

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: 5166
CALIBRATION DATE: 10-Oct-13

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.41511954e-003
h = 6.45200536e-004
i = 2.36661520e-005
j = 2.29918251e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121206e-003
b = 5.99007136e-004
c = 1.55340453e-005
d = 2.30069200e-006
f0 = 3263.902

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	3263.902	-1.5000	0.00002
1.0000	3452.364	1.0000	0.00001
4.5000	3729.258	4.5000	-0.00005
8.0000	4021.770	8.0000	-0.00004
11.5000	4330.316	11.5000	0.00000
14.9999	4655.293	15.0000	0.00010
18.4999	4997.092	18.5000	0.00005
22.0000	5356.097	21.9999	-0.00008
25.5000	5732.675	25.4999	-0.00006
29.0000	6127.175	29.0000	0.00001
32.5000	6539.920	32.5000	0.00003

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

