

Model Number  
EX646B71

# LOOP POWERED, CURRENT OUTPUT, INDUSTRIAL VIBRATION SENSOR

Revision: A  
ECN #: 27692

Performance	ENGLISH	SI	
Measurement Range	0.0 to 10 g rms	0.0 to 98.1 m/s <sup>2</sup> rms	[1]
Output	4-20 mA	4-20 mA	
Frequency Range(± 3 dB)	180 to 60,000 cpm	3 to 1000 Hz	[2][3]
Broadband Resolution	0.05 g rms	0.5 m/s <sup>2</sup> rms	[4]
Non-Linearity	± 1 %	± 1 %	
<b>Environmental</b>			
Temperature Range	-40 to 176 °F	-40 to 80 °C	
<b>Electrical</b>			
Excitation Voltage	12 to 30 VDC	12 to 30 VDC	
Settling Time(within 2% of value)	<15 sec	<15 sec	
Electrical Isolation(Case)	>10 <sup>8</sup> ohm	>10 <sup>8</sup> ohm	
<b>Physical</b>			
Size (Hex x Height)	1.375 in x 3.65 in	34.93 mm x 92.7 mm	
Weight	1.2 lb	544 gm	
Mounting Thread	1/4 NPT	Not Applicable	
Sensing Element	Ceramic	Ceramic	
Sensing Geometry	Shear	Shear	
Housing Material	Stainless Steel	Stainless Steel	
Electrical Connector	Removable Screw Terminals	Removable Screw Terminals	
Electrical Connection Position	Top	Top	
Electrical Connections(Tab 1)	4-20 mA Pos (+)	4-20 mA Pos (+)	
Electrical Connections(Tab 2)	4-20 mA Neg (-)	4-20 mA Neg (-)	
Screw Terminal Wire Size	12-24 AWG	3.0 - .2mm <sup>2</sup>	

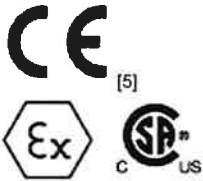
**OPTIONAL VERSIONS**  
Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

EX - ATEX or ATEX and CSA Hazardous Area Approval	Ex ia IIC T4, -40°C≤Tas80°C, II 1 G	Ex ia IIC T4, -40°C≤Tas80°C, II 1 G
Hazardous Area Approval	Ex nA IIC T4, -40°C≤Tas80°C, II 3 G	Ex nA IIC T4, -40°C≤Tas80°C, II 3 G
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
Hazardous Area Approval	DIV II, CL I, GRPS A-D, ExnA, AExnA, IIC T4	DIV II, CL I, GRPS A-D, ExnA, AExnA, IIC T4

RV - Buffered Analog Signal Output - 100 mV/g (±20%)	Electrical Connector	Removable Screw Terminals	Removable Screw Terminals
Electrical Connections(Tab 1)	4-20 mA Pos (+)	4-20 mA Pos (+)	4-20 mA Pos (+)
Electrical Connections(Tab 2)	4-20 mA Neg (-)	4-20 mA Neg (-)	4-20 mA Neg (-)
Electrical Connections(Tab 3)	Signal Output Pos	Signal Output Pos	Signal Output Pos
Electrical Connections(Tab 4)	Signal Output Neg	Signal Output Neg	Signal Output Neg

**NOTES:**  
 [1] Conversion Factor 1 in/sec = 0.0254 m/sec.  
 [2] Current will fluctuate at frequencies below 5 Hz.  
 [3] 1Hz = 60 cpm (cycles per minute).  
 [4] Typical.  
 [5] See PCB Declaration of Conformance PS039 or PS053 for details.

**SUPPLIED ACCESSORIES:**  
 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)



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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Entered: <i>JL</i>	Engineer: <i>MJD</i>	Sales: <i>MKN</i>	Approved: <i>MJ</i>	Spec Number:
Date: <i>1-18-07</i>	Date: <i>1-12-07</i>	Date: <i>1-12-07</i>	Date: <i>11-12-07</i>	<b>38750</b>

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