

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0603

SBE 43I OXYGEN CALIBRATION DATA

CALIBRATION DATE: 12-Sep-14

COEFFICIENTS:

Soc = 1.4898e-004

Foffset = -3321.65

Tau20 = 4.44

A = -2.5565e-003

B = 1.2688e-004

C = -2.1345e-006

E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4

D2 = -4.64803e-2

H1 = -3.300000e-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)
1.30	2.00	0.00	4223.68	1.29	-0.00
1.31	6.00	0.00	4339.63	1.31	-0.00
1.33	12.00	0.00	4518.31	1.32	-0.00
1.34	20.00	0.00	4759.23	1.34	-0.00
1.35	26.00	0.00	4943.89	1.35	-0.00
1.36	30.00	0.00	5080.99	1.36	-0.00
4.06	6.00	0.00	6492.88	4.07	0.01
4.06	2.00	0.00	6157.93	4.07	0.01
4.08	12.00	0.00	7015.43	4.08	0.00
4.11	20.00	0.00	7739.93	4.11	0.00
4.15	26.00	0.00	8329.34	4.16	0.00
4.18	30.00	0.00	8735.28	4.18	0.00
6.81	2.00	0.00	8062.42	6.80	-0.01
6.84	6.00	0.00	8653.69	6.84	-0.00
6.85	12.00	0.00	9517.43	6.85	-0.00
6.92	20.00	0.00	10751.00	6.92	-0.00
6.94	26.00	0.00	11674.77	6.94	0.00
6.97	30.00	0.00	12346.06	6.97	-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 SBE43I, 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

