

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0360  
CALIBRATION DATE: 15-Dec-12

SBE 45 CONDUCTIVITY CALIBRATION DATA  
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

## COEFFICIENTS:

g = -9.986590e-001	CPcor = -9.5700e-008
h = 1.353918e-001	CTcor = 3.2500e-006
i = -1.293277e-004	WBOTC = 5.5203e-007
j = 2.881154e-005	

BATH TEMP (ITS-90)	BATH SAL (PSU)	BATH COND (Siemens/m)	INST FREQ (Hz)	INST COND (Siemens/m)	RESIDUAL (Siemens/m)
22.0000	0.0000	0.00000	2717.27	0.00000	0.00000
0.9999	34.6960	2.96665	5408.95	2.96666	0.00001
4.4999	34.6753	3.27272	5613.03	3.27271	-0.00001
15.0000	34.6314	4.25132	6220.03	4.25132	-0.00001
18.5000	34.6215	4.59531	6419.49	4.59532	0.00002
24.0000	34.6098	5.15129	6729.08	5.15129	0.00000
29.0000	34.6012	5.67104	7005.79	5.67102	-0.00002
32.5000	34.5920	6.04128	7196.25	6.04130	0.00001

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

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

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

Residual = instrument conductivity - bath conductivity

