



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-11719
Instrument Firmware Version: V 7.2.5
Zero Conductivity Frequency: 2546.72
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	11162144	2000m(2000 dBar)



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www.seabird.com

SENSOR SERIAL NUMBER: 11719
CALIBRATION DATE: 26-Mar-19

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

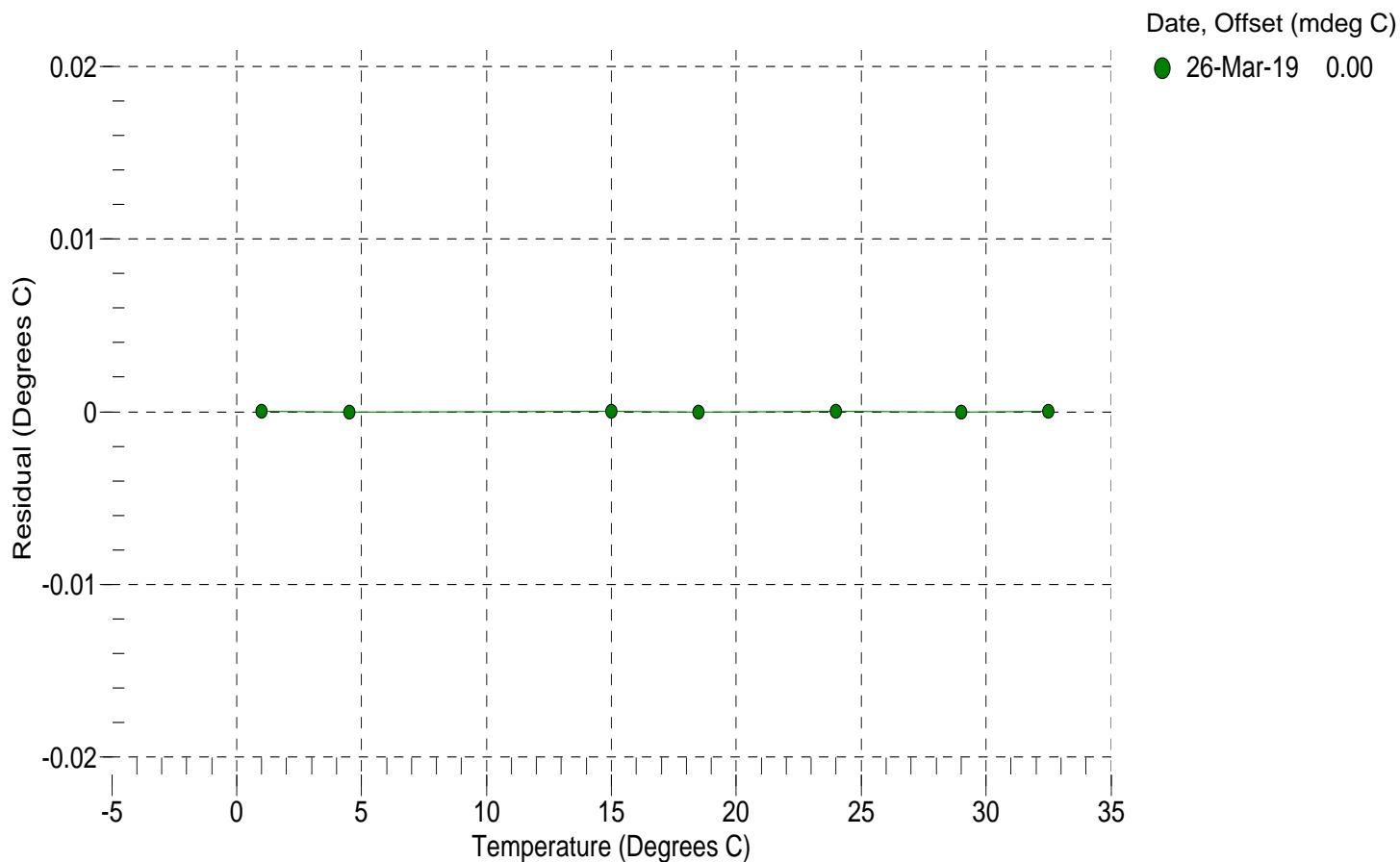
a0 = -9.028337e-004
a1 = 2.989497e-004
a2 = -4.054147e-006
a3 = 1.574951e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	15368256.4	1.0000	0.0000
4.5000	13140212.4	4.5000	-0.0000
15.0000	8374787.9	15.0000	0.0000
18.5000	7251792.1	18.5000	-0.0000
24.0000	5817709.2	24.0000	0.0000
29.0000	4790493.0	29.0000	-0.0000
32.5001	4195149.8	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 = -1.003865e+000
h = 1.554189e-001
i = -3.888682e-004
j = 5.396826e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 1.3087e-007

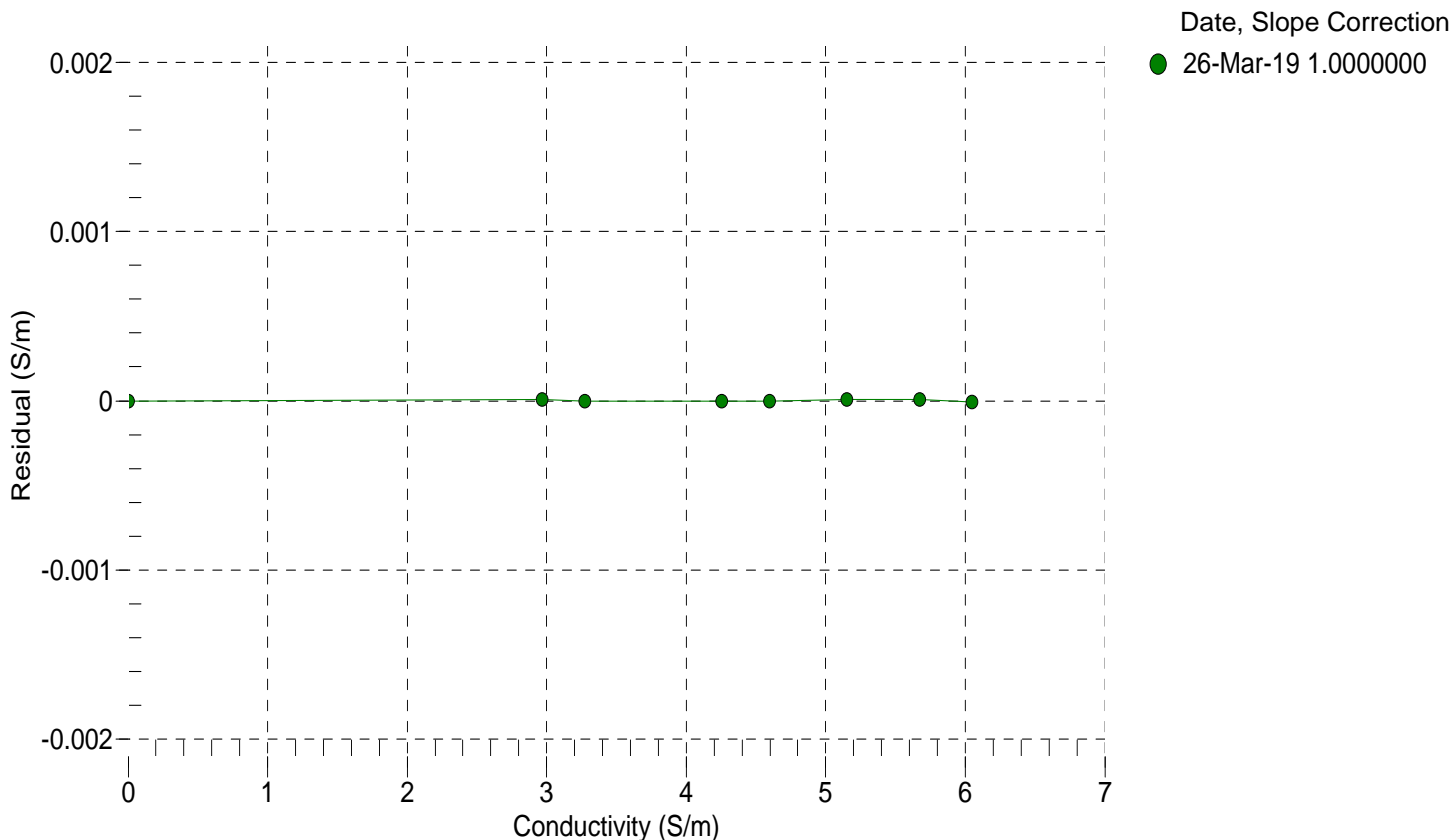
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2546.72	0.00000	0.00000
1.0000	34.7075	2.96755	5064.55	2.96756	0.00001
4.5000	34.6881	3.27382	5255.68	3.27381	-0.00000
15.0000	34.6461	4.25294	5824.04	4.25293	-0.00000
18.5000	34.6371	4.59716	6010.82	4.59715	-0.00000
24.0000	34.6271	5.15358	6300.75	5.15359	0.00001
29.0000	34.6213	5.67396	6559.97	5.67397	0.00001
32.5001	34.6174	6.04523	6738.61	6.04522	-0.00001

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

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: 21-Mar-19

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11162144

COEFFICIENTS:

PA0 =	3.411155e-001	PTCA0 =	4.729837e+003
PA1 =	3.915631e-004	PTCA1 =	4.566641e+001
PA2 =	-2.964821e-013	PTCA2 =	-2.817004e-001
PTHA0 =	2.934115e+002	PTCB0 =	3.120834e+005
PTHA1 =	-6.139183e-005	PTCB1 =	2.201961e+001
PTHA2 =	-9.455182e-013	PTCB2 =	-2.673235e-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)
14.65	42229.9	4153389.6	14.67	0.00	32.50	4003139.40	43848.20
591.84	1519896.8	4150763.0	591.92	0.00	29.00	4053837.80	43732.46
1169.06	3000663.0	4149894.0	1169.09	0.00	24.00	4126174.40	43571.29
1746.30	4484958.4	4149112.6	1746.34	0.00	18.50	4205580.20	43374.77
2323.54	5972533.7	4148253.4	2323.54	0.00	15.00	4256018.80	43279.31
2900.68	7463240.0	4147449.2	2900.65	-0.00	4.50	4406931.20	42906.66
2323.54	5972480.6	4147721.0	2323.52	-0.00	1.00	4457067.60	42650.33
1746.20	4485032.8	4147857.2	1746.36	0.01	TEMPERATURE (°C) SPAN		
1169.21	3000492.5	4148030.0	1169.02	-0.01			
591.88	1519520.5	4148264.2	591.77	-0.00			
14.65	42259.5	4147104.0	14.67	0.00			
					2.12	312128.94	
					20.82	312425.96	
					32.81	312518.09	

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)

● 21-Mar-19 0.00

