

# INDUSTRIAL ICP® ACCELEROMETER

Revision: G  
ECN #: 29661

Model Number  
**623C01**

## ENGLISH

**Performance**  
Sensitivity(± 5 %) 10.2 mV/(m/s<sup>2</sup>) [2]  
Measurement Range ± 50 g  
Frequency Range(± 5 %) 144 to 480,000 cpm [3]  
Frequency Range(± 10 %) 102 to 600,000 cpm  
Frequency Range(± 3 dB) 48 to 900,000 cpm  
Resonant Frequency 2400 kcpm [1]  
Broadband Resolution(1 to 10,000 Hz) 100 µg  
Non-Linearity ± 1 %  
Transverse Sensitivity ± 5 % [4]  
**Environmental**  
Overload Limit(Shock) 5000 g pk  
Temperature Range -65 to +250 °F [1]  
Temperature Response See Graph  
Enclosure Rating IP68

**Electrical**  
Settling Time(within 1% of bias) ≤ 2.0 sec  
Discharge Time Constant ≥ 0.2 sec  
Excitation Voltage 18 to 28 VDC  
Constant Current Excitation 2 to 20 mA  
Output Impedance <100 ohm  
Output Bias Voltage 8 to 12 VDC  
Spectral Noise(10 Hz) 7.0 µg/√Hz [1]  
Spectral Noise(100 Hz) 2.8 µg/√Hz [1]  
Spectral Noise(1 kHz) 0.9 µg/√Hz [1]  
Electrical Protection RFI/ESD  
Electrical Isolation >10<sup>8</sup> ohm

**Physical**  
Size (Hex x Height) 11/16 in x 1.97 in  
Weight 1.80 oz  
Mounting Thread 1/4-28 Female [5]  
Mounting Torque 2 to 5 ft-lb  
Sensing Element Ceramic  
Sensing Geometry Shear  
Housing Material Stainless Steel  
Sealing Welded Hermetic  
Electrical Connector 2-Pin MIL-C-5015  
Electrical Connection Position Top

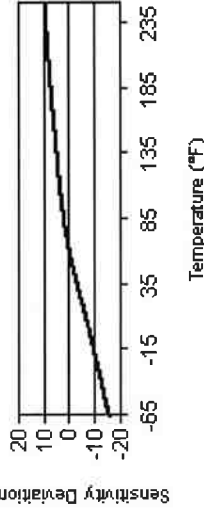
## SI

10.2 mV/(m/s<sup>2</sup>) [2]  
± 490 m/s<sup>2</sup>  
2.4 to 8000 Hz [3]  
1.7 to 10,000 Hz  
0.8 to 15,000 Hz  
40 kHz [1]  
981 µm/s<sup>2</sup> [1]  
± 1 % [4]  
± 5 %  
49,050 m/s<sup>2</sup> pk  
-54 to +121 °C [1]  
See Graph  
IP68

≤ 2.0 sec  
≥ 0.2 sec  
18 to 28 VDC  
2 to 20 mA  
<100 ohm  
8 to 12 VDC  
68.7 (µm/s<sup>2</sup>)/√Hz [1]  
27.5 (µm/s<sup>2</sup>)/√Hz [1]  
8.8 (µm/s<sup>2</sup>)/√Hz [1]  
RFI/ESD  
>10<sup>8</sup> ohm

17.5 mm x 50 mm  
51 gm  
1/4-28 Female [5]  
2.7 to 6.8 N-m  
Ceramic  
Shear  
Stainless Steel  
Welded Hermetic  
2-Pin MIL-C-5015  
Top

Typical Sensitivity Deviation vs Temperature



## 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.

**CS** - Canadian Standards Association Approved Intrinsically Safe Hazardous Area Approval CI I, Div 1, Groups A, B, C, D; CI II, Div 1, Groups A, B, C, D; CI III, II, Div 1, Groups E, F, G; CI III, Div 1  
**Hazardous Area Approval** Exia IIC T4, AExia IIC, T4 Exia IIC T4, AExia IIC, T4  
**Hazardous Area Approval** CI I, Div 2, Groups A, B, C, D; CI I, Div 2, Groups A, B, C, D; ExnL IIC T4, AExnA IIC T4

**EX** - ATEX, CSA, or ATEX and CSA Hazardous Area Approval  
**Hazardous Area Approval** EEx ia IIC T4, -54°CsTas121° EEx ia IIC T4, -54°CsTas121°  
C, II 1 G

**LB** - Low Bias Voltage  
**Output Bias Voltage** 6 to 8 VDC  
**Excitation Voltage** 12 to 28 VDC  
**Measurement Range** ± 35 g  
6 to 8 VDC  
12 to 28 VDC  
± 343 m/s<sup>2</sup>

**M** - Metric Mount  
**Supplied Accessory**: Model M081A61 Mounting Stud 1/4-28 to M6 X 1 (1) replaces Model 081A40

**MS** - Mine Safety & Health Administration Certification

## 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 or PS061 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)

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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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