

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0813  
CALIBRATION DATE: 14-Apr-12

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

## COEFFICIENTS:

g = -1.036905e+000  
h = 1.505980e-001  
i = -4.592770e-004  
j = 5.883346e-005

CPcor = -9.5700e-008  
CTcor = 3.2500e-006  
WBOTC = -7.1758e-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                  | 2633.06           | 0.00000                  | 0.00000                 |
| 1.0000                | 34.8466           | 2.97831                  | 5177.48           | 2.97830                  | -0.00000                |
| 4.5000                | 34.8260           | 3.28555                  | 5372.06           | 3.28555                  | 0.00000                 |
| 15.0000               | 34.7817           | 4.26782                  | 5951.19           | 4.26781                  | -0.00000                |
| 18.4999               | 34.7722           | 4.61314                  | 6141.67           | 4.61315                  | 0.00001                 |
| 24.0000               | 34.7619           | 5.17143                  | 6437.50           | 5.17142                  | -0.00001                |
| 29.0000               | 34.7559           | 5.69354                  | 6702.15           | 5.69354                  | 0.00000                 |

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

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

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

Residual = instrument conductivity - bath conductivity

