

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: 1366
CALIBRATION DATE: 18-Jul-13

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.83483585e-003
h = 6.77076392e-004
i = 2.60978776e-005
j = 2.05978043e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121304e-003
b = 6.02922995e-004
c = 1.49262074e-005
d = 2.06121874e-006
f0 = 6124.703

| BATH TEMP (ITS-90) | INSTRUMENT FREQ (Hz) | INST TEMP (ITS-90) | RESIDUAL (ITS-90) |
|-----------------------|-------------------------|-----------------------|----------------------|
| -1.5001 | 6124.703 | -1.5001 | 0.00005 |
| 1.0000 | 6475.967 | 1.0000 | -0.00004 |
| 4.5000 | 6991.741 | 4.5000 | -0.00004 |
| 7.9999 | 7536.204 | 7.9999 | -0.00002 |
| 11.4999 | 8110.134 | 11.4999 | 0.00003 |
| 14.9999 | 8714.225 | 14.9999 | 0.00004 |
| 18.4999 | 9349.181 | 18.4999 | 0.00004 |
| 21.9999 | 10015.674 | 21.9999 | 0.00001 |
| 25.5000 | 10714.362 | 25.4999 | -0.00007 |
| 29.0000 | 11445.856 | 28.9999 | -0.00007 |
| 32.5000 | 12210.783 | 32.5001 | 0.00007 |

Temperature ITS-90 = $1 / \{ g + h[\ln(f_0/f)] + i[\ln^2(f_0/f)] + j[\ln^3(f_0/f)] \} - 273.15$ (°C)

Temperature IPTS-68 = $1 / \{ a + b[\ln(f_0/f)] + c[\ln^2(f_0/f)] + d[\ln^3(f_0/f)] \} - 273.15$ (°C)

Following the recommendation of JPOTS: T_{68} is assumed to be $1.00024 * T_{90}$ (-2 to 35 °C)

Residual = instrument temperature - bath temperature

