


Model Number 646B10	LOOP POWERED, CURRENT OUTPUT, INDUSTRIAL VIBRATION SENSOR				Revision: NR ECN #:
<b>Performance</b>	<b>ENGLISH</b>	<b>SI</b>		<b>OPTIONAL VERSIONS</b>	
Measurement Range	0.0 to 10 g rms	0.0 to 98.1 m/s <sup>2</sup> 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			
Frequency Range (± 10 %)	180 to 60,000 cpm	3 to 1 kHz	[2][3]		
Broadband Resolution	0.05 g rms	0.5 m/s <sup>2</sup> rms	[4]		
Non-Linearity	± 1 %	± 1 %		<b>M</b> - Metric Mount Supplied Accessory : Model M081A61 Mounting Stud 1/4-28 to M6 X 1 (1) replaces Model 081A40	
<b>Environmental</b>				<b>RV</b> - Buffered Analog Signal Output - 100 mV/g (±20%)	
Temperature Range	-40 to 185 °F	-40 to 85 °C		Electrical Connector                      Integral Cable                      Integral Cable	
<b>Electrical</b>				Electrical Connections (Red)                      4-20 mA Pos (+)                      4-20 mA Pos (+)	
Excitation Voltage	12 to 30 VDC	12 to 30 VDC		Electrical Connections (Black)                      4-20 mA Neg (-)                      4-20 mA Neg (-)	
Load Resistance	50(Vs-12) ohm	50(Vs-12) ohm		Electrical Connections (White)                      Signal Output Pos                      Signal Output Pos	
Settling Time (within 2% of value)	<15 sec	<15 sec		Electrical Connections (Green)                      Signal Output Neg                      Signal Output Neg	
Electrical Isolation (Case)	>10 <sup>8</sup> ohm	>10 <sup>8</sup> ohm		<b>NOTES:</b>	
<b>Physical</b>				[1] Conversion Factor 1g = 9.81 m/s <sup>2</sup> .	
Size (Hex x Height)	1.0 in x 4.2 in	25.4 mm x 107 mm		[2] Current will fluctuate at frequencies below 5 Hz.	
Weight (without cable)	4.7 oz	131 gm		[3] 1Hz = 60 cpm (cycles per minute).	
Mounting Thread	1/4-28 UNF	Not Applicable		[4] Typical.	
Mounting Torque	3 to 5 ft-lb	4 to 7 N-m		[5] See PCB Declaration of Conformance PS039 for details.	
Sensing Element	Ceramic	Ceramic		<b>SUPPLIED ACCESSORIES:</b>	
Sensing Geometry	Shear	Shear		Model 081A40 Mounting Stud (1)	
Housing Material	Stainless Steel	Stainless Steel		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)	
Sealing	Welded Hermetic	Welded Hermetic		Entered: <u>BJS</u> Engineer: <u>MJE</u> Sales: <u>BG-1</u> Approved: <u>N.F</u> Spec Number:	
Electrical Connector	Integral Cable	Integral Cable		Date: <u>4-1-05</u> Date: <u>4/1/05</u> Date: <u>4/3/05</u> Date: <u>4/6/05</u> 29946	
Electrical Connection Position	Top	Top		 <b>IMI SENSORS</b> A PCB PIEZOTRONICS DIV. 3425 Walden Avenue, Depew, NY 14043	
Electrical Connections (Red)	4-20 mA Pos (+)	4-20 mA Pos (+)			
Electrical Connections (Blue)	4-20 mA Neg (-)	4-20 mA Neg (-)			
Cable Length	10 ft	3.0 m		Phone: 800-959-4464	
Cable Type	Polyurethane	Polyurethane		Fax: 716-684-3823	
				E-Mail: imi@pcb.com	



[5]  
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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