

LOOP POWERED, CURRENT OUTPUT, INDUSTRIAL VIBRATION SENSOR

Model Number
645B00

Revision: A
ECN #: 25170

	ENGLISH	SI
Performance		
Measurement Range	0.0 to 5 g rms	0.0 to 49 m/s ² rms
Output	4-20 mA	4-20 mA
Frequency Range (± 10 %)	180 to 60,000 cpm	[1] 3 to 1 kHz
Broadband Resolution	0.025 g rms	[2][3] 0.24 m/s ² rms
Non-Linearity	± 1 %	[4] ± 1 %
Environmental		
Temperature Range	-40 to 185 °F	-40 to 85 °C
Electrical		
Excitation Voltage	12 to 30 VDC	12 to 30 VDC
Load Resistance	50(Vs-12) ohm	50(Vs-12) ohm
Settling Time (within 2% of value)	<15 sec	<15 sec
Electrical Isolation (Case)	>10 ⁵ ohm	>10 ⁸ ohm
Physical		
Size (Hex x Height)	1.0 in x 2.6 in	25.4 mm x 66 mm
Weight	4.7 oz	131 gm
Mounting Thread	1/4-28 UNF	Not Applicable
Mounting Torque	3 to 5 ft-lb	4 to 7 N-m
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	Top	Top
Electrical Connections (Pin A)	4-20 mA Pos (+)	4-20 mA Pos (+)
Electrical Connections (Pin B)	4-20 mA Neg (-)	4-20 mA Neg (-)

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
 Hazardous Area Approval EEx ia IIC T4, -40°C≤Tas80°C, II 1 G
 Hazardous Area Approval EEx nL IIC T4, -40°C≤Tas80°C, II 3 G
 Hazardous Area Approval DIV I, CL I, II, GRPS A-G, Exia, AEXia, IIC T4
 Hazardous Area Approval DIV II, CL I, GRPS A-D, ExnL, AEXnA, IIC T4

M - Metric Mount
 Supplied Accessory : Model M081A61 Mounting Stud 1/4-28 to M6 X 1 (1) replaces Model 081A40

RV - Buffered Analog Signal Output - 100 mV/g (±20%)
 Electrical Connector 3-Pin MIL-C-5015
 Electrical Connections (Pin A) 4-20 mA Pos (+)
 Electrical Connections (Pin B) 4-20 mA Neg/Signal Output Neg
 Electrical Connections (Pin C) Signal Output Pos

NOTES:
 [1] Conversion Factor 1g = 9.81 m/s².
 [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 081A40 Mounting Stud (1)
 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)

Entered: BLS	Engineer: mpf	Sales: klm	Approved: NT	Spec Number:
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CE [5] **Ex** **SP**^{US}_C

*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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