



SEA-BIRD ELECTRONICS, INC.

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Digiquartz Pressure Calibration dP/dT Corrected Coefficients

(Changed coefficients are posted in italics)

Pressure Transducer Serial Number: 134959

Original Calibration Date: 15-Dec-15

Date of Correction: 2015-12-19

Installed in: SBE 9Plus S/N 1263

PRESSURE COEFFICIENTS

<i>C1</i>	<i>-40230.25</i>	<i>psia</i>
<i>C2</i>	<i>-0.4466859</i>	<i>psia/deg C</i>
C3	1.240000e-002	psia/deg C ²
D1	3.511700e-002	
D2	0.000000e+000	
<i>T1</i>	<i>30.23099</i>	<i>μsec</i>
<i>T2</i>	<i>-4.46971e-04</i>	<i>μsec/deg C</i>
T3	4.128850e-006	μsec/deg C ²
T4	2.885040e-009	μsec/deg C ³
T5	0.000000e+000	

Slope = 1.0

Offset = 0.0

Corrected at Sea-Bird Electronics as per Paroscientific Calibration and Sea-Bird Electronics dP/dT tests. The original calibration from Paroscientific assumes an operating temperature range of 0 to 125 degrees C. dP/dT correction adjusts this operating range to a nominal range of 0 to 22 degrees C. This increases the accuracy of the transducer in this temperature range.

NOTE: Original coefficients from Paroscientific are attached to this form for informational purposes and should not be used.

CALIBRATION COEFFICIENTSSERIAL NO : **134959**

PRESSURE TRANSDUCER

DATE : 11-03-2015

MODEL :

410K-134

PRESSURE RANGE :

0 to 10000 psia

TEMP. RANGE :

0 to 125 deg C

PORT :

PRESSURE COEFFICIENTSU = temperature
(deg C)

$$C = C_1 + C_2 U + C_3 U^2$$

$$D = D_1 + D_2 U$$

$$T_0 = T_1 + T_2 U + T_3 U^2 + T_4 U^3 + T_5 U^4$$

T = pressure period
(μsec)

Pressure : (psia)

$$P = C \left(1 - \frac{T_0^2}{T^2} \right) \left(1 - D \left(1 - \frac{T_0^2}{T^2} \right) \right)$$

C ₁	-40229.00 psia
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C ₂	-4.54495E-01 psia/deg C
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C ₃	1.24004E-02 psia/deg C ²
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D ₁	0.035117
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D ₂	0
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T ₁	30.23143 μsec
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T ₂	-4.49696E-04 μsec/deg C
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T ₃	4.12885E-06 μsec/deg C ²
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T ₄	2.88504E-09 μsec/deg C ³
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T ₅	0
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(11-03-2015)

PAROSCIENTIFIC, INC.4500 148th AVENUE N.E.
REDMOND, WA. 98052

CUSTOMER : SEABIRD ELECTRONICS, INC.

SALES ORDER : 33547

PREPARED BY : RM



CALIBRATION COEFFICIENTSSERIAL NO : **134959**

PRESSURE TRANSDUCER

DATE : **11-03-2015**

MODEL :	PRESSURE RANGE :	TEMP. RANGE :	PORT :
410K-134	0 to 10000 psia	0 to 125 deg C	

PRESSURE COEFFICIENTS AT FIXED TEMPERATURE

(only valid at specified temperature)

T = pressure period (μsec)

Pressure equation : (psia)

$$P = C \left(1 - \frac{T_0^2}{T^2} \right) \left(1 - D \left(1 - \frac{T_0^2}{T^2} \right) \right)$$

Temperature: 21.0 C

C (psia)	-40233.07				
D	0.035117				
T ₀ (μsec)	30.22383				

(11-03-2015)

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