

Model Number  
**627A01**

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

Revision: C  
ECN #: 14824

### Performance

	ENGLISH	SI	
Sensitivity (±15 %)	100 mV/g	10.2 mV/(m/s <sup>2</sup> )	[2]
Measurement Range	±50 g	±490 m/s <sup>2</sup>	
Frequency Range (±3 dB)	20 to 600000 cpm	0.33 to 10000 Hz	[3]
Resonant Frequency	1080 kcpm	18 kHz	[1]
Broadband Resolution (1 to 10000 Hz)	1000 µg	9810 µm/s <sup>2</sup>	[1]
Non-Linearity	±1 %	±1 %	[4]
Transverse Sensitivity	≤5 %	≤5 %	

### Environmental

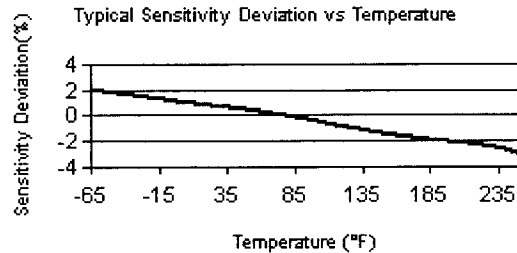
Overload Limit (Shock)	5000 g pk	49050 m/s <sup>2</sup> pk	
Temperature Range	-65 to +250 °F	-54 to +121 °C	
Temperature Response	See Graph	See Graph	
Enclosure Rating	IP68	IP68	

### Electrical

Settling Time (within 1% of bias)	≤10 sec	≤10 sec	
Discharge Time Constant	≥0.5 sec	≥0.5 sec	
Excitation Voltage	18 to 28 VDC	18 to 28 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Impedance	<100 ohms	<100 ohms	
Output Bias Voltage	8 to 12 VDC	8 to 12 VDC	
Spectral Noise (10 Hz)	50 µg/√Hz	491 (µm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise (100 Hz)	20 µg/√Hz	196 (µm/s <sup>2</sup> )/√Hz	[1]
Spectral Noise (1 kHz)	6 µg/√Hz	59 (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)	7/8 in x 2.06 in	22 mm x 52.3 mm	
Weight	3.3 oz	94 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	Quartz	Quartz	
Sensing Geometry	Shear	Shear	
Housing Material	Stainless Steel	Stainless Steel	
Sealing	Welded Hermetic	Welded Hermetic	
Electrical Connector	2-Pin MIL-C-5015	2-Pin MIL-C-5015	
Electrical Connection Position	Top	Top	



[6]

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.

#### 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] See PCB Declaration of Conformance PS023 for details.

### SUPPLIED ACCESSORIES:

Model 081A40 Mounting Stud (1)  
Model ICS-2 NIST-traceable single-axis single-point amplitude response calibration at 6000 cpm (100 Hz)

Entered: <i>MWS</i>	Engineer: <i>MWS</i>	Sales: <i>BS7</i>	Approved: <i>N.F</i>	Spec Number:
Date: <i>10.4.02</i>	Date: <i>10.4.02</i>	Date: <i>10/1/02</i>	Date: <i>10/1/02</i>	<b>8309</b>

**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



Represented in India by

**Structural Solutions Pvt Ltd. | Phone: 040 2322 2380 | Email: sales@stsols.com**

#4th Floor, Sudheer Tapani Towers, Himayath Nagar, Hyderabad - 500 029