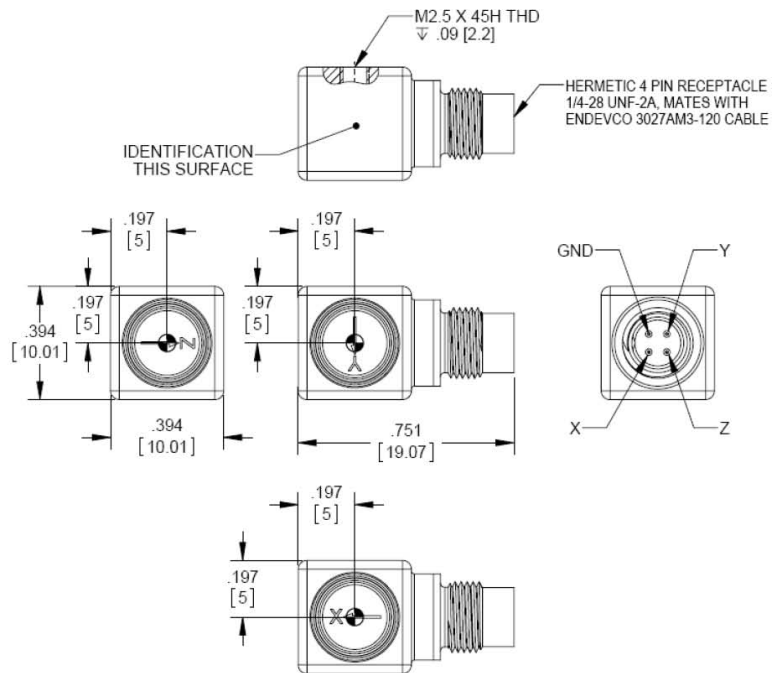


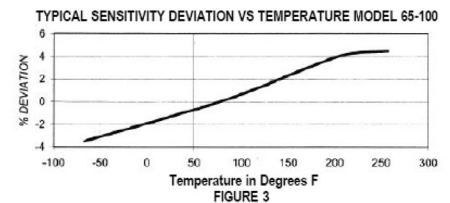
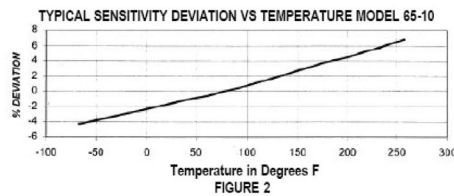
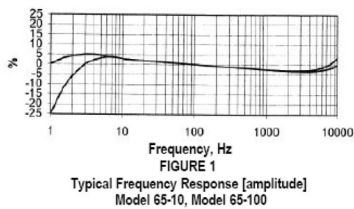
Isotron[®] accelerometer

Model 65



⊕ INDICATES LOCATION OF SEISMIC MASS

STANDARD TOLERANCE
 INCHES [MILLIMETERS]
 XX = ± .03 [X = ± .8]
 XXX = ± .010 [XX = ± .25]



Key features

- 65-10-R and 65-100-R available as replacement sensors
- Triaxial, low-impedance output
- Small size (10-mm cube, 5 gram)
- Ideal for structural analysis, laboratory testing, and modal analysis
- Single connector, flexible cable

Description

The high sensitivity and high performance of model 65 distinguishes this triaxial accelerometer from comparable products. Model 65 is packaged in a 10-mm cube of welded titanium construction. Interface to the model 65 is via a Microtech 4-pin connector. Temporary petrowax adhesive and a ten-foot cable assembly with BNC connectors are provided as standard accessories.

The Model 65 has excellent frequency response, both amplitude and phase, which provides the user with a triaxial accelerometer ideally suited for structural and component testing, drop tests and general laboratory vibration work. It also features a shear mode construction for low base strain sensitivity. The reduced size of this accelerometer enables the test engineer or technician to measure the accelerations of three orthogonal axes of vibration simultaneously on lightweight structures. Optional mounting block accessories are available for model 65.

Isotron[®] accelerometer

Model 65

Specifications

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Dynamic characteristics	Units	-10	-100
Range	g (m/s ²)	±500 (4900)	±50 (490)
Voltage sensitivity			
Typical	mV/g (mV / m/s ²)	10 (1.02)	100 (10.2)
Min	mV/g (mV / m/s ²)	8 (.82)	80 (8.2)
Max	mV/g (mV / m/s ²)	12 (1.22)	120 (12.2)
Amplitude response			
5%	Hz	0.8 to 10 000	3 to 6 000
±1 dB	Hz	0.4 to 10 000	1.5 to 6000
±3 dB	Hz	0.2 to 10 000	0.7 to 10 000
Phase response, ±5°	Hz	3 to 1500	10 to 1500
Resonance frequency, typ	Hz	60 000	45 000
Transverse sensitivity	%		< 5
Sensitivity deviation vs. temperature			
At -67°F (-55°C)			-4
At +257°F (+125°C)		7	5
Amplitude non-linearity	%		< 1
Output characteristics			
Output polarity			See arrows on outline drawing
DC output bias voltage [1]	Vdc		+12.3 to +13.5
Output impedance			
2 mA to 3 mA	Ω		< 300
3 mA to 20 mA	Ω		< 100
Full scale output voltage	Vpk		±5
Noise floor			
Broadband (2Hz to 10kHz)	μg rms	800	400
Spectral			
1Hz	μg ^{1/2} /Hz	500	300
10Hz	μg ^{1/2} /Hz	80	50
100Hz	μg ^{1/2} /Hz	15	10
1kHz	μg ^{1/2} /Hz	6	4
Grounding [2]			Signal ground connected to case
Power requirement			
Compliance voltage	Vdc		+23 to +30
Supply current	mA		+2 to +20
Warm-up time (to reach 90% of final bias)	sec		< 20
Environmental characteristics			
Temperature range			-67°F to 257°F (-55°C to +125°C)
Humidity			Hermetically sealed
Sinusoidal vibration limit	g pk	±500	±200
Shock limit [3]	g pk		10 000
Base strain sensitivity at 250 μstrain	eq. g/μstrain		< 0.001
Thermal transient sensitivity	eq. g/°F		0.02
Physical characteristics			
Dimensions			See outline drawing
Weight	oz (gm)		0.17 (5)
Case material			Titanium, commercially pure
Connector [4]			4 pin Microtech style side mounted
Mounting [5]			Adhesive or m2.5 thread
Mounting torque	lbf-in		8
Calibration			
Supplied, each axis:			
Voltage sensitivity	mV/g		
Bias	Vdc		
Maximum transverse sensitivity	%		
Frequency response	%		Z Axis: 20 to 10 000 / X & Y Axis: 20 to 6 000

