

# AC970 Series

## Intrinsically Safe mini-MIL Accelerometer, Top Exit Connector/Cable, 100 mV/g

**CSA/ATEX/IECEX  
Approved**



Actual  
Product  
Size Shown



### REGULATORY INFORMATION

Ex ia IIC T3/T4 Ga  
AEx ia IIC T3/T4 Ga  
CLI Groups A, B, C, D  
CLII Groups E, F, G; CLIII  
CLI, Zone 0

Control Drawing INS10012  
Ui = 28 Vdc li = 112 mA  
Pi = 1W, Ci = 63.036nF, Li = 0µH  
CSA 242141  
Sira 15ATEX2152X  
Ex ia IIC T3 Ga  
IECEX SIR 15.0060X  
Ex ia IIC T3 Ga

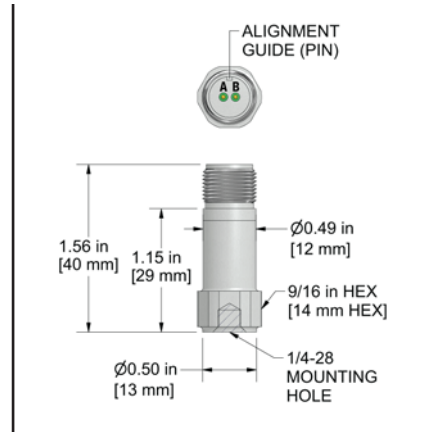
Operating Temperature Code: T4  
Ambient Temperature Range = -40°C to +80°C  
Operating Temperature Code: T3  
Ambient Temperature Range = -40°C to +121°C

Requires **Intrinsically Safe Barrier IS111**

### AC970-1D

2 Pin Connector

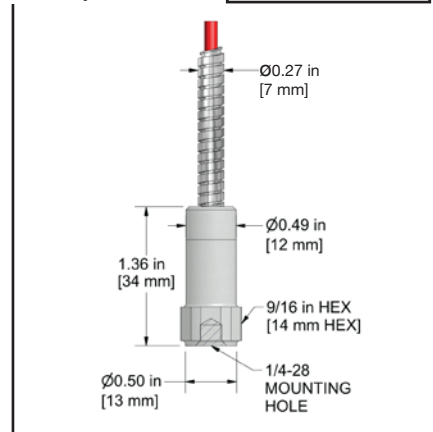
Connector Pin	Polarity
A	(+) Signal/Power
B	(-) Common



### AC970-3D

Armored Integral Cable

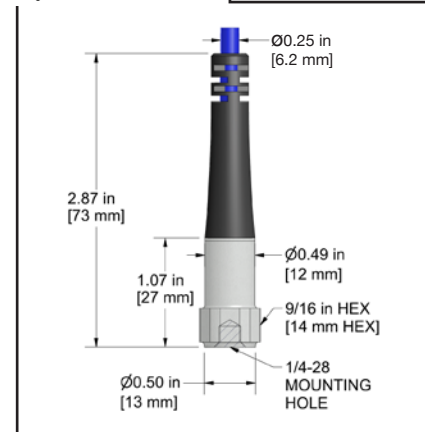
Conductor	Polarity
Red	(+) Signal/Power
Black	(-) Common
Shield	Cable Drain Wire



### AC970-9D

Integral Cable

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



Specifications	Standard	Metric
Part Number	AC970	M/AC970
<b>Vibration</b>		
Sensitivity (±10%)	100 mV/g	
Frequency Response (±3dB)	36-900,000 CPM	0,6-15000 Hz
Frequency Response (±10%)	60-420,000 CPM	1,0-7000 Hz
Dynamic Range	± 50 g, peak	
<b>Electrical</b>		
Settling Time	<2.5 seconds	
Voltage Source (IEPE)	18-28 VDC	
Constant Current Excitation	2-10 mA	
Spectral Noise @ 10 Hz	30 µg/√Hz	
Spectral Noise @ 100 Hz	4 µg/√Hz	
Spectral Noise @ 1000 Hz	2 µg/√Hz	
Output Impedance	<100 ohm	
Bias Output Voltage	10-14 VDC	
Case Isolation	>10 <sup>8</sup> ohm	

Specifications	Standard	Metric
<b>Environmental</b>		
Temperature Range	-58 to 250°F	-50 to 121°C
Maximum Shock Protection	5,000 g, peak	
Electromagnetic Sensitivity	CE	
Sealing	Welded, Hermetic	
<b>Physical</b>		
Sensing Element	PZT Ceramic	
Sensing Structure	Shear Mode	
Weight	0.7 oz	20 grams
Case Material	316L Stainless Steel	
Mounting	1/4-28	
Connector (AC970-1D)	2 Pin mini-MIL, J Series Connector	
Armored Cable (AC970-3D)	Armor Jacketed Cable	
Integral Cable (AC970-9D)	Blue TPE Cable	
Resonant Frequency	2,040,000 CPM	34000 Hz
Mounting Torque	2 to 5 ft. lbs.	2,7 to 6,8 Nm
Mounting Hardware	1/4-28 Stud	M6x1 Adapter Stud
Calibration Certificate	CA10	

### Ordering Information

Standard	AC970-1D (1/4-28 Stud)	AC970-3D / (1/4-28 Stud)	AC970-9D / (1/4-28 Stud)
	Stock Product	Build To Order	Build To Order
		(maximum armor length 100 ft.) (cable length in feet) (termination)	(length in feet) (termination)
Metric	M/AC970-1D (M6x1 Adapter Stud)	M/AC970-3D / (M6x1 Adapter Stud)	M/AC970-9D / (M6x1 Adapter Stud)
	Stock Product	Build To Order	Build To Order
		(maximum armor length 30 m) (cable length in meters) (termination)	(length in meters) (termination)

**Read Before Purchasing**  
Important information on  
**Regulatory Approvals and  
Requirements**  
on Page 87

**Cable Terminations:** L Z



**Backed by our Unconditional Lifetime Warranty**

SECTION 1 - VIBRATION SENSORS  
Intrinsically Safe Accelerometers