


Model Number 645B10	LOOP POWERED, CURRENT OUTPUT, INDUSTRIAL VIBRATION SENSOR			Revision: A ECN #: 21215
Performance	ENGLISH	SI	OPTIONAL VERSIONS	
Measurement Range	0.0 to 5 g rms	0.0 to 49 m/s ² rms	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	M - Metric Mount	
Frequency Range (± 10 %)	180 to 60,000 cpm	3 to 1 kHz	Supplied Accessory : Model M081A61 Mounting Stud 1/4-28 to M6 X 1 (1) replaces Model 081A40	
Broadband Resolution	0.025 g rms	0.24 m/s ² rms	RV - Buffered Analog Signal Output - 100 mV/g (±20%)	
Non-Linearity	± 1 %	± 1 %	Electrical Connector Integral Cable Integral Cable	
Environmental			Electrical Connections (Red) 4-20 mA Pos 4-20 mA Pos	
Temperature Range	-40 to 185 °F	-40 to 85 °C	Electrical Connections (Black) 4-20 mA Neg 4-20 mA Neg	
Electrical			Electrical Connections (White) Signal Output Pos Signal Output Pos	
Excitation Voltage	12 to 30 VDC	12 to 30 VDC	Electrical Connections (Green) Signal Output Neg Signal Output Neg	
Load Resistance	50(Vs-12) ohm	50(Vs-12) ohm	NOTES:	
Settling Time (within 2% of value)	<15 sec	<15 sec	[1] Conversion Factor 1g = 9.81 m/s ² .	
Electrical Isolation (Case)	>10 ⁸ ohm	>10 ⁸ ohm	[2] Current will fluctuate at frequencies below 5 Hz.	
Physical			[3] 1Hz = 60 cpm (cycles per minute).	
Size (Hex x Height)	1.0 in x 4.2 in	25.4 mm x 107 mm	[4] Typical.	
Weight (without cable)	4.7 oz	131 gm	[5] See PCB Declaration of Conformance PS039 for details.	
Mounting Thread	1/4-28 UNF	Not Applicable	SUPPLIED ACCESSORIES:	
Mounting Torque	3 to 5 ft-lb	4 to 7 N-m	Model 081A40 Mounting Stud (1)	
Sensing Element	Ceramic	Ceramic	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)	
Sensing Geometry	Shear	Shear	Entered: <u>BLS</u> Engineer: <u>MTZ</u> Sales: <u>EGT</u> Approved: <u>N.F</u> Spec Number:	
Housing Material	Stainless Steel	Stainless Steel	Date: <u>12-9-04</u> Date: <u>12/10/04</u> Date: <u>12/10/04</u> Date: <u>12/16/04</u> 27957	
Sealing	Welded Hermetic	Welded Hermetic	 IMI SENSORS A PCB PIEZOTRONICS DIV. 3425 Walden Avenue, Depew, NY 14043	
Electrical Connector	Integral Cable	Integral Cable		
Electrical Connection Position	Top	Top		
Electrical Connections (Red)	4-20 mA Pos	4-20 mA Pos	Phone: 800-959-4464	
Electrical Connections (Blue)	4-20 mA Neg	4-20 mA Neg	Fax: 716-684-3823	
Cable Length	10 ft	3.0 m	E-Mail: imi@pcb.com	
Cable Type	Polyurethane	Polyurethane		



[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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