



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-12234
Instrument Firmware Version: V 7.2.5
Zero Conductivity Frequency: 2577.45
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	11320403	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: 12234
CALIBRATION DATE: 08-Oct-19

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

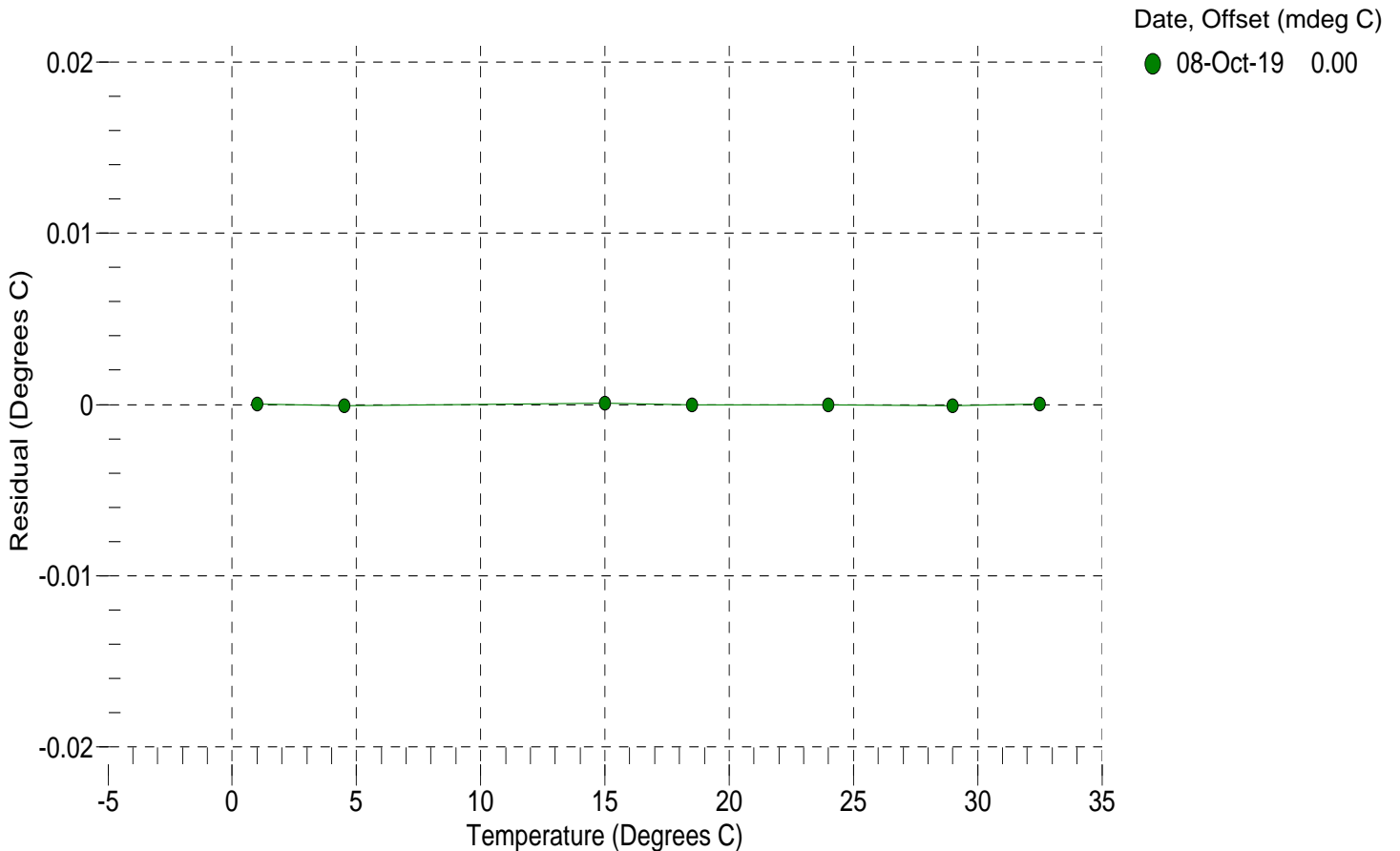
a0 = -9.637788e-004
a1 = 3.082446e-004
a2 = -4.639063e-006
a3 = 1.697138e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	16004303.8	1.0000	0.0000
4.5000	13686112.0	4.4999	-0.0001
15.0000	8726154.9	15.0001	0.0001
18.5000	7556989.5	18.5000	-0.0000
23.9940	6065105.8	23.9940	-0.0000
29.0000	4993841.5	28.9999	-0.0001
32.5000	4373723.3	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: 12234
CALIBRATION DATE: 08-Oct-19

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

COEFFICIENTS:

g = -1.012547e+000
h = 1.530906e-001
i = -3.981753e-004
j = 5.307886e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 3.2328e-008

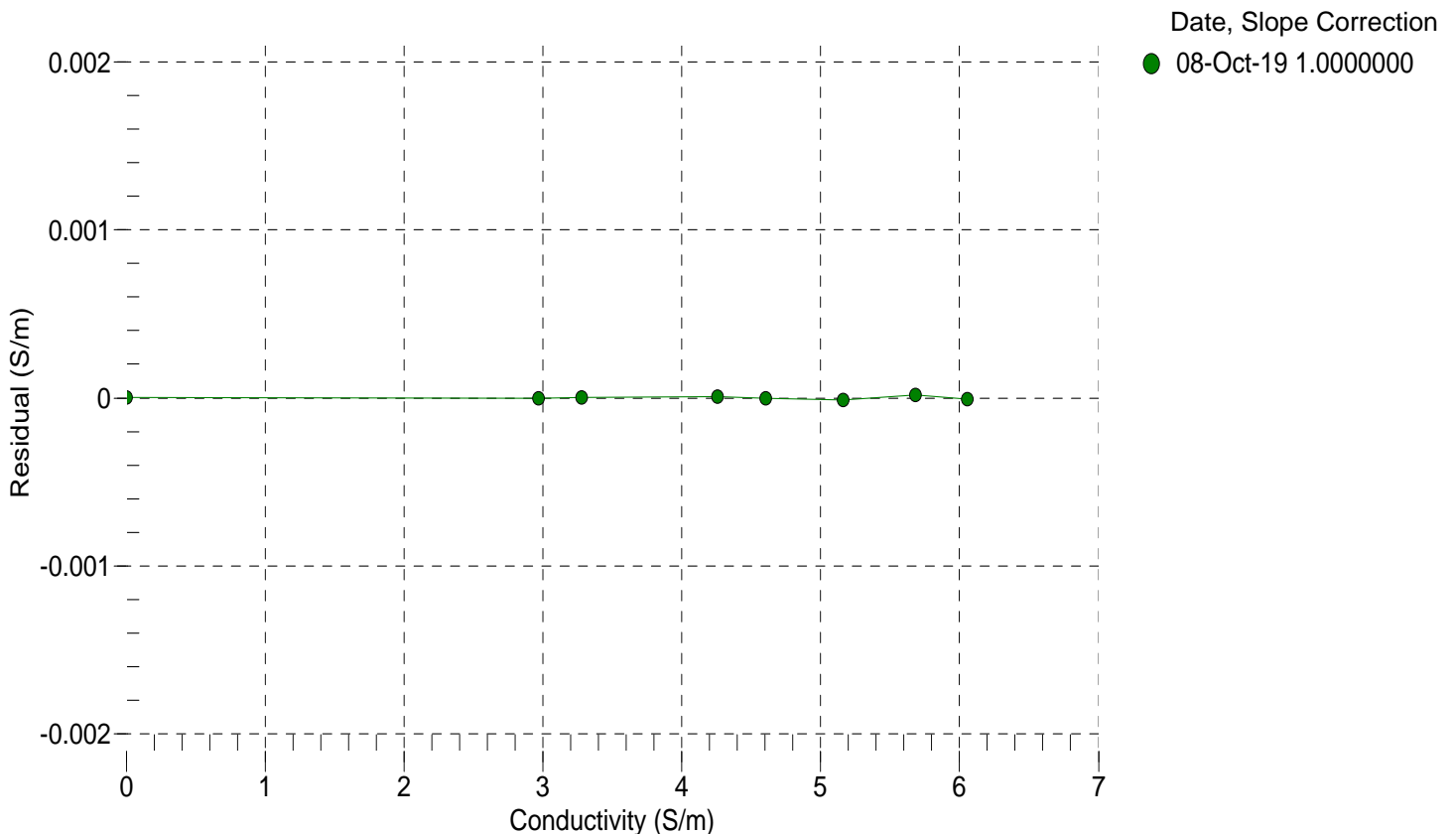
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2577.45	0.00000	0.00000
1.0000	34.7574	2.97141	5112.17	2.97141	-0.00000
4.5000	34.7375	3.27802	5304.75	3.27803	0.00000
15.0000	34.6959	4.25840	5877.58	4.25841	0.00001
18.5000	34.6873	4.60310	6065.86	4.60310	-0.00000
23.9940	34.6782	5.15973	6357.85	5.15972	-0.00001
29.0000	34.6731	5.68150	6619.54	5.68151	0.00002
32.5000	34.6702	6.05339	6799.69	6.05338	-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





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

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

SENSOR SERIAL NUMBER: 12234
CALIBRATION DATE: 02-Oct-19

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 11320403

COEFFICIENTS:

PA0 =	5.508183e-002	PTCA0 =	-3.280186e+003
PA1 =	3.902225e-004	PTCA1 =	3.231552e+001
PA2 =	-2.911255e-013	PTCA2 =	-1.200012e+000
PTHA0 =	3.072307e+002	PTCB0 =	3.153243e+005
PTHA1 =	-6.255747e-005	PTCB1 =	1.284797e+001
PTHA2 =	-1.013076e-012	PTCB2 =	-9.716820e-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)
14.65	34393.1	4272792.4	14.69	0.00	32.50	4117180.80	35385.60
591.18	1514245.1	4270072.4	591.07	-0.00	29.00	4166413.40	35597.29
1168.01	2999091.8	4268867.2	1168.11	0.00	23.99	4236899.80	35767.98
1744.76	4486581.2	4267721.2	1744.89	0.00	18.50	4314076.80	35807.48
2321.52	5977237.7	4266615.6	2321.60	0.00	15.00	4363183.80	35807.94
2898.28	7471092.2	4265308.8	2898.26	-0.00	4.50	4509709.40	35793.07
2321.45	5976720.8	4265027.0	2321.40	-0.00	1.00	4558748.80	35655.88
1744.97	4486335.6	4264938.8	1744.79	-0.01			
1167.57	2997675.7	4264873.4	1167.55	-0.00			
590.70	1513360.3	4264816.4	590.72	0.00			
14.65	34259.7	4263486.8	14.64	-0.00			

TEMPERATURE (°C)	SPAN
1.09	315338.16
20.05	315542.84
33.67	315646.73

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)

● 02-Oct-19 0.00

