

Model 65HT Isotron[®] accelerometer

Features

- **NEW!** 65HT-10-R available as replacement sensor
- Shock-proof, overload-protected
- Automotive test cell
- Aerospace test chambers
- Triaxial, low-impedance output
- Small size (10-mm cube, 5 gram)
- Rated for continuous use up to +175°C

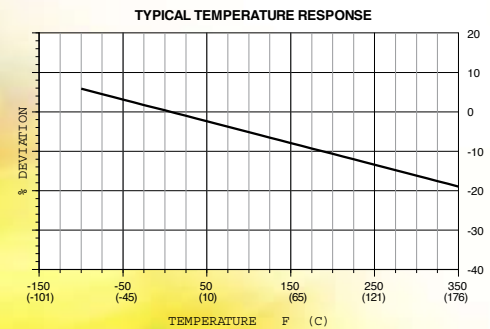
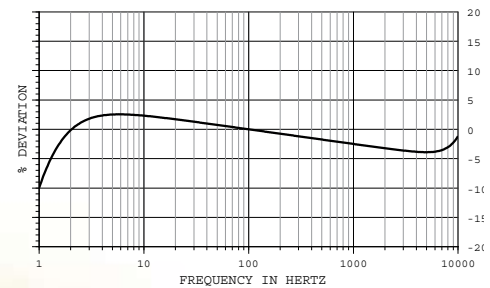
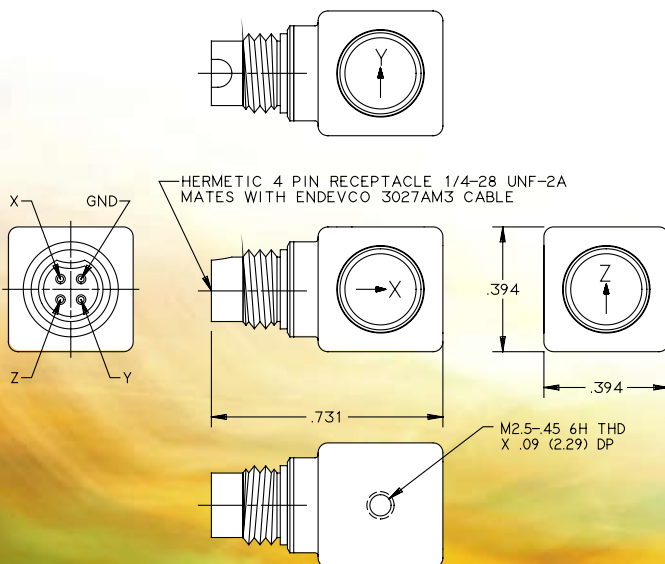


Description

The extended temperature capability (+175°C) and high resolution of Endevco's model 65HT triaxial accelerometer distinguish it from competitor offerings. The Endevco[®] model 65HT is packaged in a 10-mm cube of welded titanium construction. Interface to the model 65HT is via a hermetically sealed 4-pin connector. Using the latest technology in high temperature components and processes, the micro-electronic circuits are designed and built specifically to continuously operate at +175°C. It is supplied with high temperature cable assemblies as a standard accessory.

The model 65HT's excellent frequency responses, both amplitude and phase, provide the user with a triaxial accelerometer ideally suited for structural and component testing in automotive test cells, environmental test chambers and general laboratory applications. 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.

Endevco signal conditioner models 133, 2792B, 2793 or Oasis are recommended for use with this accelerometer.



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Endevco

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	-1	-10
Range	g	±5000	±500
Voltage sensitivity, typical	mV/g	1	10
Frequency response		See typical amplitude response	
Amplitude response ±5%	Hz	5 to 6000 (z-axis)	
	Hz	5 to 6000 (x,y-axis)	
±1 dB typical	Hz	3 to 8000 (all axes)	
Resonance frequency	Hz	40 000	
Transverse sensitivity	%	< 5	
Temperature response		See typical curve	
Amplitude non-linearity	%	< 1	

Output characteristics

Output polarity		See arrows on outline drawing	
DC output bias voltage [2]	Vdc	+10.0 to +13.0@room temperature	
Output impedance 3ma to 4ma	Ω	< 100	
Full scale output voltage	Vpk	±5	
Resolution (2 Hz to 10 kHz broadband)	g rms	≤ 10 000	0.0015 ≤ 1400
Grounding		Signal ground connected to case	

Power requirement

Compliance voltage	Vdc	+23 to +30
Supply current [1]	mA	+1 to +4
Warm-up time (to reach 90% of final bias)	sec	< 2

Environmental characteristics

Temperature range		-67°F to 347°F (-55°C to +175°C)
Humidity		Hermetically sealed
Sinusoidal vibration limit	g pk	±800
Shock limit [3]	g pk	10 000
Base strain sensitivity at 250 μstrain	eq. g/μstrain	0.001
Thermal transient sensitivity	eq. g/°F (°C)	0.1 (0.2)

Physical characteristics

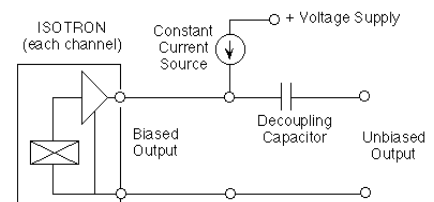
Dimensions		See outline drawing
Weight	gm (oz)	5 (0.17)
Case material		Titanium, commercially pure Cpy
Connector		4 pin Microtech style side mounted
Mounting [4]		Adhesive or m2.5 thread
Mounting torque	lbf-in (Nm)	7 (0.8)

Calibration [5]

Supplied, each axis:		
Voltage sensitivity	mV/g	
Maximum transverse sensitivity	%	
Frequency response	Hz	20 Hz to 6 kHz (z-axis) 20 Hz to 5 kHz (x,y-axis)

Accessories

Product	Description	65HT-10, 65HT-100	65HT-10-R
3027AM3-120	Triaxial cable, 85° C, 3 BNC's at instrumentation end	Included	Optional
3027AVM3-36	Extension cable rated to +200°C (mates with 3027AM3)	Included	Optional
3027AHM13-XXX	Highly flexible, high strength, 200°C triaxial cable, (transducer cable, mates with 3027AM3)	Optional	Optional
2988M12	Adhesive/clip adapter	Optional	Optional
32279	Petro wax	Included	Optional
EHX431	+260°C rated adhesive	Optional	Optional
EH755	Screw, cap	Included	Included
EH761	Screw, set	Included	Included



Notes:

- +4 mA max constant current level to meet specifications. Constant current level >+4 mA may cause bias dc level shift.
- +22 Vdc minimum must be available to the accelerometer to ensure full-scale operation at the temperature extremes.
- Shock pulses of short duration may excite sensor resonance.
- Be careful not to apply excessive force when removing the accelerometer from structure.
- Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 800-982-6732 for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.



Continued product improvement necessitates that Endevco reserve the right to modify these specifications without notice. Endevco maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, the support of stringent Quality Control requirements, and compulsory corrective action procedures. These measures, together with conservative specifications have made the name Endevco synonymous with reliability.