

~ Multi-Axis Load Cell Calibration Summary ~

OT 2155350

Model Number: 260A11/FCS-DN

Customer: _____

Serial Number: 16939

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)	33.98	34.14	15.61
	(pC/N)	7.639	7.675	3.511
Linearity:	(% FS)	0.3	0.3	0.03
Capacitance:	(pF)	18.8	18.9	18.3

Cross Talk Percentage

Cross Talk	%
X to Y	1.91
Y to X	1.58
X to Z	1.80
Y to Z	0.63
Z to X	0.41
Z to Y	1.22

Condition of Unit

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

Notes

1. Station #24 Sensitivity at 6744 lb is 17.22 pC/lb (30 kN is 3.87 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 # TA333
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: Fran Coleman *fe*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 #: 16939 X - AXIS
Description: Force Sensor
Type: Charge

Capacitance: 18.8 pF

Date: 1/19/2018

By: Fran Coleman, Cal. Tech. *FC*

Station: 0-1,000 lb. Load Cell (Test Procedure AT501-3)

Sensitivity*: 33.98 pC/LBF
 7.639 pC/N

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

Linearity*: 0.3% FS
Uncertainty:** +/- 1 %

Cert #: 685693

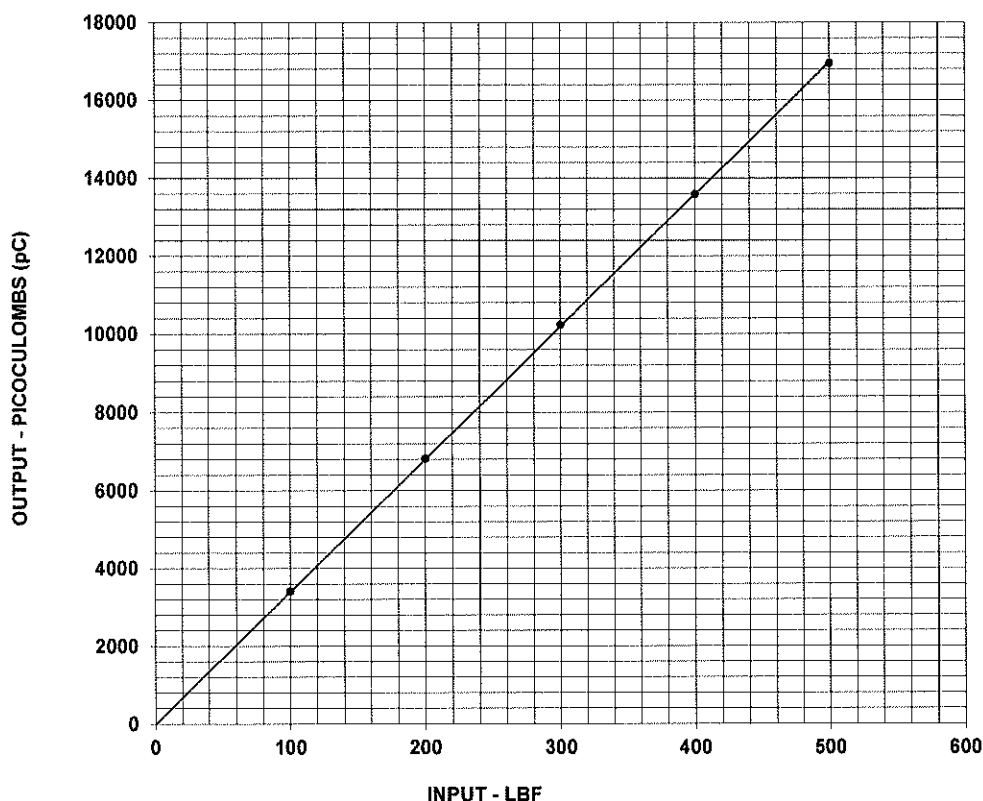
* Zero based, least-squares straight line.

** 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	3415
200	6822
300	10237
400	13589
500	16953

Notes:

- 1 Station # 24
- 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/NCCL Z540.3.
- 4 NIST traceability through PCB control # TA333.
- 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 #: 16939 Y - AXIS
Description: Force Sensor
Type: Charge

Capacitance: 18.9 pF

Date: 1/19/2018
By: Fran Coleman, Cal. Tech. *FC*
Station: 0-1,000 lb. Load Cell (Test Procedure AT501-3)

Sensitivity*: 34.14 pC/LBF
 7.675 pC/N

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

Linearity*: 0.3% FS

Cert #: 685695

Uncertainty:** +/- 1 %

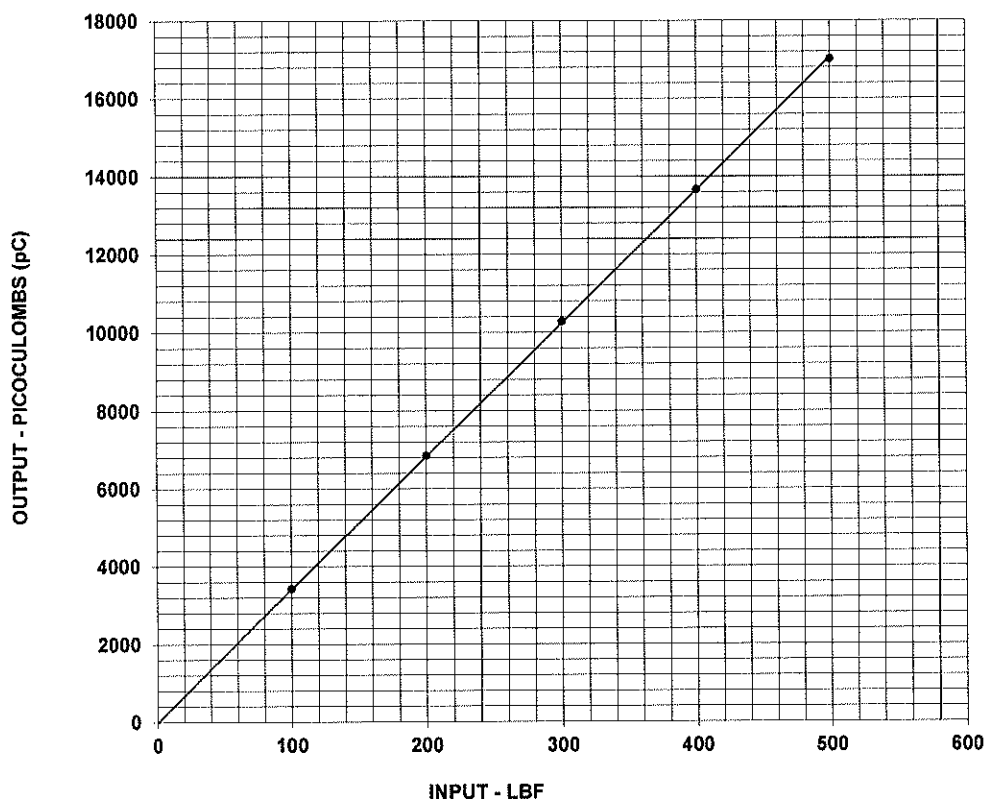
* Zero based, least-squares straight line.

** 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)
100	3433
200	6860
300	10282
400	13671
500	17014

Notes:

- 1 Station # 24
- 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 #: 16939 Z - AXIS
Description: Force Sensor
Type: Charge

Capacitance: 18.3 pF

Date: 1/19/2018

By: Fran Coleman, Cal. Tech. *FL*

Station: 0-1,000 lb. Load Cell (Test Procedure AT501-3)

Sensitivity*: 15.61 pC/LBF
 3.511 pC/N

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

Linearity*: 0.03% FS

Cert #: 685697

Uncertainty:** +/- 1 %

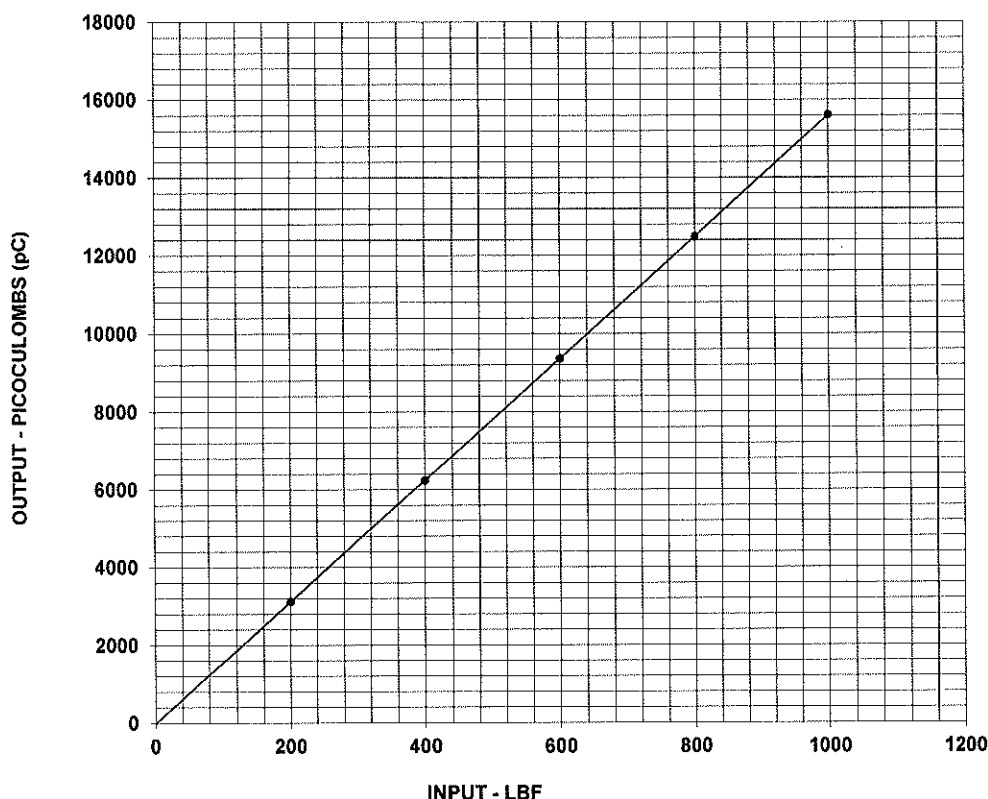
* Zero based, least-squares straight line.

** 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	3123
400	6242
600	9365
800	12490
1000	15620

Notes:

- 1 Station # 24 Sensitivity at 6744 lb is 17.22 pC/lb (30 kN is 3.87 pC/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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