

Tri-axial low frequency IEPE accelerometer

Description

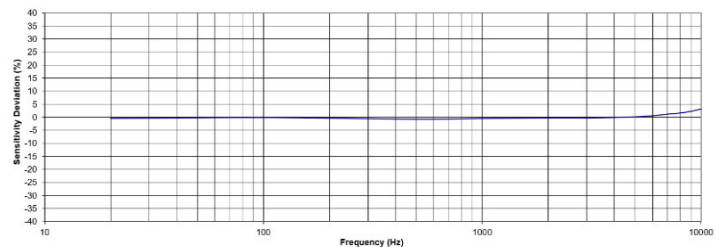
Model 560A is an IEPE triaxial accelerometer designed for small size applications. The accelerometer uses shear piezo electronical element which provides a wide operating frequency range. The IEPE sensor combines outstanding crystals and low noise integral microelectronics to achieve very low sensitivity 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 amplitude and phase, provide the user with a triaxial accelerometer ideally suited for structural and component testing, drop tests and general laboratory vibration work. The small 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.

Features

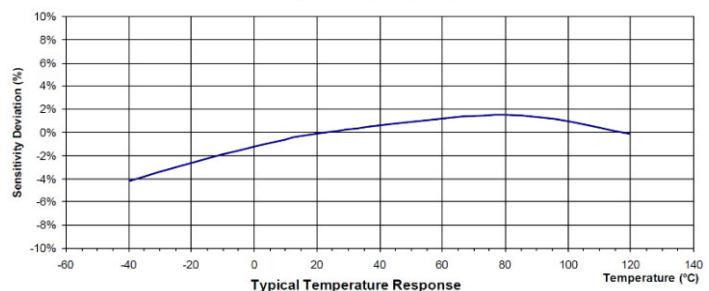
- Low frequency response
- Flexible cable exit
- Adhesive or screw mounting
- Hermetic sealed
- Annular shear mode
- Tri-axial measurement
- Mounting isolated optional

Application

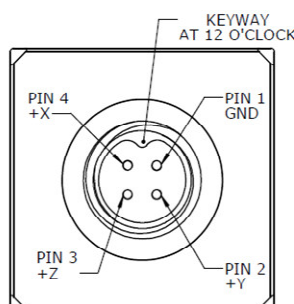
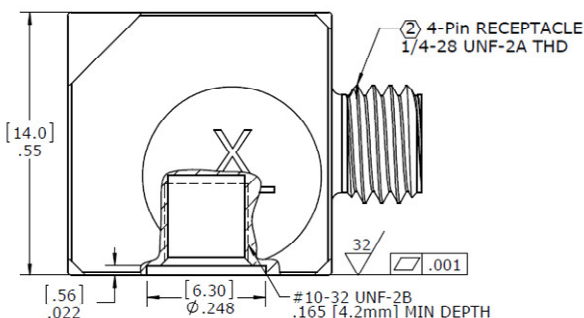
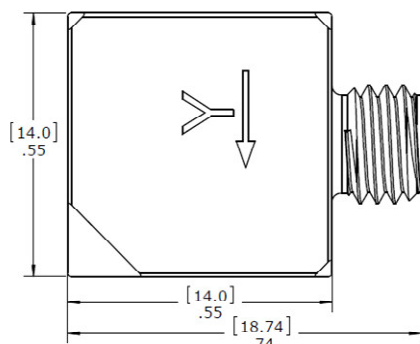
- Aircraft testing
- Shock testing
- Road testing
- Modal analysis



Typical Frequency Response



Typical Temperature Response



Specification

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

Measurement range	±10	±50	±100	±200	±500	±2000	g
Sensitivity, ±10%	500	100	50	25	10	2.5	mV/g
Frequency response, ±5%	2.5~5000	0.5~5000	0.5~5000	0.5~5000	0.5~5000	0.5~5000	Hz
Frequency response, ±10%	1.5~10000	0.3~10000	0.3~10000	0.3~10000	0.3~10000	0.3~10000	Hz
Resonant frequency	25	25	25	25	25	25	kHz
Transverse sensitivity	<5	<5	<5	<5	<5	<5	%
Temperature response	±10	±10	±10	±10	±10	±10	%
Non-linearity	±1	±1	±1	±1	±1	±1	%FSO
Residual noise (2 Hz to 20 KHz)	0.0002	0.0002	0.0002	0.0003	0.0005	0.001	Equiv. g RMS
Operating temperature	-55 to +100	-55 to +100	-55 to +125	-55 to +125	-55 to +125	-55 to +125	°C
Shock limit	5000	7000	7000	7000	7000	7000	g

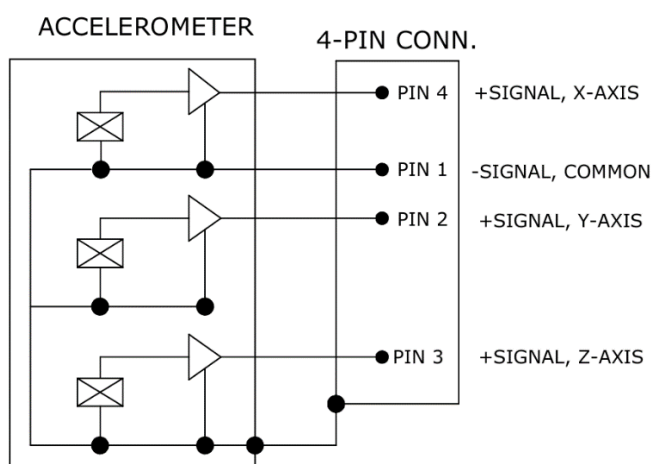
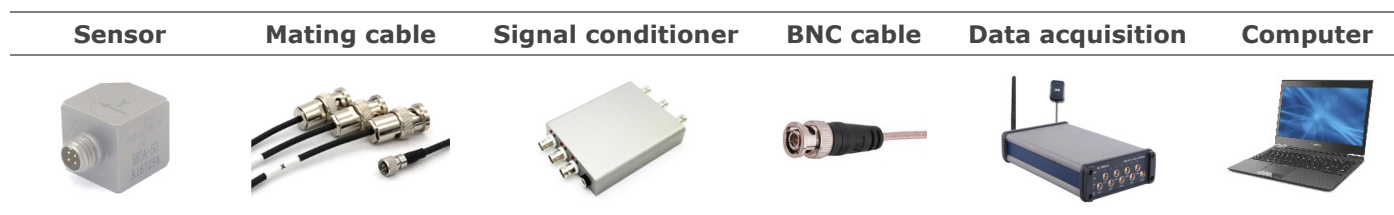
Parameters	Value	Units
Bias voltage (room temperature)	8 to 12	Vdc
Bias voltage (-55°C to 125°C)	6 to 13	Vdc
Output impedance	<100	Ω
Full scale output voltage	±5	V
Insulation resistance (@100Vdc)	>100	MΩ
Supply (compliance) voltage	18 to 30	Vdc
Supply current	2 to 10	mA
Humidity	Hermetically sealed	
Case material	Titanium alloy	
Sensing element	Piezo ceramic	
Weight	12.6	Grams
Mounting torque	18 (2)	lb-in (N-m)

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0231	Mounting stud 10-32 to 10-32 thread	One stud Included
PM0356	Mounting stud 10-32 to M5 thread	
MB0013	Magnet mounting adapter	Optional
PM0276	Adhesive mounting adapter	Optional
13M4-3	3 meter mating cable with 4 pins mating connector to 3X BNC(male) connector	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

560	A	-	50
Model	Output signal	-	Range
560	A=IEPE output E=IEPE output with TEDS	-	10=10g 50=50g 100=100g 200=200g 500=500g 2000=2000g

