

AC970 Series

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

**CSA/ATEX/IECEX
Approved**



IECEX
IECEX SIR 15.0060X



**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

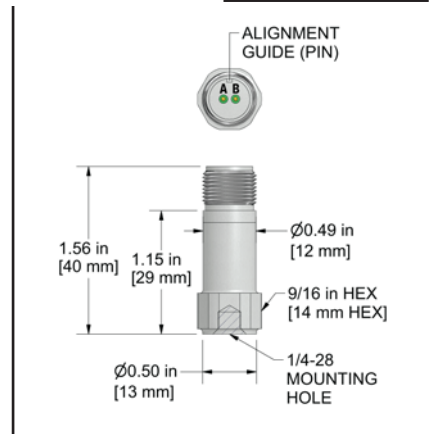
Operating Temperature Code: T4
Ambient Temperature Range = -40°C to +80°C
Operating Temperature Code: T3
Ambient Temperature Range = -40°C to +121°C

Requires Intrinsically Safe Barrier IS111

AC970-1D

2 Pin Connector

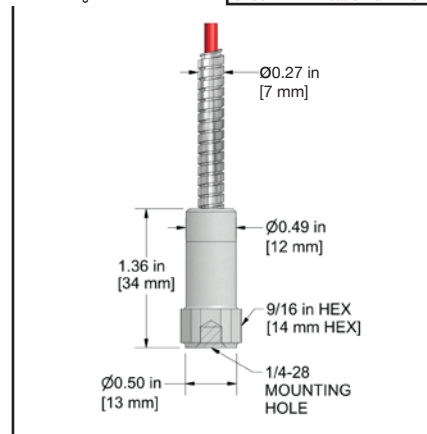
| Connector Pin | Polarity |
|---------------|------------------|
| A | (+) Signal/Power |
| B | (-) Common |



AC970-3D

Armored Integral Cable

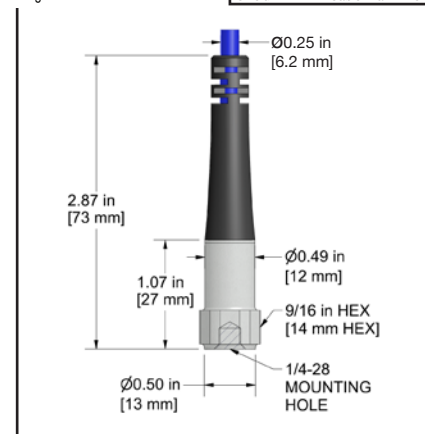
| Conductor | Polarity |
|-----------|------------------|
| Red | (+) Signal/Power |
| Black | (-) Common |
| Shield | Cable Drain Wire |



AC970-9D

Integral Cable

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



| Specifications | Standard | Metric |
|-----------------------------|----------------------|--------------|
| Part Number | AC970 | M/AC970 |
| Vibration | | |
| 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 | |
| Electrical | | |
| 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 ⁸ ohm | |

| Specifications | Standard | Metric |
|-----------------------------|------------------------------------|-------------------|
| Environmental | | |
| Temperature Range | -58 to 250°F | -50 to 121°C |
| Maximum Shock Protection | 5,000 g, peak | |
| Electromagnetic Sensitivity | CE | |
| Sealing | Welded, Hermetic | |
| Physical | | |
| 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) |
|----------|-----------------------------------|---|-------------------------------------|
| | | (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) |
| | | (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



VIBRATION ANALYSIS HARDWARE

Backed by our Unconditional Lifetime Warranty

SECTION 1 - VIBRATION SENSORS
Intrinsically Safe Accelerometers