429
CALIBRATION DATE: 09-Jun-21

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

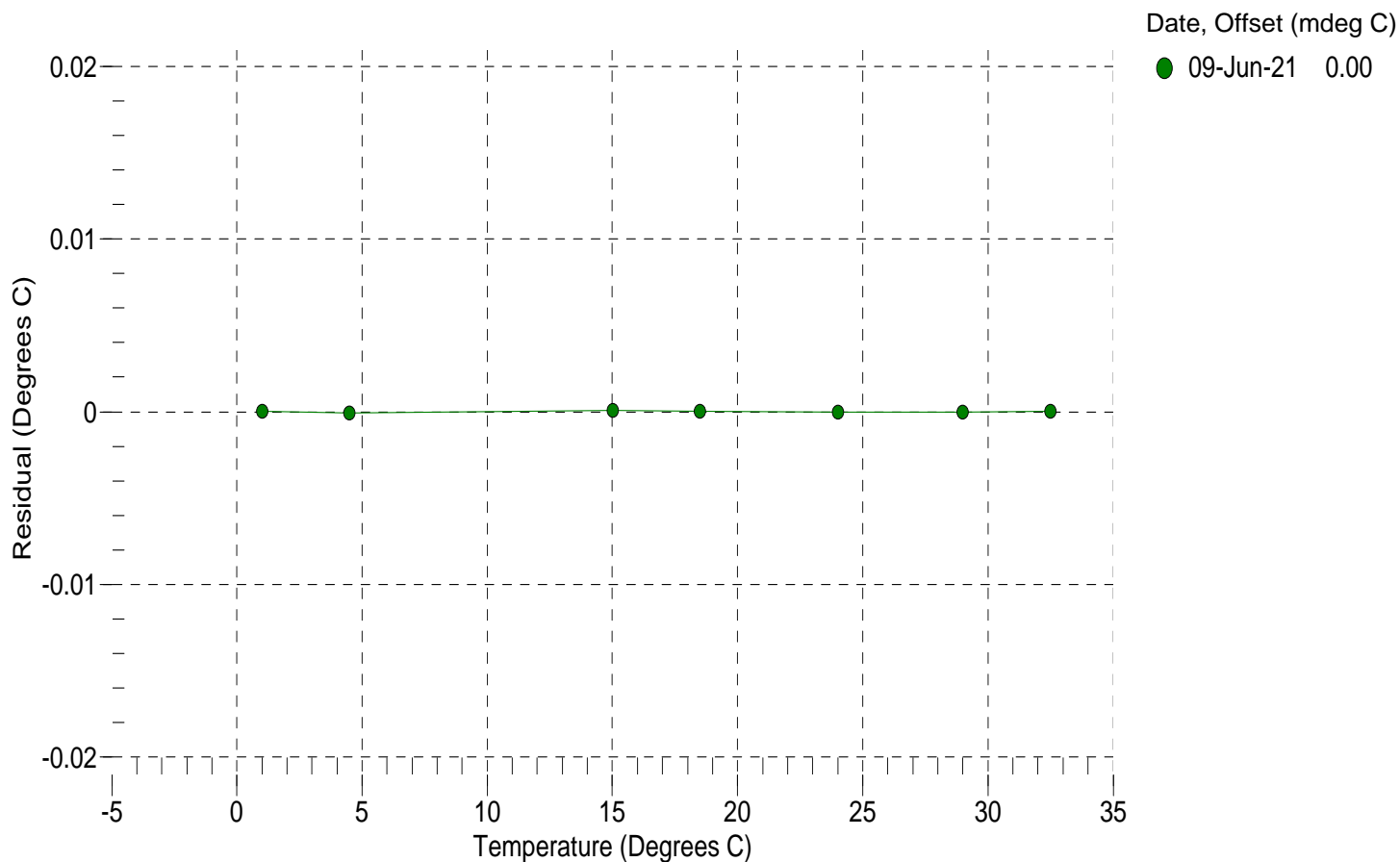
a0 = -8.511818e-004
a1 = 2.866838e-004
a2 = -3.290515e-006
a3 = 1.410632e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	16265370.7	1.0000	0.0000
4.5000	13906832.7	4.4999	-0.0001
15.0000	8862576.5	15.0001	0.0001
18.5000	7673978.1	18.5000	0.0000
24.0000	6156146.5	24.0000	-0.0000
29.0000	5068927.8	29.0000	-0.0000
32.5000	4438843.7	32.5000	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 = -1.028369e+000
h = 1.539937e-001
i = -4.794150e-004
j = 6.009180e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 4.1803e-007

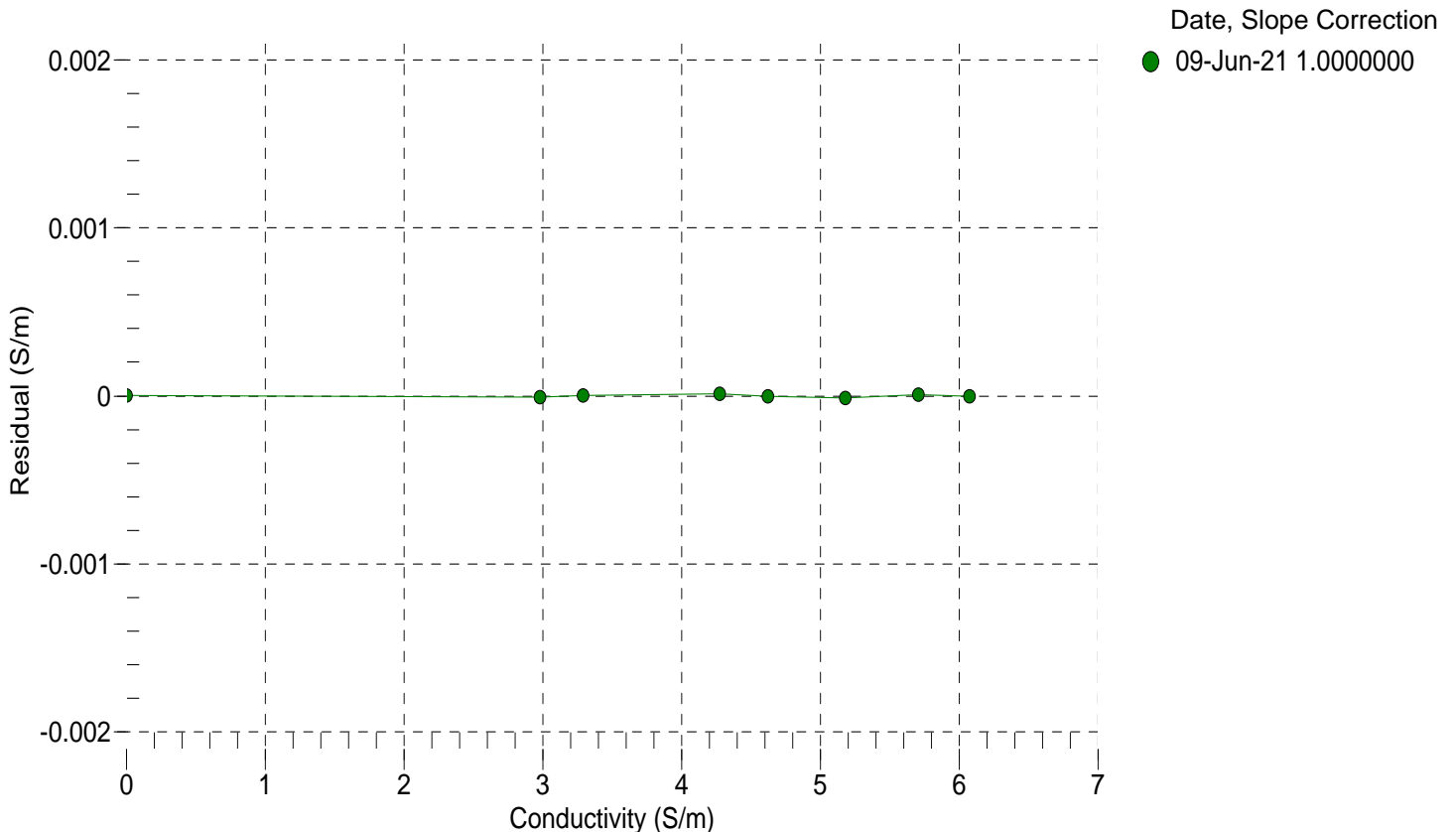
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2591.24	0.00000	0.00000
1.0000	34.9212	2.98407	5119.14	2.98407	-0.00001
4.5000	34.9020	3.29201	5311.48	3.29202	0.00000
15.0000	34.8611	4.27653	5883.57	4.27654	0.00001
18.5000	34.8528	4.62269	6071.63	4.62269	-0.00000
24.0000	34.8439	5.18228	6363.57	5.18226	-0.00001
29.0000	34.8389	5.70560	6624.61	5.70561	0.00001
32.5000	34.8353	6.07893	6804.48	6.07893	-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: 01-Jun-21

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11890053

COEFFICIENTS:

PA0 =	3.177897e-001	PTCA0 =	4.548175e+002
PA1 =	3.906894e-004	PTCA1 =	7.026497e+001
PA2 =	-2.729169e-013	PTCA2 =	-1.516260e+000
PTHA0 =	3.160757e+002	PTCB0 =	3.165422e+005
PTHA1 =	-6.162506e-005	PTCB1 =	6.063934e+000
PTHA2 =	-1.314467e-012	PTCB2 =	1.758421e-001

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)
14.53	37645.3	4347955.8	14.52	-0.00	32.50	4221500.40	38764.90
590.86	1515842.1	4346041.2	590.97	0.00	29.00	4269590.60	38888.38
1167.87	2998485.1	4345329.0	1167.97	0.00	24.00	4338136.80	38958.98
1744.70	4483739.5	4344670.2	1744.77	0.00	18.50	4413345.40	38875.26
2321.62	5972437.9	4344045.8	2321.70	0.00	15.00	4461138.00	38778.01
2898.46	7463792.8	4343455.0	2898.45	-0.00	4.50	4603816.20	38431.60
2321.60	5972103.2	4343844.0	2321.57	-0.00	1.00	4651358.20	38157.05
1745.15	4484329.5	4344198.4	1745.00	-0.01			
1167.78	2997683.1	4344565.6	1167.65	-0.00			
590.82	1515402.7	4344914.0	590.80	-0.00			
14.52	37579.1	4344128.4	14.49	-0.00			

TEMPERATURE (°C)	SPAN
1.96	316554.74
20.62	316742.02
32.96	316933.12

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)

● 01-Jun-21 0.00

