

Model Number  
**622B01**

# INDUSTRIAL ICP® ACCELEROMETER

Revision: NR  
ECN #:

| 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 %)               | 35 to 360,000 cpm | 0.58 to 6000 Hz             | [3] |
| Frequency Range(± 10 %)              | 25 to 600,000 cpm | 0.42 to 10,000 Hz           |     |
| Frequency Range(± 3 dB)              | 12 to 900,000 cpm | 0.2 to 15,000 Hz            |     |
| Resonant Frequency                   | 1800 kcpm         | 30 kHz                      | [1] |
| Broadband Resolution(1 to 10,000 Hz) | 50 µg             | 490 µm/s <sup>2</sup>       | [1] |
| Non-Linearity                        | ± 1 %             | ± 1 %                       | [4] |
| Transverse Sensitivity               | ≤ 5 %             | ≤ 5 %                       |     |

| Environmental         | ENGLISH        | SI                         |     |
|-----------------------|----------------|----------------------------|-----|
| Overload Limit(Shock) | 5000 g pk      | 49,050 m/s <sup>2</sup> pk |     |
| Temperature Range     | -65 to +250 °F | -54 to +121 °C             |     |
| Temperature Response  | See Graph      | See Graph                  | [1] |
| Enclosure Rating      | IP68           | IP68                       |     |

| Electrical                       | ENGLISH              | SI                            |     |
|----------------------------------|----------------------|-------------------------------|-----|
| Settling Time(within 1% of bias) | ≤ 5.0 sec            | ≤ 5.0 sec                     |     |
| Discharge Time Constant          | ≥ 0.8 sec            | ≥ 0.8 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 ohm             | <100 ohm                      |     |
| Output Bias Voltage              | 8 to 12 VDC          | 8 to 12 VDC                   |     |
| Spectral Noise(10 Hz)            | 4.0 µg/√Hz           | 39.2 (µm/s <sup>2</sup> )/√Hz | [1] |
| Spectral Noise(100 Hz)           | 0.8 µg/√Hz           | 7.85 (µm/s <sup>2</sup> )/√Hz | [1] |
| Spectral Noise(1 kHz)            | 0.4 µg/√Hz           | 3.92 (µm/s <sup>2</sup> )/√Hz | [1] |
| Electrical Isolation             | >10 <sup>8</sup> ohm | >10 <sup>8</sup> ohm          |     |
| Electrical Protection            | RFI/ESD              | RFI/ESD                       |     |

| Physical                       | ENGLISH          | SI                   |     |
|--------------------------------|------------------|----------------------|-----|
| 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    | No Metric Equivalent | [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           | 2-Pin MIL-C-5015 | 2-Pin MIL-C-5015     |     |
| Electrical Connection Position | Top              | Top                  |     |

**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.

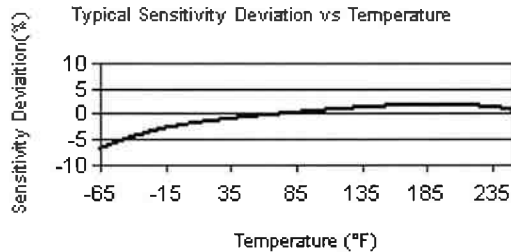
**M - Metric Mount**  
Supplied Accessory : Model M081A61 Mounting Stud 1/4-28 to M6 X 1 (1)

**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-1 NIST-traceable single-axis amplitude response calibration from 600 cpm (10 Hz) to upper 5% frequency (1)



|                      |                      |                      |                       |              |
|----------------------|----------------------|----------------------|-----------------------|--------------|
| Entered: <i>JJD</i>  | Engineer: <i>JJD</i> | Sales: <i>JJD</i>    | Approved: <i>N.S.</i> | Spec Number: |
| Date: <i>3/30/07</i> | Date: <i>3/30/07</i> | Date: <i>3/20/07</i> | Date: <i>4/2/07</i>   | <b>35885</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



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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