

Model 67 Isotron® accelerometer

Features

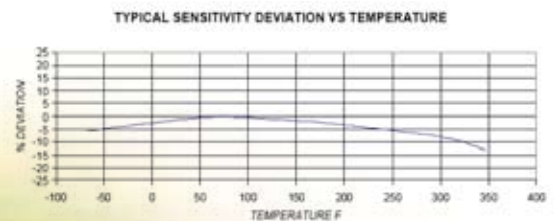
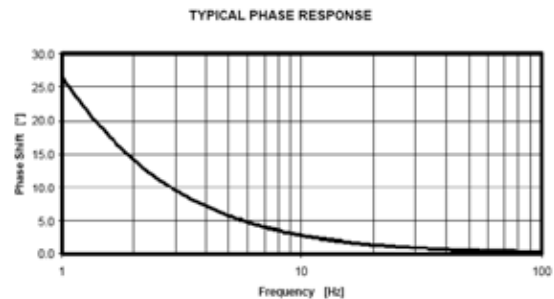
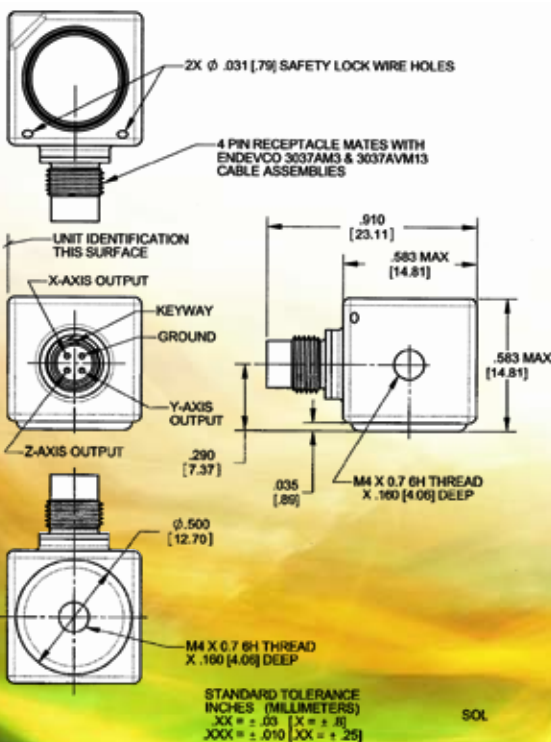
- Triaxial, low-impedance output
- High temperature to 350°F (175°C)
- High output (100 mV/g), high resolution (Mili-g)
- Ideal for structural analysis and ESS
- Shock-proof, overload-protected
- Single connector, flexible cable



Description

The Endevco model 67 is a small high temperature triaxial accelerometer designed for laboratory testing and modal analysis data acquisition. The unit operates to 347°F (175°C), features welded titanium construction, is hermetically sealed against environmental contamination and provides high output sensitivity. Its light weight of less than 14 grams effectively minimizes mass loading effects.

The model 67-XXX 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 the Endevco model 67, in the form of a constant current, travels through the same pins as the low impedance output signals. The 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.



Model 67 Isotron[®] accelerometer

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	-10	-100
Range	g	±500	±50
Voltage sensitivity, typical	mV/g	10	100
Frequency response		See typical amplitude response	
Amplitude response ±1dB typical [1]	Hz	0.5 to 8000 Hz	
Phase response	degrees	< 5	5-5000 Hz
		< 10	2-7000 Hz
Resonance frequency, typical	Hz	35 000	
Transverse sensitivity	%	< 5	
Temperature response		See typical curve	
Amplitude linearity	%	≤ 2	

Output characteristics

Output polarity		Acceleration directed into base produces positive output	
DC output bias voltage [3]	Vdc	+12.0 to +13.0	
Output impedance 4-10 mA	Ω	< 100	
Full scale output voltage	V	±5	
Resolution (2 Hz to 10 kHz broadband)	g rms	0.0003	0.000012
Grounding		Signal ground connected to case and isolated from mounting surface	

Power requirement

Supply voltage	Vdc	+23 to +30
Supply current	mA	+2 to +20
Warm-up time (to reach 90% of final bias)	sec	< 3

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 [4]	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

Physical characteristics

Dimensions		See outline drawing	
Weight	gm (oz)	14 (0.5)	
Case material		Titanium	
Connector [5]		4 pin 10-32 side mounted	
Mounting [6]		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	%	20 to 8000

Notes:

- Frequency response calibration on x and y may be limited by the mounting fixture of the calibration system. Actual frequency responses of axis x and y are similar to axis z.
- Case isolation available as model 65M1-XXX. Must be specified at time of order.
- +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.
- Microtech DR-45-4 receptacle mates with Endevco Model 3027AM3 cable assembly.
- Be careful not to apply abusive forces 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.

Included accessories

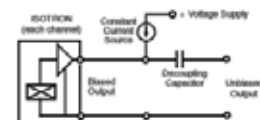
P/N EH755	Triaxial cable, 85°C
P/N EH761	3 BNC's at instrumentation end
P/N 32227	Screw, cap M2.5 x .45 x 6 mm
	Screw, set M2.5 x .45 x 6 mm
	Petro Wax

Optional accessories

Model 3027AVM13-120 (10 ft)	Triaxial cable, 200°C
	(Transducer extension cable, mates with Model 3027AM3)
P/N 31849	DAAK Deluxe Accelerometer
	Adhesive Kit
65M1 version	Electrical isolation, Case [2]



Model 133, 3-channel
signal conditioner



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.