

Model Number
VO622A11

HIGH FREQUENCY INDUSTRIAL ICP® VELOCITY SENSOR

Revision E
ECN #: 29718

Performance

	ENGLISH	SI	
Sensitivity (±10 %)	100 mV/in/sec	3937 mV/m/sec	[2]
Measurement Range	±50 in/sec	±1.27 m/sec	
Frequency Range (±10 %)	240 to 270000 cpm	4 to 4500 Hz	[3][4]
Frequency Range (±3 dB)	180 to 540000 cpm	3 to 9000 Hz	
Resonant Frequency	1200 kcpm	20 kHz	[1]
Broadband Resolution (1 to 10000 Hz)	450 µin/sec	11.4 µm/sec	[1]
Non-Linearity	±1 %	±1 %	[5]
Transverse Sensitivity	≤5 %	≤5 %	

Environmental

Overload Limit (Shock)	5000 g pk	49050 m/s² pk
Temperature Range	-65 to +250 °F	-54 to +121 °C

Electrical

Settling Time (within 1% of bias)	≤30 sec	≤30 sec	
Excitation Voltage	18 to 28 VDC	18 to 28 VDC	
Constant Current Excitation	2 to 10 mA	2 to 10 mA	
Output Impedance	<100 Ohm	<100 Ohm	
Output Bias Voltage	8 to 12 VDC	8 to 12 VDC	
Spectral Noise (10 Hz)	40 µin/sec/√Hz	1.12 µm/sec/√Hz	[1]
Spectral Noise (100 Hz)	7.0 µin/sec/√Hz	0.18 µm/sec/√Hz	[1]
Spectral Noise (1 kHz)	0.4 µin/sec/√Hz	0.01 µm/sec/√Hz	[1]
Electrical Protection	RFI/ESD	RFI/ESD	
Electrical Isolation	>10 ⁸ Ohm	>10 ⁸ Ohm	

Physical

Size (Hex x Height)	7/8 in x 4.3 in	22 mm x 109 mm	
Weight	3.3 oz	94 gm	
Mounting Thread	1/4-28 Female	1/4-28 Female	[6]
Mounting Torque	2 to 5 ft-lb	2.7 to 6.8 Nm	
Sensing Element	Ceramic	Ceramic	
Sensing Geometry	Shear	Shear	
Housing Material	Stainless Steel	Stainless Steel	
Sealing	Welded Hermetic	Welded Hermetic	
Cable Length	10 ft	3 m	
Cable Type	Polyurethane	Polyurethane	[7]

Optional Versions (Optional versions have identical specifications and accessories as listed for standard model except where noted below. More than one option maybe used.)

CS - Canadian Standards Association Approved Intrinsically Safe		
Hazardous Area Approval	CI I, Div I, Groups A, B, C, D; CI II, Div I, Groups E, F, G; CI III, Div I	CI I, Div I, Groups A, B, C, D; CI II, Div I, Groups E, F, G; CI III, Div I
Hazardous Area Approval	Exia IIC T4, AExia IIC, T4	Exia IIC T4, AExia IIC, T4
Hazardous Area Approval	CI I, Div 2, Groups A, B, C, D; ExnL IIC T4, AExnA IIC T4	CI I, Div 2, Groups A, B, C, D; ExnL IIC T4, AExnA IIC T4
EX - Hazardous Area Approval- contact factory for specific approvals		
Hazardous Area Approval	EEx ia IIC T4, - 54°C≤Ta≤121°C, II 1 G	EEx ia IIC T4, - 54°C≤Ta≤121°C, II 1 G

M - Metric Mount

Supplied Accessory: Model M081A61 Mounting stud, 1/4-28 to M6 x 1

TO - Temperature Output

Temperature Output Range	+36 to +250 °F	+2 to +121 °C
Temperature Scale Factor	5.56 mV/°F + 32	(+10 mV/°C)
Electrical Connector	3-Pin	3-Pin
Electrical Connections (Pin A)	Acceleration Output	Acceleration Output
Electrical Connections (Pin B)	Ground	Ground
Electrical Connections (Pin C)	Temperature Output	Temperature Output

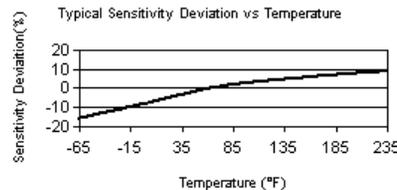
Notes

- [1] Typical.
- [2] Conversion Factor 1g = 9.81 m/s².
- [3] 1Hz = 60 cpm (cycles per minute).
- [4] The high frequency tolerance is accurate within ±10% of the specified frequency.
- [5] Zero-based, least-squares, straight line method.
- [6] 1/4-28 has no equivalent in S.I. units.
- [7] Twisted shielded pair.
- [8] See PCB Declaration of Conformance PS023 for details.

Supplied Accessories

081A40 Mounting Stud (1)
ICS-1 NIST-traceable single-axis amplitude response calibration from 600 cpm (10 Hz) to upper 5% frequency (1)

Entered: LLH	Engineer: JEC	Sales: NJF	Approved: LLH	Spec Number:
Date: 11/21/2008	Date: 11/07/2008	Date: 11/07/2008	Date: 11/21/2008	12856



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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