

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: 0140
CALIBRATION DATE: 10-Jul-12

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.4894

Voffset = -0.5047

Tau20 = 1.07

A = -3.2968e-003

B = 1.5058e-004

C = -2.6774e-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(VOLTS)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.24	2.00	0.09	0.767	1.24	-0.00
1.24	6.00	0.09	0.800	1.24	-0.00
1.25	12.00	0.08	0.851	1.25	-0.00
1.26	20.00	0.07	0.922	1.26	-0.00
1.27	26.00	0.07	0.977	1.27	-0.00
1.28	30.00	0.07	1.016	1.28	0.00
4.20	6.00	0.09	1.507	4.21	0.01
4.21	2.00	0.09	1.400	4.21	0.00
4.21	12.00	0.08	1.672	4.21	0.00
4.22	26.00	0.07	2.074	4.22	0.01
4.22	20.00	0.07	1.897	4.22	-0.00
4.23	30.00	0.07	2.202	4.24	0.00
6.62	30.00	0.07	3.154	6.61	-0.00
6.73	12.00	0.08	2.369	6.72	-0.00
6.73	20.00	0.07	2.727	6.73	-0.00
6.74	6.00	0.09	2.112	6.74	0.00
6.76	26.00	0.07	3.018	6.76	0.00
6.82	2.00	0.09	1.954	6.82	-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 [Kelvin]

OxSol(T,S) = oxygen saturation [ml/l], P = pressure [dbar], Residual = instrument oxygen - bath oxygen

Date, Delta Ox (ml/l)

