

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 1628  
CALIBRATION DATE: 19-Dec-14

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS:  
Soc = 0.4564  
Voffset = -0.4784  
Tau20 = 1.24

A = -3.3023e-003  
B = 1.1253e-004  
C = -1.0450e-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)
1.24	6.00	0.00	0.797	1.24	-0.00
1.25	2.00	0.00	0.762	1.25	-0.00
1.26	12.00	0.00	0.855	1.26	-0.00
1.28	20.00	0.00	0.931	1.28	-0.00
1.29	26.00	0.00	0.990	1.29	0.00
1.29	30.00	0.00	1.031	1.30	0.01
4.01	6.00	0.00	1.505	4.02	0.00
4.02	12.00	0.00	1.676	4.02	0.00
4.02	2.00	0.00	1.395	4.02	-0.00
4.03	20.00	0.00	1.906	4.02	-0.01
4.08	26.00	0.00	2.101	4.09	0.00
4.10	30.00	0.00	2.223	4.10	0.00
6.78	6.00	0.00	2.212	6.78	0.00
6.80	12.00	0.00	2.506	6.80	0.00
6.81	2.00	0.00	2.029	6.80	-0.00
6.82	20.00	0.00	2.895	6.81	-0.01
6.86	26.00	0.00	3.207	6.87	0.01
6.87	30.00	0.00	3.396	6.86	-0.01

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

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

