## Model Number INDUSTRIAL TRIAXIAL ICP® ACCELEROMETER 639A91 Performance **ENGLISH** 100 mV/g 10.2 mV/(m/s<sup>2</sup>) [2] Sensitivity(± 10 %) Measurement Range ± 50 g pk ± 491 m/s<sup>2</sup> pk Frequency Range(± 5 %) 1.5 to 5500 Hz 1.5 to 5500 Hz Frequency Range(± 3 dB) 0.5 to 13 kHz 0.5 to 13 kHz Resonant Frequency ≥ 26 kHz ≥ 26 kHz [1] Broadband Resolution(1 to 10,000 Hz) .3 mg $3.0 \text{ mm/s}^2 \text{ rms}$ Non-Linearity ≤ 1 % ≤ 1 % [3] Transverse Sensitivity ≤ 5 % ≤ 5 % **Environmental** Overload Limit(Shock) ± 5000 g pk ± 5000 g pk -54 to 121 °C Temperature Range(Operating) -65 to 250 °F [1] Temperature Response See Graph See Graph Enclosure Rating IP68, IP69K IP68, IP69K Electrical **Excitation Voltage** 18 to 30 VDC 18 to 30 VDC Constant Current Excitation 2 to 20 mA 2 to 20 mA Output Impedance ≤ 150 Ohm ≤ 150 Ohm Output Bias Voltage 8 to 12 VDC 8 to 12 VDC Discharge Time Constant ≥ .32 sec ≥ .32 sec Settling Time(within 10% of bias) <2 sec <2 sec Spectral Noise(1 Hz) 90 μg/√Hz 883 (um/sec<sup>2</sup>)/√Hz [1][2] Spectral Noise(10 Hz) 20 μg/√Hz 196 (um/sec<sup>2</sup>)/√Hz [1][2] Spectral Noise(100 Hz) 10 µg/√Hz 98.1 (µm/sec<sup>2</sup>)/√Hz Spectral Noise(1 kHz) 3.0 µg/√Hz 29.4 (µm/sec<sup>2</sup>)/√Hz [1][2] Electrical Isolation(Case) ≥ 10<sup>8</sup> Ohm ≥ 10<sup>8</sup> Ohm **Physical** Sensing Element Ceramic Ceramic Sensing Geometry Shear Shear Housing Material Stainless Steel Stainless Steel Sealing Hermetic Hermetic Size (Height x Length x Width) .72 in x .95 in x .95 in 18.3 mm x 24.1 mm x 24.1 mm Weight(Maximum) 3.0 oz 85 am **Electrical Connector** 4-Pin. M12 4-Pin. M12

Side

Through Hole

2 to 5 ft-lb

Typical Sensitivity Deviation vs Temperature

Side

Through Hole

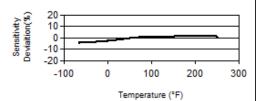
2.7 to 6.8 N-cm



Mounting

**Electrical Connection Position** 

Mounting Torque(Through Bolt)





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**

Revision: C

ECN #: 48030

Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

**EX** - Hazardous Area Approval- contact factory for specific approvals

Supplied Accessory: Model M081A119 Supplied Accessories: M081A119 mounting bolt replaces 081A119

## NOTES:

[1] Typical.

- [2] Conversion Factor 1g = 9.81 m/s<sup>2</sup>.
- [3] Zero-based, least-squares, straight line method.
- [4] See PCB Declaration of Conformance PS023 for details.

## SUPPLIED ACCESSORIES:

Model 081A119 Captive mounting bolt 1/4-28 x .625" (1)

Model ACS-1T NIST traceable triaxial amplitude response, 10 Hz to upper 5% frequency. (1)

| Entered: LK     | Engineer: JJD   | Sales: MC       | Approved: NJF   | Spec Number: |
|-----------------|-----------------|-----------------|-----------------|--------------|
| Date: 3/22/2018 | Date: 3/22/2018 | Date: 3/22/2018 | Date: 3/22/2018 | 64198        |



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