

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0719
CALIBRATION DATE: 29-Oct-13

SBE 43I OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 1.3623e-004 (DI)
Foffset = -3296.49
Tau20 = 5.54

A = -1.0306e-003
B = 1.5203e-004
C = -2.7555e-006
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	6.00	0.00	4361.70	1.26	-0.00
1.27	2.00	0.00	4256.77	1.26	-0.00
1.28	12.00	0.00	4535.90	1.28	0.00
1.29	20.00	0.00	4765.06	1.30	0.00
1.30	26.00	0.00	4938.61	1.31	0.01
1.30	30.00	0.00	5062.11	1.31	0.01
3.97	2.00	0.00	6307.42	3.96	-0.01
3.98	6.00	0.00	6653.07	3.98	-0.01
4.01	12.00	0.00	7177.24	4.01	-0.00
4.03	20.00	0.00	7861.37	4.03	-0.00
4.05	26.00	0.00	8399.39	4.06	0.00
4.07	30.00	0.00	8777.83	4.07	0.00
6.74	2.00	0.00	8420.67	6.75	0.00
6.76	6.00	0.00	9000.81	6.76	0.00
6.78	12.00	0.00	9863.28	6.78	0.00
6.80	20.00	0.00	11004.17	6.80	-0.00
6.81	30.00	0.00	12458.10	6.81	-0.01
6.83	26.00	0.00	11890.86	6.83	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

