

Miniature tri-axial IEPE accelerometer



Features

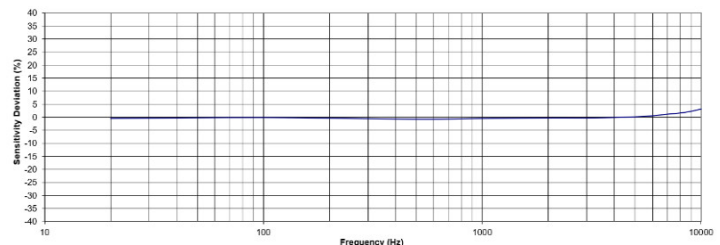
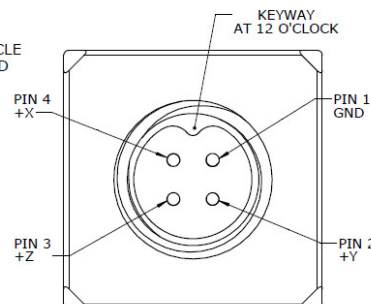
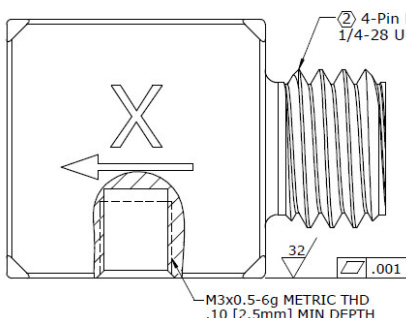
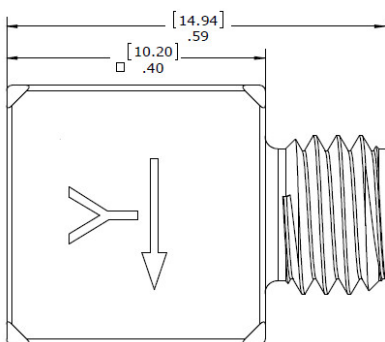
- Extended bandwidth
- Flexible cable exit
- Adhesive or screw mounting
- Hermetic sealed
- Annular shear mode
- Wide frequency response
- Mounting ground isolated

Application

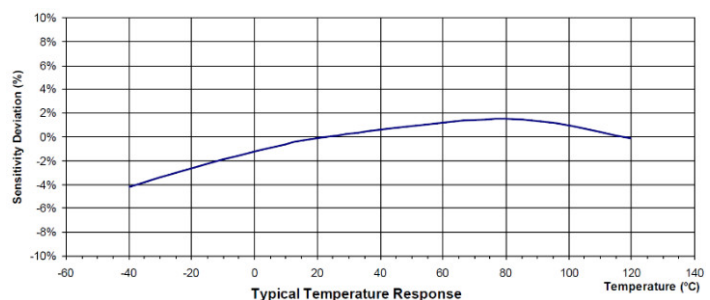
- Aircraft testing
- Shock testing
- Road testing
- Modal analysis

Description

Model 730AM1 is an IEPE tri-axial accelerometer designed for miniature applications. The accelerometer uses shear piezo electrical element which provides a wide operating frequency range. The IEPE sensor combines outstanding crystals and low noise integral microelectronics to achieve very low sensitivity variation over the operating temperature range, compared to other sensing element designs. The shear element technology also ensures high immunity to base strain errors. The accelerometer uses a welded titanium construction for low mass and a light weight 4 pin connector, or integral cable assembly for lower mass and wider frequency operation. Excellent frequency response, both low and high frequency, provide the user with a tri-axial accelerometer ideally suited for structural and component testing, modal analysis and general laboratory vibration work. The miniature cube size of this accelerometer enables the test engineer or technician to measure the accelerations of three orthogonal axes of vibration simultaneously on lightweight structures. All variations provide reliable measurements and long-term stability.



Typical Frequency Response



Typical Temperature Response

Specification

Typical at +24°C (+75°F), 24Vdc, 4 mA and 100Hz, unless otherwise stated.

Measurement range	±50	±100	±200	±500	g
Sensitivity, ±15%	100	50	25	10	mV/g
Frequency response, ±5%	0.5~10000	0.5~10000	0.5~10000	0.5~10000	Hz
Frequency response, ±10%	0.3~12000	0.3~12000	0.3~12000	0.3~12000	Hz
Resonant frequency	42	42	42	42	kHz
Transverse sensitivity	<5	<5	<5	<5	%
Temperature response	±10	±10	±10	±10	%
Non-linearity	±1	±1	±1	±1	%FSO
Residual noise (2 Hz to 20 KHz)	0.0016	0.002	0.002	0.002	Equiv. g RMS
Operating & storage temperature	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C	°C
Shock limit	5000	5000	5000	5000	g

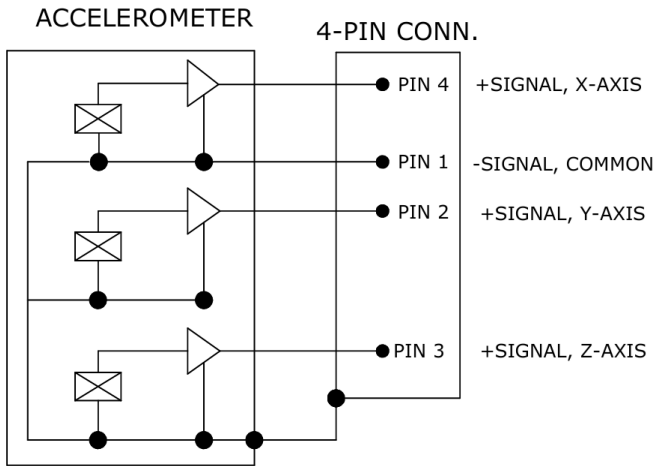
Parameters	Value	Units
Bias voltage (room temperature)	8 to 12	Vdc
Bias voltage (operating temperature)	6 to 13	Vdc
Output impedance	<100	Ω
Full scale output voltage	±5	V
Insulation resistance (@100Vdc)	>100	MΩ
Supply (compliance) voltage	18 to 30	Vdc
Supply current	2 to 10	mA
Humidity	Hermetically sealed	
Case material	Titanium alloy	
Sensing element	Piezo ceramic	
Weight	4.1	Grams
Mounting torque	16 (1.8)	lb-in (N-m)

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0117	M3X8.0 cup point set screw	Included
13M4-3	3 meter mating cable with 4 pins mating connector to 3X BNC(male) connector	Optional
MB0028	Adhesive mounting adapter	Optional
MB0006	Magnet mounting adapter(base ground)	Optional
MB0018	Magnet mounting adapter(isolated)	Optional
IN-03	3 channels IEPE signal conditioner	Optional
IN-91	Portable vibration analyzer	Optional
IN-3062	8 channels data acquisition system	Optional

Measurement configuration



Ordering information

730	AM1	-	50
Model	Output signal	-	Range
730	A=IEPE output M1=Extended frequency range	-	50=50g 100=100g 200=200g 500=500g

