

~ Multi-Axis Load Cell Calibration Summary ~

OT 2155-955

Model Number: 260A11/FCS-DN

Customer: _____

Serial Number: 16935

P.O. Number: _____

Description: Charge® 3-Component Force SensorManufacturer: PCB Piezotronics, Inc.Method: Back to Back Comparison
(Test Procedure AT501-3)

Calibration Data

Temperature: 73 °F = 23 °C Humidity: 44 %

		X	Y	Z
Input:	(lbs.)	225	225	225
	(N)	1001	1001	1001
Sensitivity:	(pC/lb)	34.22	34.08	15.62
	(pC/N)	7.693	7.662	3.511
Linearity:	(% FS)	0.2	0.1	0.2
Capacitance:	(pF)	18.3	18.7	18.5

Cross Talk Percentage

Cross Talk	%
X to Y	1.28
Y to X	0.76
X to Z	2.45
Y to Z	0.07
Z to X	0.25
Z to Y	0.61

Condition of Unit

As Found: _____ In tolerance
As Left: _____ In tolerance

Notes

1. Station #25 Sensitivity at 6744 lb is 17.11 pC/lb (30 kN is 3.85 pC/N)
2. This sensor is calibrated with a 081A70 beryllium copper mounting stud.
3. The sensor is preloaded to 5000 lbs. (22.24 kN) prior to calibration.
4. Calibration is N.I.S.T. Traceable thru Project # KE104
5. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
6. Calibration is performed in compliance with ISO 9001, ISO 10012-1, ANSI/NCISL Z540-1-1994 and ISO 17025.
7. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
8. Measurement uncertainty (95% confidence level with a coverage factor of 2) is +/-1%.

Technician: Ryan Roskwitalski *RR*Date: 1/19/2018

Cert. No. 1862.01



3425 Walden Avenue

Depew, New York 14043

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CALIBRATION CERTIFICATE

Model: 260A11/FCS-DN
Serial #: 16935 X - Axis
Description: Force Sensor
Type: Charge

Capacitance: 18.3 pF

Date: 1/19/2018
By: Ryan Roskwitalski, Cal. Tech. *RR*
Station: 0-1000 lb Load Cell (Test Procedure AT-501-3)

Sensitivity*: 34.22 pC/LBF
7.693 pC/N

Temp: 73 deg F [23deg C]
Humidity: 44 %

Linearity*: 0.2% FS
Uncertainty**: +/- 1 %

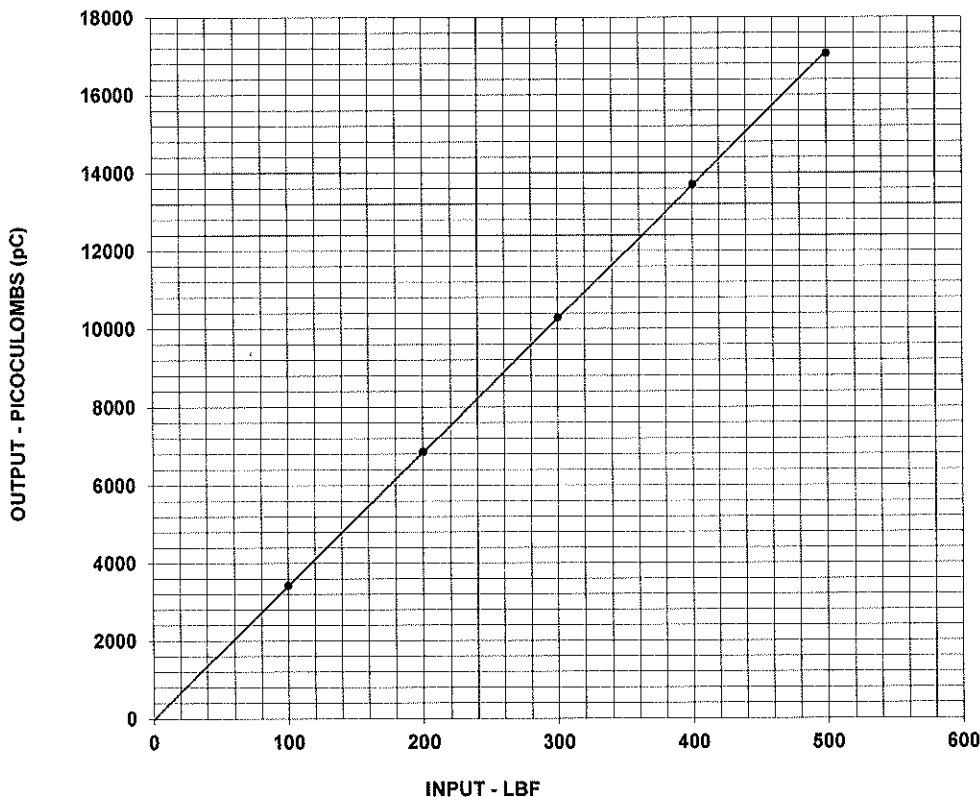
Cert #: 685691

* Zero based, least-squares straight line.

** Measurement uncertainty represented using a coverage factor of k=2 which provides a level of confidence of approximately 95 %.

Condition of Unit:

As Found: In tolerance
As Left: In tolerance



TEST DATA

INPUT (LBF)	OUTPUT (pC)
100	3427
200	6861
300	10291
400	13709
500	17068

Notes:

- 1 Station# 25
- 2 The sensor is preloaded to 5000 lbs. prior to calibration. The preload is applied to fixtures that do not shunt forces through the mounting stud.
- 3 Calibration is traceable to NIST and is accredited to ISO 17025 and ANSI/NCSL Z540.3.
- 4 NIST traceability through PCB control # KE104.
- 5 This certificate may not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.



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CALIBRATION CERTIFICATE

Model: 260A11/FCS-DN
Serial #: 16935 Y - Axis
Description: Force Sensor
Type: Charge

Capacitance: 18.7 pF

Date: 1/19/2018
By: Ryan Roskwitalski, Cal. Tech. *RL*
Station: 0-1000 lb Load Cell (Test Procedure AT-501-3)

Sensitivity*: 34.08 pC/LBF
7.662 pC/N

Temp: 73 deg F [23deg C]
Humidity: 44 %

Linearity*: 0.1% FS
Uncertainty**: +/- 1 %

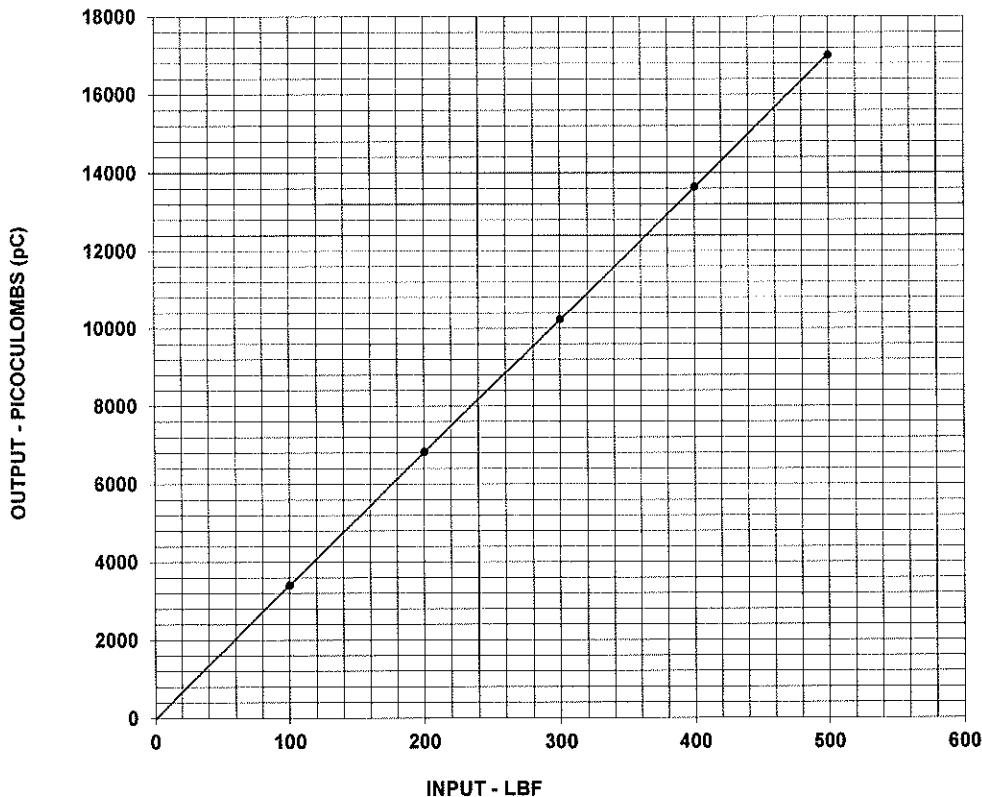
Cert #: 685690

* Zero based, least-squares straight line.

** Measurement uncertainty represented using a coverage factor of k=2 which provides a level of confidence of approximately 95 %.

Condition of Unit:

As Found: In tolerance
As Left: In tolerance



TEST DATA

INPUT (LBF)	OUTPUT (pC)
100	3407
200	6826
300	10244
400	13646
500	17016

Notes:

- 1 Station# 25
- 2 The sensor is preloaded to 5000 lbs. prior to calibration. The preload is applied to fixtures that do not shunt forces through the mounting stud.
- 3 Calibration is traceable to NIST and is accredited to ISO 17025 and ANSI/NCSL Z540.3.
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CALIBRATION CERTIFICATE

Model: 260A11/FCS-DN
Serial #: 16935 Z - Axis
Description: Force Sensor
Type: Charge

Capacitance: 18.5 pF

Date: 1/19/2018

By: Ryan Roskwitalski, Cal. Tech. *RR*

Station: 0-1000 lb Load Cell (Test Procedure AT-501-3)

Sensitivity*: 15.62 pC/LBF
 3.511 pC/N

Temp: 73 deg F [23deg C]

Humidity: 44 %

Linearity*: 0.2% FS

Cert #: 685692

Uncertainty:** +/- 1 %

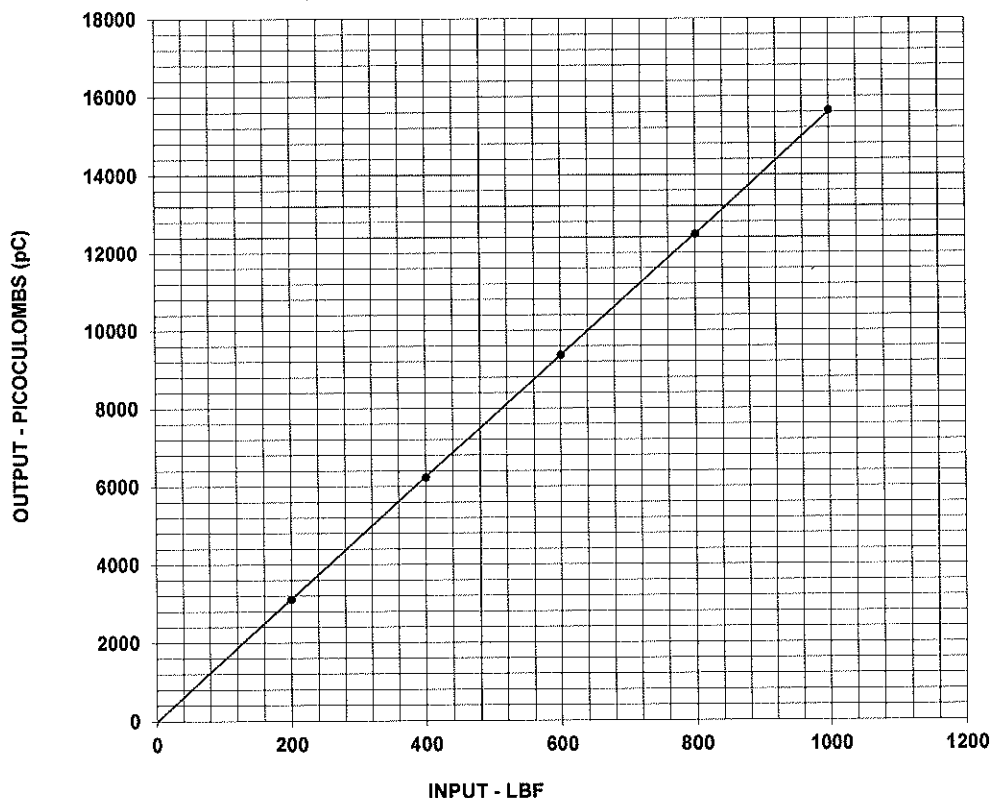
* Zero based, least-squares straight line.

** Measurement uncertainty represented using a coverage factor of k=2 which provides a level of confidence of approximately 95 %.

Condition of Unit:

As Found: In tolerance

As Left: In tolerance



TEST DATA

INPUT (LBF)	OUTPUT (pC)
200	3107
400	6229
600	9364
800	12481
1000	15643

Notes:

- 1 Station# 25 Sensitivity at 6744 lb is 17.11pC/lb (30 kN is 3.85pC/N)
- 2 The sensor is preloaded to 5000 lbs. prior to calibration. The preload is applied to fixtures that do not shunt forces through the mounting stud.
- 3 Calibration is traceable to NIST and is accredited to ISO 17025 and ANSI/NCSL Z540.3.
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