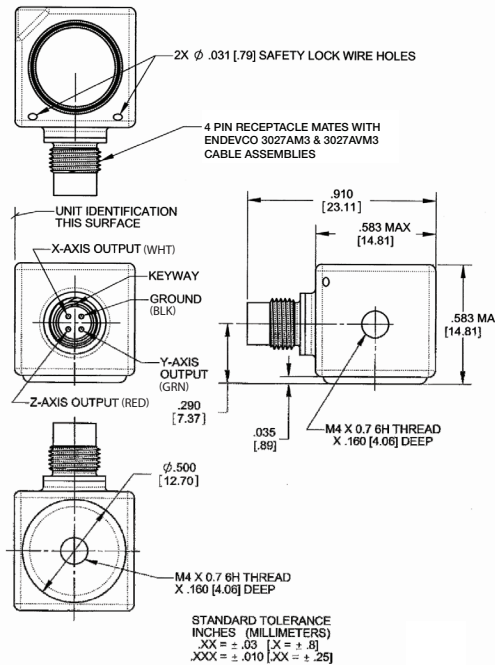


Endevco®

Isotron® accelerometer Model 67

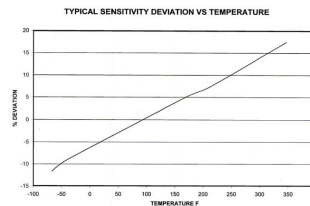
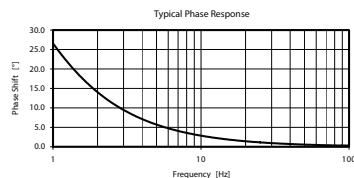
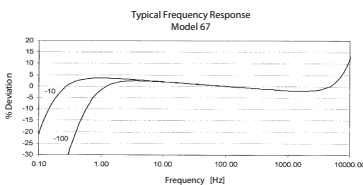


Key features

- 67-10-R and 67-100-R available as replacement sensors.
- Triaxial, low-impedance output
- High temperature to 347°F (175°C)
- High output (100 mV/g)
- Ideal for structural analysis, ESS and NVH
- Overload protected for high shock resistance
- Single connector

Endevco model 67 is a miniature high temperature triaxial accelerometer designed for laboratory, ESS, NVH and other non temperature test environments. The unit features welded titanium construction for low weight and a complete seal against the environment. It provides a high output sensitivity, even up to its maximum operating temperature of 347°F (175°C). With its small size (14.8 mm³) and light weight of less than 14 grams, the model 67 effectively minimizes mass loading effects.

Model 67 features Endevco's Piezite type P-8 crystal element operating in the annular shear mode to achieve low base strain sensitivity and excellent output stability over time. This accelerometer incorporates internal hybrid signal conditioners to achieve a low noise floor. Power to model 67, in the form of a constant current, travels through the same pins as the low impedance output signals. Model 67 was designed for either adhesive mounting or screw mounting using a M4 screw. The model number suffix denotes acceleration sensitivity in mV/g; i.e. 67-100 features sensitivity of 100 mV/g.



Meggitt Sensing Systems

Our measurement product competencies:

Piezoelectric accelerometers | Piezoresistive accelerometers | Isotron accelerometers | Variable capacitance accelerometers | Pressure transducers | Acoustic sensors | Electronic instruments | Calibration systems | Shakers | Modal hammers | Cable assemblies

MEGGITT
smart engineering for
extreme environments

Endevco®

Isotron® accelerometer

Model 67

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	mV/g (mV / m/s ²)	10 (1.0)	100 (10.2)
Frequency response		See typical amplitude response	
Amplitude response			
±5%	Hz	0.2 to 6000	0.7 to 6000
±1dB typical	Hz	0.15 to 8000	0.5 to 8000
Phase response			
< 5°	Hz		5-5000
< 10°	Hz		2-7000
Resonance frequency	Hz		35 000
Transverse sensitivity	%		< 5
Temperature response		See typical curve	
At -67°F (-55°C) max/min	%		0/-20
At +347°F (+175°C) max/min	%		0/+30
Amplitude linearity	%		≤ 1

Output characteristics

Output polarity	Acceleration directed into base produces positive output		
DC output bias voltage			
Room temperature, 75°F (23°C)	Vdc		+12.0 to +13.0
-67°F to 347°F (-55°C to +175°C)	Vdc		+6.0 to +16.0
Output impedance 4-10 mA	Ω		< 100
Full scale output voltage	V		±5
Residual noise			
Broadband			
1 Hz - 10kHz	µg rms	1400	450
Spectral			
1 Hz	µg/√Hz	350	100
10 Hz	µg/√Hz	100	30
100 Hz	µg/√Hz	40	14
1000 Hz	µg/√Hz	15	4
Grounding	Signal ground is connected to case and not isolated from mounting surface		

Power requirement

Supply voltage	Vdc	+24 to +30
Supply current	mA	+2 to +8
Warm-up time (to reach 90% of final bias)	sec	< 10

Environmental characteristics

Temperature range	-67°F to 347°F (-55°C to +175°C)		
Humidity	Hermetically sealed		
Sinusoidal vibration limit	g pk		1000
Shock limit [1]	g pk		5000
Base strain sensitivity at 250 µstrain	eq. g/µstrain	0.01	0.001
Thermal transient sensitivity	eq. g/°F	0.07	0.007
Electromagnetic noise, at 100 Gauss	eq. g/Gauss	0.001	0.0002

Physical characteristics

Dimensions	See outline drawing		
Weight	oz (gm)		0.5 (14)
Case material			Titanium
Connector			4 pin side mounted
Mounting [2]			Adhesive or M4 thread
Mounting torque	lbf-in (Nm)		10 (1.13)

Calibration

Supplied, each axis:		
Voltage sensitivity	mV/g	
Maximum transverse sensitivity	%	
Frequency response (Y and Z axis)	%	20 Hz to 8000 Hz
Frequency response (X axis)	%	20 Hz to 6000 Hz
Bias	Vdc	

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Isotron® accelerometer

Model 67

Accessories:

Product	Description	67-10 / 67-100	67-10-R / 67-100-R
EH783	M4 socket head cap screw	Included	Included
EHM1641	Wrench, hex key, metric	Included	Optional
3027AVM13-84	Extension cable, 200°C, mates with 3027AM3, 7 feet	Included	Optional
3027AM3-36	Triaxial cable, 85°C, 3BNCs at instrumentation end, 3 feet	Included	Optional
133	Signal conditioner	Optional	Optional
2793	Isotron signal conditioner	Optional	Optional
4990A-1	OASIS 2000 computer controlled system	Optional	Optional

Notes

1. Shock pulses of short duration may excite sensor resonance.
2. Be careful not to apply abusive forces when removing the accelerometer from structure.
3. Maintain high levels of precision and accuracy using Meggitt's factory calibration services. Call Meggitt'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.

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Continued product improvement necessitates that Meggitt reserve the right to modify these specifications without notice. Meggitt 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.
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