

VE901 Series

Nonincendive Intrinsically Safe Velocity Sensor, CSA North America Class 1
Div 1, Class II Div 1, Class III and IECEx/ATEX Zone 0,1 Approved Piezo
Velocity Sensor, Top Exit 2 Pin Connector, 100 mV/in/sec, ±10%



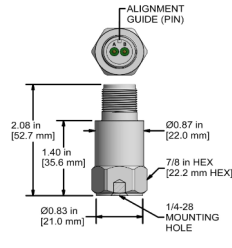
Regulatory Information

CSA 221421	Install per drawing INS10210
CSA 26CA80263367X	Refer to product manual MNX10134
CL I, DIV 1, GRP A, B, C and D	
CL II, DIV 1, GRP E, F and G; CL III	Sira 15ATEX2152X
Ex ia IIC T3-T4 Ga	Ex ia IIC T3 -T4 Ga
Ex ib IIIC T135°C...T147°C Db	T3: Ta @ -40°C to +121°C
CL I, ZN 0, AEx ia IIC T3-T4 Ga	T4: Ta @ -40°C to +80°C
ZN 21, AEx ib IIIC T135°C...T147°C Db	Ex ib IIIC T135°C ... T147°C Db
T3: Ta = -40°C to +121°C	T147°C: Ta @ -40°C to +121°C
T4: Ta = -40°C to +80°C	T135°C: Ta @ -40°C to +80°C
T147°C: Ta = -40°C to +121°C	Ex ia I Ma
T135°C: Ta = -40°C to +80°C	Ta @ -40°C to +121°C
Install per drawing INS10187	Install per drawing INS10211
Refer to product manual MNX10127	Refer to product manual MNX10135
IECEx SIR 15.0060X	Connector Exit Entity Parameters:
Ex ia IIC T3-T4 Ga	Ui = 28 Vdc, li = 120 mA, Pi = 1W, Ci =
Ex ib IIIC T135°C ... T147°C Db	0nF, Li = 0μH
Ex ia I Ma	Integral Cable Entity Parameters
T3: Ta @ -40°C to +121°C	Ui = 28 Vdc, li = 120 mA, Pi = 1W, Ci =
T4: Ta @ -40°C to +80°C	80.4nF, Li = 336μH
Mining Group I: Ta @ -40°C to +121°C	
T147°C: Ta @ -40°C to +121°C	1600 ft (488 m) Maximum
T135°C: Ta @ -40°C to +80°C	Allowable Integral Cable Length
	Approved Cabling: CB102, CB103*,
	CB111, CB190*, CB193*, CB206,
	CB296 (*Approved for Use in T4
	Applications Only)
	Requires one IS111-1B Intrinsic
	Safety Barrier

VE901-1A

2 Pin Connector

Connector Pin	Polarity
A	(+) Signal/Power
B	(-) Common

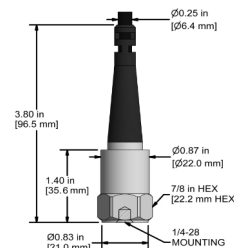


Stock Product

VE901-2A

Integral Cable

Conductor	Polarity
Red	(+) Signal/Power
Black	(-) Common
Shield	Cable Drain Wire

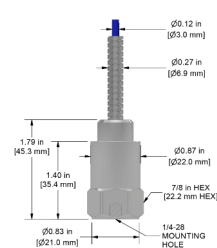


Built To Order

VE901-3A

Armored Integral Cable

Conductor	Polarity
Red	(+) Signal/Power
Black	(-) Common
Shield	Cable Drain Wire



Built To Order

Specifications	Standard	Metric	Specifications	Standard	Metric
Part Number	VE901	M/ or M8/VE901	Environmental		
Sensitivity (±10%)	100 mV/in/sec		Operating Temperature Range	-58 to 250 °F	-50 to 121 °C
Frequency Response (±3dB)	90-720,000 CPM	1.5-12000 Hz	Maximum Shock Protection	5,000 g, peak	
Frequency Response (±10%)	120-270,000 CPM	2.0-4500 Hz	Electromagnetic Sensitivity	CE	
Dynamic Range	± 50 in/sec. pk		Sealing	Welded, Hermetic	
Transverse Sensitivity	*Vsource ≥ 22V, 12Vbias		Submersible Depth	200 ft.	60 m
	≤5%		SIL Rating	SIL 3	
Electrical			Physical		
Settling Time	<5 Seconds		Sensing Element	PZT Ceramic	
Voltage Source	18-30 VDC		Sensing Structure	Shear Mode	
Constant Current Excitation	2-10 mA		Weight	3.2 oz	90 grams
Spectral Noise @ 10 Hz	25 μIPS/√Hz		Case Material	316L Stainless Steel	
Spectral Noise @ 100 Hz	2 μIPS/√Hz		Mounting Thread	1/4-28 Blind Tapped Hole	
Spectral Noise @ 1000 Hz	0.5 μIPS/√Hz		Connector (Non-Integral)	2 Pin MIL-C-5015	
Output Impedance	<100 ohm		Resonant Frequency	1,380,000 CPM	23000 Hz
Bias Output Voltage	10-14 VDC		Mounting Torque	2 to 5 ft. lbs.	2.7 to 6.8 Nm
Case Isolation	>10 ⁸ ohm		Mounting Hardware Supplied	1/4-28 Stud	M6x1 or M8x1.25 Adapter Stud
			Calibration Certificate	CA10	

Typical Frequency Response

