

AC970 Series

Nonincendive Miniature Industrial, Intrinsically Safe, CSA North America Class 1, Division 1 and IECEx/ATEX Zone 0, 1 Approved Accelerometer, Top Exit 2 Pin Mini-MIL Connector, 100 mV/g, ±10%



Regulatory Information

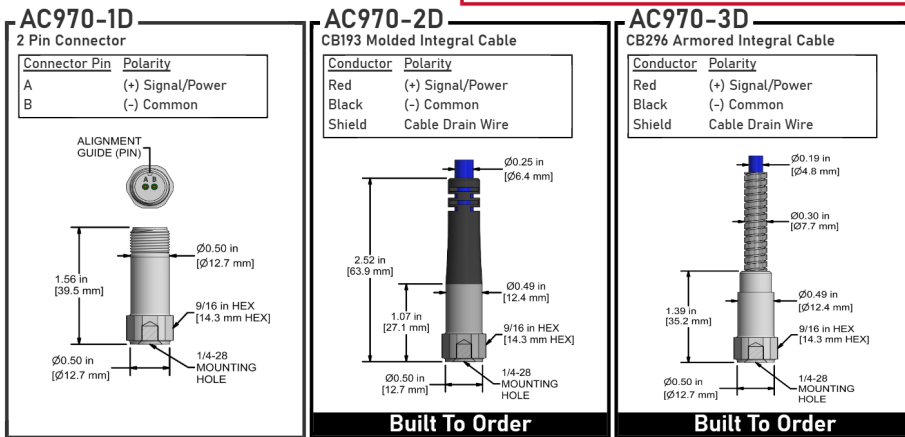
CSA 221421
 Ex ia IIC T3/T4 Ga
 Ex ia I Ma
 AEx ia IIC T3/T4
 CLI Groups A, B, C, D
 CLII Groups E, F, G; CLIII
 CLI, Zone 0
 Operating Temp Code: T4
 Ambient Temp Range = -40 to 80°C
 Operating Temp Code: T3
 Ambient Temp Range = -40 to 121°C
 Control Drawing INS10012
 Ex ia IIC T3 -40°C < Ta < +121°C
 Ex ia IIC T4 -40°C < Ta < +80°C

Sira 15ATEX2152X
 IECEx SIR 15.0060X
 Ex ia IIC T3/T4 Ga
 Ex ib IIIC T135°C..T143°C Db
 Operating Temp Code: T143°C Db
 Ambient Temp Range = -40°C to 121°C
 Operating Temp Code: T135°C
 Ambient Temp Range = -40°C to +80°C
 Ex ia I Ma

Connector Exit Entity Parameters:
 Ui = 28 Vdc, li = 120 mA, Pi = 1W, Ci = 28nF, Li = 0µH

200 ft (61 m) Maximum Allowable Integral Cable Length
 Approved Cabling: CB102, CB103*, CB111, CB190*, CB193*, CB296 (*Approved for Use in T4 Applications Only)
 Requires One IS111-1B Intrinsic Safety Barrier

Integral Cable Entity Parameters
 Ui = 28 Vdc, li = 120 mA, Pi = 1W, Ci = 40nF, Li = 40.2µH



Specifications	Standard	Metric	Specifications	Standard	Metric
Part Number	AC970	M/ or M8/AC970	Environmental		
Sensitivity (±10%)	100 mV/g		Operating Temperature Range	-58 to 250 °F	-50 to 121 °C
Frequency Response (±3dB)	36-1,200,000 CPM	0.6-20000 Hz	Maximum Shock Protection	5,000 g, peak	
Frequency Response (±10%)	60-420,000	1.0-7000 Hz	Electromagnetic Sensitivity	CE	
Dynamic Range	± 50 g, peak		Sealing	Welded, Hermetic	
Electrical			Physical		
Settling Time	< 2.5 Seconds		Sensing Element	PZT Ceramic	
Voltage Source	18-28 VDC		Sensing Structure	Shear Mode	
Constant Current Excitation	2-10 mA		Weight	0.7 oz	20 grams
Spectral Noise @ 10 Hz	30 µg/√Hz		Case Material	316L Stainless Steel	
Spectral Noise @ 100 Hz	4 µg/√Hz		Mounting Thread	1/4-28 Blind Tapped Hole	
Spectral Noise @ 1000 Hz	2 µg/√Hz		Connector (Non-Integral)	2 Pin mini-MIL	
Output Impedance	<100 ohm		Resonant Frequency	2,040,000	34000 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

