

Model Number  
**9105D**

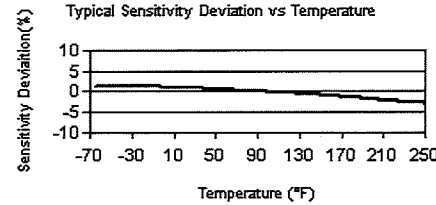
# PORTABLE VIBRATION CALIBRATOR VERIFICATION ACCELEROMETER

Revision: NR  
ECN#:

PERFORMANCE	ENGLISH	SI
Sensitivity (±5%)	10 mV/g	1.02 mV/(m/s <sup>2</sup> )
Measurement Range	±500 g pk	±4 905 m/s <sup>2</sup> pk
Broadband Resolution (1 to 10 000 Hz)	0.003 g rms	0.03 m/s <sup>2</sup> rms
Frequency Range (±5%)	1 to 7 000 Hz	
Frequency Range (±10%)	0.7 to 11 000 Hz	
Resonant Frequency	≥38 kHz	
Non-Linearity (±40 g)	≤0.08%	
Non-Linearity (Full Scale Output)	≤1%	
Transverse Sensitivity	≤3%	
<b>ENVIRONMENTAL</b>		
Overload Limit (Shock)	±10 000 g pk	±98 100 m/s <sup>2</sup> pk
Temperature Range (Operating)	-65 °F to +250 °F	-54 °C to +12 °C
Temperature Response	See Graph	
<b>ELECTRICAL</b>		
Excitation Voltage	18 to 30 VDC	
Constant Current Excitation	2 to 20 mA	
Output Impedance	≤100 Ω	
Output Bias Voltage	8 to 12 VDC	
Discharge Time Constant	0.5 to 2.6 s	
Setting Time (Within 10% of Bias)	<5 s	
Spectral Noise (1 Hz)	2 800 µg/√Hz	27 468 (µm/s <sup>2</sup> )/√Hz
Spectral Noise (10 Hz)	700 µg/√Hz	6 867 (µm/s <sup>2</sup> )/√Hz
Spectral Noise (100 Hz)	180 µg/√Hz	1 766 (µm/s <sup>2</sup> )/√Hz
Spectral Noise (1 kHz)	64 µg/√Hz	628 (µm/s <sup>2</sup> )/√Hz
<b>PHYSICAL</b>		
Sensing Element/Geometry	Quartz/Shear	
Housing Material	Titanium	
Sealing	Welded Hermetic	
Electrical Connector	10-32 Coaxial Jack	
Electrical Connector Position	Top	
Mounting Thread	10-32 Female	
Size (Hex x Height)	0.50 in x 1.14 in	12.7 mm x 29 mm
Weight	0.38 oz	10.5 g
<b>ICP® SIGNAL CONDITIONER</b>		
Voltage Gain (±1%)	1:1	
Low Frequency Response (-5%)	<0.1 Hz	
Universal Input Power	100-240 VAC 50-60 Hz	
Discharge Time Constant (0 to +50%)	10 s	
Electrical Connectors (Input, Output)	BNC Jack	

**NOTES:**

- [1] Typical.
- [2] Zero-based, least squares, straight line method.
- [3] Supplied external DC power supply 488B04.
- [4] With ≥ 1 MΩ input impedance of readout device.



**SECONDARY CALIBRATION SERVICE UNCERTAINTY:**

MCS-A010	Secondary calibration with K394A31 air bearing shaker. Calibration data acquired from 5 to 10 kHz.
----------	---

Expanded uncertainties using a coverage factor of k=2:

(5 ≤ f ≤ 10) Hz	1.7%
(10 < f < 100) Hz	1.2%
100Hz	0.75%
(100 < f ≤ 920) Hz	1.0%
(920 < f ≤ 5000) Hz	1.4%
(5000 < f ≤ 10000) Hz	1.9%

f represents calibration frequency

**INCLUDED COMPONENTS:**

- 003C03 Sensor Cable (QTY: 1)
- 012A03 Output Cable (QTY: 1)
- 081B05 Mnt Stud (10-32 to 10-32) (QTY: 1)
- 081A08 Mnt Stud (10-32 to 1/4-28) (QTY: 1)
- MCS-A010 Secondary Calibration 5-10 kHz (QTY: 1)

All specifications are at room temperature unless otherwise specified.  
ICP is a registered trademark of PCB Piezotronics, Inc.  
In the interest of constant product improvement, specifications may change without notice.



Project Engineer: <i>CGK</i>	Product Manager: <i>MRS</i>	SAM Team Leader: <i>ThwB</i>	Spec Number: <b>PS-0183</b>
Date: <i>28 Feb 2024</i>	Date: <i>28 Feb 2024</i>	Date: <i>27 Feb 2024</i>	Page 1 of 1



10310 Aerohub Boulevard  
Cincinnati, OH 45215, USA

info@modalshop.com  
+1 513.351.9919

+1 800.860.4867  
Fax: +1 513.458.2172

SAM-F020 revD 12/7/21