



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-11772
Instrument Firmware Version: V 7.2.5
Zero Conductivity Frequency: 2587.14
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	11054308	2000m(2000 dBar)



Sea-Bird Scientific
13431 NE 20th Street
Bellevue, WA 98005
USA

+1 425-643-9866
seabird@seabird.com
www.seabird.com

SENSOR SERIAL NUMBER: 11772
CALIBRATION DATE: 16-Apr-19

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

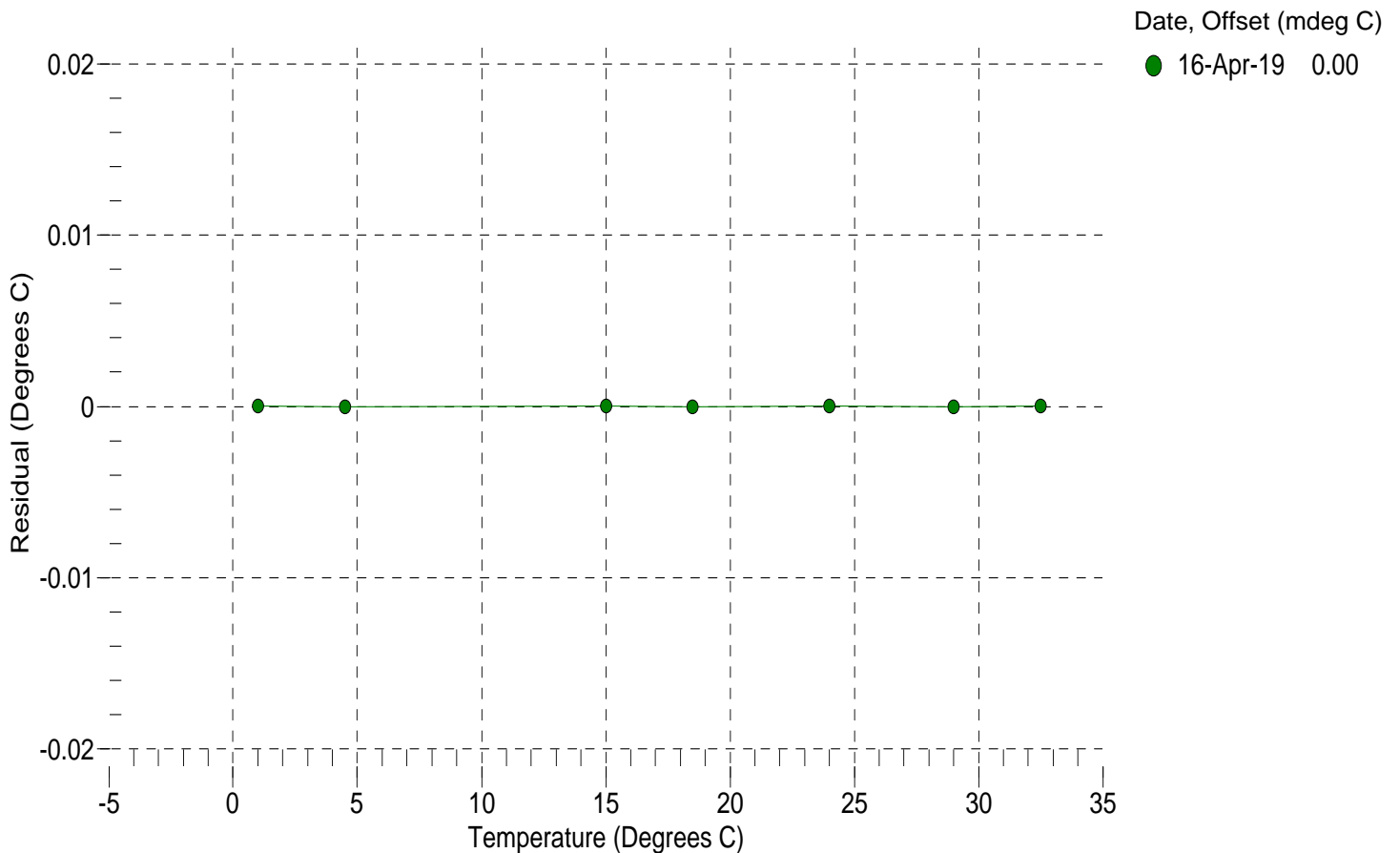
a0 = -9.274357e-004
a1 = 2.988629e-004
a2 = -4.055618e-006
a3 = 1.572783e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	16869630.6	1.0000	0.0000
4.5000	14426899.6	4.5000	-0.0000
15.0000	9200074.4	15.0000	0.0000
18.5000	7967826.5	18.5000	-0.0000
23.9939	6395348.5	23.9939	0.0000
29.0000	5266047.7	29.0000	-0.0000
32.5000	4612311.4	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





Sea-Bird Scientific
13431 NE 20th Street
Bellevue, WA 98005
USA

+1 425-643-9866
seabird@seabird.com
www.seabird.com

SENSOR SERIAL NUMBER: 11772
CALIBRATION DATE: 16-Apr-19

SBE 41 CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -1.006423e+000
h = 1.509230e-001
i = -3.434320e-004
j = 4.890711e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 3.2207e-007

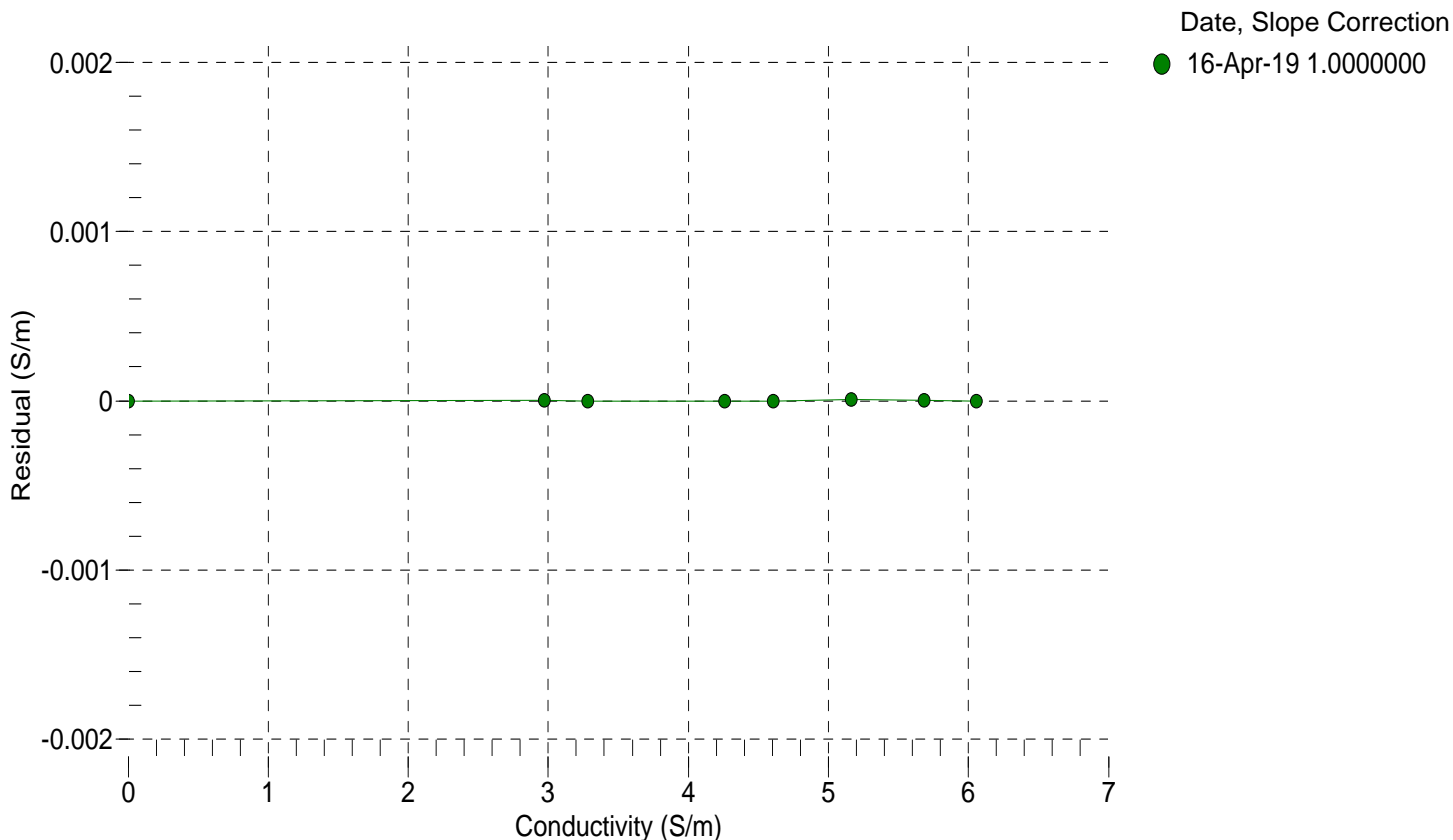
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2587.14	0.00000	0.00000
1.0000	34.7911	2.97402	5143.63	2.97402	0.00000
4.5000	34.7711	3.28088	5337.65	3.28088	-0.00000
15.0000	34.7281	4.26194	5914.65	4.26193	-0.00000
18.5000	34.7189	4.60684	6104.27	4.60684	-0.00000
23.9939	34.7091	5.16381	6398.33	5.16382	0.00001
29.0000	34.7038	5.68596	6661.88	5.68596	0.00000
32.5000	34.7009	6.05814	6843.34	6.05814	-0.00000

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

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

$\text{Conductivity (S/m)} = (g + h * f^2 + i * f^3 + j * f^4) / (1 + \delta * t + \epsilon * p)$

Residual (Siemens/meter) = instrument conductivity - bath conductivity





Sea-Bird Scientific
13431 NE 20th Street
Bellevue, WA 98005
USA

+1 425-643-9866
seabird@seabird.com
www.seabird.com

SENSOR SERIAL NUMBER: 11772
CALIBRATION DATE: 29-Mar-19

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11054308

COEFFICIENTS:

PA0 =	-7.036097e-002	PTCA0 =	-3.602153e+003
PA1 =	3.891320e-004	PTCA1 =	-1.214776e+001
PA2 =	-2.663191e-013	PTCA2 =	1.815443e-001
PTHA0 =	2.973355e+002	PTCB0 =	3.129381e+005
PTHA1 =	-6.277347e-005	PTCB1 =	2.215847e+001
PTHA2 =	-7.977894e-013	PTCB2 =	1.025019e-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)
14.77	34502.3	4159136.6	14.80	0.00	32.50	4014175.80	34906.00
591.41	1520583.3	4157476.4	591.45	0.00	29.00	4064637.00	34964.63
1168.08	3009889.3	4156388.8	1168.16	0.00	23.99	4136879.80	34991.85
1744.76	4502143.7	4155365.6	1744.83	0.00	18.50	4216009.00	34972.74
2321.54	5997951.9	4154119.8	2321.68	0.00	15.00	4266433.20	34947.26
2898.17	7495757.0	4153188.8	2898.10	-0.00	4.50	4416991.80	35120.03
2321.59	5997701.6	4153288.2	2321.57	-0.00	1.00	4467098.80	35115.22
1744.86	4502053.3	4153121.2	1744.77	-0.00	TEMPERATURE (°C) SPAN		
1168.30	3010062.0	4153136.2	1168.21	-0.00			
591.57	1520599.0	4153201.6	591.44	-0.00			
14.77	34489.3	4150067.4	14.80	0.00			
					2.12	312985.57	
					20.92	313446.42	
					32.96	313779.64	

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)

● 29-Mar-19 -0.00

