

# RBR

## Conductivity Calibration Certificate

RBRlegato<sup>3</sup> C.T.D, Teledyne Webb Slocum, dry bay (1000dbar) s/n: 207968

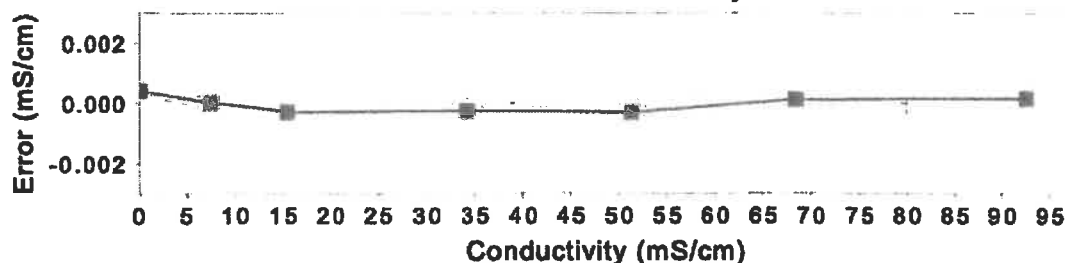
References: Autosal8400B#66289, MS-315#15506, SSW P164, RC#002

Reference Resistance (ohm)	Reference Conductivity (mS/cm)	Voltage Ratio, V	Measured Conductivity (mS/cm)	Calibration Error (mS/cm)	Coefficients	
open	0.0000	-0.000137	0.0004	0.0004	C0:	26.457904E-3
694.042	7.4024	0.038920	7.4024	0.0000	C1:	189.51392
331.926	15.4780	0.081531	15.4777	-0.0003	(K) C2:	1.001942
150.019	34.2460	0.180563	34.2457	-0.0002	X0:	538.5284E-6
100.016	51.3675	0.270907	51.3672	-0.0003	X1:	-12.133374E-6
75.023	68.4793	0.361203	68.4794	0.0001	X2:	0.0
55.520	92.5358	0.488141	92.5360	0.0002	X3:	0.0
					X4:	0.0
					X5:	14.863837
					X6:	10
Bath	Voltage Ratio	Temperature (ITS-90)	Salinity (PSS-78)	Conductivity (mS/cm)		
T15S35	0.2255738	14.86384	34.9928	42.7758		
T25S35	0.2788079	24.80848	34.9958	52.8655		

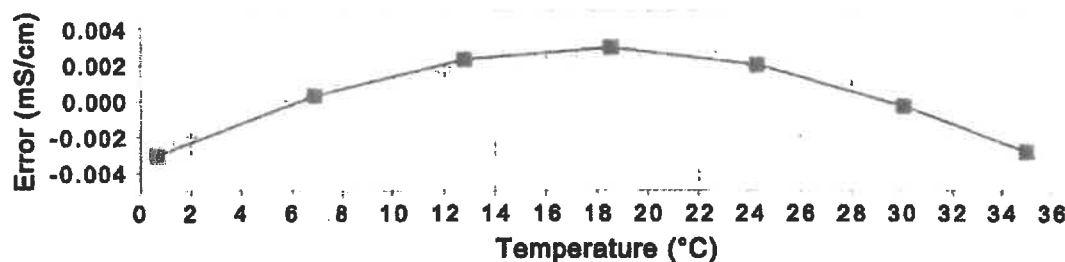
Cell Constant @T15S35 = 5.13754 1/cm

$$C_c = \frac{C_0 + C_1 * C_2 * V - X_0 * (T - X_5)}{1 + X_1 * (T - X_5) + X_2 * (P - X_6) + X_3 * (P - X_6)^2 + X_4 * (P - X_6)^3}$$

Calibration error vs. Conductivity



Calibration error vs. Temperature



Calibration Date: 2021-08-18

Issue Date: 2021-08-18

File Name: 207968\_20210818\_1521C.rsk

Operator:

  
jwang

Approver:

  
kmalorny

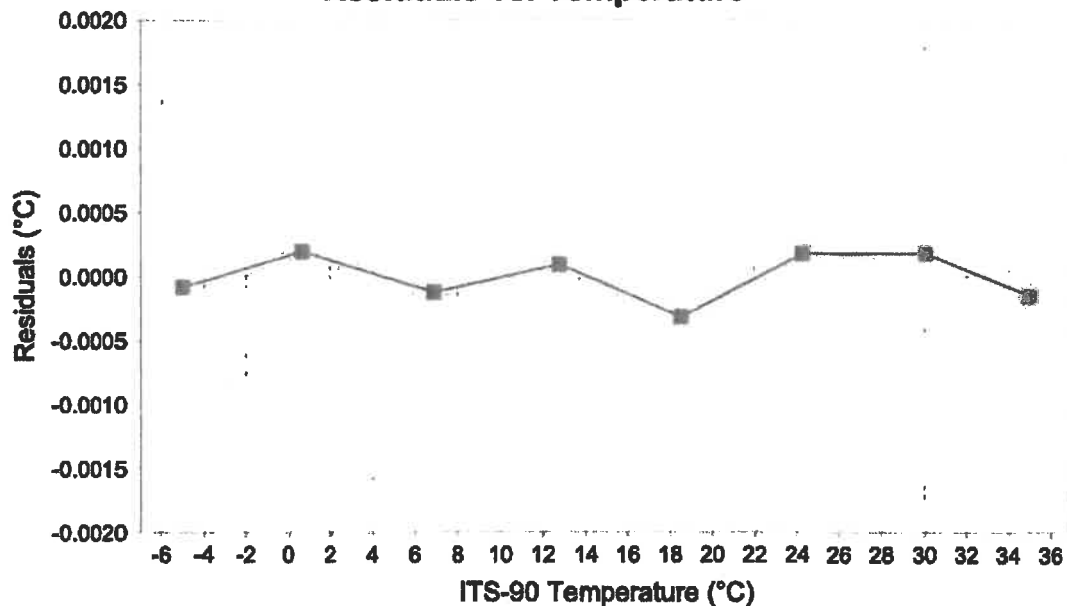


## Temperature Calibration Certificate

Logger ID: RBRlegato<sup>3</sup> Serial No: 207968 Channel No: 2

Reference Temperature, ITS-90	Voltage ratio, V	Measured Temperature, ITS-90	Calibration error	Coefficients
-4.97361	0.683896	-4.97369	-0.00008	C0: 3.5320197E-3
0.66592	0.615894	0.66612	0.00020	C1: -253.05226E-6
6.88648	0.538339	6.88636	-0.00012	C2: 2.5934678E-6
12.79196	0.465618	12.79205	0.00010	C3: -78.98605E-9
18.56121	0.398294	18.56089	-0.00031	
24.30635	0.336903	24.30653	0.00018	
30.10444	0.281863	30.10462	0.00018	
34.99447	0.241164	34.99433	-0.00014	

Residuals vs. Temperature



Calibration Date: 2021-08-15  
Issue Date: 2021-08-16  
Calibration ID: 48368

Operator:

dluong

Approver:

kmalorny

# RBR

## Pressure Calibration Certificate

RBRlegato<sup>3</sup> C.T.D, Teledyne Webb Slocum, dry bay (1000dbar) s/n: 207968

Instrument rating: 1,000 dbar s/n: N009851

Nominal accuracy: 0.05%FS (0.5 dbar)

Reference instrument: Mensor CPC6000 s/n: 612676

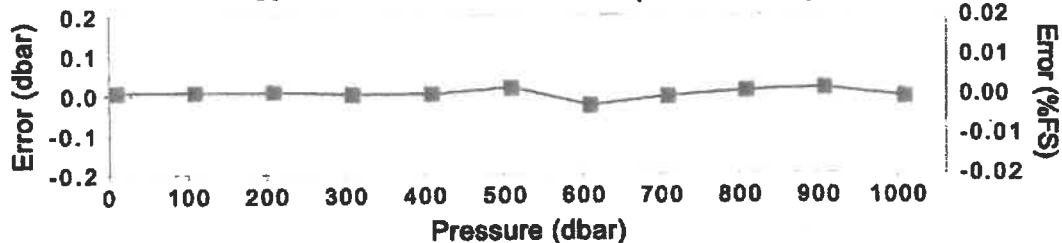
Applied pressure, $P_{app}$ (dbar)	Voltage ratio, V	Measured pressure, $P_c$ (dbar)	Calibration error (dbar)	Coefficients
10.110	0.019401	10.1193	0.0089	C0: -34.557392
110.000	0.062521	110.0087	0.0087	C1: 2.3136807E3
209.999	0.105639	210.0075	0.0085	C2: 36.9867
309.999	0.148711	310.0016	0.0026	C3: -30.144094
409.998	0.191748	410.0007	0.0027	X0: 10.1104
509.998	0.234760	510.0158	0.0178	X1: 79.48717E-3
609.998	0.277720	609.9706	-0.0274	X2: 7.0892575E-6
709.996	0.320690	709.9917	-0.0043	X3: -736.2426E-9
809.996	0.363643	810.0056	0.0096	X4: -119.37886E-6
909.997	0.406588	910.0133	0.0163	X5: 21.74662
1010.010	0.449525	1010.0046	-0.0054	

$$P_c = X_0 + \frac{P_m - X_0 - X_1(T - X_5) - X_2(T - X_5)^2 - X_3(T - X_5)^3}{1 + X_4(T - X_5)}$$

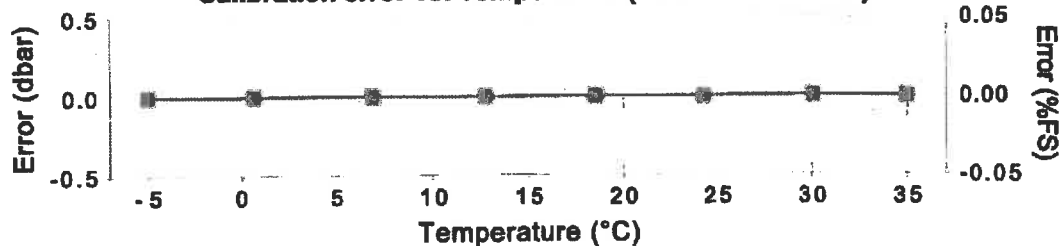
Head (mm) = 234

$$P_m = C_0 + C_1V + C_2V^2 + C_3V^3$$

Calibration error vs. Pressure (Tcal = 21.7°C)



Calibration error vs. Temperature (Patm = 10.16 dbar)



Calibration Date: 2021-08-17

Issue Date: 2021-08-18

File Name: 207968\_20210818\_0807P.rsk

Operator:

*Adam Falicki*

afalicki

Approver:

*K. Malorny*

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