

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: 0041
CALIBRATION DATE: 06-Feb-14

SBE 49 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

a0 = 8.475638e-004

a1 = 2.822316e-004

a2 = -2.147358e-006

a3 = 2.154652e-007

| BATH TEMP (ITS-90) | INSTRUMENT OUTPUT(n) | INST TEMP (ITS-90) | RESIDUAL (ITS-90) |
|-----------------------|-------------------------|-----------------------|----------------------|
| 1.0000 | 682084.932 | 1.0001 | 0.0001 |
| 4.5000 | 601806.373 | 4.4998 | -0.0002 |
| 15.0000 | 399695.729 | 15.0001 | 0.0001 |
| 18.5000 | 344654.153 | 18.5000 | 0.0000 |
| 24.0000 | 269328.271 | 23.9999 | -0.0001 |
| 29.0000 | 211482.644 | 28.9998 | -0.0002 |
| 32.5001 | 176305.339 | 32.5002 | 0.0001 |

$MV = (n - 524288) / 1.6e+007$

$R = (MV * 2.295e+010 + 9.216e+008) / (6.144e+004 - MV * 5.3e+005)$

Temperature ITS-90 = $1 / \{a_0 + a_1[\ln(R)] + a_2[\ln^2(R)] + a_3[\ln^3(R)]\} - 273.15$ (°C)

Residual = instrument temperature - bath temperature

