

# 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: 1348  
CALIBRATION DATE: 04-Mar-14

## SBE 43 OXYGEN CALIBRATION DATA

### COEFFICIENTS

Soc = 0.3542

Voffset = -0.5139

Tau20 = 1.07

A = -3.6375e-003

B = 2.0198e-004

C = -2.7879e-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<br>(ml/l) | BATH TEMP<br>ITS-90 | BATH SAL<br>PSU | INSTRUMENT<br>OUTPUT(VOLTS) | INSTRUMENT<br>OXYGEN(ml/l) | RESIDUAL<br>(ml/l) |
|-------------------|---------------------|-----------------|-----------------------------|----------------------------|--------------------|
| 1.28              | 2.00                | 0.00            | 0.888                       | 1.27                       | -0.00              |
| 1.29              | 6.00                | 0.00            | 0.937                       | 1.29                       | 0.00               |
| 1.29              | 12.00               | 0.00            | 1.008                       | 1.29                       | -0.00              |
| 1.30              | 20.00               | 0.00            | 1.099                       | 1.30                       | 0.00               |
| 1.32              | 26.00               | 0.00            | 1.179                       | 1.33                       | 0.00               |
| 1.33              | 30.00               | 0.00            | 1.228                       | 1.33                       | 0.01               |
| 4.01              | 2.00                | 0.00            | 1.690                       | 4.00                       | -0.01              |
| 4.06              | 6.00                | 0.00            | 1.850                       | 4.06                       | 0.00               |
| 4.07              | 20.00               | 0.00            | 2.344                       | 4.06                       | -0.01              |
| 4.08              | 12.00               | 0.00            | 2.070                       | 4.08                       | -0.00              |
| 4.08              | 26.00               | 0.00            | 2.559                       | 4.08                       | 0.00               |
| 4.09              | 30.00               | 0.00            | 2.706                       | 4.10                       | 0.00               |
| 6.76              | 2.00                | 0.00            | 2.499                       | 6.76                       | 0.00               |
| 6.78              | 6.00                | 0.00            | 2.746                       | 6.78                       | 0.00               |
| 6.81              | 12.00               | 0.00            | 3.113                       | 6.81                       | 0.00               |
| 6.83              | 20.00               | 0.00            | 3.587                       | 6.83                       | -0.00              |
| 6.87              | 26.00               | 0.00            | 3.958                       | 6.88                       | 0.01               |
| 6.93              | 30.00               | 0.00            | 4.216                       | 6.92                       | -0.01              |

Oxygen (ml/l) = Soc \* (V + Voffset) \* (1.0 + A \* T + B \* T<sup>2</sup> + C \* T<sup>3</sup>) \* OxSol(T,S) \* exp(E \* P / 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)

