

**Model Number**  
656A90

# 4-20 MA VELOCITY TRANSMITTER

Revision: NR  
ECN #: 53239

**Performance**

	ENGLISH	SI	
Measurement Range(± 5 %)	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 1,000 Hz	[2]
Frequency Range(± 3 dB)	210 to 120,000 cpm	3.5 to 2,000 Hz	[2]
Transverse Sensitivity	≤ 5 %	≤ 5 %	
Repeatability	± 2 %	± 2 %	

**Environmental**

Temperature Range	-40 to 221 °F	-40 to 105 °C	
Enclosure Rating	IP68	IP68	
Vibration Limit	250 g pk	2,452.5 m/s <sup>2</sup> pk	[3]
Shock Limit	2,500 g pk	24,525 m/s <sup>2</sup> pk	[3]

**Electrical**

Excitation Voltage	12 to 30 VDC	12 to 30 VDC	
Load Resistance	50 (Vs-10) Ohms	50 (Vs-10) Ohms	
Settling Time	30 sec	30 sec	[4]
Electrical Isolation(Case)	> 10 <sup>8</sup> Ohm	> 10 <sup>8</sup> Ohm	

**Physical**

Size (Hex x Height x Diameter)	15/16 in x 2.20 in x 1.0 in	15/16 in x 55.8 mm x 25.4 mm	
Weight	4.2 oz	120 gm	
Mounting Thread	1/4-28 UNF	No Metric Equivalent	
Mounting Torque	2.0 ft-lb	2.71 Nm	
Sensing Element	Ceramic	Ceramic	
Sensing Geometry	Shear	Shear	
Housing Material	316L Stainless Steel	316L Stainless Steel	
Sealing	Welded Hermetic	Welded Hermetic	
Electrical Connector	4-Pin, M12	4-Pin, M12	
Electrical Connection Position	Top	Top	

**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.

**NOTES:**

- [1] Conversion Factor 1 in/sec = 0.0254 m/sec.
- [2] 1Hz = 60 cpm (cycles per minute).
- [3] Conversion Factor 1g = 9.81 m/s<sup>2</sup>.
- [4] Typical.
- [5] See PCB Declaration of Conformance PS235 for Details

**SUPPLIED ACCESSORIES:**

Model 081A40 Mounting Stud (1)  
 Model ICS-51 NIST Traceable single-point amplitude response calibration at 0 excitation and one at 6,000 cpm (100Hz) for 4-20 mA output vibration sensor (1)  
 Model M081A61 Mounting Stud 1/4-28 to M6 X 1 (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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