

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0220

SBE 43F OXYGEN CALIBRATION DATA

CALIBRATION DATE: 01-Sep-11

## COEFFICIENTS

Soc = 3.3595e-004 (DI)

Foffset = -872.54

Tau20 = 1.78

A = -3.4497e-003

B = 1.3878e-004

C = -2.7547e-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)
1.18	6.00	0.00	1283.96	1.18	0.00
1.20	2.00	0.00	1245.48	1.20	0.01
1.21	12.00	0.00	1362.56	1.21	0.00
1.21	20.00	0.00	1462.15	1.22	0.00
1.23	26.00	0.00	1548.83	1.23	0.00
1.23	30.00	0.00	1606.83	1.24	0.00
4.07	6.00	0.00	2283.64	4.06	-0.01
4.08	2.00	0.00	2131.05	4.07	-0.02
4.08	12.00	0.00	2524.52	4.08	-0.01
4.12	30.00	0.00	3321.77	4.12	0.00
4.12	20.00	0.00	2869.46	4.12	-0.01
4.15	26.00	0.00	3146.19	4.14	-0.00
6.93	30.00	0.00	4987.65	6.93	-0.00
6.96	26.00	0.00	4693.96	6.97	0.00
7.04	20.00	0.00	4286.99	7.04	0.00
7.06	12.00	0.00	3733.91	7.06	0.00
7.17	6.00	0.00	3365.34	7.18	0.00
7.26	2.00	0.00	3121.20	7.26	0.01

Oxygen (ml/l) = Soc \* (F + Foffset) \* (1.0 + A \* T + B \* T<sup>2</sup> + C \* T<sup>3</sup>) \* OxSol(T,S) \* exp(E \* P / 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

