

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 1635
CALIBRATION DATE: 11-Feb-14

SBE 39 PRESSURE CALIBRATION DATA
508 psia S/N 5634

COEFFICIENTS:

PA0 = -5.070637e-001
PA1 = 2.406524e-002
PA2 = 1.377387e-009
PTHA0 = -8.759610e+001
PTHA1 = 4.591215e-002
PTHA2 = -3.573783e-007

PTCA0 = -5.240888e+002
PTCA1 = -7.776997e-001
PTCA2 = -8.178803e-003
PTCB0 = 2.436025e+001
PTCB1 = -3.150000e-003
PTCB2 = 0.000000e+000

PRESSURE SPAN CALIBRATION

PRESSURE PSIA	INST OUTPUT	THERMISTOR OUTPUT	COMPUTED PRESSURE	ERROR %FS
14.67	84.7	2432.0	14.69	0.00
104.93	3820.9	2433.0	104.89	-0.01
204.94	7962.8	2433.0	204.92	-0.00
304.96	12102.5	2434.0	304.95	-0.00
404.96	16239.2	2434.0	404.96	-0.00
504.97	20373.5	2433.0	504.95	-0.00
404.97	16240.7	2433.0	404.99	0.00
304.97	12104.3	2433.0	304.99	0.01
204.97	7964.8	2433.0	204.97	0.00
104.96	3823.8	2433.0	104.96	-0.00
14.67	84.2	2433.0	14.68	0.00

THERMAL CORRECTION

TEMP ITS90	PRESS TEMP	INST OUTPUT
-1.50	1903.40	115.00
1.00	1959.60	112.98
4.50	2038.40	109.97
8.00	2116.90	106.88
11.50	2196.00	103.87
15.00	2274.80	100.40
18.50	2353.80	96.51
22.00	2433.30	92.69
25.50	2512.70	88.61
29.00	2591.70	84.34
32.50	2671.30	79.84
TEMP(ITS90)		SPAN(mV)
-5.00		24.38
35.00		24.25

$y = \text{thermistor output}; t = \text{PTHA0} + \text{PTHA1} * y + \text{PTHA2} * y^2$

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

$n = x * \text{PTCB0} / (\text{PTCB0} + \text{PTCB1} * t + \text{PTCB2} * t^2)$

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

