SEA-BIRD SCIENTIFIC
Sea-Bird Scientific
13431 NE 20th Street
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seabird@seabird.com
www.seabird.com

SENSOR SERIAL NUMBER: 9834
CALIBRATION DATE: 01-Jul-22

Slocum Payload CTD CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

```
g = -1.024368e+000
h =  1.398982e-001
i = -4.092726e-004
j =  4.818350e-005

CPcor = -9.5700e-008
CTcor =  3.2500e-006
WBOTC =  3.9924e-007
```

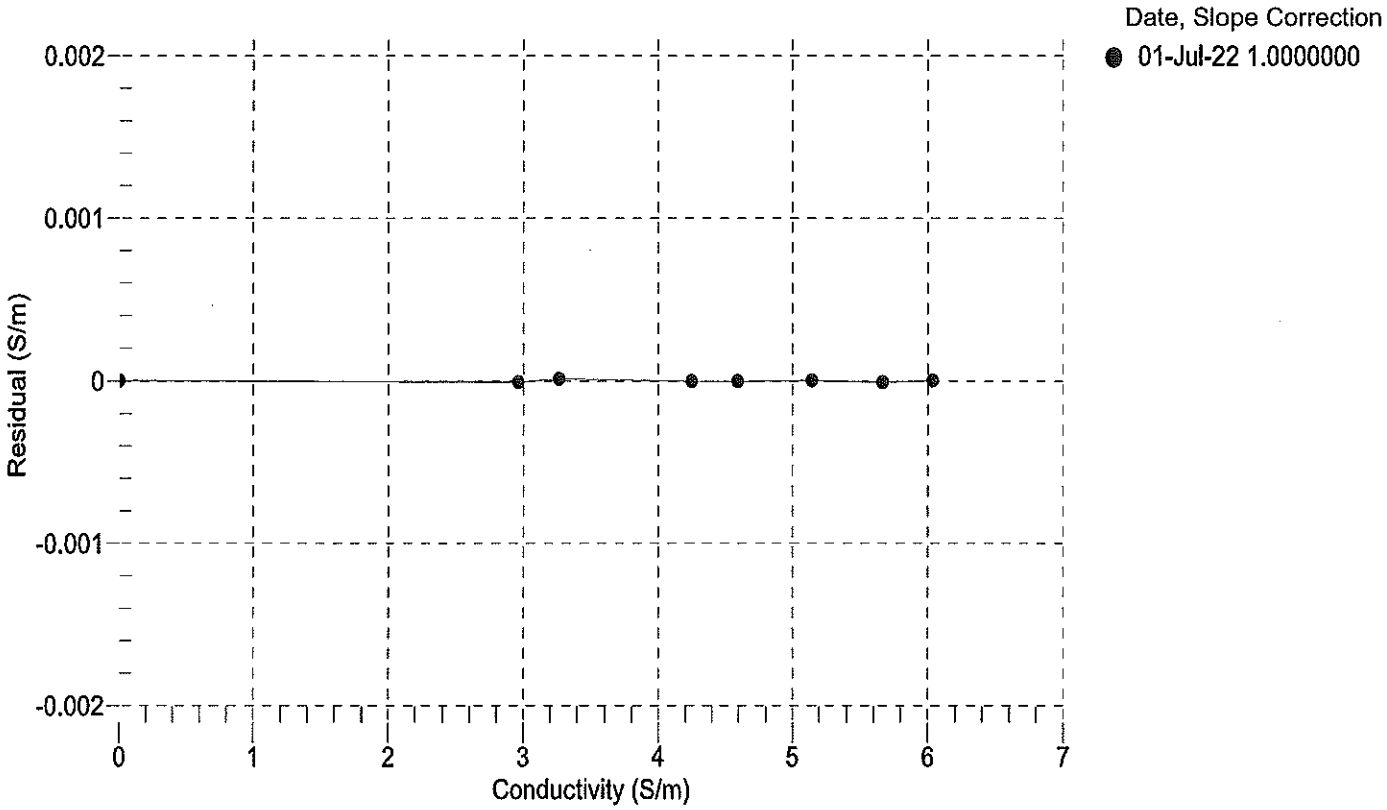
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2713.29	0.00000	0.00000
0.9999	34.6539	2.96339	5354.51	2.96339	-0.00001
4.4997	34.6339	3.26918	5555.57	3.26919	0.00001
14.9999	34.5909	4.24687	6153.71	4.24687	-0.00000
18.5000	34.5814	4.59056	6350.32	4.59055	-0.00000
24.0001	34.5704	5.14609	6655.52	5.14609	0.00000
28.9999	34.5621	5.66534	6928.27	5.66533	-0.00001
32.5001	34.5527	6.03521	7115.98	6.03521	0.00000

f = Instrument Output(Hz) * sqrt(1.0 + WBOTC * t) / 1000.0

t = temperature (°C); p = pressure (decibars); δ = CTcor; ε = CPcor;

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

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



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SENSOR SERIAL NUMBER: 9834
CALIBRATION DATE: 21-Jun-22

Slocum Payload CTD PRESSURE CALIBRATION DATA
1450 psia S/N 12154022

COEFFICIENTS:

PA0 =	9.261350e-002	PTCA0 =	5.250178e+005
PA1 =	4.510488e-003	PTCA1 =	3.244437e-001
PA2 =	-3.316401e-011	PTCA2 =	7.099636e-003
PTEMPA0 =	-7.521399e+001	PTCB0 =	2.514950e+001
PTEMPA1 =	5.008170e-002	PTCB1 =	-9.000000e-004
PTEMPA2 =	-3.863483e-007	PTCB2 =	0.000000e+000

PRESSURE SPAN CALIBRATION

PRESSURE (PSIA)	INSTRUMENT OUTPUT (counts)	THERMISTOR OUTPUT (volts)	COMPUTED PRESSURE (PSIA)	RESIDUAL (%FSR)
14.65	528265.9	2008.8	14.70	0.00
301.75	591824.0	2012.6	301.48	-0.02
589.04	655636.5	2013.7	589.13	0.01
876.22	719395.7	2014.6	876.28	0.00
1163.84	783224.0	2018.8	1163.47	-0.02
1450.06	847003.1	2020.3	1450.17	0.01
1163.62	783274.5	2020.3	1163.70	0.01
875.65	719395.0	2021.1	876.29	0.04
589.01	655651.1	2021.0	589.21	0.01
301.77	591894.8	2021.2	301.80	0.00
14.65	528255.8	2027.8	14.65	0.00

THERMAL CORRECTION

TEMP (°C)	THERMISTOR OUTPUT (volts)	INSTRUMENT OUTPUT (counts)
32.50	2188	528308.80
29.00	2115	528304.50
24.00	2012	528306.80
18.50	1899	528295.50
15.00	1827	528300.10
4.50	1612	528288.70
1.00	1540	528293.80

TEMPERATURE (°C)	SPAN
-5.00	25.15
35.00	25.12

y = thermistor output (counts)

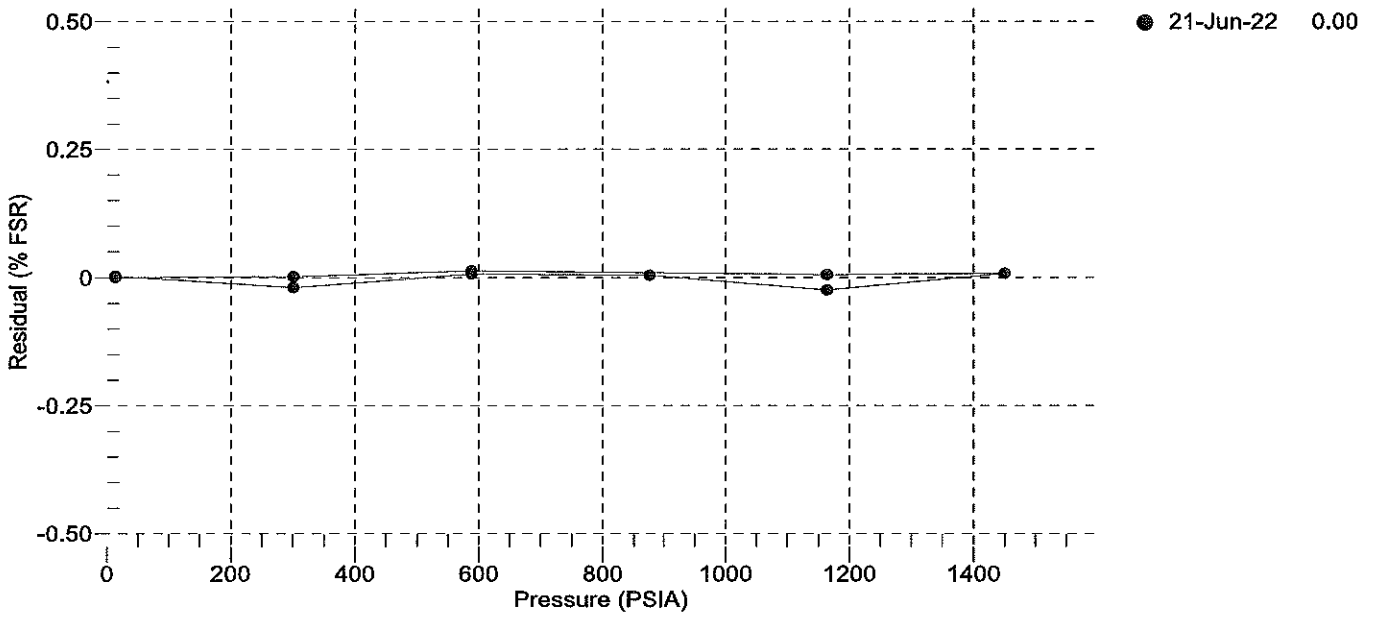
$t = PTEMPA0 + PTEMPA1 * y + PTEMPA2 * y^2$

$x = \text{instrument output} - PTCA0 - PTCA1 * t - PTCA2 * t^2$

$n = x * PTCB0 / (PTCB0 + PTCB1 * t + PTCB2 * t^2)$

$\text{pressure (PSIA)} = PA0 + PA1 * n + PA2 * n^2$

Residual (%FSR) = (computed pressure - true pressure) * 100 / Full Scale Range



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CALIBRATION DATE: 01-Jul-22

Slocum Payload CTD TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

a0 = -6.992463e-005
a1 = 3.016520e-004
a2 = -4.170515e-006
a3 = 1.940148e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
0.9999	571067.3	0.9999	-0.0000
4.4997	488076.8	4.4998	0.0001
14.9999	310772.8	14.9998	-0.0001
18.5000	269034.6	18.5001	0.0001
24.0001	215773.8	24.0001	0.0000
28.9999	177650.4	28.9999	-0.0000
32.5001	155564.9	32.5001	-0.0000

n = Instrument Output (counts)

Temperature ITS-90 (°C) = $1/\{a0 + a1[ln(n)] + a2[ln^2(n)] + a3[ln^3(n)]\} - 273.15$

Residual (°C) = instrument temperature - bath temperature