



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-11709
Instrument Firmware Version: V 7.2.5
Zero Conductivity Frequency: 2602.54
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	11076163	2000m(2000 dBar)



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www.seabird.com

SENSOR SERIAL NUMBER: 11709
CALIBRATION DATE: 25-Apr-19

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

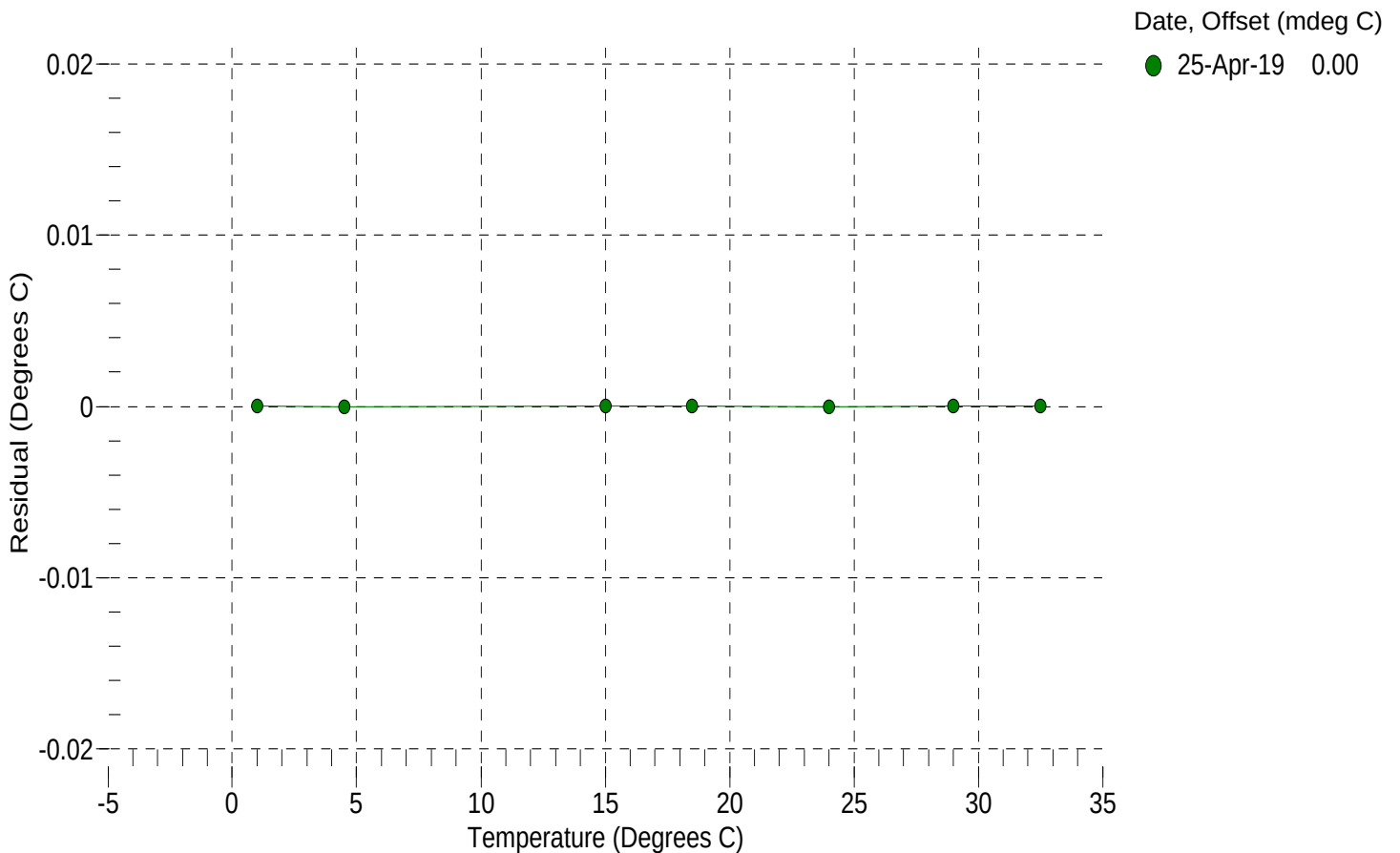
a0 = -8.937388e-004
a1 = 2.957833e-004
a2 = -3.837030e-006
a3 = 1.532762e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	15523647.1	1.0000	0.0000
4.5000	13277526.4	4.5000	-0.0000
15.0000	8470450.2	15.0000	0.0000
18.5000	7336862.0	18.5000	0.0000
24.0000	5888725.0	24.0000	-0.0000
29.0000	4850931.4	29.0000	0.0000
32.5001	4249261.2	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 = -1.006174e+000
h = 1.490895e-001
i = -3.273741e-004
j = 4.630682e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 4.1622e-007

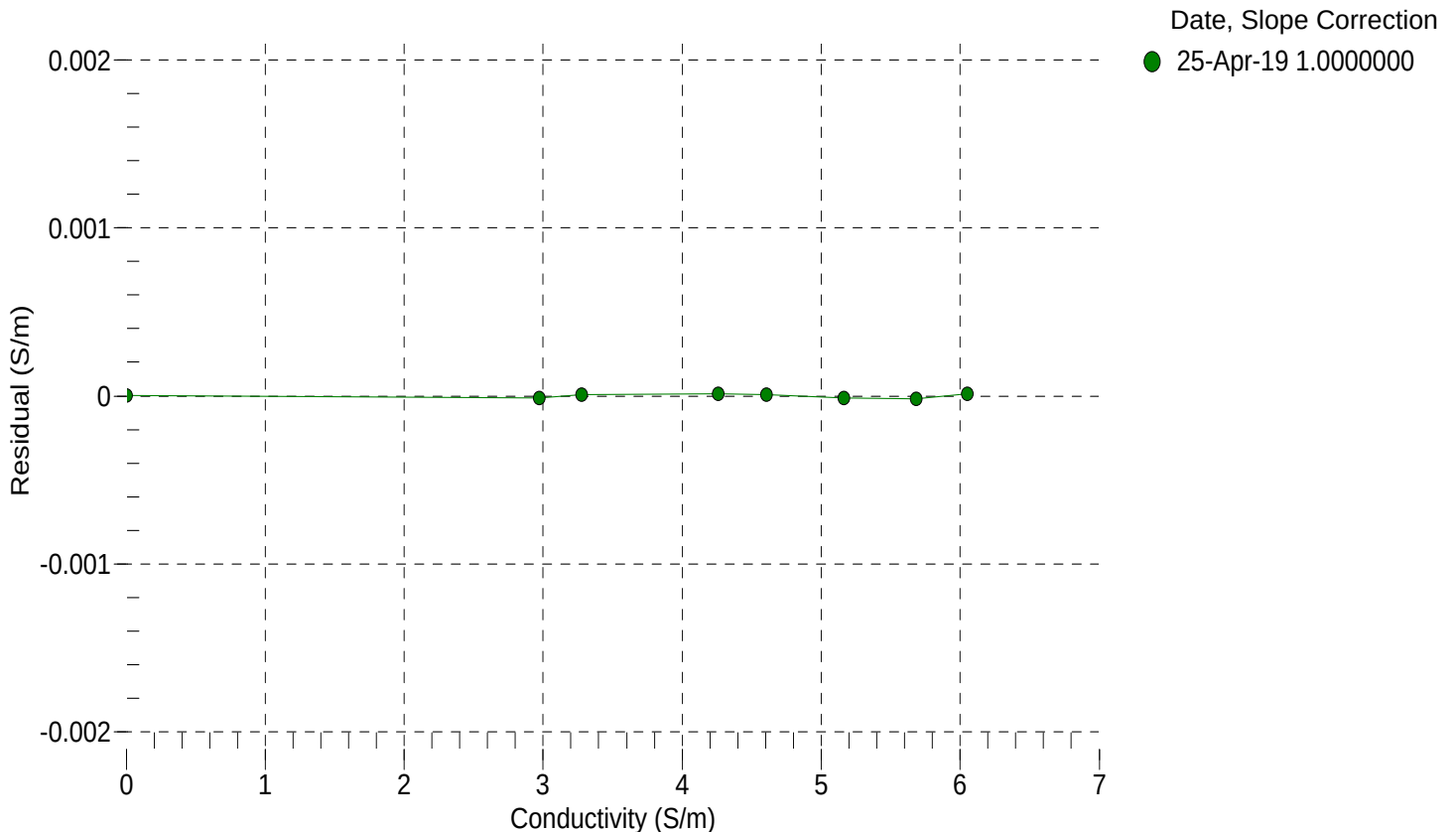
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2602.53	0.00000	0.00000
1.0000	34.7651	2.97201	5173.46	2.97199	-0.00001
4.5000	34.7450	3.27866	5368.62	3.27867	0.00001
15.0000	34.7024	4.25912	5949.02	4.25913	0.00001
18.5000	34.6932	4.60380	6139.76	4.60380	0.00001
24.0000	34.6828	5.16096	6435.84	5.16094	-0.00001
29.0000	34.6770	5.68207	6700.60	5.68205	-0.00002
32.5001	34.6727	6.05379	6883.06	6.05380	0.00001

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

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

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: 11709
CALIBRATION DATE: 19-Mar-19

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11076163

COEFFICIENTS:

PA0 =	2.211343e-001	PTCA0 =	2.942247e+003
PA1 =	3.933435e-004	PTCA1 =	1.609526e+001
PA2 =	-2.738506e-013	PTCA2 =	4.294588e-001
PTHA0 =	2.961264e+002	PTCB0 =	3.109707e+005
PTHA1 =	-6.246686e-005	PTCB1 =	2.534761e+001
PTHA2 =	-8.261131e-013	PTCB2 =	-4.267897e-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)
14.63	40002.5	4159164.8	14.56	-0.00	32.50	4007878.40	42564.70
590.72	1508158.3	4151119.0	590.77	0.00	29.00	4058406.20	42488.10
1166.99	2979404.1	4149953.0	1167.01	0.00	24.00	4130663.00	42300.20
1743.27	4453856.4	4148697.0	1743.32	0.00	18.50	4209998.20	42048.29
2319.53	5931297.0	4147689.6	2319.60	0.00	15.00	4260387.80	41922.74
2895.83	7411665.0	4146778.6	2895.83	-0.00	4.50	4411173.80	41738.49
2319.69	5931303.2	4146918.6	2319.60	-0.00	1.00	4461295.80	41628.11
1743.54	4454409.1	4147029.6	1743.53	-0.00	TEMPERATURE (°C) SPAN		
997.92	2544570.5	4145649.0	996.81	-0.04			
590.96	1508416.2	4145636.6	590.86	-0.00			
14.63	40432.2	4145252.6	14.72	0.00			
					2.12	311022.58	
					20.92	311314.17	
					32.96	311342.52	

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)

● 19-Mar-19 -0.00

