

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0222  
CALIBRATION DATE: 07-Mar-13

## SBE 43F OXYGEN CALIBRATION DATA

### COEFFICIENTS

Soc = 3.2967e-004 (DI)  
Foffset = -834.98  
Tau20 = 1.97

A = -2.5893e-003  
B = 5.1700e-005  
C = 3.9011e-007  
E nominal = 0.036

### NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4 H1 = -3.30000e-2  
D2 = -4.64803e-2 H2 = 5.00000e+3  
H3 = 1.45000e+3

BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(Hz)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.26	2.00	0.00	1228.86	1.25	-0.01
1.27	6.00	0.00	1282.55	1.27	-0.01
1.29	12.00	0.00	1363.06	1.28	-0.00
1.31	20.00	0.00	1475.68	1.31	0.00
1.32	26.00	0.00	1562.86	1.33	0.01
1.32	30.00	0.00	1619.08	1.34	0.02
4.23	2.00	0.00	2164.90	4.22	-0.00
4.27	6.00	0.00	2343.61	4.27	0.00
4.30	12.00	0.00	2603.34	4.30	-0.00
4.34	20.00	0.00	2963.22	4.34	-0.00
4.37	26.00	0.00	3239.45	4.39	0.01
4.38	30.00	0.00	3411.40	4.40	0.02
7.21	30.00	0.00	5045.04	7.19	-0.02
7.34	26.00	0.00	4864.27	7.35	0.01
7.34	20.00	0.00	4428.53	7.33	-0.01
7.38	12.00	0.00	3871.43	7.38	-0.00
7.47	6.00	0.00	3477.80	7.49	0.01
7.58	2.00	0.00	3220.41	7.57	-0.00

$$\text{Oxygen (ml/l)} = \text{Soc} * (\text{F} + \text{Foffset}) * (1.0 + \text{A} * \text{T} + \text{B} * \text{T}^2 + \text{C} * \text{T}^3) * \text{OxSol}(\text{T}, \text{S}) * \exp(\text{E} * \text{P} / \text{K})$$

F = frequency output from SBE43F, T = temperature [deg C], S = salinity [PSU] K = temperature [deg K]

OxSol(T,S) = oxygen saturation [ml/l], P = pressure [dbar]

Residual = instrument oxygen - bath oxygen

