



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-14304
Instrument Firmware Version: 7.2.5
Zero Conductivity Frequency: 2599.49
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	11620523	2000m(2000 dBar)



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www.seabird.com

SENSOR SERIAL NUMBER: 14304
CALIBRATION DATE: 10-May-21

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

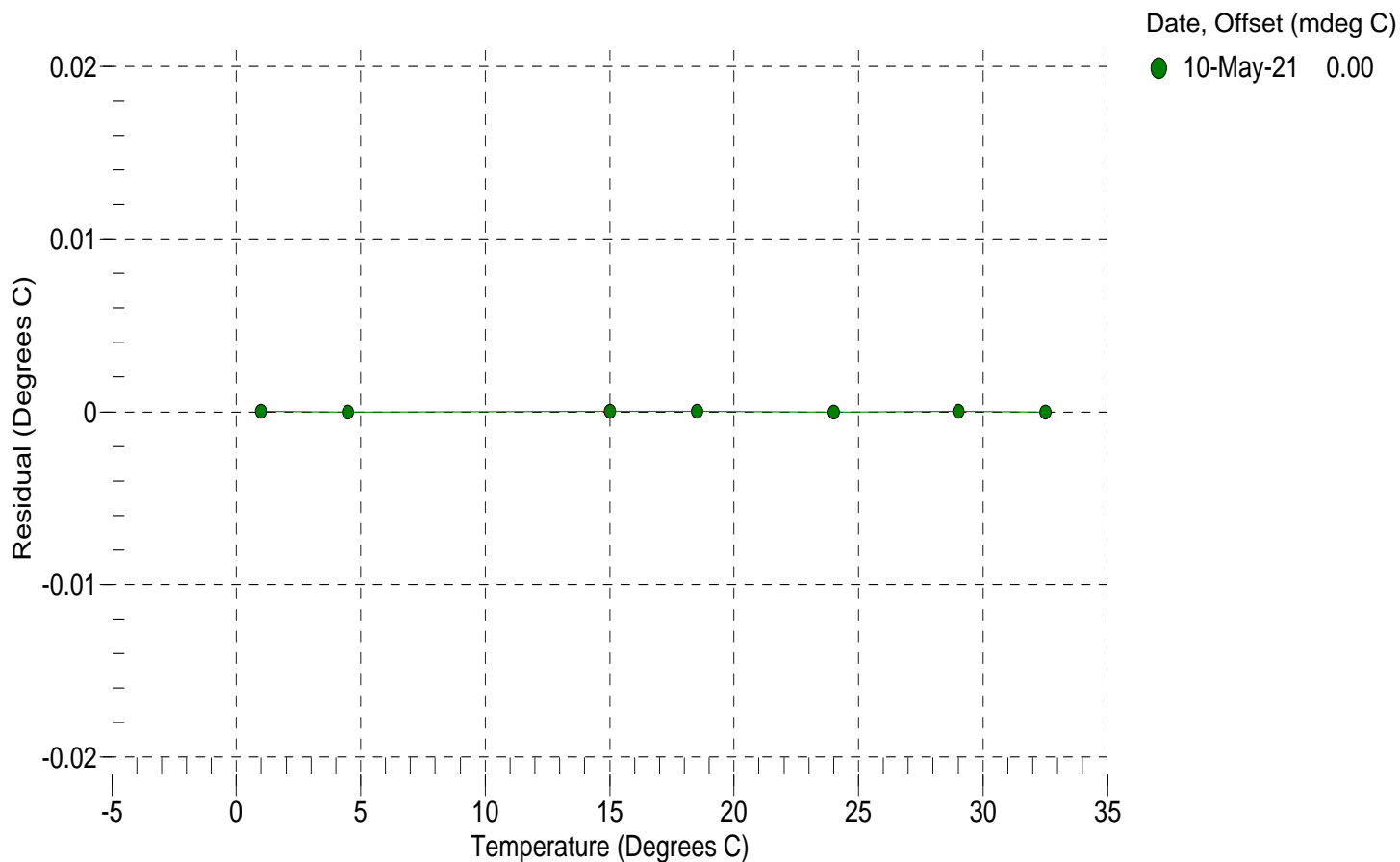
a0 = -9.394273e-004
a1 = 3.076276e-004
a2 = -4.564258e-006
a3 = 1.697793e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	14218985.2	1.0000	0.0000
4.5000	12165852.2	4.5000	-0.0000
15.0000	7768850.3	15.0000	0.0000
18.5000	6731260.6	18.5000	0.0000
24.0000	5405223.3	24.0000	-0.0000
29.0000	4454526.5	29.0000	0.0000
32.5001	3903169.0	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 = -1.025601e+000
h = 1.526370e-001
i = -4.906073e-004
j = 6.067887e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 1.0578e-006

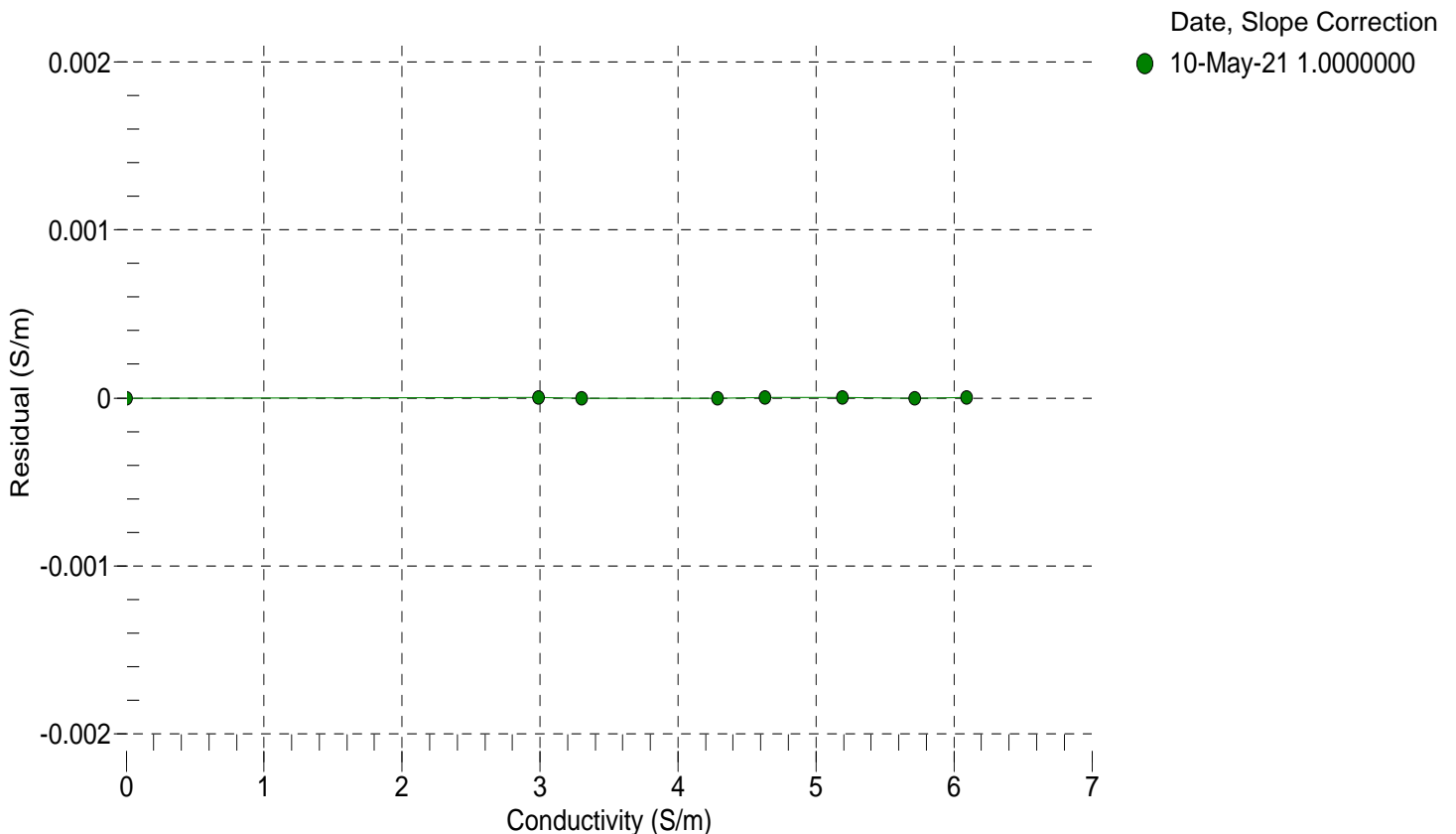
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2599.49	0.00000	0.00000
1.0000	35.0042	2.99049	5144.96	2.99049	0.00000
4.5000	34.9855	3.29911	5338.50	3.29911	-0.00000
15.0000	34.9468	4.28592	5914.20	4.28592	-0.00000
18.5000	34.9394	4.63293	6103.45	4.63293	0.00000
24.0000	34.9311	5.19381	6397.17	5.19381	0.00000
29.0000	34.9257	5.71821	6659.70	5.71821	-0.00000
32.5001	34.9214	6.09225	6840.58	6.09225	0.00000

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

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

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: 14304
CALIBRATION DATE: 04-May-21

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11620523

COEFFICIENTS:

PA0 =	4.283612e-001	PTCA0 =	7.480364e+003
PA1 =	3.926541e-004	PTCA1 =	5.822366e+001
PA2 =	-2.772204e-013	PTCA2 =	-4.636586e-001
PTHA0 =	3.049580e+002	PTCB0 =	3.227486e+005
PTHA1 =	-6.239667e-005	PTCB1 =	-1.142357e+000
PTHA2 =	-9.974773e-013	PTCB2 =	1.283009e-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	44863.1	4233506.4	14.68	0.00	32.50	4098106.20	46401.60
591.11	1515314.9	4234759.4	591.35	0.01	29.00	4147599.80	46398.03
1167.79	2988570.9	4234664.8	1167.93	0.00	24.00	4218292.20	46248.50
1744.62	4465518.3	4234368.4	1744.74	0.00	18.50	4295871.20	45975.65
2321.43	5945655.3	4234126.0	2321.58	0.01	15.00	4345261.20	45747.25
2898.09	7427851.8	4233886.0	2898.01	-0.00	4.50	4492589.40	45318.95
2321.51	5945490.9	4234585.8	2321.52	0.00	1.00	4541662.20	45120.71
1745.26	4466383.9	4235224.8	1745.08	-0.01	TEMPERATURE (°C) SPAN		
1168.19	2988673.5	4235851.6	1167.97	-0.01			
591.50	1515173.1	4236509.2	591.30	-0.01			
14.63	44631.0	4237188.4	14.59	-0.00			
					2.01	322746.78	
					20.62	322779.55	
					32.96	322850.29	

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)

● 04-May-21 -0.00

