

Model Number 647A01		LOOP POWERED, CURRENT OUTPUT, INDUSTRIAL VIBRATION SENSOR			Revision: A ECN #: 43341	
Performance		ENGLISH	SI		OPTIONAL VERSIONS	
Measurement Range	0.0 to 5 g rms	0.0 to 49 m/s ² rms	[1]	Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.		
Output	4-20 mA	4-20 mA		EX - Hazardous Area Approval- contact factory for specific approvals		
Frequency Range(± 10 %)	180 to 300,000 cpm	3 to 5 kHz	[2][3]	Hazardous Area Approval	DIV II, CL I, GRPS A-D, ExnL, AExnA, IIC T4	DIV II, CL I, GRPS A-D, ExnL, AExnA, IIC T4
Broadband Resolution	0.025 g rms	0.24 m/s ² rms	[4]	Hazardous Area Approval	EEx ia IIC T4, -40°C≤Tas80°C, II 1 G	EEx ia IIC T4, -40°C≤Tas80°C, II 1 G
Non-Linearity	± 1 %	± 1 %		Hazardous Area Approval	EEx nL IIC T4, -40°C≤Tas80°C, II 3 G	EEx nL IIC T4, -40°C≤Tas80°C, II 3 G
Environmental				Hazardous Area Approval	DIV I, CL I, II, III, GRPS A-G, Exia, AExia, IIC T4	DIV I, CL I, II, III, GRPS A-G, Exia, AExia, IIC T4
Temperature Range	-40 to 185 °F	-40 to 85 °C		M - Metric Mount		
Electrical				Supplied Accessory : Model M080A163A (1) replaces Model 080A162		
Excitation Voltage	12 to 30 VDC	12 to 30 VDC		RV - Buffered Analog Signal Output - 100 mV/g (±20%)		
Settling Time(within 2% of value)	<15 sec	<15 sec	[5][6]	Electrical Connector	3-Pin MIL-C-5015	3-Pin MIL-C-5015
Electrical Isolation(Case)	>10 ⁸ Ohm	>10 ⁸ Ohm		Electrical Connections(Pin A)	4-20 mA Pos (+)	4-20 mA Pos (+)
Physical				Electrical Connections(Pin B)	4-20 mA Neg/Signal Output Neg	4-20 mA Neg/Signal Output Neg
Size (Hex x Height)	7/8 in x 1.41 in	22.2 mm x 35.8 mm		Electrical Connections(Pin C)	Signal Output Pos	Signal Output Pos
Weight	3.8 oz	108 gm		NOTES:		
Mounting Thread	1/4-28 UNF	1/4-28 UNF		[1]Conversion Factor 1 in/sec = 0.0254 m/sec.		
Mounting Torque(Stud)	3 to 4 ft-lb	4.1 to 5.4 Nm		[2]1Hz = 60 cpm (cycles per minute).		
Mounting Torque(hex nut)	2 to 3 ft-lb	2.7 to 4.1 Nm		[3]Current will fluctuate at frequencies below 5 Hz.		
Sensing Element	Ceramic	Ceramic		[4]Typical value.		
Sensing Geometry	Shear	Shear		[5]1/8" hex Allen key required for English version, 3mm hex Allen key required for metric version.		
Housing Material	Stainless Steel	Stainless Steel		[6]Stud torque must exceed sensor hex nut torque to ensure proper dismantling.		
Sealing	Welded Hermetic	Welded Hermetic		[7]See PCB Declaration of Conformance PS039 or PS053 for details.		
Electrical Connector	2-Pin MIL-C-5015	2-Pin MIL-C-5015		SUPPLIED ACCESSORIES:		
Electrical Connection Position	Side	Side		Model 080A162 Mounting Stud (1)		
Electrical Connections(Pin A)	4-20 mA Pos (+)	4-20 mA Pos (+)		Model ICS-4 NIST-traceable single-axis amplitude response calibration from 0 cpm (0 Hz) to upper 10% frequency for 4 - 20 mA output vibration sensor (1)		
Electrical Connections(Pin B)	4-20 mA Neg (-)	4-20 mA Neg (-)				
 [7] <i>All specifications are at room temperature unless otherwise specified.</i> <i>In the interest of constant product improvement, we reserve the right to change specifications without notice.</i> ICP® is a registered trademark of PCB Group, Inc.						
Entered: AP Engineer: DK Sales: EGY Approved: BAM Spec Number: Date: 10/10/2014 Date: 10/10/2014 Date: 10/10/2014 Date: 10/10/2014 41751  IMI SENSORS A PCB PIEZOTRONICS DIV. 3425 Walden Avenue, Depew, NY 14043 Phone: 800-959-4464 Fax: 716-684-3823 E-Mail: imi@pcb.com						