

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 1685  
CALIBRATION DATE: 28-Oct-15

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS:  
Soc = 0.4592  
Voffset = -0.5148  
Tau20 = 1.09

A = -3.0199e-003  
B = 1.4479e-004  
C = -2.3714e-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)
1.17	6.00	0.00	0.811	1.17	-0.00
1.17	2.00	0.00	0.780	1.17	-0.00
1.18	12.00	0.00	0.861	1.17	-0.00
1.18	20.00	0.00	0.929	1.18	0.00
1.19	30.00	0.00	1.017	1.19	0.00
1.19	26.00	0.00	0.982	1.19	0.00
3.95	2.00	0.00	1.408	3.95	-0.00
3.97	26.00	0.00	2.074	3.97	0.00
3.97	20.00	0.00	1.904	3.97	-0.00
3.97	12.00	0.00	1.685	3.97	-0.00
3.97	6.00	0.00	1.523	3.98	0.00
4.01	30.00	0.00	2.207	4.01	0.00
6.74	6.00	0.00	2.223	6.74	0.00
6.75	12.00	0.00	2.502	6.75	-0.00
6.75	30.00	0.00	3.362	6.75	-0.00
6.77	26.00	0.00	3.171	6.77	0.00
6.77	2.00	0.00	2.047	6.77	-0.00
6.78	20.00	0.00	2.886	6.78	-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

