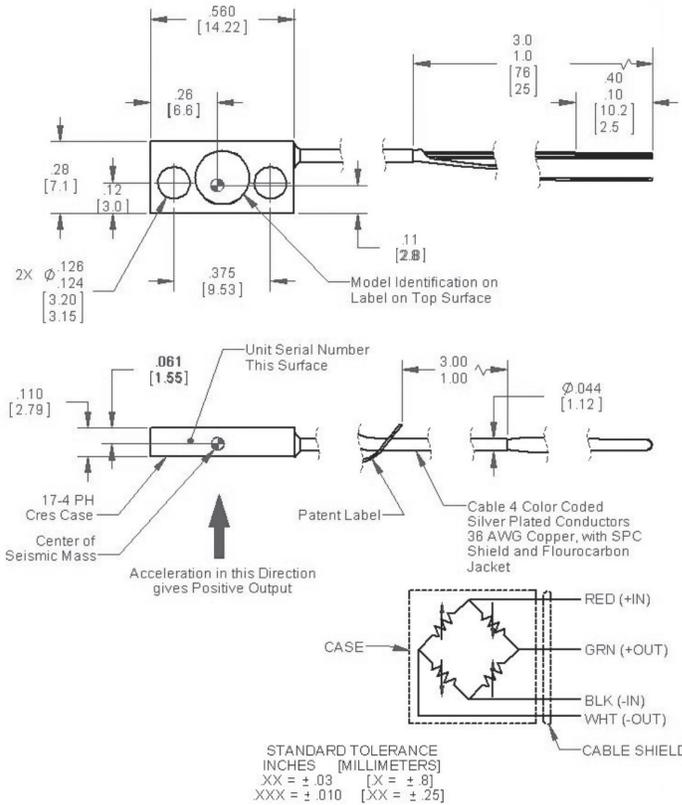


Piezoresistive accelerometer

Model 7270A



Key features

- Ranges up to 200,000 g
- High resonance frequency
- DC response
- Minimal zero shift after shock

The Endevco model 7270A is a family of rugged undamped piezoresistive accelerometers designed for shock applications. The model 7270A features minimal mass loading, broad frequency response, and minimum zero shift during a shock event.

The 7270A uses a unique micro-machined, piezoresistive sensor with gages arranged in a full wheatstone bridge circuit. The extremely small size and efficient construction allow for exceptionally high resonant frequency. The flat, lightweight case is designed to reduce the effect of case resonance for optimal frequency response.

60,000 and 200,000g ranges are subject to International Traffic in Arms Regulations (ITAR), and as such a license is required for shipments outside the U.S. and other restrictions may apply.

Piezoresistive accelerometer

Model 7270A

Specifications

All specifications are referenced at +75°F (+24°C) and 10 Vdc, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Dynamic characteristics	Units	2K	6K	20K	60K	200K
Linear range	g	2,000	6,000	20,000	60,000	200,000
Sensitivity min/typ [1]	μV/g	50/100	15/30	5/10	1.5/3	.5/1
Frequency response +/-5%	Hz	0 to 10,000	0 to 20,000	0 to 50,000	0 to 100,000	0 to 150,000
Natural frequency (typ)	kHz	90	180	350	700	1200
Shock limit [max]	g	10,000	18,000	60,000	180,000	200,000
Zero measureand output (max at 10V)	mV	+/-100	+/-100	+/-100	+/-100	+/-100
Transverse sensitivity (max)	%	5	5	5	5	5
Thermal zero shift [2]	mV	10	10	10	10	10
-30°F to +150°F [-34°C to +66°C]						
Thermal sensitivity shift	%/C	-0.12	-0.12	-0.12	-0.12	-0.12

Electrical characteristics

Excitation	Vdc	2 to 12 (10 standard)				
Resistance						
input	Ω	650 ± 300				
output	Ω	650 ± 300				
Isolation resistance (shorted together) and cable shield		100 MΩ min at 100 VDC between leads or case.				

Physical characteristics

Case material		17-4 CRES
Weight (excluding cable)	grams	1.5
Cable		(4) 36 AWG SPC, shield, FEP jacket cable weight 0.10 oz/ft (2.83 g/ft)
Mounting		4-40 high strength screws (x2) Recommended mounting torque, 8 ± 2 lbf-in (0.9 N-m)

Environmental

Temperature		
Operating (3)	°C (F°)	- 55 to + 121 [- 67 to + 250]
Storage	°C (F°)	- 55 to + 121 [- 67 to + 250]

Calibration data

Data for sensitivity, ZMO, input and output resistance are supplied on the calibration certificate. Unless specified by the customer at time of order, the default calibration will be performed at 10.0 Vdc excitation.

Piezoresistive accelerometer

Model 7270A

Accessories

Product	Description	7270A
EH137	[2] 4-40 high strength screws	Included
EHW265	[2] No. 4 washers	Included
7970	Triaxial mounting block	Optional
31167	Mounting plate (10-32 stud adaptor)	Optional
K7270KM6	Mechanical isolator conversion kit	Optional

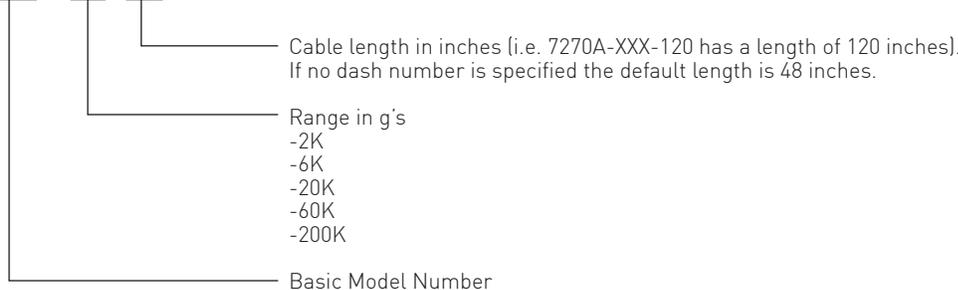
Options

Options	Description
M4	1/4 - 28 stud mount package
M6	Enclosed in mechanical isolator with 1/4 - 28 stud
M16	Calibrated at 5V excitation
M26	Calibrated at 3.3V excitation
-Z	Fixed resistors only

Notes

1. Sensitivity measured at 5,000g, except for 2,000g model measured at 2,000g
2. Operating temperatures above 93C [200F] result in unpredictable thermal zero shift. TZS should be monitored and/or managed by auto-zeroing to insure no loss in data due to signal saturation.
3. 150°F is the maximum recommended operating temperature with 10 Vdc excitation. In applications requiring higher operating temperatures, lower excitation voltage is recommended.
4. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 866-ENDEVCO for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.
5. Model number definition:

7270A - XXX - ZZZ



Contact

ENDEVCO

www.endevco.com

Tel: +1 (866) ENDEVCO

[+1 (866) 363-3826]