~ Calibration Certificate ~

Per ISO 16063-21

SNLW230616

Model Number: 356A01

Serial Number: LW230616 (x axis)

Description: ICP® Triaxial Accelerometer

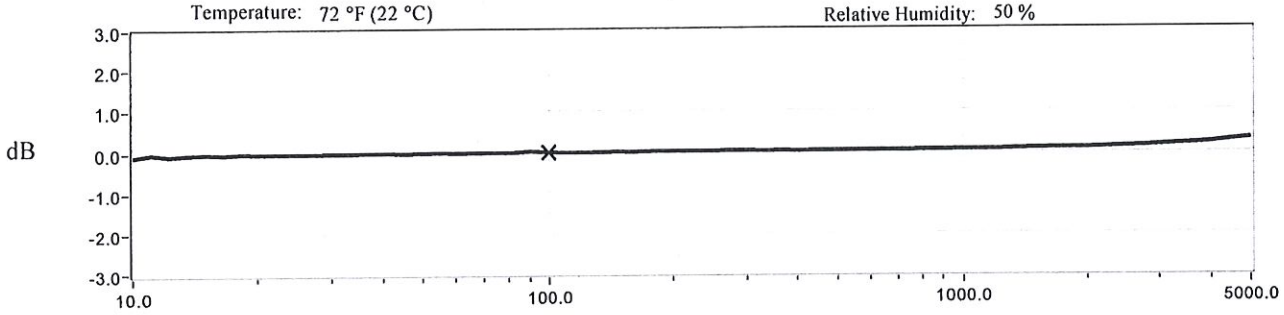
Manufacturer: PCB Method: Back-to-Back Comparison AT401-3

Calibration Data

Sensitivity @ 100 Hz	**4.84 mV/g**	Output Bias	10.2 VDC
	(0.493 mV/m/s²)	Transverse Sensitivity	3.9 %
Discharge Time Constant	0.49 seconds		

Sensitivity Plot

Temperature: 72 °F (22 °C) Relative Humidity: 50 %



Data Points

Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)
10	-1.2	300	0.2
15	-0.4	500	0.3
30	-0.3	1000	0.5
50	-0.2	3000	1.7
REF. FREQ.	0.0	5000	3.5

Mounting Surface: Tungsten Adapter Fastener: Adhesive Fixture Orientation: Inverted Vertical
Acceleration Level (pk)[1]: 10.0 g (98.1 m/s²)
[1]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. [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: Robert Zsebehazy R.Z. Date: 9/21/2017

ACCREDITED
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 ~

Per ISO 16063-21

Model Number: 356A01

Serial Number: LW230616 (y axis)

Description: ICP® Triaxial Accelerometer

Manufacturer: PCB

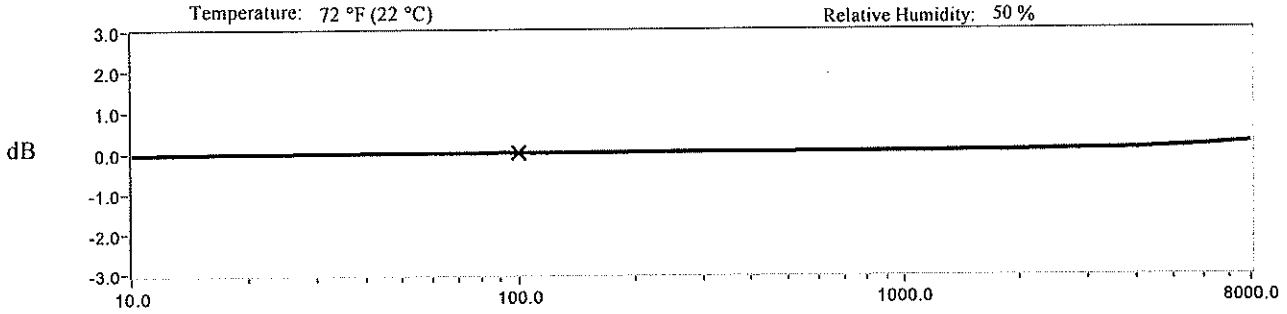
Method: Back-to-Back Comparison AT401-3

Calibration Data

Sensitivity @ 100 Hz	**4.36 mV/g**	Output Bias	10.4 VDC
	(0.444 mV/m/s²)	Transverse Sensitivity	3.7 %
Discharge Time Constant	0.42 seconds		

Sensitivity Plot

Temperature: 72 °F (22 °C) Relative Humidity: 50 %



Data Points

Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)
10	-0.5	300	0.2	7000	2.3
15	-0.3	500	0.2	8000	2.8
30	-0.2	1000	0.4		
50	-0.1	3000	0.9		
REF. FREQ.	0.0	5000	1.4		

Mounting Surface: Tungsten Adapter Fastener: Adhesive Fixture Orientation: Vertical
Acceleration Level (pk)[1]: 10.0 g (98.1 m/s²)
[1]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) = 0.088 x (freq)². [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: Robert Zsebehazy R.Z. Date: 9/21/2017

ACCREDITED
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

CAL2-358885861.481+0

ACS-1T

~ Calibration Certificate ~

Per ISO 16063-21

Model Number: 356A01

Serial Number: LW230616 (z axis)

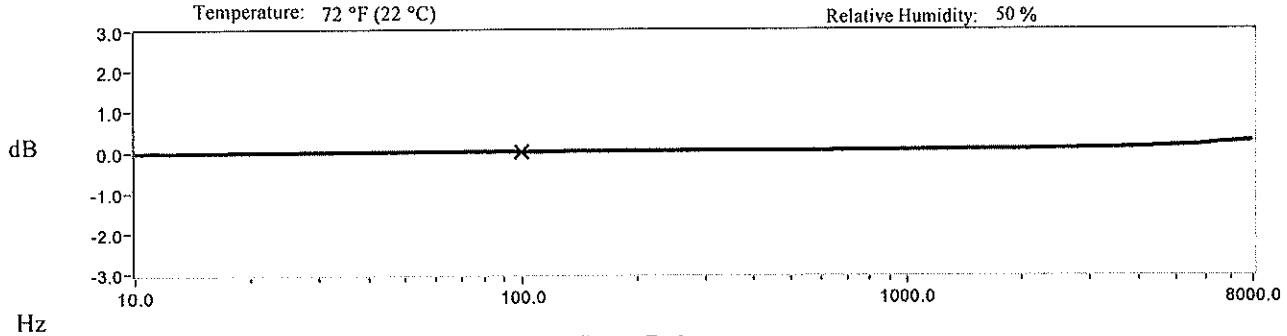
Description: ICP® Triaxial Accelerometer

Manufacturer: PCB Method: Back-to-Back Comparison AT401-3

Calibration Data

Sensitivity @ 100 Hz	**4.60 mV/g**	Output Bias	10.2 VDC
	(0.469 mV/m/s²)	Transverse Sensitivity	4.3 %
Discharge Time Constant	0.49 seconds		

Sensitivity Plot



Data Points

Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)
10	-0.4	300	0.4	7000	2.6
15	-0.2	500	0.4	8000	3.1
30	-0.1	1000	0.5		
50	0.0	3000	1.1		
REF. FREQ.	0.0	5000	1.7		

Mounting Surface: Tungsten Adapter Fastener: Adhesive Fixture Orientation: Vertical
Acceleration Level (pk)[1]: 10.0 g (98.1 m/s²)
[1]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. [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: Robert Zsebehazy R.Z. Date: 9/21/2017

ACCREDITED
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

CAL2-3588859026.580+0

ACS-1T