

AC972 Series

Nonincendive Intrinsically Safe, CSA North America Class 1 Div 1, Class II Div 1, Class III and IECEx/ATEX Zone 0,1 Approved Triaxial Accelerometer, Follows Cartesian Phase Coordinate System for Modal/ODS Analysis, Side Exit 4 Pin Mini-MIL Connector, 10 mV/g, ±10%



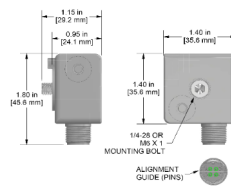
Regulatory Information

CSA 221421	Mining Group I: Ta @-40°C to +121°C
CSA 26CA80263367X	T147°C: Ta @ -40°C to +121°C
CLI, DIV 1, GRP A, B, C and D	T135°C: Ta @ -40°C to +80°C
CLII, DIV 1, GRP E, F and G; CLIII	Install per drawing INS10210
Ex ia IIC T3-T4 Ga	Refer to product manual MNX10134
Ex ib IIIC T135°C...T147°C Db	
CLI, ZN 0, AEx ia IIC T3-T4 Ga	
ZN 21, AEx ib IIIC T135°C...T147°C Db	
T3: Ta = -40°C to +121°C	Sira 15ATEX2152X
T4: Ta = -40°C to +80°C	Ex ia IIC T3 -T4 Ga
T147°C: Ta = -40°C to +121°C	T3: Ta @ -40°C to +121°C
T135°C: Ta = -40°C to +80°C	T4: Ta @ -40°C to +80°C
Install per drawing INS10187	Ex ib IIIC T135°C ... T147°C Db
Refer to product manual MNX10127	T147°C: Ta @ -40°C to +121°C
	T135°C: Ta @ -40°C to +80°C
200 ft (61 m) Maximum Allowable Integral Cable Length	Ex ia I Ma
Approved Cabling: CB192*, CB298 (*Approved for Use in T4 Applications Only)	Ta @-40°C to +121°C
Requires Two IS111-1B Intrinsic Safety Barriers	Install per drawing INS10211
	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 = 28nF, Li = 0µH
Ex ib IIIC T135°C ... T147°C Db	
Ex ia I Ma	Integral Cable Entity Parameters
T3: Ta @ -40°C to +121°C	Ui = 28 Vdc, li = 120 mA, Pi = 1W, Ci = 40nF, Li = 40.2µH
T4: Ta @ -40°C to +80°C	

AC972-1D

4 Pin Connector

Connector Pin	Polarity
A (Axis Y)	(+) Signal/Power
B (Axis X)	(+) Signal/Power
C (Axis Z)	(+) Signal/Power
D	(-) Common

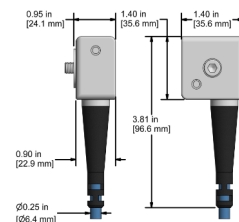


Stock Product

AC972-2D

CB192 Molded Integral Cable

Conductor	Polarity
Red (Axis Y)	(+) Signal/Power
Green (Axis X)	(+) Signal/Power
White (Axis Z)	(+) Signal/Power
Black	(-) Common/GND

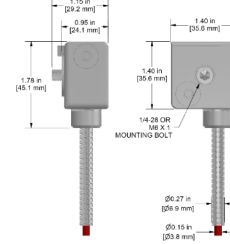


Built To Order

AC972-3D

CB298 Armored Integral Cable

Conductor	Polarity
Red (Axis Y)	(+) Signal/Power
Green (Axis X)	(+) Signal/Power
White (Axis Z)	(+) Signal/Power
Black	(-) Common/GND



Built To Order

Specifications	Standard	Metric	Specifications	Standard	Metric
Part Number	AC972	M/AC972	Environmental		
Sensitivity (±10%)	10 mV/g		Operating Temperature Range	-65 to 250°F	-54 to 121°C
Frequency Response (±3dB)	60-600,000 CPM	1,0-10000 Hz	Electromagnetic Sensitivity	CE	
Frequency Response (±10%)	90-420,000 CPM	1,5-7000 Hz	Sealing	Welded, Hermetic	
Dynamic Range	± 500 g, peak *Vsource ≥ 22V, 12Vbias		SIL Rating	SIL 2	
Transverse Sensitivity	≤5%		Physical		
Electrical			Sensing Element	PZT Ceramic	
Settling Time	<2.5 seconds		Sensing Structure	Shear Mode	
Voltage Source	18-28 VDC		Weight	7.1 oz	200 grams
Constant Current Excitation	2-10 mA		Case Material	316L Stainless Steel	
Spectral Noise @ 10 Hz	27 µg/√Hz		Mounting Thread	1/4-28	
Spectral Noise @ 100 Hz	6.5 µg/√Hz		Connector (Non-Integral)	4 Pin J Connector	
Spectral Noise @ 1000 Hz	2.5 µg/√Hz		Mounting Torque	1 to 2 ft. lbs.	1,4 to 2,7 Nm
Output Impedance	<100 ohm		Mounting Hardware Supplied	1/4-28 Captive Bolt	M6x1 Captive Bolt
Bias Output Voltage	10-14 VDC		Calibration Certificate	CA10	
Case Isolation	>10 ⁸ ohm				

Typical Frequency Response

