

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0244
CALIBRATION DATE: 31-Mar-15

SBE 43F OXYGEN CALIBRATION DATA

COEFFICIENTS:
Soc = 2.6506e-004
Foffset = -894.46
Tau20 = 1.18

A = -3.7981e-003
B = 1.8570e-004
C = -2.1783e-006
E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS
D1 = 1.92634e-4 H1 = -3.300000e-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)
1.28	2.00	0.00	1395.965	1.28	-0.00
1.28	12.00	0.00	1550.722	1.28	-0.00
1.28	6.00	0.00	1459.608	1.28	-0.00
1.31	20.00	0.00	1688.429	1.31	-0.00
1.33	26.00	0.00	1787.329	1.33	0.00
1.35	30.00	0.00	1865.700	1.35	0.01
4.06	6.00	0.00	2682.405	4.06	0.00
4.06	2.00	0.00	2489.265	4.06	-0.00
4.07	12.00	0.00	2978.822	4.07	-0.00
4.13	20.00	0.00	3388.426	4.13	-0.00
4.17	26.00	0.00	3697.588	4.17	0.00
4.20	30.00	0.00	3912.648	4.21	0.00
6.86	2.00	0.00	3586.823	6.86	-0.00
6.89	12.00	0.00	4420.801	6.89	-0.00
6.91	6.00	0.00	3938.811	6.91	0.01
6.98	20.00	0.00	5108.477	6.97	-0.01
7.04	26.00	0.00	5629.274	7.04	0.01
7.05	30.00	0.00	5944.377	7.04	-0.01

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

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

