

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: 1371
CALIBRATION DATE: 05-Feb-14

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.79632777e-003
h = 6.54120275e-004
i = 2.18070954e-005
j = 1.45360978e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121297e-003
b = 5.89892557e-004
c = 1.39846007e-005
d = 1.45486861e-006
f0 = 6048.424

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6048.424	-1.5000	-0.00005
1.0000	6403.200	1.0001	0.00006
4.5000	6924.844	4.5000	0.00002
8.0000	7476.422	8.0000	0.00001
11.5000	8058.772	11.5000	-0.00003
15.0000	8672.740	15.0000	-0.00002
18.5000	9319.114	18.4999	-0.00006
22.0000	9998.716	22.0000	0.00002
25.5000	10712.278	25.5001	0.00005
29.0000	11460.542	29.0000	0.00003
32.5000	12244.219	32.5000	-0.00005

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

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

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

Residual = instrument temperature - bath temperature

