



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-11712
Instrument Firmware Version: V 7.2.5
Zero Conductivity Frequency: 2500.21
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	11162137	2000m(2000 dBar)



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www.seabird.com

SENSOR SERIAL NUMBER: 11712
CALIBRATION DATE: 18-Apr-19

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

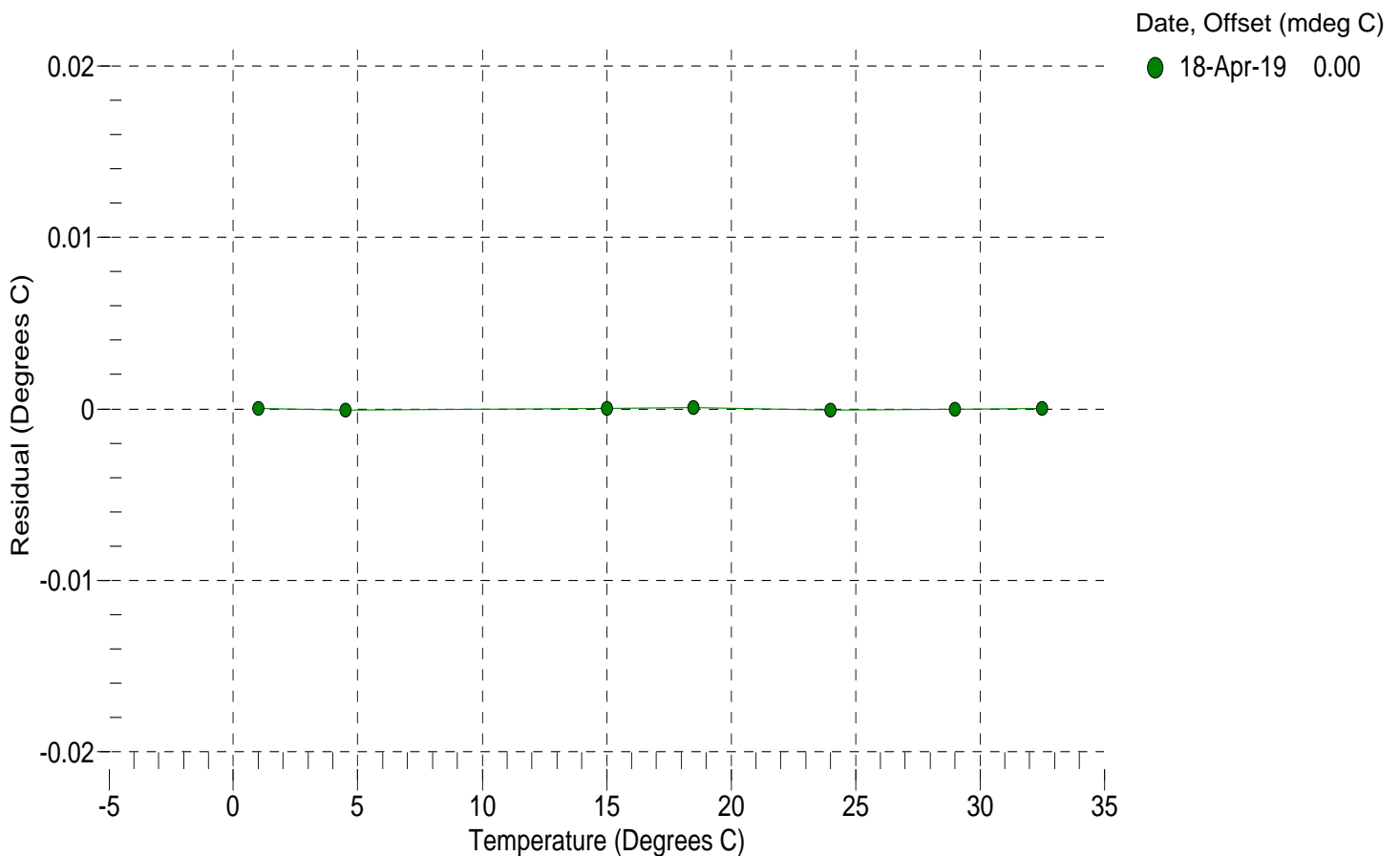
a0 = -9.100922e-004
a1 = 2.980281e-004
a2 = -3.984062e-006
a3 = 1.557628e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	15962554.1	1.0000	0.0000
4.5000	13650279.6	4.4999	-0.0001
15.0000	8703359.2	15.0000	0.0000
18.5000	7537253.0	18.5001	0.0001
24.0000	6047950.4	23.9999	-0.0001
29.0000	4980926.5	29.0000	-0.0000
32.5001	4362434.5	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 = -1.002415e+000
h = 1.610544e-001
i = -4.203741e-004
j = 5.701348e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = -3.3327e-008

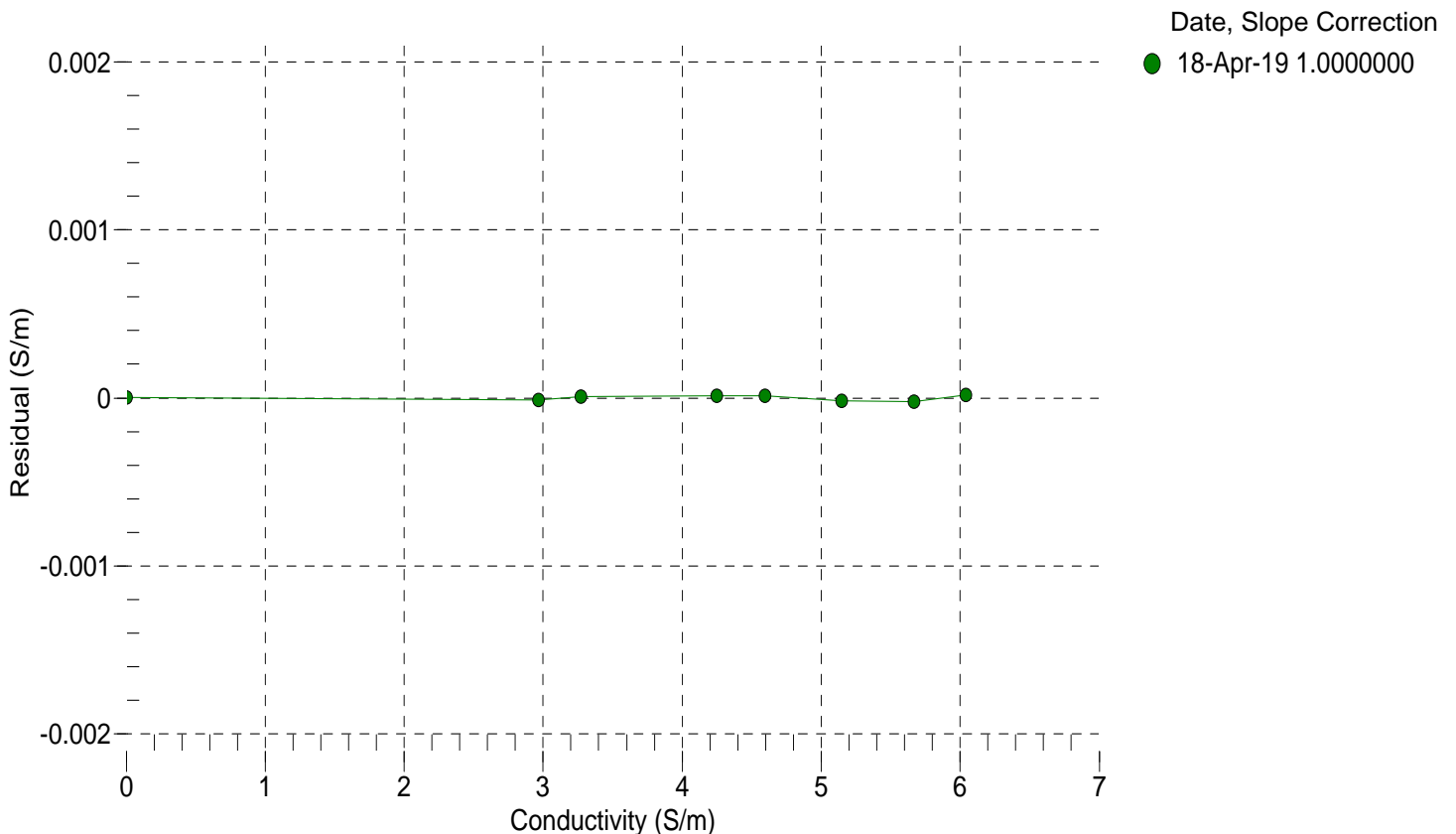
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2500.21	0.00000	0.00000
1.0000	34.6762	2.96513	4973.86	2.96512	-0.00001
4.5000	34.6563	3.27111	5161.66	3.27112	0.00001
15.0000	34.6140	4.24941	5720.13	4.24942	0.00001
18.5000	34.6049	4.59334	5903.68	4.59336	0.00001
24.0000	34.5948	5.14931	6188.57	5.14929	-0.00002
29.0000	34.5890	5.66926	6443.31	5.66924	-0.00002
32.5001	34.5849	6.04020	6618.89	6.04022	0.00002

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

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: 05-Apr-19

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11162137

COEFFICIENTS:

PA0 =	1.608968e-001	PTCA0 =	-9.503688e+002
PA1 =	3.918694e-004	PTCA1 =	2.328938e+001
PA2 =	-2.885988e-013	PTCA2 =	-1.874165e-001
PTHA0 =	2.928190e+002	PTCB0 =	3.103102e+005
PTHA1 =	-6.081505e-005	PTCB1 =	8.998573e+000
PTHA2 =	-1.016459e-012	PTCB2 =	3.234463e-002

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)
14.44	35929.2	4173706.8	14.44	-0.00	32.50	4011510.40	38266.30
592.11	1512817.5	4172491.4	592.14	0.00	29.00	4062277.00	38298.85
1169.78	2992694.8	4171455.4	1169.75	-0.00	24.00	4134564.40	38226.05
1747.50	4476313.9	4170689.0	1747.55	0.00	18.50	4213900.20	38103.57
2325.20	5962992.1	4170021.8	2325.26	0.00	15.00	4264320.20	38007.96
2902.89	7452681.1	4169370.8	2902.87	-0.00	4.50	4415118.80	37867.89
2325.24	5962810.8	4169729.8	2325.19	-0.00	1.00	4465217.80	37760.00
1747.43	4476008.2	4170020.2	1747.43	-0.00	TEMPERATURE (°C) SPAN		
1169.92	2993037.1	4170304.8	1169.88	-0.00			
592.01	1512468.0	4169577.4	592.00	-0.00			
14.43	35926.2	4169645.6	14.44	0.00			
					2.12	310329.49	
					20.82	310511.60	
					32.81	310640.30	

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)

● 05-Apr-19 -0.00

