



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-12996
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2642.99
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	11493663	2000m(2000 dBar)



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www.seabird.com

SENSOR SERIAL NUMBER: 12996
CALIBRATION DATE: 01-Jul-20

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

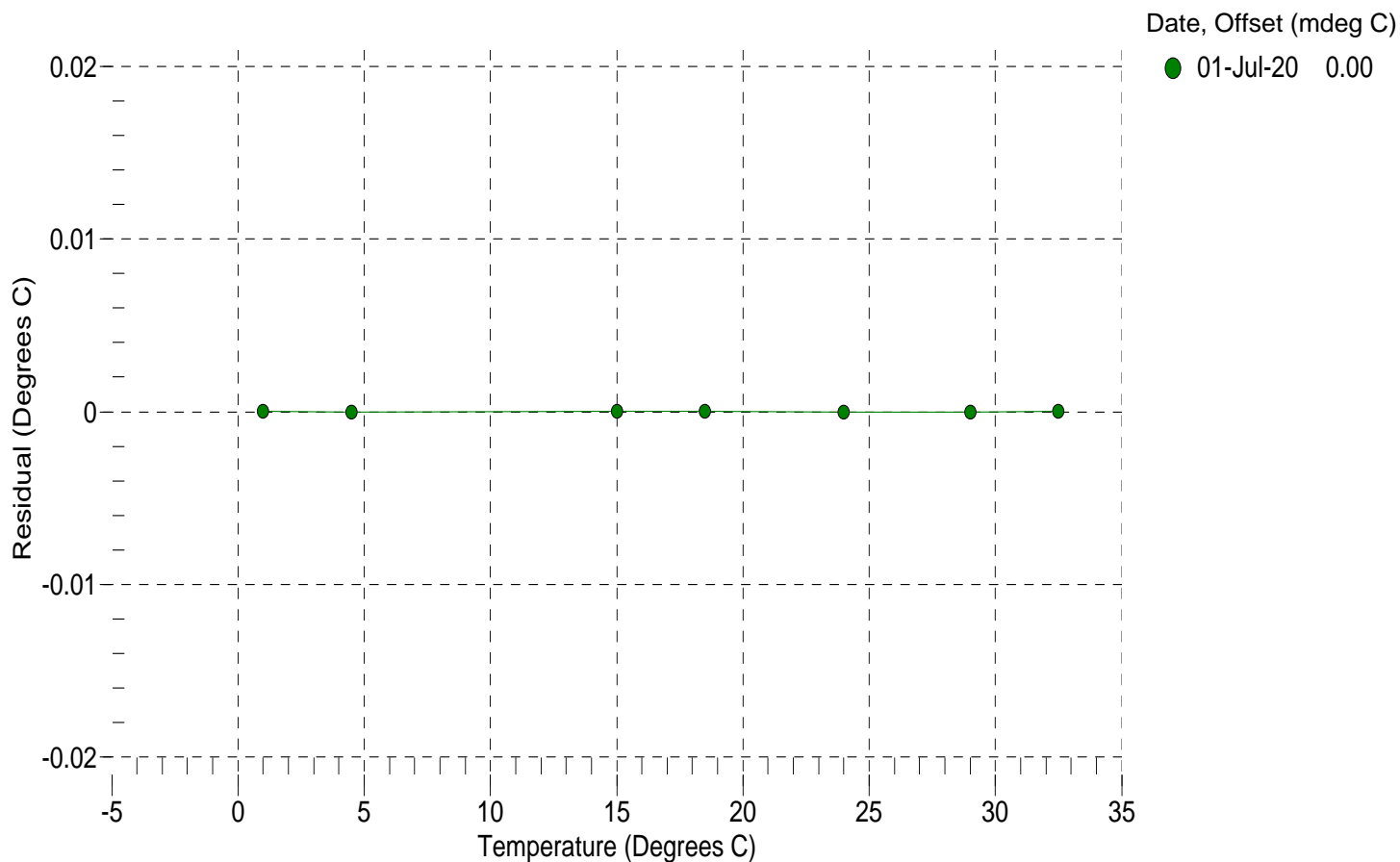
a0 = -9.171559e-004
a1 = 2.942247e-004
a2 = -3.766551e-006
a3 = 1.499566e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	18095098.0	1.0000	0.0000
4.5000	15470219.4	4.5000	-0.0000
15.0000	9857016.2	15.0000	0.0000
18.5000	8534490.0	18.5000	0.0000
24.0000	6845791.6	24.0000	-0.0000
29.0000	5636327.3	29.0000	-0.0000
32.5000	4935439.7	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 = -1.001728e+000
h = 1.436002e-001
i = -1.651314e-004
j = 3.409610e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 2.8374e-007

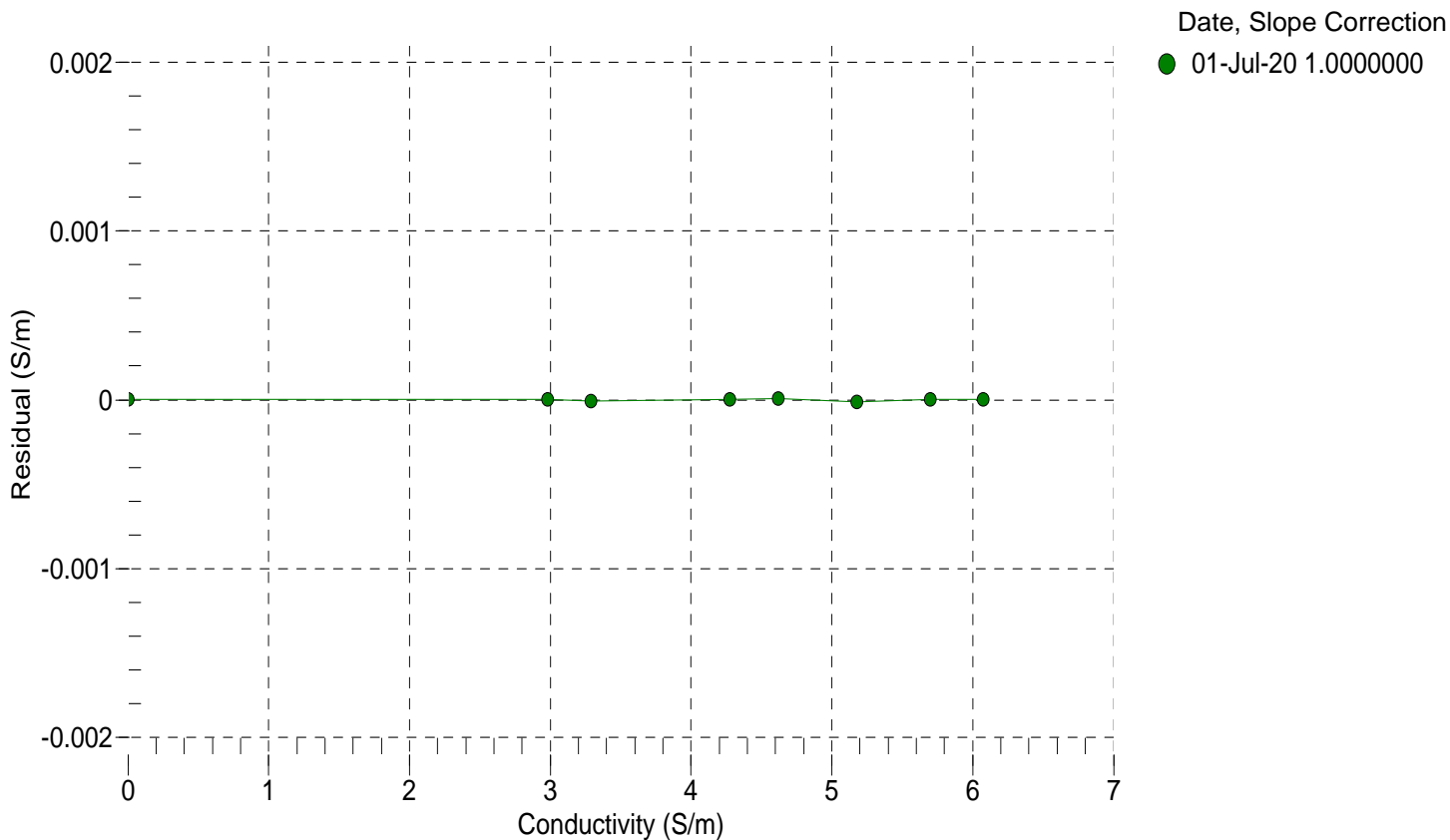
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2642.99	0.00000	0.00000
1.0000	34.8826	2.98109	5265.07	2.98110	0.00000
4.5000	34.8594	3.28839	5463.66	3.28838	-0.00001
15.0000	34.8207	4.27210	6055.01	4.27210	0.00000
18.5000	34.8132	4.61800	6249.39	4.61801	0.00001
24.0000	34.8056	5.17721	6551.12	5.17720	-0.00001
29.0000	34.8019	5.70023	6820.94	5.70023	0.00000
32.5000	34.7998	6.07344	7006.94	6.07344	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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SENSOR SERIAL NUMBER: 12996
CALIBRATION DATE: 24-Jun-20

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11493663

COEFFICIENTS:

PA0 =	2.391317e-001	PTCA0 =	-7.102219e+003
PA1 =	3.908498e-004	PTCA1 =	6.302699e+001
PA2 =	-2.990751e-013	PTCA2 =	-1.580606e+000
PTHA0 =	2.873034e+002	PTCB0 =	3.146737e+005
PTHA1 =	-5.912227e-005	PTCB1 =	-1.474625e+001
PTHA2 =	-1.188012e-012	PTCB2 =	5.225251e-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)
14.49	29900.5	4125332.0	14.46	-0.00	32.50	3989784.40	31072.70
591.09	1507001.8	4117937.2	591.21	0.00	29.00	4040999.80	31281.72
1167.41	2986523.7	4117053.0	1167.59	0.01	24.00	4113538.40	31419.68
1743.58	4468884.1	4116164.4	1743.75	0.01	18.50	4193210.20	31378.04
2319.82	5954730.5	4115400.2	2319.95	0.00	15.00	4243861.60	31266.03
2895.77	7443268.2	4114711.0	2895.87	0.00	4.50	4395125.00	30986.04
2319.70	5953156.6	4115066.8	2319.34	-0.01	1.00	4445520.20	30834.08
1743.88	4468939.6	4115369.2	1743.77	-0.00			
1167.46	2985908.5	4115612.4	1167.34	-0.00			
590.97	1506187.1	4115894.0	590.89	-0.00			
14.48	29905.0	4114932.8	14.47	-0.00			

TEMPERATURE (°C)	SPAN
1.18	314657.03
20.55	314591.35
34.13	314779.09

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)

● 24-Jun-20 0.00

