Model Number
603091

# INDUSTRIAL ICP® ACCELEROMETER

Revision: D ECN #: 50817

603C91			. •
Performance	ENGLISH	SI	
Sensitivity(± 10 %)	100 mV/g	10.2 mV/(m/s²)	[1]
Measurement Range	± 50 g	± 490 m/s²	
Frequency Range(± 3 dB)	30 to 600,000 cpm	0.5 to 10,000 Hz	[2]
Resonant Frequency	1,500 kcpm	25 kHz	[3]
Broadband Resolution(1 to 10,000 Hz)	350 μg	3,434 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 ℃	
Temperature Response	See Graph	See Graph	[3]
Enclosure Rating	IP68, IP69K	IP68, IP69K	
Electrical			
Settling Time(within 1% of bias)	≤ 3.0 sec	≤ 3.0 sec	[3]
Discharge Time Constant	≥ 0.3 sec	≥ 0.3 sec	
Excitation Voltage	18 to 28 VDC	18 to 28 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	121
Spectral Noise(10 Hz)	8 μg/√Hz	78.5 (µm/sec <sup>2</sup> )/√Hz	[3]
Spectral Noise(100 Hz)	5 μg/√Hz	49.1 (μm/sec <sup>2</sup> )/√Hz	[3]
Spectral Noise(1 kHz)	4 μg/√Hz	39.2 (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)	11/16 in x 1.73 in	18 mm x 44 mm	
Weight	1.95 oz	55 gm	
Mounting Thread	1/4-28 Female	No Metric Equivalent	[5]
Mounting Torque	2 to 5 ft-lb	2.7 to 6.8 Nm	
Sensing Element	Ceramic	Ceramic	
Sensing Geometry	Shear	Shear	
Housing Material	316L Stainless Steel	316L Stainless Steel	
Sealing	Welded Hermetic	Welded Hermetic	
Electrical Connector	4-Pin, M12	4-Pin, M12	
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)

TO - Temperature Output Temperature Output Range Temperature Scale Factor Electrical Connections (Pin A) Electrical Connections (Pin B) Electrical Connections (Pin C) Electrical Connections (Pin D)

+36 to +250 °F 5.56 mV/°F + 32 Acceleration Signal / Power Ground No Connection Temperature Output

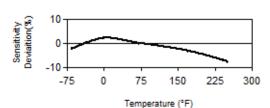
+2 to +121 °C +10 mV/°C Acceleration Signal / Power Ground No Connection Temperature Output

#### 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.

#### Typical Sensitivity Deviation vs Temperature





### **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)

Entered: LK	Engineer: GD	Sales: MC	Approved: BAM	Spec Number:
Date: 06/11/2020	Date: 06/11/2020	Date: 06/11/2020	Date: 06/11/2020	61657



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