### **Model Number** 601A02

# **LOW-COST INDUSTRIAL ICP® ACCELEROMETER**

Revision: G ECN #: 55435

| 001A02                                         |                           |                                 |     |
|------------------------------------------------|---------------------------|---------------------------------|-----|
| Performance                                    | ENGLISH                   | SI                              |     |
| Sensitivity(± 20 %) Measurement Range          | 500 mV/g<br>± 10 g        | 51 mV/(m/s²)<br>± 98 m/s²       | [1] |
| Frequency Range(± 5 %)                         | 28 to 240,000 cpm         | 0.47 to 4,000 Hz                | [2] |
| Frequency Range(± 10 %)                        | 20 to 300,000 cpm         | 0.33 to 5,000 Hz                |     |
| Frequency Range(± 3 dB)                        | 10 to 480,000 cpm         | 0.17 to 8,000 Hz                |     |
| Resonant Frequency                             | 960 kcpm                  | 16 kHz                          | [3] |
| Broadband Resolution(1 to 10,000 Hz)           | 35 μg                     | 343 µm/sec <sup>2</sup>         | [3] |
| Non-Linearity                                  | ± 1 %                     | ± 1 %                           | [4] |
| Transverse Sensitivity                         | ≤ 7 %                     | ≤ 7 %                           |     |
| Environmental                                  |                           | •                               |     |
| Overload Limit(Shock)                          | 5,000 g pk                | 49,050 m/s² pk                  |     |
| Temperature Range                              | -65 to +250 °F            | -54 to +121 °C                  |     |
| Temperature Response                           | See Graph                 | See Graph                       | [3] |
| Enclosure Rating                               | IP68                      | IP68                            |     |
| Electrical                                     | .40                       | .40                             |     |
| Settling Time(within 1% of bias)               | ≤ 10 sec                  | ≤ 10 sec                        |     |
| Discharge Time Constant                        | ≥ 1.0 sec<br>18 to 28 VDC | ≥ 1.0 sec<br>18 to 28 VDC       |     |
| Excitation Voltage Constant Current Excitation | 2 to 20 mA                | 2 to 20 mA                      |     |
| Output Impedance                               | < 150 Ohm                 | < 150 Ohm                       |     |
| Output Impedance Output Bias Voltage           | 8 to 12 VDC               | 8 to 12 VDC                     |     |
| Spectral Noise(10 Hz)                          | 3 μg/√Hz                  | 29.4 (µm/sec <sup>2</sup> )/√Hz | [3] |
| Spectral Noise(100 Hz)                         | 0.7 μg/√Hz                | 6.9 (µm/sec <sup>2</sup> )/√Hz  | [3] |
| Spectral Noise(1 kHz)                          | 0.5 μg/√Hz                | 4.9 (µm/sec <sup>2</sup> )/√Hz  | [3] |
| Electrical Isolation(Case)                     | > 10 <sup>8</sup> Ohm     | > 10 <sup>8</sup> Ohm           |     |
| Physical                                       |                           |                                 |     |
| Size (Hex x Height)                            | 7/8 in x 1.94 in          | 22.2 mm x 49.3 mm               |     |
| Weight                                         | 2.8 oz                    | 80 gm                           |     |
| Mounting Thread                                | 1/4-28 Female             | N/A                             | [5] |
| Mounting Torque                                | 2 to 5 ft-lb              | 2.7 to 6.8 Nm                   |     |
| Sensing Element                                | Ceramic                   | Ceramic                         |     |
| Sensing Geometry                               | Shear                     | Shear                           |     |
| Housing Material                               | Stainless Steel           | Stainless Steel                 |     |
| Electrical Connector                           | 2-Pin MIL-C-5015          | 2-Pin MIL-C-5015                |     |
| Sealing                                        | Welded Hermetic           | Welded Hermetic                 |     |
| Electrical Connection Position                 | Тор                       | Тор                             |     |

### **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:

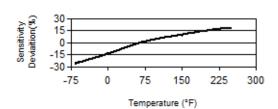
- [1] Conversion Factor  $1g = 9.81 \text{ m/s}^2$ .
- [2] The high frequency tolerance is accurate within  $\pm 10\%$  of the specified frequency.
- [4]Zero-based, least-squares, straight line method.
- [5]1/4-28 has no equivalent in S.I. units.
- [6] See PCB Declaration of Conformance PS023 for details.

## **SUPPLIED ACCESSORIES:**

Model 081A40 Mounting Stud (1)

Model ICS-2 NIST-traceable single-point amplitude response calibration at 6000 cpm (100 Hz) for each axis (1)

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

| Entered: ND      | Engineer: NJF    | Sales: EGY       | Approved: NJF    | Spec Number: |
|------------------|------------------|------------------|------------------|--------------|
| Date: 12/19/2024 | Date: 12/19/2024 | Date: 12/19/2024 | Date: 12/19/2024 | 6136         |



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