

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: 1210
CALIBRATION DATE: 31-Dec-15

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS:
Soc = 0.4932
Voffset = -0.5013
Tau20 = 1.45
A = -4.6722e-003
B = 2.3530e-004
C = -3.8682e-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 OXYGEN (ml/l)	BATH TEMPERATURE (° C)	BATH SALINITY (PSU)	INSTRUMENT OUTPUT (volts)	INSTRUMENT OXYGEN (ml/l)	RESIDUAL (ml/l)
1.15	20.00	0.00	0.879	1.15	0.00
1.15	30.00	0.00	0.959	1.16	0.00
1.15	26.00	0.00	0.927	1.16	0.00
1.17	2.00	0.00	0.747	1.16	-0.00
1.17	6.00	0.00	0.778	1.17	-0.00
1.17	12.00	0.00	0.825	1.17	-0.00
3.86	30.00	0.00	2.033	3.86	0.01
3.89	26.00	0.00	1.936	3.90	0.01
3.91	20.00	0.00	1.789	3.92	0.01
3.92	12.00	0.00	1.586	3.92	-0.00
3.93	6.00	0.00	1.434	3.93	-0.00
3.94	2.00	0.00	1.334	3.94	0.00
6.56	30.00	0.00	3.101	6.56	-0.00
6.63	26.00	0.00	2.939	6.62	-0.01
6.65	20.00	0.00	2.685	6.64	-0.00
6.66	12.00	0.00	2.346	6.67	0.00
6.66	2.00	0.00	1.909	6.66	0.00
6.67	6.00	0.00	2.085	6.67	-0.00

V = instrument output (volts); T = temperature (°C); S = salinity (PSU); K = temperature (°K)

Oxsol(T,S) = oxygen saturation (ml/l); P = pressure (dbar)

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

Residual (ml/l) = instrument oxygen - bath oxygen

