

~ Calibration Certificate ~

Per ISO 16063-21

Model Number: 393B04

Serial Number: 44963

Description: ICP® Accelerometer

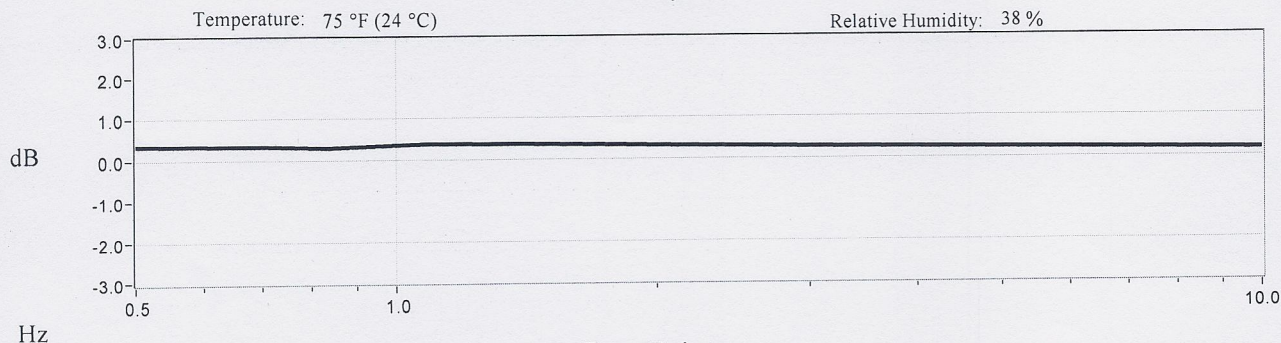
Manufacturer: PCB

Method: Back-to-Back Comparison AT401-12

Calibration Data

Sensitivity @ 100 Hz 1002 mV/g
(102.2 mV/m/s²)

Sensitivity Plot



Data Points

Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)
0.5	4.0	10	1.9
1	4.0		
2	3.7		
5	2.7		
7	2.3		

Mounting Surface: Stainless Steel w/Silicone Grease Fastener: 10-32 Female Fixture Orientation: Vertical

Acceleration Level (pk): 1.00 g (9.81 m/s²)

*The acceleration level may be limited by shaker displacement at low frequencies. If the listed level cannot be obtained, the calibration system uses the following formula to set the vibration amplitude; Acceleration Level (g) = 0.207 x (freq)². *The gravitational constant used for calculations by the calibration system is: 1 g = 9.80665 m/s².

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration is traceable to one or more of the following; PTB 10065, PTB 10066 and NIST 683/283498.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 9001, ISO 10012-1, ANSI Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Measurement uncertainty (95% confidence level with coverage factor of 2) for frequency ranges tested during calibration are as follows: 0.5-0.99 Hz; +/- 1.8%, 1-30 Hz; +/- 1.0%, 30.01-199 Hz; +/- 1.5%, 200-1 kHz; +/- 3.0%.

Technician: Monty Manning *mm*

Date: 12/9/2015



CALIBRATION CERT #1862.02

PCB PIEZOTRONICS
VIBRATION DIVISION

Headquarters: 3425 Walden Avenue, Depew, NY 14043

Calibration Performed at: 10869 Highway 903, Halifax, NC 27839

TEL: 888-684-0013

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www.pcb.com

CAL57-3532548142.211+0



~ Calibration Certificate ~

Per ISO 16063-21

Model Number: 393B04

Serial Number: 44963

Description: ICP® Accelerometer

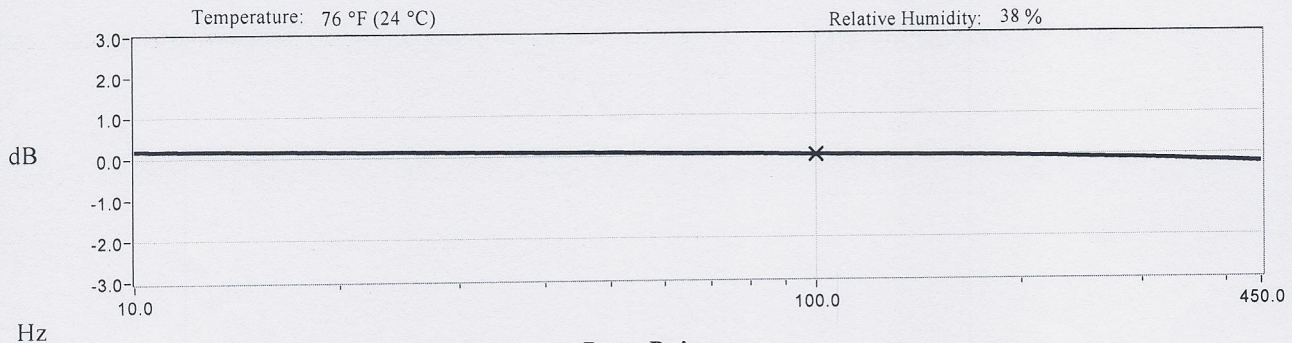
Manufacturer: PCB

Method: Back-to-Back Comparison AT401-3

Calibration Data

Sensitivity @ 100 Hz	1002 mV/g (102.2 mV/m/s ²)	Output Bias	11.6 VDC
Discharge Time Constant	9.8 seconds	Transverse Sensitivity	0.7 %
		Resonant Frequency	2.9 kHz

Sensitivity Plot



Data Points

Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)
10	2.0	300	-1.5
15	1.7	450	-2.8
30	1.2		
50	0.8		
REF. FREQ.	0.0		

Mounting Surface: Beryllium w/Silicone Grease Fastener: 10-32 Female Fixture Orientation: Vertical

Acceleration Level (pk): 1.00 g (9.81 m/s²)

*The acceleration level may be limited by shaker displacement at low frequencies. If the listed level cannot be obtained, the calibration system uses the following formula to set the vibration amplitude: Acceleration Level (g) = 0.008 x (freq)². *The gravitational constant used for calculations by the calibration system is: 1 g = 9.80665 m/s².

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration is NIST Traceable thru Project 683/287323 and PTB Traceable thru Project 17014.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 9001, ISO 10012-1, ANSI Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Measurement uncertainty (95% confidence level with coverage factor of 2) for frequency ranges tested during calibration are as follows: 5-9 Hz; +/- 2.0%, 10-99 Hz; +/- 1.5%, 100-1999 Hz; +/- 1.0%, 2-10 kHz; +/- 2.5%.

Technician: Monty Manning *mm*

Date: 12/9/2015



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CAL48-3532545668.936+0



~ Calibration Certificate ~

Per ISO 16063-21

Model Number: 393B04

Serial Number: 44963

Description: ICP® Accelerometer

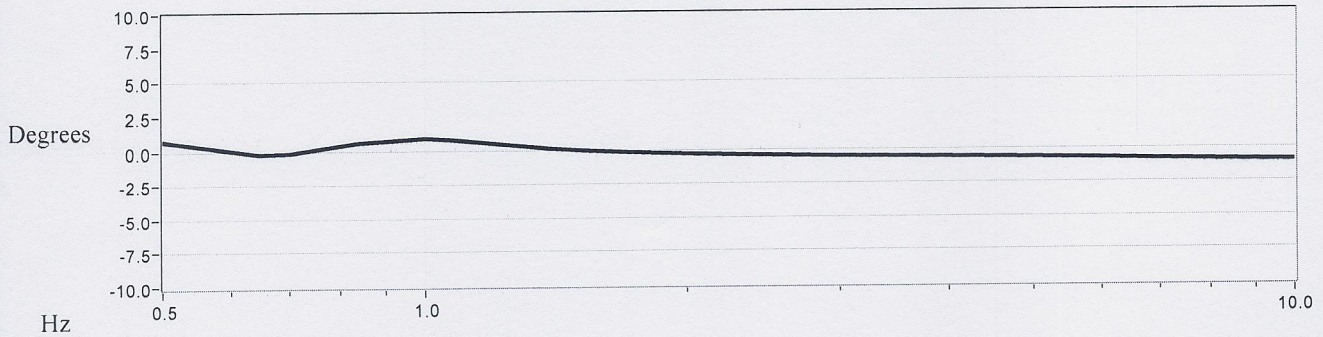
Manufacturer: PCB

Method: Back-to-Back Comparison AT401-12

Calibration Data

Sensitivity @ 100 Hz 1002 mV/g (102.2 mV/m/s²)

Phase Plot



Data Points

Frequency (Hz)	Phase (°)
0.5	0.7
1	0.9
2	-0.4
5	-0.7
7	-0.9
10	-1.0

Notes

1. Calibration is traceable to one or more of the following; PTB 10065, PTB 10066 and NIST 683/283498.
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3. Calibration is performed in compliance with ISO 9001, ISO 10012-1, ANSI Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.

Technician: Monty Manning *MM* Date: 12/9/2015

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