Model Number **643A00**	# 4-20 MA OUTPUT VELOCITY SENSOR	Revision: B ECN #: 43341

Performance	**ENGLISH**	**SI**	
Measurement Range	0.0 to 0.5 in/sec rms	0.0 to 12.7 mm/s rms	[1]
Output	4-20 mA	4-20 mA	
Frequency Range(± 10 %)	600 to 60,000 cpm	10 to 1 kHz	[2][3]
Broadband Resolution	0.005 in/sec rms	0.13 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	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	2-Pin MIL-C-5015	2-Pin MIL-C-5015	
Electrical Connection Position	Side	Side	
Electrical Connections(Pin A)	4-20 mA Pos (+)	4-20 mA Pos (+)	
Electrical Connections(Pin B)	4-20 mA Neg (-)	4-20 mA Neg (-)	

[7]

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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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	EEx ia IIC T4, -40°C≤Ta≤80°C, II 1 G	EEx ia IIC T4, -40°C≤Ta≤80°C, II 1 G
Hazardous Area Approval	EEx nL IIC T4, -40°C≤Ta≤80°C, II 3 G	EEx nL IIC T4, -40°C≤Ta≤80°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, ExnL, AExnA, IIC T4	DIV II, CL I, GRPS A-D, ExnL, AExnA, IIC T4

M - Metric Mount
Supplied Accessory : Model M080A163A (1) replaces Model 080A162

RV - Buffered Analog Signal Output - 100 mV/g (±20%)

Electrical Connector	3-Pin MIL-C-5015	3-Pin MIL-C-5015
Electrical Connections(Pin A)	4-20 mA Pos (+)	4-20 mA Pos (+)
Electrical Connections(Pin B)	4-20 mA Neg/Signal Output Neg	4-20 mA Neg/Signal Output Neg
Electrical Connections(Pin C)	Signal Output Pos	Signal Output Pos

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 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 (1)

Entered: AP	Engineer: DK	Sales: EGY	Approved: BAM	Spec Number:
Date: 10/10/2014	Date: 10/10/2014	Date: 10/10/2014	Date: 10/10/2014	**31661**

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