

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0719

SBE 43I OXYGEN CALIBRATION DATA

CALIBRATION DATE: 08-Oct-15

COEFFICIENTS:

Soc = 1.3722e-004 (adj)

Foffset = -3289.69

Tau20 = 4.20

A = -3.5653e-003

B = 2.0056e-004

C = -3.0361e-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)
1.26	26.00	0.00	4973.06	1.26	0.00
1.27	30.00	0.00	5108.19	1.28	0.01
1.28	2.00	0.00	4279.77	1.27	-0.00
1.28	20.00	0.00	4821.94	1.28	0.00
1.30	6.00	0.00	4418.22	1.29	-0.00
1.33	12.00	0.00	4631.05	1.33	-0.00
4.05	2.00	0.00	6440.06	4.05	-0.00
4.07	20.00	0.00	8146.91	4.07	-0.00
4.07	6.00	0.00	6837.22	4.07	-0.00
4.08	26.00	0.00	8721.03	4.08	0.00
4.08	12.00	0.00	7411.35	4.08	-0.00
4.08	30.00	0.00	9108.17	4.08	0.00
6.84	2.00	0.00	8609.05	6.84	0.00
6.85	6.00	0.00	9261.23	6.85	0.00
6.86	12.00	0.00	10222.33	6.86	0.00
6.87	26.00	0.00	12435.16	6.87	-0.00
6.88	30.00	0.00	13091.94	6.87	-0.00
6.88	20.00	0.00	11501.91	6.88	-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

