



Sea-Bird Scientific  
 13431 NE 20<sup>th</sup> Street  
 Bellevue, WA 98005  
 USA

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

SENSOR SERIAL NUMBER: 0439  
 CALIBRATION DATE: 16-Jan-18

SBE 38 TEMPERATURE CALIBRATION DATA  
 ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

a0 = 6.282428e-005  
 a1 = 2.701679e-004  
 a2 = -2.137388e-006  
 a3 = 1.445691e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
-1.5000	741930.9	-1.4999	0.0001
1.0000	661151.5	0.9999	-0.0001
4.5000	564271.5	4.4999	-0.0001
8.0000	483192.5	8.0002	0.0002
11.5001	415115.5	11.5000	-0.0001
15.0000	357752.0	15.0001	0.0001
18.4999	309262.4	18.4999	0.0000
22.0001	268138.2	22.0001	-0.0000
25.5000	233156.8	25.5000	0.0000
29.0001	203309.1	29.0000	-0.0001
32.5000	177766.6	32.5001	0.0001

n = Instrument Output (counts)

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

Residual (°C) = instrument temperature - bath temperature

