



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-14424
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2657.17
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	11891200	2000m(2000 dBar)



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www.seabird.com

SENSOR SERIAL NUMBER: 14424
CALIBRATION DATE: 09-Jun-21

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

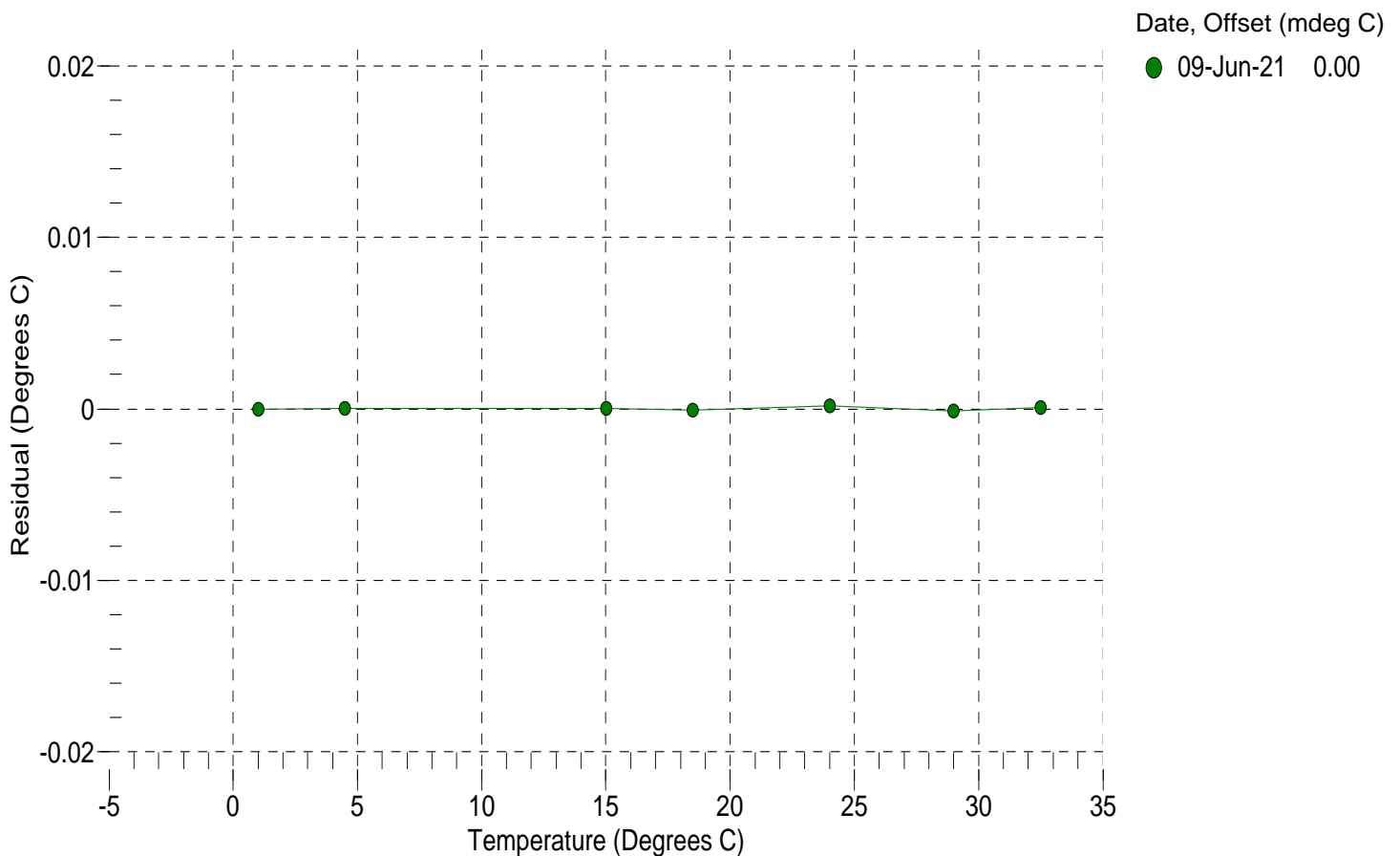
a0 = -1.038521e-003
a1 = 3.183608e-004
a2 = -5.244060e-006
a3 = 1.813395e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	17149629.2	1.0000	-0.0000
4.5000	14666758.0	4.5000	0.0000
15.0000	9353844.3	15.0000	0.0000
18.5000	8101269.5	18.4999	-0.0001
24.0000	6501218.6	24.0002	0.0002
29.0000	5354916.0	28.9999	-0.0001
32.5000	4690371.7	32.5001	0.0001

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 = -1.010306e+000
h = 1.439436e-001
i = -4.723388e-004
j = 5.670328e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 9.4074e-007

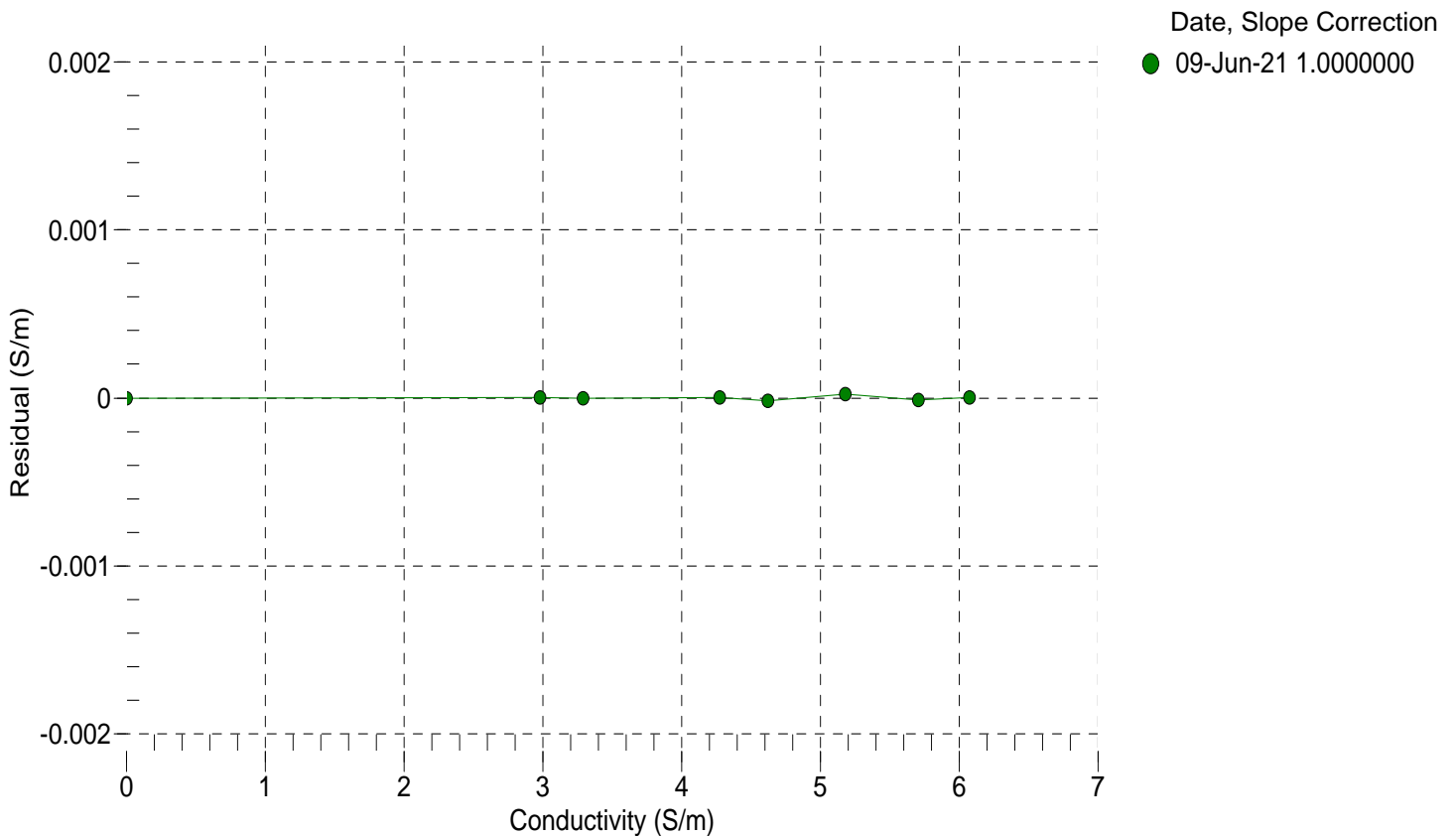
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2657.17	0.00000	0.00000
1.0000	34.9212	2.98407	5284.58	2.98408	0.00000
4.5000	34.9020	3.29201	5483.98	3.29201	-0.00000
15.0000	34.8611	4.27653	6076.89	4.27653	0.00000
18.5000	34.8528	4.62269	6271.72	4.62267	-0.00002
24.0000	34.8439	5.18228	6574.15	5.18230	0.00002
29.0000	34.8389	5.70560	6844.45	5.70559	-0.00001
32.5000	34.8353	6.07893	7030.71	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 11891200

COEFFICIENTS:

PA0 =	-1.198762e+000	PTCA0 =	6.257829e+003
PA1 =	3.900122e-004	PTCA1 =	-8.707650e+001
PA2 =	-2.681349e-013	PTCA2 =	-2.266290e+000
PTHA0 =	3.193663e+002	PTCB0 =	3.233902e+005
PTHA1 =	-6.182540e-005	PTCB1 =	1.530069e+001
PTHA2 =	-1.342725e-012	PTCB2 =	-1.590899e-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)
14.52	43379.5	4386426.0	14.47	-0.00	32.50	4248023.40	42584.70
590.70	1524152.5	4382489.8	590.92	0.01	29.00	4295776.60	43413.62
1167.31	3007878.9	4381421.0	1167.32	0.00	24.00	4363836.80	44463.03
1743.78	4494823.3	4380160.6	1743.79	0.00	18.50	4438521.40	45462.64
2320.22	5984934.3	4379204.4	2320.30	0.00	15.00	4485996.20	45985.39
2896.67	7477772.4	4378324.8	2896.66	-0.00	4.50	4627643.00	47360.63
2320.28	5984903.9	4378486.4	2320.28	0.00	1.00	4674867.40	47772.70
1744.25	4495673.6	4378608.8	1744.12	-0.00	TEMPERATURE (°C) SPAN		
1167.62	3008352.0	4378556.8	1167.51	-0.00			
590.75	1523738.8	4378644.8	590.77	0.00			
14.51	43215.1	4376385.8	14.46	-0.00			
					1.96	323419.58	
					20.62	323638.11	
					32.96	323721.73	

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

