

Sea-Bird Scientific 13431 NE 20<sup>th</sup> Street Bellevue, WA 98005 USA +1 425-643-9866 seabird@seabird.com www.seabird.com

SENSOR SERIAL NUMBER: 1637 CALIBRATION DATE: 18-Apr-23 SBE 39 PRESSURE CALIBRATION DATA 508 psia S/N 5636

## **COEFFICIENTS:**

| PA0 =   | 1.368437e-001  | PTCA0 = | 9.909489e+001  |
|---------|----------------|---------|----------------|
| PA1 =   | 2.395743e-002  | PTCA1 = | 5.253572e-001  |
| PA2 =   | 1.424663e-009  | PTCA2 = | -1.211098e-002 |
| PTHA0 = | -8.959557e+001 | PTCB0 = | 2.524750e+001  |
| PTHA1 = | 4.578094e-002  | PTCB1 = | -2.900000e-003 |
| PTHA2 = | -4.121286e-007 | PTCB2 = | 0.000000e+000  |

## PRESSURE SPAN CALIBRATION

## THERMAL CORRECTION

| PRESSURE<br>(PSIA) | INSTRUMENT<br>OUTPUT (counts) | THERMISTOR OUTPUT (counts) | COMPUTED<br>PRESSURE (PSIA) | RESIDUAL<br>) (%FSR) | TEMP<br>(°C) | THERMISTOR OUTPUT (counts) | INSTRUMENT OUTPUT (counts) |
|--------------------|-------------------------------|----------------------------|-----------------------------|----------------------|--------------|----------------------------|----------------------------|
| 14.42              | 700.1                         | 2497.0                     | 14.44                       | 0.00                 | -1.50        | 1959.00                    | 706.60                     |
| 104.70             | 4456.0                        | 2501.0                     | 104.68                      | -0.00                | 1.00         | 2015.50                    | 709.05                     |
| 204.70             | 8615.8                        | 2504.0                     | 204.67                      | -0.01                | 4.50         | 2094.50                    | 709.72                     |
| 304.71             | 12774.6                       | 2504.0                     | 304.69                      | -0.00                | 8.00         | 2174.30                    | 710.54                     |
| 404.71             | 16930.9                       | 2506.0                     | 404.70                      | -0.00                | 11.50        | 2254.00                    | 710.99                     |
| 504.71             | 21084.7                       | 2505.0                     | 504.69                      | -0.00                | 15.00        | 2333.90                    | 711.40                     |
| 404.70             | 16932.7                       | 2505.0                     | 404.74                      | 0.01                 | 18.50        | 2413.60                    | 712.15                     |
| 304.71             | 12776.5                       | 2506.0                     | 304.74                      | 0.01                 | 22.00        | 2493.60                    | 714.59                     |
| 204.70             | 8617.9                        | 2506.0                     | 204.72                      | 0.00                 | 25.50        | 2573.70                    | 715.07                     |
| 104.71             | 4457.1                        | 2507.0                     | 104.71                      | -0.00                | 29.00        | 2653.90                    | 714.12                     |
| 14.43              | 699.7                         | 2508.0                     | 14.43                       | 0.00                 | 32.50        | 2734.20                    | 709.39                     |

TEMPERATURE (°C) SPAN
-5.00 25.26
35.00 25.15

y = thermistor output (counts)

 $t = PTHA0 + PTHA1 * y + PTHA2 * y^2$ 

 $x = instrument output - PTCA0 - PTCA1 * t - PTCA2 * t^2$ 

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

pressure (PSIA) =  $PA0 + PA1 * n + PA2 * n^2$ 

