

Sea-Bird Electronics, Inc.

13431 NE 20th Street, Bellevue, WA 98005-2010 USA

Phone: (+1) 425-643-9866 Fax (+1) 425-643-9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 0712
CALIBRATION DATE: 05-Nov-14

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS:
Soc = 0.5151
Voffset = -0.5240
Tau20 = 1.11

A = -4.5686e-003
B = 2.5758e-004
C = -4.0601e-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 (VOLTS)	INSTRUMENT OXYGEN (ml/l)	RESIDUAL (ml/l)
1.28	2.00	0.00	0.783	1.28	0.00
1.30	6.00	0.00	0.818	1.30	0.00
1.32	12.00	0.00	0.873	1.32	-0.00
1.34	20.00	0.00	0.940	1.34	-0.00
1.35	26.00	0.00	0.993	1.35	0.00
1.37	30.00	0.00	1.033	1.37	-0.00
4.04	2.00	0.00	1.340	4.04	0.00
4.08	12.00	0.00	1.600	4.08	-0.00
4.12	6.00	0.00	1.460	4.12	0.00
4.12	20.00	0.00	1.808	4.12	0.00
4.16	30.00	0.00	2.074	4.16	0.00
4.16	26.00	0.00	1.970	4.16	0.00
6.83	6.00	0.00	2.075	6.83	-0.00
6.87	2.00	0.00	1.913	6.87	-0.00
6.92	12.00	0.00	2.350	6.92	0.00
6.95	20.00	0.00	2.688	6.94	-0.00
6.97	26.00	0.00	2.945	6.97	0.00
6.98	30.00	0.00	3.122	6.97	-0.00

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

V = voltage output from SBE43, 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

