Model Number 649A04

# PROGRAMMABLE LOOP POWERED, CURRENT OUTPUT, INDUSTRIAL **VIBRATION SENSOR**

Revision: B ECN #: 42229

Performance	<u>ENGLISH</u>	<u>SI</u>	
Measurement Range(Velocity)	0.5 to 3 in/sec pk	12.7 to 76.2 mm/s pk	[1][2][3][4]
Measurement Range(Acceleration)	1 to 10 g pk	9.8 to 98.1 m/s <sup>2</sup> pk	[5][2][4]
Measurement Range(Displacement)	4 to 20 mil pk - pk	0.1 to 0.5 mm pk - pk	[6][2][4]
Output(± 5 %)	4 mA	4 mA	
Output(± 10 %)	20 mA	20 mA	
Frequency Range(-6 dB)	180 to 60,000 cpm	3 to 1000 Hz	[7][8][4][9]
Frequency Range	180 to 300,000 cpm	3 to 5000 Hz	[7][8][4]
Frequency Range	180 to 600,000 cpm	3 to 10,000 Hz	[7][8][4]
Frequency Range	600 to 60,000 cpm	10 to 1000 Hz	[4][7][8]
Frequency Range	600 to 300,000 cpm	10 to 5000 Hz	[7][8][4]
Frequency Range	600 to 600,000 cpm	10 to 10,000 Hz	[7][8][4]
Environmental			
Temperature Range	-40 to +185 °F	-40 to +85 °C	
Electrical			
Excitation Voltage	15 to 30 VDC	15 to 30 VDC	
Settling Time(within 2% of value)	<30 sec	<30 sec	
Electrical Isolation(Case)	>10 <sup>8</sup> Ohm	>10 <sup>8</sup> Ohm	
Physical			
Size (Hex x Height)	1.0 in x 2.6 in	25.4 mm x 66 mm	
Weight	4.6 oz	129 gm	[10]
Mounting Thread	1/4-28 UNF	No Metric Equivalent	
Mounting Torque	3 to 5 ft-lb	4 to 7 Nm	
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	Тор	Тор	
Electrical Connections(Pin A)	4-20 mA Pos (+)	4-20 mA Pos (+)	
Electrical Connections(Pin B)	4-20 mA Neg (-)	4-20 mA Neg (-)	



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**

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) replaces Model

RV - Buffered Analog Signal Output - 100 mV/g (±20%)

**Electrical Connector** 3-Pin MIL-C-5015 3-Pin MIL-C-5015 Electrical Connections(Pin A) 4-20 mA Pos (+) 4-20 mA Pos (+) Electrical Connections(Pin B) 4-20 mA Neg/Signal Output 4-20 mA Neg/Signal Output Neg Nea Electrical Connections(Pin C) Signal Output Pos Signal Output Pos

## NOTES:

- [1] Conversion Factor 1 in/sec = 25.4 mm/sec.
- [2] FS Full Scale.
- [3] Factory set, 1 in/sec peak.
- USB Programmable with 600A21 kit.
- [5] Conversion Factor 1g = 9.81 m/s².
- Conversion Factor 1 mil = 0.0254 mm
- Current will fluctuate at frequencies below 5 Hz.
- [8] 1Hz = 60 cpm (cycles per minute).
- [9] Factory Set
- [10] Typical.
- [11] See PCB Declaration of Conformance PS124 for details.

# SUPPLIED ACCESSORIES:

Model 081A40 Mounting Stud (1)

Entered: AP	Engineer: LAB	Sales: SA	Approved: NJF	Spec Number:
Date: 1/14/2014	Date: 1/14/2014	Date: 1/14/2014	Date: 1/14/2014	45987



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