

Model Number 642A12	4-20 MA OUTPUT VELOCITY SENSOR	Revision: B ECN #: 47262
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	<u>ENGLISH</u>	<u>SI</u>	
Performance			
Measurement Range	0.0 to 2 in/sec pk	0 to 50.8 mm/s pk	[1]
Output	4-20 mA	4-20 mA	
Frequency Range(± 10 %)	180 to 60,000 cpm	3 to 1 kHz	[2][3]
Broadband Resolution	0.01 in/sec rms	0.26 mm/s rms	[4]
Non-Linearity	± 1 %	± 1 %	
Environmental			
Temperature Range	-40 to 185 °F	-40 to 85 °C	
Electrical			
Excitation Voltage	12 to 30 VDC	12 to 30 VDC	
Settling Time(within 2% of value)	<15 sec	<15 sec	
Electrical Isolation(Case)	>10 ⁸ Ohm	>10 ⁸ Ohm	
Physical			
Size (Hex x Height)	7/8 in x 1.41 in	22.2 mm x 35.8 mm	
Weight(without cable)	3.8 oz	108 gm	
Mounting Thread	1/4-28 UNF	1/4-28 UNF	
Mounting Torque(Stud)	3 to 4 ft-lb	4.1 to 5.4 Nm	[5][6]
Mounting Torque(hex nut)	2 to 3 ft-lb	2.7 to 4.1 Nm	
Sensing Element	Ceramic	Ceramic	
Sensing Geometry	Shear	Shear	
Housing Material	Stainless Steel	Stainless Steel	
Sealing	Welded Hermetic	Welded Hermetic	
Electrical Connector	Integral Cable	Integral Cable	
Electrical Connection Position	Side	Side	
Cable Termination	Blunt cut	Blunt cut	
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	
Cable Type	Polyurethane	Polyurethane	

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 - Hazardous Area Approval- contact factory for specific approvals		
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
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
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
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
M - Metric Mount Supplied Accessory : Model M080A163A (1) replaces Model 080A162		
RV - Buffered Analog Signal Output - 100 mV/g (±20%)		
Electrical Connector	Integral Cable	Integral Cable
Electrical Connections(Red)	4-20 mA Pos (+)	4-20 mA Pos (+)
Electrical Connections(Black)	4-20 mA Neg (-)	4-20 mA Neg (-)
Electrical Connections(White)	Signal Output Pos	Signal Output Pos
Electrical Connections(Green)	Signal Output Neg	Signal Output Neg
TO - Temperature Output		


NOTES:

[1] Conversion Factor 1 in/sec = 0.0254 m/sec.
 [2] 1Hz = 60 cpm (cycles per minute).
 [3] Current will fluctuate at frequencies below 5 Hz.
 [4] Typical value.
 [5] 1/8" hex Allen key required for English version, 3mm hex Allen key required for metric version.
 [6] Stud torque must exceed sensor hex nut torque to ensure proper dismantling.
 [7] See PCB Declaration of Conformance PS039 or PS053 for details.

SUPPLIED ACCESSORIES:

Model 080A162 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

Entered: LK	Engineer: gs	Sales: MC	Approved: NJF	Spec Number:
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All specifications are at room temperature unless otherwise specified.
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