

SBE54 Tsunameter

Tsunami Pressure Sensor

Instrument Configuration:

Serial Number	0049
Firmware Version	1.4
Baud Rate	9600
Pressure Sensor Serial Number	136920
Pressure Sensor Range	10000 psia
Maximum Depth	6885 meters

CAUTION - The maximum deployment depth is limited by the measurement range of the pressure sensor.



Sea-Bird Electronics, Inc.

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Crystal Calibration: SBE 54 S/N 0049

Date 23-Aug-2016

Sea-Bird Electronics has performed a calibration on the Crystal Oscillator installed in this SBE 54. The calibration coefficients are listed below. These are entered into the instrument at the factory. They are provided here in case the equipment is reset for any reason and the coefficients are deleted. Type the coefficients as shown below:

FRA0= 6000054.049

FRA1= 0.00887775759751

FRA2= -1.76561211182e-07

FRA3= 1.0307336422e-12

CALIBRATION COEFFICIENTS

PAROSCIENTIFIC
 PRESSURE TRANSDUCER
 Corrected coefficients for 54-0049

Serial No: **136920**
 Original Cal Date: 07/07/2016
 Corrected Cal Date: 08/26/2016

PRESSURE RANGE: 0 to 10000 psia

TEMPERATURE COEFFICIENTS

X = temperature period (μsec)

$$U = X - U_0$$

Temperature: (deg C)

$$\text{Temp} = Y_1U + Y_2U^2 + Y_3U^3$$

U0	5.780463	μsec
Y1	-3983.291	deg C/μsec
Y2	-11609.94	deg C/μsec ²
Y3	0	

PRESSURE COEFFICIENTS

T = pressure period (μsec)

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

$$D = D_1 + D_2U$$

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

pressure: (psia)

$$P = C(1 - (T_0^2/T^2))(1 - D(1 - (T_0^2/T^2)))$$

<i>C1</i>	<i>-4.3932409E+04</i>	<i>psia</i>
<i>C2</i>	<i>-9.4630684E+02</i>	<i>psia/μsec</i>
<i>C3</i>	164451.5	psia/μsec ²
D1	0.030711	
D2	0	
<i>T1</i>	<i>2.9728282E+01</i>	<i>μsec</i>
<i>T2</i>	<i>9.4108519E-01</i>	<i>μsec/μsec</i>
T3	66.66224	μsec /μsec ²
T4	203.4478	μsec /μsec ³
T5	0	



Digiquartz Pressure Calibration Coefficients

Corrected at Sea-Bird Electronics per Paroscientific Calibration and SBE dP/dT tests.

(*Changed coefficients are posted in italics.*)



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Pressure Test Certificate

Test Date: 2016-08-16

Description: SBE-54

Sensor Information:

Model Number: SBE-54

Serial Number: 0049

Pressure Test Protocol:

Low Pressure Test: 40 PSI Held For: 15 Minutes

High Pressure Test: 10000 PSI Held For: 15 Minutes

Passed Test: True

Tested By: bk

High pressure is generally equal to the maximum depth rating of the instrument

