

# ~ Calibration Certificate ~

Per ISO 16063-21

Model Number: 393C

Serial Number: 24547

Description: ICP® Accelerometer

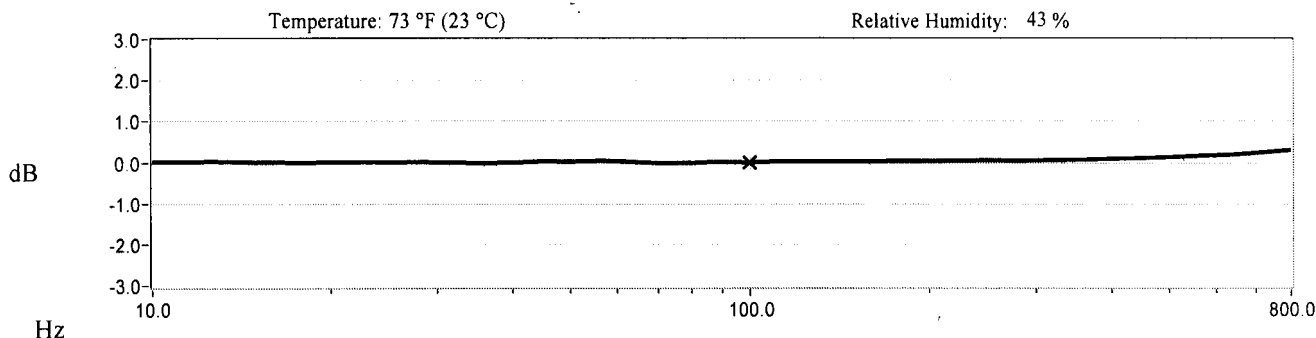
Method: Back-to-Back Comparison (AT401-3)

Manufacturer: PCB

## Calibration Data

Sensitivity @ 100.0 Hz      1031    mV/g      Output Bias      3.0    VDC  
(105.1    mV/m/s<sup>2</sup>)      Transverse Sensitivity      3.6    %  
Resonant Frequency      4802.8    Hz

## Sensitivity Plot



## Data Points

Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)
10.0	0.1	300.0	0.5
15.0	0.0	500.0	1.5
30.0	0.0	800.0	3.5
50.0	0.2		
REF. FREQ.	0.0		

Mounting Surface: Stainless Steel w/Silicone Grease Coating      Fastener: Stud Mount

Fixture Orientation: Vertical

Acceleration Level (rms): 0.500 g (4.90 m/s<sup>2</sup>)

\*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) = 0.010 x (freq)<sup>2</sup>

\*The gravitational constant used for calculations by the calibration system is: 1 g = 9.80665 m/s<sup>2</sup>.

## Condition of Unit

As Found: n/a  
As Left: New Unit, In Tolerance

## Notes

1. Calibration is NIST Traceable thru Project 822/274086 and PTB Traceable thru Project 1060.
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/NCSL Z540-1-1994 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: Charles Butler      Date: 07/01/08



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      FAX: 716-685-3886      www.pcb.com



# ~ Calibration Certificate - Phase ~

Per ISO 16063-21

Model Number: 393C

Serial Number: 24547

Description: ICP® Accelerometer

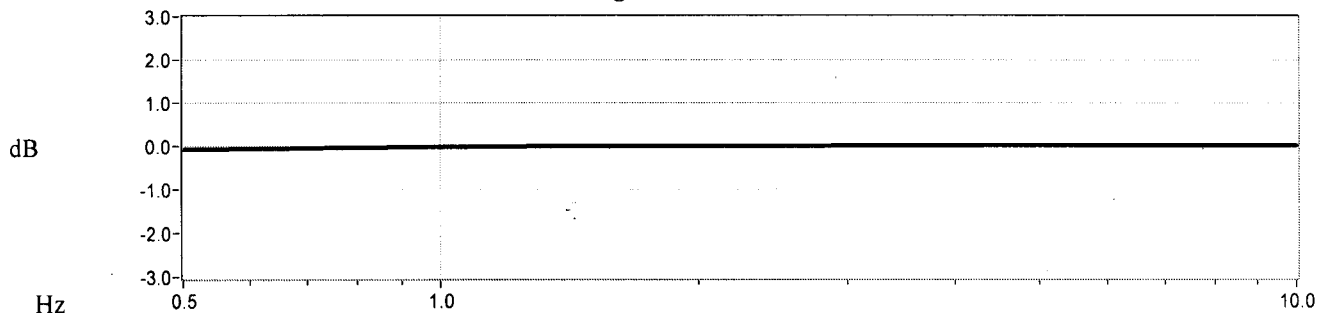
Method: Back-to-Back Comparison (AT401-12)

Manufacturer: PCB

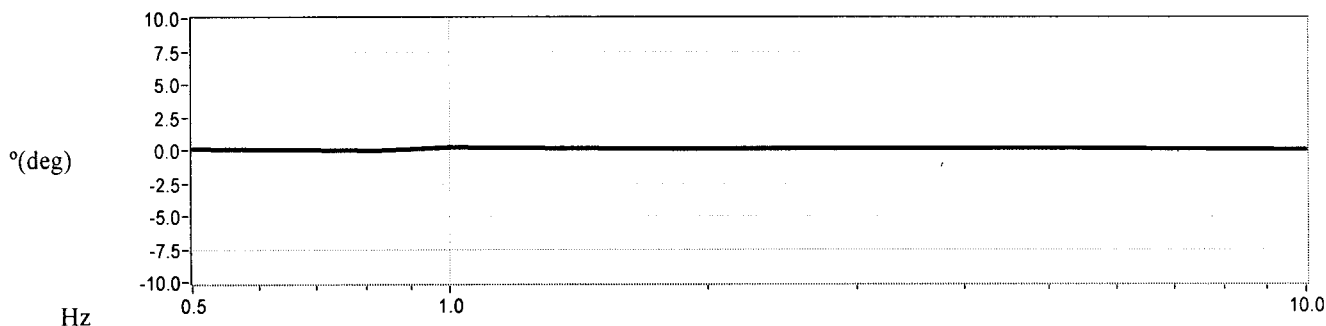
## Calibration Data

Sensitivity @ 100.0 Hz      1031    mV/g      (105.1    mV/m/s<sup>2</sup>)

### Magnitude Plot



### Phase Plot



### Data Points

Frequency (Hz)	Deviation (%)	Phase (°)
0.5	-0.9	0.1
1.0	-0.2	0.2
2.0	-0.0	0.1
5.0	0.2	0.1
7.0	0.2	0.1
10.0	0.1	0.0

### Notes

1. Calibration is traceable to one or more of the following report numbers; PTB 5399, PTB 5400 and NIST 822/271196.
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/NCSL Z540-1-1994 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: Charles Butler      Date: 07/01/08



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