SEA-BIRD ELECTRONICS, INC.

1808 136th Place N.E., Bellevue Washington, 98005 USA
Phone: (425) 643-9866 Fax: (425) 643-9954 Email: seabird@seabird.com

Digiquartz Pressure Calibration dP/dT Corrected Coefficients

(Changed coefficients are posted in italics)

Pressure Transducer Serial Number: 115173
Original Calibration Date: 2009-07-01
Date of Correction: 2009-09-23
Installed in: SBE 9Plus S/N 0957

PRESSURE COEFFICIENTS

C1	***-47019.53***	***psia***
C2	***-3.1992304e-01***	***psia/deg C***
C3	1.4641e-02	psia/deg C^2
D1	0.037486	
D2	0.0	
T1	***30.0246***	***µsec***
T2	***-3.417081e-04***	***µsec/deg C***
T3	4.1484e-06	µsec/deg C^2
T4	2.79372e-09	µsec/deg C^3
T5	0e+00	

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 information purposes and should not be used.

CALIBRATION COEFFICIENTS

SERIAL NO : **115173**

PRESSURE TRANSDUCER

DATE : 07-01-2009

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

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	-47018.20	psia
C_2	-3.11018E-01	psia/deg C
C_3	1.46413E-02	psia/deg C^2

D_1	0.037486
D_2	0

T_1	30.02504	μsec
T_2	-3.39080E-04	μsec/deg C
T_3	4.14838E-06	μsec/deg C^2
T_4	2.79372E-09	μsec/deg C^3
T_5	0	

(07-01-2009)

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

CUSTOMER : SEABIRD ELECTRONICS, INC.

PARO TEST 12

SALES ORDER : 26474 PREPARED BY : T.C.

CALIBRATION COEFFICIENTS

SERIAL NO : **115173**

PRESSURE TRANSDUCER

DATE : 07-01-2009

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)	-47018.27				
D	0.037486				
T_0 (μsec)	30.01978				

(07-01-2009)

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SBE 5T SUBMERSIBLE PUMP CONFIGURATION SHEET

Customer: NOAA/AOML
Delivery Date: 9/25/2009
Serial Number: 5416
MRP PN: 90543
Job Number: 54833

Pressure Case: 10,500 meters (titanium)

Pittman Motor Type:

- **P/N 3711B113-R1, 18.02 ohms nominal (For applications up to 2000 RPM MAX)** ☐
  - 5 Winding, low voltage input (jump P5 to P7) (80676 assy/3711B113-R1 motor) ☐
  - 5 Winding, standard voltage input (jump P5 to P6) (80676 assy/3711B113-R1 motor) ☐
- **P/N 3711B112-R1, 7.40 ohms nominal (For applications up to 4500 RPM MAX)** ☐
  - 3 Winding, low voltage input (jump P5 to P7) (80675 assy/3711B112-R1 motor) ☐
  - 3 Winding, standard voltage input (jump P5 to P6) (80675 assy/3711B112-R1 motor) ☐
- **P/N 3711B112-R2, 3.55 ohms nominal (For applications up to 4500 RPM MAX)** ☑
  - 3 Winding, low voltage input (jump P5 to P7) (801572 assy/3711B112-R2 motor) ☐
  - 3 Winding, standard voltage input (jump P5 to P6) (801572 assy/3711B112-R2 motor) ☑

Speed Adjust Range: Min: 945 RPM Max: 5250 RPM (@ 12 Vin/300mA load)

Final Speed Setting: 3000 RPM (TP1 = 100.0 Hz)

Low voltage pumps only:

Motor speed at 7.5 Vin with no load: 0 RPM (TP1 = 0.0 Hz)

Motor speed at 7.5 Vin with 200mA load: 0 RPM (TP1 = 0.0 Hz)

Motor dropout voltage: 9.4