



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: 136924
Original Calibration Date: 12-Sep-16
Date of Correction: 2016-09-27
Installed in: SBE 9Plus S/N 1292

PRESSURE COEFFICIENTS

<i>C1</i>	<i>-42478.98</i>	<i>psia</i>
<i>C2</i>	<i>-0.1618984</i>	<i>psia/deg C</i>
<i>C3</i>	<i>1.460220e-002</i>	<i>psia/deg C²</i>
D1	3.536900e-002	
D2	0.000000e+000	
<i>T1</i>	<i>29.92804</i>	<i>μsec</i>
<i>T2</i>	<i>-3.15695e-04</i>	<i>μsec/deg C</i>
T3	4.144500e-006	μsec/deg C ²
T4	3.229580e-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 COEFFICIENTS

SERIAL NO : **136924**

PRESSURE TRANSDUCER

DATE : 07-11-2016

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

U = temperature
(deg C)

$$C = C_1 + C_2U + C_3U^2$$

$$D = D_1 + D_2U$$

$$T_0 = T_1 + T_2U + T_3U^2 + T_4U^3 + T_5U^4$$

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	-42477.93	psia
C ₂	-1.43374E-01	psia/deg C
C ₃	1.46022E-02	psia/deg C ²

D ₁	0.035369
D ₂	0

T ₁	29.92838	μsec
T ₂	-3.09637E-04	μsec/deg C
T ₃	4.14450E-06	μsec/deg C ²
T ₄	3.22958E-09	μsec/deg C ³
T ₅	0	

(07-11-2016)

PAROSCIENTIFIC, INC.

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

CUSTOMER : SEABIRD ELECTRONICS, INC.

SALES ORDER : 34152

PREPARED BY : RM



CALIBRATION COEFFICIENTSSERIAL NO : **136924**

PRESSURE TRANSDUCER

DATE : 07-11-2016

MODEL : 410K-134	PRESSURE RANGE : 0 to 10000 psia	TEMP. RANGE : 0 to 125 deg C	PORT :
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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)	-42474.50				
D	0.035369				
T ₀ (μsec)	29.92374				

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