

# Sea-Bird Electronics, Inc.

13431 NE 20th Street, Bellevue, WA 98005-2010 USA

Phone: (+1) 425-643-9866 Fax (+1) 425-643-9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 1603  
CALIBRATION DATE: 11-Feb-14

SBE 39 PRESSURE CALIBRATION DATA  
508 psia S/N 4924

## COEFFICIENTS:

PA0 = 1.720758e-001  
PA1 = 2.395849e-002  
PA2 = 1.504860e-009  
PTHA0 = -7.579512e+001  
PTHA1 = 4.840811e-002  
PTHA2 = -2.903260e-007

PTCA0 = 5.317435e+001  
PTCA1 = 5.718434e-001  
PTCA2 = -1.105475e-002  
PTCB0 = 2.515287e+001  
PTCB1 = 5.750000e-004  
PTCB2 = 0.000000e+000

## PRESSURE SPAN CALIBRATION

| PRESSURE<br>PSIA | INST<br>OUTPUT | THERMISTOR<br>OUTPUT | COMPUTED<br>PRESSURE | ERROR<br>%FS |
|------------------|----------------|----------------------|----------------------|--------------|
| 14.66            | 665.8          | 2035.0               | 14.67                | 0.00         |
| 104.92           | 4432.9         | 2035.0               | 104.91               | -0.00        |
| 204.93           | 8605.7         | 2036.0               | 204.91               | -0.00        |
| 304.93           | 12776.6        | 2037.0               | 304.93               | -0.00        |
| 404.94           | 16944.8        | 2037.0               | 404.93               | -0.00        |
| 504.94           | 21110.9        | 2037.0               | 504.93               | -0.00        |
| 404.94           | 16946.5        | 2037.0               | 404.97               | 0.01         |
| 304.94           | 12778.1        | 2036.0               | 304.96               | 0.00         |
| 204.94           | 8607.1         | 2037.0               | 204.95               | 0.00         |
| 104.94           | 4433.4         | 2037.0               | 104.92               | -0.00        |
| 14.66            | 665.8          | 2037.0               | 14.67                | 0.00         |

## THERMAL CORRECTION

| TEMP<br>ITS90 | PRESS<br>TEMP | INST<br>OUTPUT |
|---------------|---------------|----------------|
| -1.50         | 1549.00       | 666.30         |
| 1.00          | 1601.90       | 669.28         |
| 4.50          | 1675.50       | 671.18         |
| 8.00          | 1749.50       | 672.39         |
| 11.50         | 1823.40       | 673.39         |
| 15.00         | 1897.30       | 674.13         |
| 18.50         | 1971.00       | 674.53         |
| 22.00         | 2045.30       | 675.11         |
| 25.50         | 2119.40       | 675.42         |
| 29.00         | 2193.50       | 675.45         |
| 32.50         | 2268.20       | 675.44         |
| TEMP(ITS90)   |               | SPAN(mV)       |
| -5.00         |               | 25.15          |
| 35.00         |               | 25.17          |

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

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

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

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

