



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-10667
Instrument Firmware Version: V 7.2.5
Zero Conductivity Frequency: 2606.74
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	10386880	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: 10667
CALIBRATION DATE: 02-Mar-18

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

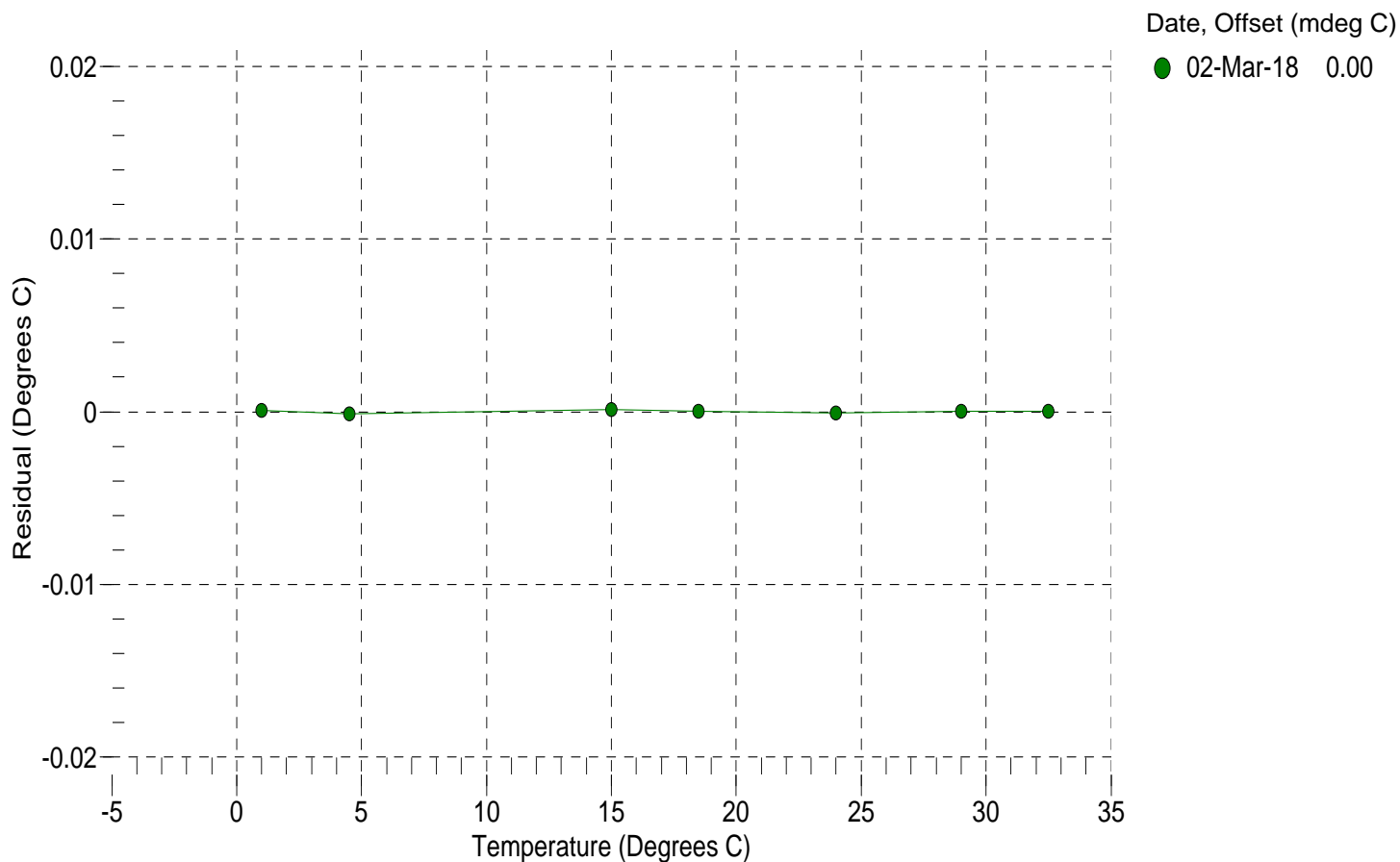
a0 = -8.514597e-004
a1 = 2.849398e-004
a2 = -3.210489e-006
a3 = 1.398909e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	16973592.6	1.0001	0.0001
4.5000	14514405.9	4.4999	-0.0001
15.0000	9253122.3	15.0001	0.0001
18.5000	8013011.3	18.5000	0.0000
23.9940	6430633.3	23.9939	-0.0001
29.0001	5294306.2	29.0001	0.0000
32.5000	4636590.2	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: 10667
CALIBRATION DATE: 02-Mar-18

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

COEFFICIENTS:

g = -9.991279e-001
h = 1.475476e-001
i = -3.115048e-004
j = 4.433731e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = -1.2786e-007

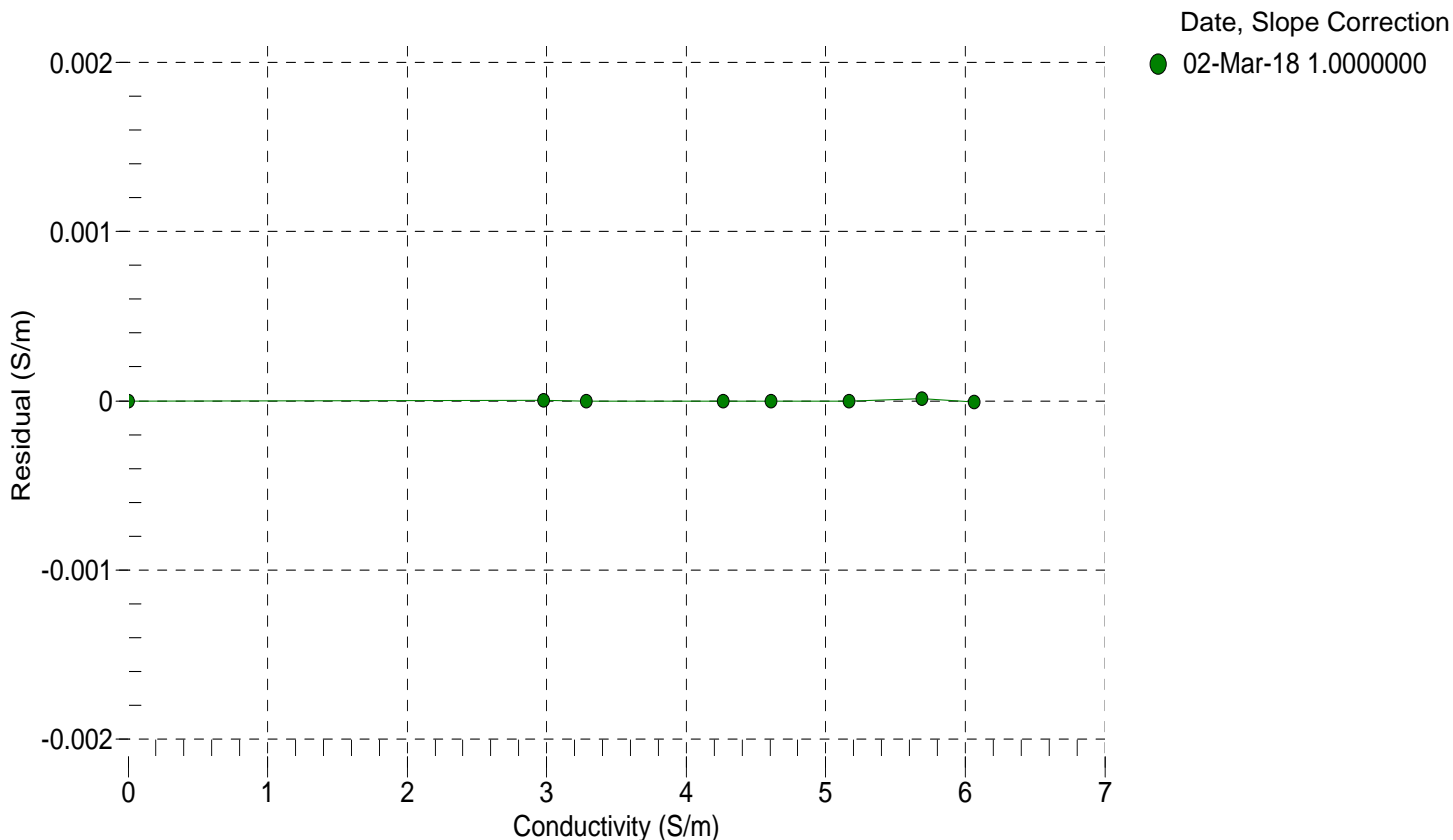
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2606.74	0.00000	0.00000
1.0000	34.8099	2.97547	5197.59	2.97547	0.00000
4.5000	34.7900	3.28249	5394.06	3.28249	-0.00000
15.0000	34.7477	4.26409	5978.30	4.26408	-0.00000
18.5000	34.7388	4.60920	6170.30	4.60919	-0.00000
23.9940	34.7294	5.16651	6468.05	5.16651	-0.00000
29.0001	34.7242	5.68894	6734.90	5.68895	0.00001
32.5000	34.7205	6.06117	6918.54	6.06116	-0.00001

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

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

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: 10667
CALIBRATION DATE: 27-Feb-18

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 10386880

COEFFICIENTS:

PA0 =	8.588625e-001	PTCA0 =	2.051280e+003
PA1 =	3.938294e-004	PTCA1 =	1.208122e+002
PA2 =	-2.892040e-013	PTCA2 =	-9.618114e-001
PTHA0 =	3.068905e+002	PTCB0 =	3.037307e+005
PTHA1 =	-6.202091e-005	PTCB1 =	3.468140e+001
PTHA2 =	-1.089226e-012	PTCB2 =	-8.585359e-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	39255.7	4274440.4	14.64	0.00	32.50	4125308.40	40547.30
591.86	1508461.3	4273042.0	591.93	0.00	29.00	4174508.20	40432.71
1169.24	2981115.5	4272113.6	1169.34	0.00	23.99	4244865.00	40120.81
1746.62	4456893.8	4271184.6	1746.72	0.00	18.50	4321811.40	39602.38
2324.04	5935925.4	4270308.4	2324.11	0.00	15.00	4370875.80	39211.99
2901.44	7418135.7	4269556.8	2901.47	0.00	4.50	4517225.60	38220.04
2324.11	5935594.3	4269789.0	2323.98	-0.00	1.00	4565934.20	37834.93
1746.61	4456505.9	4269972.0	1746.56	-0.00			
1169.40	2980943.7	4270143.6	1169.27	-0.00			
591.80	1508031.3	4270225.2	591.76	-0.00			
14.62	39182.9	4270189.0	14.60	-0.00			

TEMPERATURE (°C)	SPAN
2.10	303799.88
20.42	304080.95
32.50	303951.12

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)

● 27-Feb-18 -0.00

