

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0416  
CALIBRATION DATE: 30-Oct-13

SBE 37 CONDUCTIVITY CALIBRATION DATA  
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

## COEFFICIENTS:

g = -9.674959e-001  
h = 1.385129e-001  
i = -4.199820e-004  
j = 5.174914e-005

CPcor = -9.5700e-008  
CTcor = 3.2500e-006  
WBOTC = -8.4403e-005

| BATH TEMP<br>(ITS-90) | BATH SAL<br>(PSU) | BATH COND<br>(Siemens/m) | INST FREQ<br>(Hz) | INST COND<br>(Siemens/m) | RESIDUAL<br>(Siemens/m) |
|-----------------------|-------------------|--------------------------|-------------------|--------------------------|-------------------------|
| 22.0000               | 0.0000            | 0.00000                  | 2652.54           | 0.00000                  | 0.00000                 |
| 1.0000                | 34.6908           | 2.96626                  | 5344.20           | 2.96626                  | 0.00001                 |
| 4.4999                | 34.6708           | 3.27234                  | 5548.47           | 3.27234                  | 0.00000                 |
| 15.0000               | 34.6279           | 4.25094                  | 6155.88           | 4.25092                  | -0.00002                |
| 18.5000               | 34.6190           | 4.59501                  | 6355.53           | 4.59501                  | 0.00000                 |
| 24.0000               | 34.6093           | 5.15123                  | 6665.45           | 5.15126                  | 0.00003                 |
| 29.0000               | 34.6046           | 5.67153                  | 6942.60           | 5.67152                  | -0.00001                |

$$f = \text{INST FREQ} * \sqrt{1.0 + \text{WBOTC} * t} / 1000.0$$

$$\text{Conductivity} = (g + hf^2 + if^3 + jf^4) / (1 + \delta t + \epsilon p) \text{ Siemens/meter}$$

$$t = \text{temperature}[^{\circ}\text{C}]; p = \text{pressure}[\text{decibars}]; \delta = \text{CTcor}; \epsilon = \text{CPcor};$$

$$\text{Residual} = \text{instrument conductivity} - \text{bath conductivity}$$

