



Sea-Bird Scientific
 13431 NE 20th Street
 Bellevue, WA 98005
 USA

+1 425-643-9866
 seabird@seabird.com
 www.seabird.com

SENSOR SERIAL NUMBER: 0647
 CALIBRATION DATE: 19-Jan-24

SBE 38 TEMPERATURE CALIBRATION DATA
 ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

a0 = 5.072293e-005
 a1 = 2.681941e-004
 a2 = -2.065227e-006
 a3 = 1.402222e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
-1.5000	841075.3	-1.5000	0.0000
1.0000	749055.9	1.0000	-0.0000
4.5000	638775.8	4.5000	-0.0000
8.0000	546564.7	8.0000	-0.0000
11.5000	469191.0	11.5000	0.0000
15.0000	404050.0	15.0000	0.0000
18.5000	349025.6	18.5000	0.0000
22.0000	302397.1	22.0000	-0.0000
25.5000	262760.0	25.5000	-0.0000
29.0001	228964.0	29.0000	-0.0001
32.5000	200062.3	32.5001	0.0001

n = Instrument Output (counts)

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

$$\text{Residual (°C)} = \text{instrument temperature} - \text{bath temperature}$$

