

Model Number  
**621B51**

# INDUSTRIAL ICP® ACCELEROMETER

Revision: B  
ECN #: 14104

## DYNAMIC PERFORMANCE

|                            | ENGLISH            | SI                          |         |
|----------------------------|--------------------|-----------------------------|---------|
| Sensitivity (±5%)          | 100 mV/g           | 10,2 mV/(m/s <sup>2</sup> ) | [1]     |
| Measurement Range          | ±50 g              | ±490 m/s <sup>2</sup>       |         |
| Frequency Range: (±5%)     | 144 - 600,000 cpm  | 144 - 600 000 cpm           | [2] [3] |
| (±10%)                     | 102 - 900,000 cpm  | 102 - 900 000 cpm           |         |
| (±3 dB)                    | 48 - 1,200,000 cpm | 48 - 1 200 000 cpm          |         |
| Mounted Resonant Frequency | 2,100 kcpm         | 2 100 kcpm                  | [4]     |
| Amplitude Linearity        | ±1%                | ±1%                         | [5]     |
| Transverse Sensitivity     | ≤5%                | ≤5%                         |         |

## ENVIRONMENTAL

|                      |                |                            |     |
|----------------------|----------------|----------------------------|-----|
| Shock Limit          | 5,000 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                  | [4] |

## ELECTRICAL

|                                       |                       |                               |     |
|---------------------------------------|-----------------------|-------------------------------|-----|
| Settling Time (within 1% of bias)     | ≤5.0 sec              | ≤5.0 sec                      |     |
| Discharge Time Constant               | ≥0.2 sec              | ≥0.2 sec                      |     |
| Excitation Voltage                    | 18 to 28 VDC          | 18 to 28 VDC                  |     |
| Constant Current                      | 2 to 20 mA            | 2 to 20 mA                    |     |
| Output Impedance                      | <150 ohms             | <150 ohms                     |     |
| Output Bias                           | 8 to 12 VDC           | 8 to 12 VDC                   |     |
| Broadband Electrical Noise (1-10 kHz) | 100 µg                | 981 µm/s <sup>2</sup>         | [4] |
| Spectral Noise: (10 Hz)               | 30 µg/√Hz             | 294 (µm/s <sup>2</sup> )/√Hz  | [4] |
| (100 Hz)                              | 10 µg/√Hz             | 98,1 (µm/s <sup>2</sup> )/√Hz | [4] |
| (1 kHz)                               | 5 µg/√Hz              | 49,5 (µm/s <sup>2</sup> )/√Hz | [4] |
| Base Isolation                        | >10 <sup>8</sup> ohms | >10 <sup>8</sup> ohms         |     |

## MECHANICAL

|                          |                    |                    |     |
|--------------------------|--------------------|--------------------|-----|
| Size (hex x height)      | 11/16 x 1.03 in    | 17,5 x 26,2 mm     |     |
| Weight                   | 1.06 oz            | 30 gm              |     |
| Mounting Thread (female) | 10-32              | Not Applicable     | [6] |
| Mounting Torque          | 10 to 20 in-lb     | 1,13 to 2,26 N-m   |     |
| Sensing Element/Geometry | Ceramic/Shear      | Ceramic/Shear      |     |
| Case Material            | Stainless Steel    | Stainless Steel    |     |
| Sealing                  | Welded Hermetic    | Welded Hermetic    |     |
| Connector Type/Position  | Coaxial 10-32/Side | Coaxial 10-32/Side |     |

## 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

### Supplied Accessories

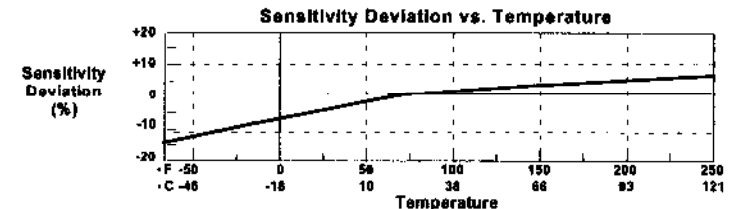
Model M081B05 Mounting Stud *replaces* Model 081A39 Mounting Stud

## NOTES:

- [1] Conversion Factor 1g = 9,81 m/s<sup>2</sup>.
- [2] 1 Hz = 60 cpm (cycles per minute).
- [3] The high frequency tolerance is accurate within ±10% of the specified frequency.
- [4] Typical value.
- [5] Zero-based, least-squares, straight line method.
- [6] 10-32 has no equivalent in S.I. units.

## SUPPLIED ACCESSORIES:

Model 081A39 Mounting Stud (1)  
Calibration Certificate (600 to 600,000 cpm)



All specifications are at room temperature unless otherwise specified.

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In the interest of constant product improvement, we reserve the right to change specifications without notice.

Form DD030 Rev.E 2/20/98

|                           |                              |                           |                              |              |
|---------------------------|------------------------------|---------------------------|------------------------------|--------------|
| Drawn: <i>[Signature]</i> | Engineer: <i>[Signature]</i> | Sales: <i>[Signature]</i> | Approved: <i>[Signature]</i> | Spec Number: |
| Date: <i>11/3/01</i>      | Date: <i>10/5/01</i>         | Date: <i>10-5-01</i>      | Date: <i>10/5/01</i>         | <b>10315</b> |

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