



SEA-BIRD
SCIENTIFIC

SBE41-CP ALACE

Instrument Configuration

Instrument Serial Number: 41-10665
Instrument Firmware Version: V 7.2.5
Zero Conductivity Frequency: 2684.00
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	10391799	2000m(2000 dBar)



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www.seabird.com

SENSOR SERIAL NUMBER: 10665
CALIBRATION DATE: 06-Mar-18

SBE 41 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

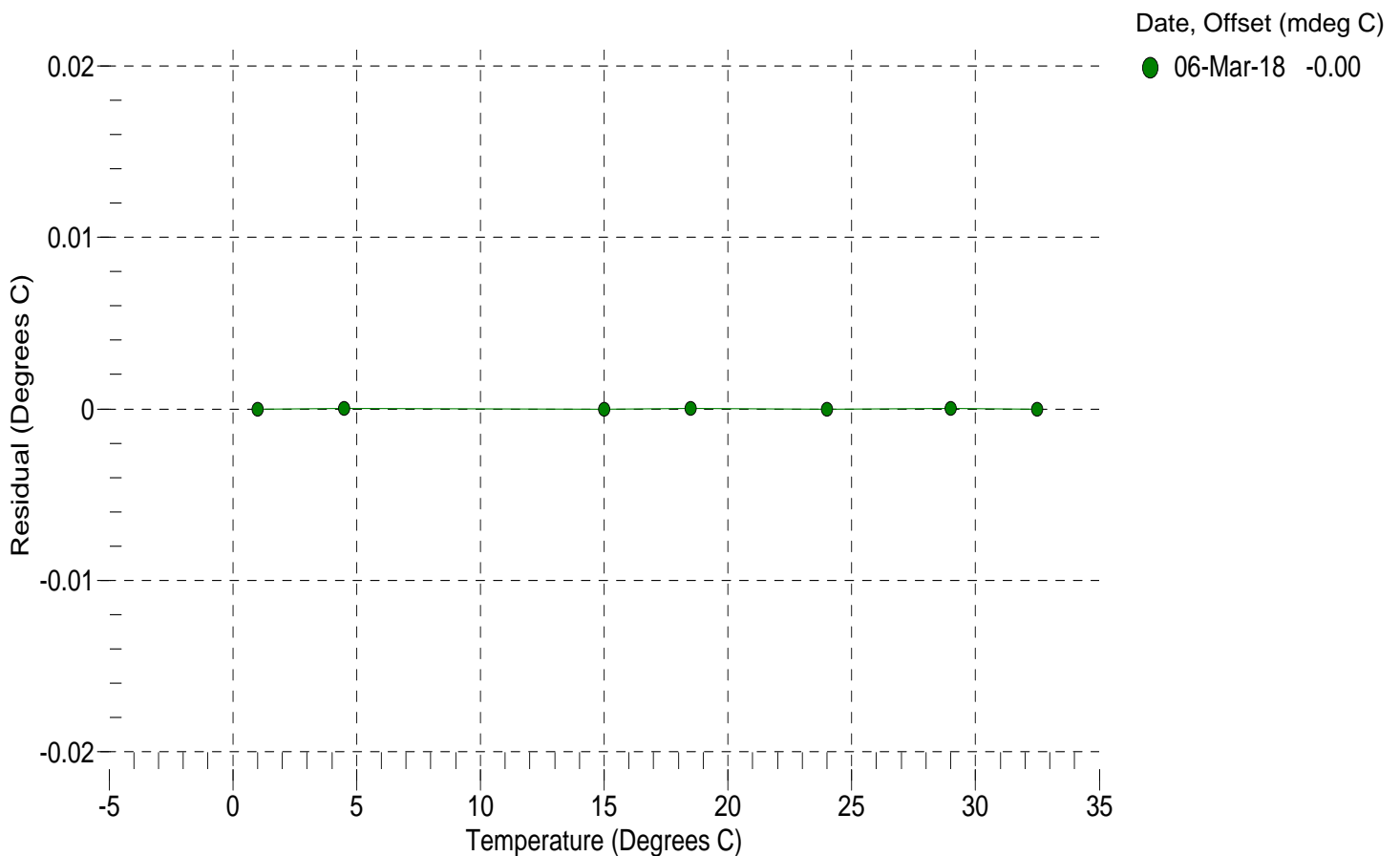
a0 = -8.016841e-004
a1 = 2.893430e-004
a2 = -3.608885e-006
a3 = 1.449890e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	14977729.4	1.0000	-0.0000
4.5000	12769370.2	4.5000	0.0000
15.0000	8071608.4	15.0000	-0.0000
18.5000	6970943.0	18.5000	0.0000
23.9940	5571429.5	23.9940	-0.0000
29.0000	4570481.5	29.0000	0.0000
32.5000	3992941.8	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





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

COEFFICIENTS:

g = -1.008179e+000
h = 1.404965e-001
i = -3.190219e-004
j = 4.330274e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = -5.2775e-007

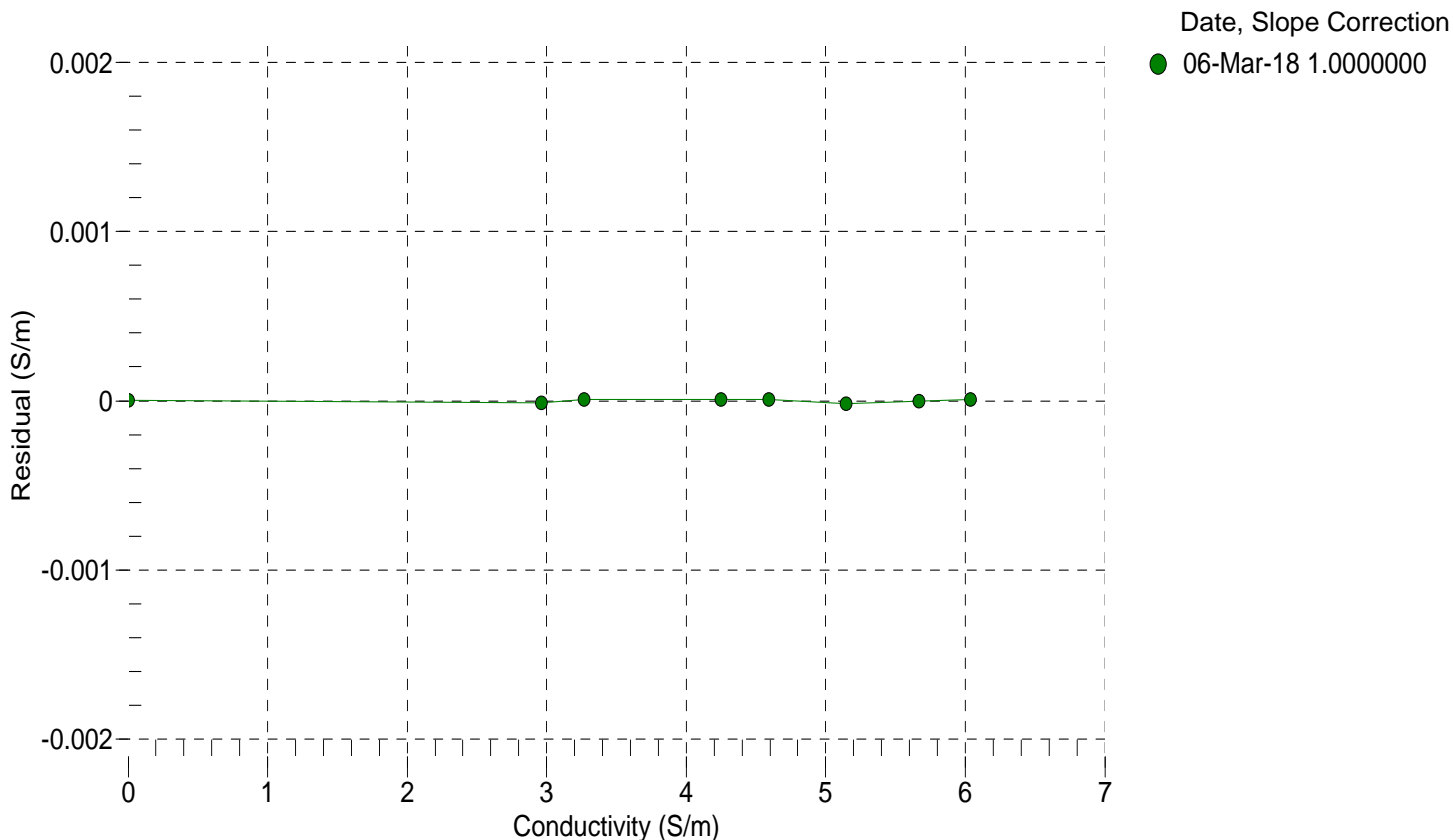
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2683.99	0.00000	0.00000
1.0000	34.6631	2.96411	5326.19	2.96410	-0.00001
4.5000	34.6434	3.27001	5526.92	3.27002	0.00001
15.0000	34.6019	4.24809	6123.88	4.24810	0.00001
18.5000	34.5932	4.59196	6320.09	4.59196	0.00001
23.9940	34.5838	5.14723	6624.33	5.14722	-0.00002
29.0000	34.5785	5.66774	6897.01	5.66773	-0.00000
32.5000	34.5756	6.03875	7084.75	6.03875	0.00001

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

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

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

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





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SENSOR SERIAL NUMBER: 10665
CALIBRATION DATE: 27-Feb-18

SBE 41 PRESSURE CALIBRATION DATA
2900 psia S/N 10391799

COEFFICIENTS:

PA0 =	4.146133e-001	PTCA0 =	-8.722281e+003
PA1 =	3.935067e-004	PTCA1 =	6.509744e+001
PA2 =	-2.864218e-013	PTCA2 =	-7.740438e-001
PTHA0 =	3.108262e+002	PTCB0 =	3.042828e+005
PTHA1 =	-6.444144e-005	PTCB1 =	-4.254172e+001
PTHA2 =	-7.816263e-013	PTCB2 =	1.651380e+000

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	28458.7	4263730.6	14.64	0.00	32.50	4113864.40	30657.40
591.86	1496300.7	4262044.0	591.85	-0.00	29.00	4163029.20	30674.78
1169.24	2967940.6	4261048.4	1169.32	0.00	23.99	4233639.00	30601.54
1746.62	4442486.2	4260102.8	1746.67	0.00	18.50	4311023.00	30353.00
2324.04	5920546.7	4259221.0	2324.14	0.00	15.00	4359976.40	30133.18
2901.44	7401467.2	4258482.8	2901.46	0.00	4.50	4507159.60	29688.37
2324.11	5920141.6	4258753.4	2323.97	-0.00	1.00	4556092.20	29488.78
1746.61	4442347.6	4258963.0	1746.60	-0.00			
1169.40	2967989.8	4259181.2	1169.32	-0.00	TEMPERATURE (°C) SPAN		
591.80	1496221.6	4259318.4	591.81	0.00	2.10	304200.64	
14.62	28395.3	4259399.6	14.61	-0.00	20.42	304102.66	
					32.50	304644.27	

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

