

# INDUSTRIAL ICP® ACCELEROMETER

Revision: G  
ECN #: 29661

## ENGLISH

<b>Performance</b>		
Sensitivity(± 5 %)	10.2 mV/(m/s <sup>2</sup> )	[2]
Measurement Range	± 490 m/s <sup>2</sup>	
Frequency Range(± 5 %)	2.4 to 8000 Hz	[3]
Frequency Range(± 10 %)	1.7 to 10,000 Hz	
Frequency Range(± 3 dB)	0.8 to 15,000 Hz	
Resonant Frequency	40 kHz	[1]
Broadband Resolution(1 to 10,000 Hz)	981 µm/s <sup>2</sup>	[1]
Non-Linearity	± 1 %	[4]
Transverse Sensitivity	± 5 %	
<b>Environmental</b>		
Overload Limit(Shock)	49,050 m/s <sup>2</sup> pk	
Temperature Range	-54 to +121 °C	[1]
Temperature Response	See Graph	
Enclosure Rating	IP68	

## SI

Settling Time(within 1% of bias)	≤ 2.0 sec	
Discharge Time Constant	≥ 0.2 sec	
Excitation Voltage	18 to 28 VDC	
Constant Current Excitation	2 to 20 mA	
Output Impedance	<100 ohm	
Output Bias Voltage	8 to 12 VDC	
Spectral Noise(10 Hz)	68.7 (µm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise(100 Hz)	27.5 (µm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise(1 kHz)	8.8 (µm/s <sup>2</sup> )/√Hz	[1]
Electrical Protection	RFI/ESD	
Electrical Isolation	>10 <sup>8</sup> ohm	
<b>Physical</b>		
Size (Hex x Height)	11/16 in x 1.97 in	
Weight	17.5 mm x 50 mm 51 gm	[5]
Mounting Thread	1/4-28 Female	
Mounting Torque	2.7 to 6.8 N-m	
Sensing Element	Ceramic	
Housing Geometry	Shear	
Sealing	Stainless Steel Welded Hermetic	
Electrical Connector	2-Pin MIL-C-5015	
Electrical Connection Position	Top	

## SI

Low Bias Voltage	6 to 8 VDC	
Output Bias Voltage	12 to 28 VDC	
Excitation Voltage	± 35 g	
Measurement Range	± 343 m/s <sup>2</sup>	
<b>M</b> - Metric Mount		
Supplied Accessory	Model M081A61 Mounting Stud 1/4-28 to M6 X 1 (1) replaces Model 081A40	
<b>MS</b> - Mine Safety & Health Administration Certification		

## OPTIONAL VERSIONS

Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

**CS** - Canadian Standards Association Approved Intrinsically Safe  
Hazardous Area Approval CI I, Div 1, Groups A, B, C, D; CI I, Div 1, Groups A, B, C, D; CI II, Div 1, Groups E, F, G; CI III, II, Div 1, Groups E, F, G; CI III, Div 1

**Hazardous Area Approval** Exia IIC T4, AExia IIC, T4  
Exia IIC T4, AExia IIC, T4  
CI I, Div 2, Groups A, B, C, D; CI I, Div 2, Groups A, B, C, D; ExnL IIC T4, AExnA IIC T4

**EX** - ATEX, CSA, or ATEX and CSA Hazardous Area Approval  
Hazardous Area Approval EEEx ia IIC T4, -54°C≤Tas≤121° EEEx ia IIC T4, -54°C≤Tas≤121°  
C, II 1 G

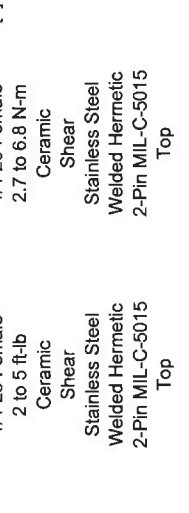
**LB** - Low Bias Voltage  
Output Bias Voltage 6 to 8 VDC  
Excitation Voltage 12 to 28 VDC  
Measurement Range ± 35 g

**M** - Metric Mount  
Supplied Accessory : Model M081A61 Mounting Stud 1/4-28 to M6 X 1 (1) replaces Model 081A40

**MS** - Mine Safety & Health Administration Certification

**NOTES:**  
[1] Typical.  
[2] Conversion Factor 1g = 9.81 m/s<sup>2</sup>.  
[3] The high frequency tolerance is accurate within ±10% of the specified frequency.  
[4] Zero-based, least-squares, straight line method.  
[5] 1/4-28 has no equivalent in S.I. units.  
[6] See PCB Declaration of Conformance PS023 or PS061 for details.

**SUPPLIED ACCESSORIES:**  
Model 081A40 Mounting Stud (1)  
Model ICS-1 NIST-traceable single-axis amplitude response calibration from 600 cpm (10 Hz) to upper 5% frequency (1)



Typical Sensitivity Deviation vs Temperature

Entered:	BLS	Engineer:	JFC	Sales:	AA	Approved:	UF	Spec Number:	
Date:	11/11/08	Date:	11/17/08	Date:	11/10/08	Date:	11/7/08		7985

Phone: 800-959-4464  
Fax: 716-684-3823  
E-Mail: imi@pcb.com

3425 Walden Avenue, Depew, NY 14043

**IMI SENSORS**  
A PCB PIEZOTRONICS DIV.

IMI SENSORS is a registered trademark of PCB Group, Inc.

All specifications are at room temperature unless otherwise specified.  
In the interest of constant product improvement, we reserve the right to change specifications without notice.

ICP® is a registered trademark of PCB Group, Inc.

CE

Ex

SP US