

# 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: 0399  
CALIBRATION DATE: 15-Dec-15

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

## COEFFICIENTS:

g = -9.742949e-001  
h = 1.422615e-001  
i = -3.520253e-004  
j = 4.909017e-005

CPcor = -9.5700e-008  
CTcor = 3.2500e-006  
WBOTC = 6.9909e-007

BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2622.37	0.00000	0.00000
1.0000	34.6814	2.96553	5271.64	2.96552	-0.00001
4.5000	34.6616	3.27156	5471.92	3.27158	0.00002
15.0000	34.6200	4.25007	6067.10	4.25005	-0.00002
18.5000	34.6108	4.59404	6262.59	4.59405	0.00001
24.0000	34.6007	5.15009	6565.93	5.15009	0.00001
28.9999	34.5949	5.67011	6837.05	5.67011	-0.00000
32.5000	34.5917	6.04124	7023.89	6.04119	-0.00005

$$f = \text{Instrument Output(Hz)} * \text{sqrt}(1.0 + \text{WBOTC} * t) / 1000.0$$

t = temperature (°C); p = pressure (decibars);  $\delta$  = CTcor;  $\epsilon$  = CPcor;

$$\text{Conductivity (S/m)} = (g + h * f^2 + i * f^3 + j * f^4) / 10 (1 + \delta * t + \epsilon * p)$$

$$\text{Residual (Siemens/meter)} = \text{instrument conductivity} - \text{bath conductivity}$$

