

Model Number  
623C11

# INDUSTRIAL ICP<sup>®</sup> ACCELEROMETER

Revision: C  
ECN #: 14824

## Performance

	ENGLISH	SI	
Sensitivity (±5 %)	100 mV/g	10.2 mV/(m/s <sup>2</sup> )	[2]
Measurement Range	±50 g	±490 m/s <sup>2</sup>	
Frequency Range (±5 %)	144 to 480000 cpm	2.4 to 8000 Hz	[3]
Frequency Range (±10 %)	102 to 600000 cpm	1.7 to 10000 Hz	
Frequency Range (±3 dB)	48 to 900000 cpm	0.8 to 15000 Hz	
Resonant Frequency	2400 kcpm	40 kHz	[1]
Broadband Resolution (1 to 10000 Hz)	100 µg	981 µm/s <sup>2</sup>	[1]
Non-Linearity	±1 %	±1 %	[4]
Transverse Sensitivity	≤5 %	≤5 %	

## Environmental

Overload Limit (Shock)	5000 g pk	49050 m/s <sup>2</sup> pk
Temperature Range	-65 to +250 °F	-54 to +121 °C
Temperature Response	See Graph	See Graph
Enclosure Rating	IP68	IP68

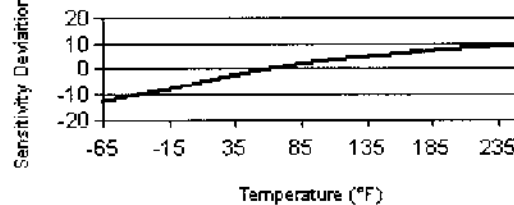
## Electrical

Settling Time (within 1% of bias)	≤2.0 sec	≤2.0 sec	
Discharge Time Constant	≥0.2 sec	≥0.2 sec	
Excitation Voltage	18 to 28 VDC	18 to 28 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Impedance	<150 ohms	<150 ohms	
Output Bias Voltage	8 to 12 VDC	8 to 12 VDC	
Spectral Noise (10 Hz)	7.0 µg/√Hz	68.7 (µm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise (100 Hz)	2.8 µg/√Hz	27.5 (µm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise (1 kHz)	0.9 µg/√Hz	8.8 (µm/s <sup>2</sup> )/√Hz	[1]
Electrical Isolation (Case)	>10 <sup>8</sup> ohms	>10 <sup>8</sup> ohms	
Electrical Protection	RFI/ESD	RFI/ESD	

## Physical

Size (Hex x Height)	11/16 in x 4.2 in	17.5 mm x 107 mm	
Weight (without cable)	1.80 oz	51 gm	
Mounting Thread	1/4-28 Female	Not Applicable	[5]
Mounting Torque	2 to 5 ft-lb	2.7 to 6.8 N-m	
Sensing Element	Ceramic	Ceramic	
Sensing Geometry	Shear	Shear	
Housing Material	Stainless Steel	Stainless Steel	
Sealing	Welded Hermetic	Welded Hermetic	
Electrical Connector	Molded Integral Cable	Molded Integral Cable	
Electrical Connection Position	Top	Top	
Cable Length	10 ft	3.0 m	
Cable Type	Polyurethane	Polyurethane	[6]

Typical Sensitivity Deviation vs Temperature



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.  
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## 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.

### LB - Low Bias Voltage

Output Bias Voltage	6 to 8 VDC	6 to 8 VDC
Excitation Voltage	12 to 28 VDC	12 to 28 VDC
Measurement Range	±35 g	±343 m/s <sup>2</sup>

### M - Metric Mount

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

## 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] Twisted shielded pair.
- [7] See PCB Declaration of Conformance PS023 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

Entered: <i>MWS</i>	Engineer: <i>MWS</i>	Sales: <i>EGM</i>	Approved: <i>NF</i>	Spec Number:
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**IMI SENSORS**  
A PCB PIEZOTRONICS DIV.  
3425 Walden Avenue, Depew, NY 14043

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