



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-12938
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2673.18
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	11497957	2000m(2000 dBar)



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SENSOR SERIAL NUMBER: 12938
CALIBRATION DATE: 06-Jun-20

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

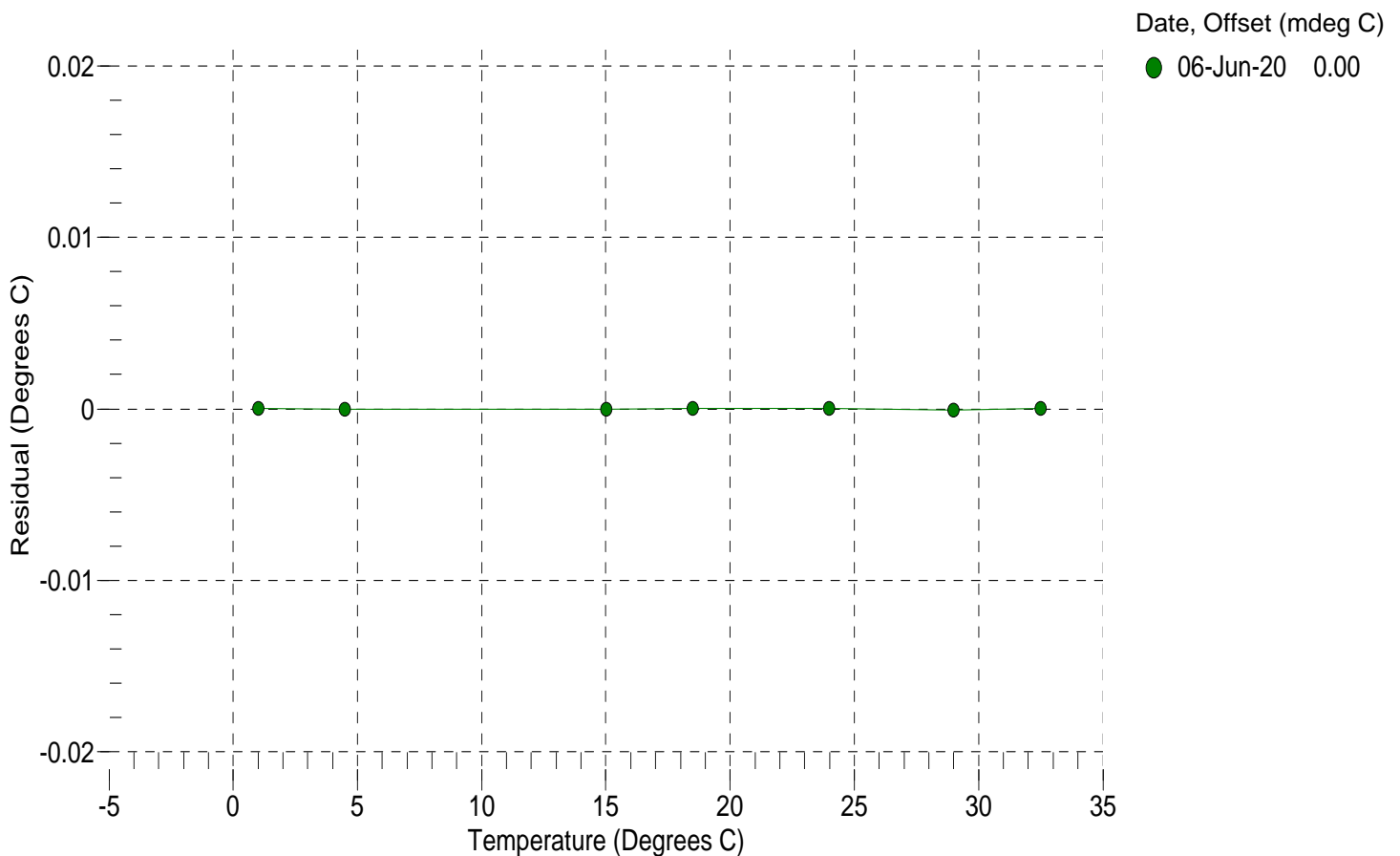
a0 = -8.478510e-004
a1 = 2.959971e-004
a2 = -3.939145e-006
a3 = 1.544443e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
0.9999	14166631.5	0.9999	0.0000
4.5000	12098088.9	4.5000	-0.0000
15.0000	7683968.0	15.0000	-0.0000
18.5000	6646271.9	18.5000	0.0000
23.9941	5324227.0	23.9941	0.0000
29.0000	4376668.0	28.9999	-0.0001
32.5000	3828907.7	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 = -9.970653e-001
h = 1.398625e-001
i = -2.296055e-004
j = 3.916633e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 5.9224e-007

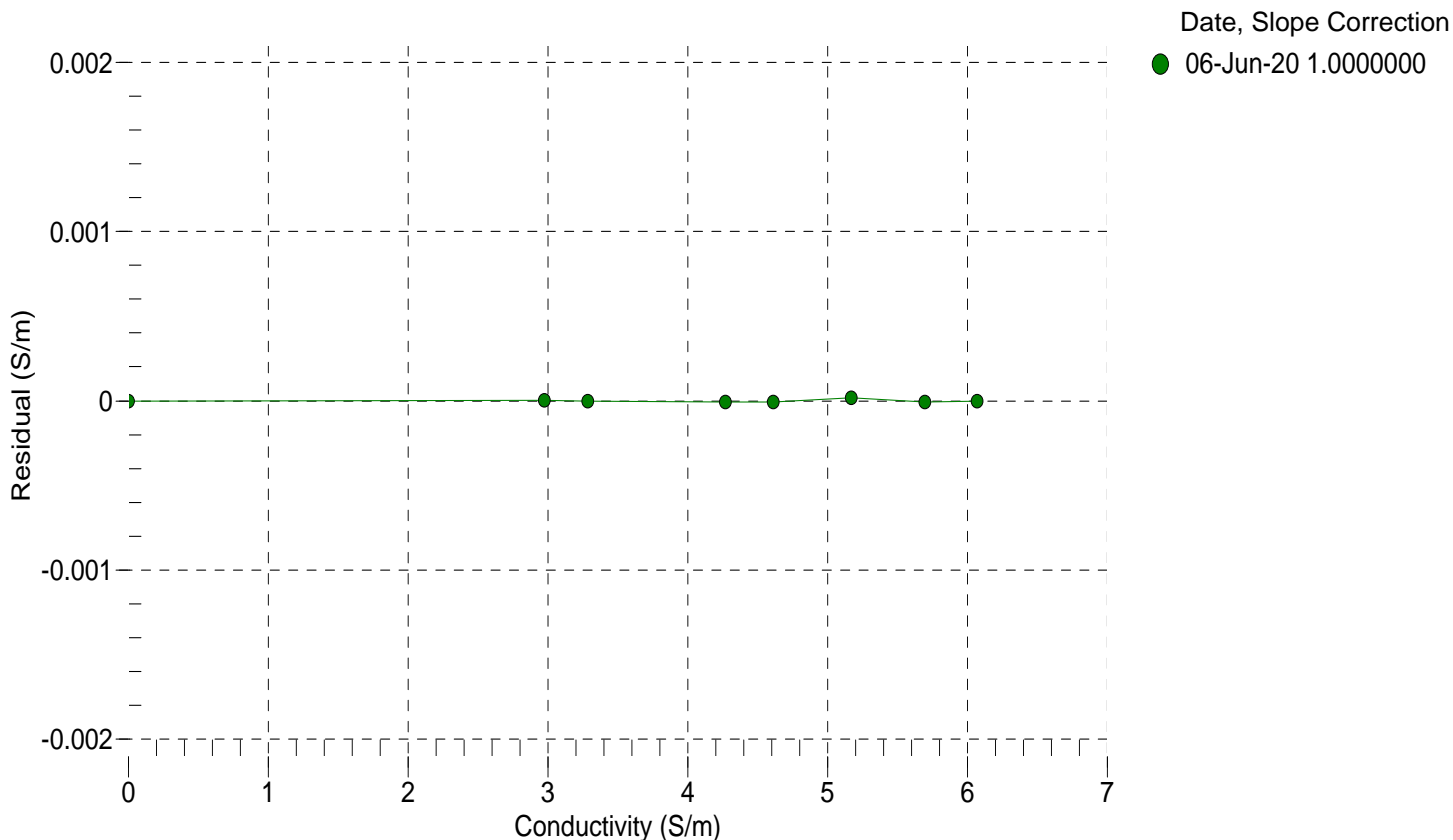
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2673.18	0.00000	0.00000
0.9999	34.8502	2.97858	5333.66	2.97858	0.00000
4.5000	34.8322	3.28608	5535.32	3.28607	-0.00000
15.0000	34.7957	4.26935	6134.96	4.26935	-0.00001
18.5000	34.7889	4.61513	6332.03	4.61512	-0.00001
23.9941	34.7819	5.17346	6637.58	5.17348	0.00002
29.0000	34.7780	5.69675	6911.29	5.69674	-0.00001
32.5000	34.7738	6.06942	7099.59	6.06942	-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: 12938
CALIBRATION DATE: 02-Jun-20

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11497957

COEFFICIENTS:

PA0 =	2.069960e-001	PTCA0 =	-2.066585e+003
PA1 =	3.906201e-004	PTCA1 =	4.527077e+001
PA2 =	-2.904100e-013	PTCA2 =	-9.615345e-001
PTHA0 =	3.296625e+002	PTCB0 =	3.146345e+005
PTHA1 =	-6.314766e-005	PTCB1 =	1.917231e+001
PTHA2 =	-1.330823e-012	PTCB2 =	-3.211287e-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)
14.58	35391.6	4455011.6	14.62	0.00	32.50	4313707.20	36139.90
590.65	1513204.5	4451323.0	590.73	0.00	29.00	4360519.20	36272.54
1166.55	2993712.3	4450022.2	1166.61	0.00	23.99	4427372.20	36337.59
1742.52	4477727.6	4448735.8	1742.59	0.00	18.50	4500647.40	36250.94
2318.45	5964982.0	4447516.0	2318.54	0.00	15.00	4547282.60	36127.92
2894.25	7454809.4	4446023.6	2894.20	-0.00	4.50	4686311.40	35905.82
2318.43	5964731.8	4445869.0	2318.44	0.00	1.00	4732678.60	35805.46
1742.86	4478201.8	4445415.2	1742.77	-0.00	<div>TEMPERATURE (°C) SPAN</div> <div>1.28 314658.43</div> <div>20.35 314891.63</div> <div>34.23 314914.47</div>		
1166.47	2993168.4	4445215.2	1166.40	-0.00			
590.50	1512270.7	4445053.8	590.36	-0.00			
14.58	35298.1	4442500.8	14.58	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)

● 02-Jun-20 -0.00

