

# LOW FREQUENCY INDUSTRIAL ICP® ACCELEROMETER

Performance	ENGLISH	SI
Sensitivity(± 5 %)	1000 mV/g ± 5 g	102 mV/(m/s <sup>2</sup> ) ± 49.1 m/s <sup>2</sup>
Measurement Range	30 to 120,000 cpm	0.5 to 2000 Hz
Frequency Range(± 5 %)	22 to 240,000 cpm	0.37 to 4000 Hz
(± 10 %)	12 to 360,000 cpm	0.2 to 6000 Hz
(± 3 dB)	720 kcpm	12 kHz
Resonant Frequency	11 µg	107.9 µm/sec <sup>2</sup>
Broadband Resolution(1 to 10,000 Hz)	± 1 %	± 1 %
Non-Linearity	± 7 %	± 7 %
Transverse Sensitivity	2500 g pk	24,525 m/s <sup>2</sup> pk
<b>Environmental</b>	-65 to +250 °F	-54 to +121 °C
Overload Limit(Shock)	See Graph	See Graph
Temperature Range	IP68	IP68
Temperature Response		
Enclosure Rating		
<b>Electrical</b>		
Settling Time(within 1% of bias)	≤ 5.0 sec	≤ 5.0 sec
Discharge Time Constant	≥ 1.0 sec	≥ 1.0 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)	1.5 µg/√Hz	14.7 (µm/sec <sup>2</sup> )/√Hz
(100 Hz)	0.5 µg/√Hz	4.91 (µm/sec <sup>2</sup> )/√Hz
(1 kHz)	0.2 µg/√Hz	1.96 (µm/sec <sup>2</sup> )/√Hz
Electrical Protection	RFI/ESD	RFI/ESD
Electrical Isolation(Case)	>10 <sup>8</sup> ohm	>10 <sup>8</sup> ohm
<b>Physical</b>		
Size (Hex x Height)	1 3/16 in x 2 3/16 in	30.2 mm x 55.6 mm
Weight	7.0 oz	199 gm
Mounting Thread	1/4-28 Female	1/4-28 Female
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.

**LB - Low Bias Voltage**  
Output Bias Voltage 6 to 8 VDC  
Excitation Voltage 12 to 28 VDC  
Measurement Range ± 3.5 g

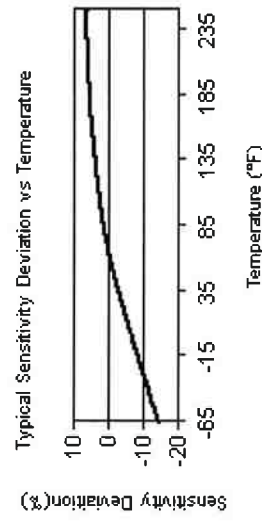
**M - Metric Mount**  
Supplied Accessory : Model M081A61 Mounting Stud 1/4-28 to M6 X 1 (1) replaces Model 081A40

**TO - Temperature Output**  
Temperature Output Range +36 to +250 °F +2 to +121 °C  
Temperature Scale Factor 5.56 mV/°F + 32 +10 mV/°C  
Electrical Connections(Black) Acceleration Output Ground  
(White) Ground  
(Green) Temperature Output Ground

**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 085A31 Protective Thermal Jacket (1)  
Model ICS-1 NIST-traceable single-axis amplitude response calibration from 600 cpm (10 Hz) to upper 5% frequency

Entered: JH	Engineer: JEC	Sales: DPS	Approved: EBS	Spec Number: 24003
Date: 11-19-09	Date: 11-20-09	Date: 8-13-07	Date: 11-16-09	



**CE** [6]

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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