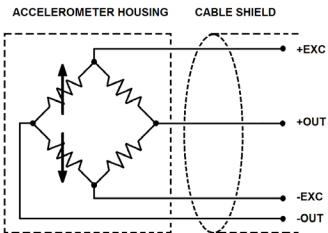
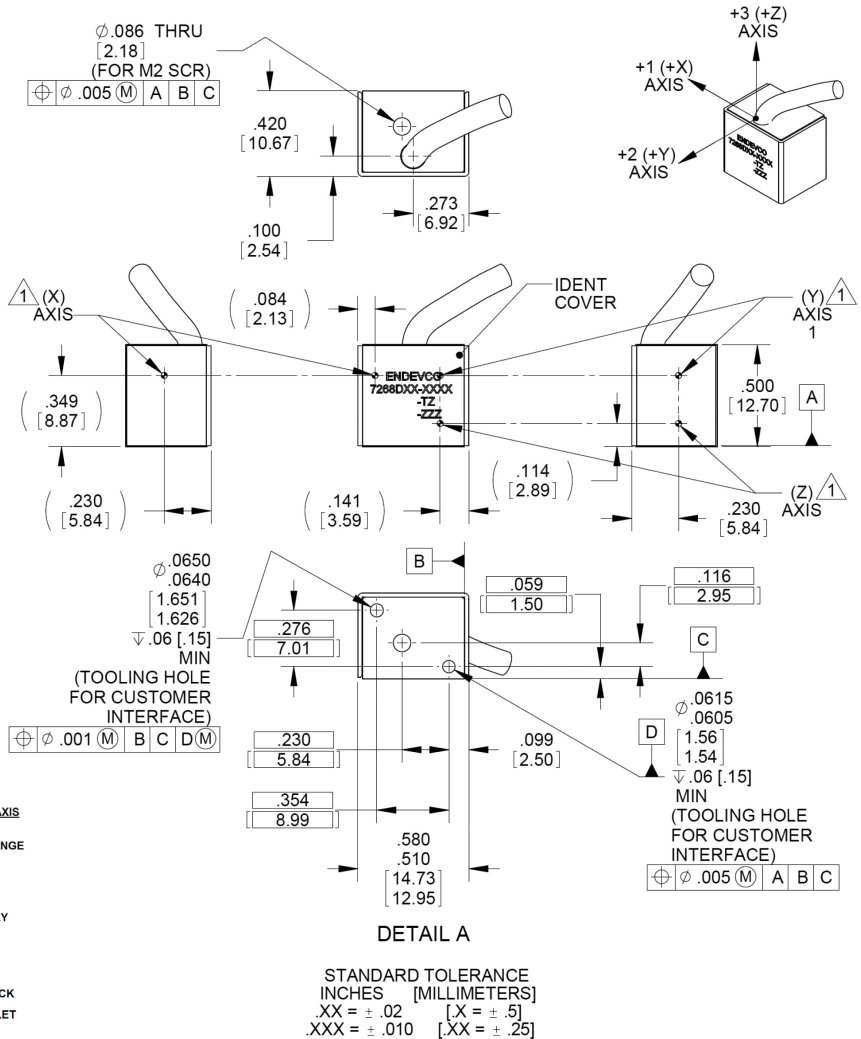


Piezoresistive triaxial accelerometer

Model 7268D



Key features

- DC response
- Multi-mode damped
- 12 wire integral cable
- Mechanical overtravel stops
- World SID ATD

Description

The Endevco Model 7268D is an extremely small piezoresistive triaxial accelerometer designed for crash testing and similar applications that require minimal mass loading and a broad frequency response. This accelerometer meets SAE J211/J2570 specifications for anthropomorphic dummy instrumentation.

The Model 7268D utilizes three advanced micro machined sensors with gas damping and integral mechanical stops to ensure ruggedness, high output, high accuracy and high resonant frequency. The sensor modules include completion resistors, and internal diodes are provided for electrostatic discharge protection. Each accelerometer has full scale output of approximately 400 mV using 10 Vdc excitation. The Model 7268D is multi-mode damped, producing excellent response over a broad frequency range. With a frequency response extending down to dc (that is, steady state) acceleration, this accelerometer is ideal for measuring long duration transient shocks. U.S. Patent 6,988,412 applies.

Piezoresistive triaxial accelerometer

Model 7268D

Specifications

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

	Units	-2K
Range	g	±2000
Sensitivity (at 100 Hz & 10 g) [1]	mV/g (typ)	0.20
mV/g (min)	0.11	
Frequency response		
±5% max, ref. 100Hz (Z axis)	Hz	0 to 3000
X, Y axes	Hz	0 to 1500
Mounted resonance frequency	Hz	25 000
Non-linearity and hysteresis	%	±1
Zero repeatability (after full scale shock)	equiv. g	±0.2
Transverse sensitivity	% Max	3 (2 for TZ option)
Zero measurand output	mV Max	±100 (±50 for TZ option)
Thermal zero shift		
0°F to 95°F (-18°C to 35°C)	%FSO	±0.02 (±0.04)
Thermal sensitivity shift (typical)		
0°F to 95°F (-18°C to 35°C)	% / °F (% / °C)	-0.12 (-0.21)
Base strain sensitivity (max)	equiv. g	0.1
Electrical		
Excitation voltage	Vdc	5.0 and 10.0
Input resistance (min)	Ω	700
Output resistance (max)	Ω	3000
Insulation resistance (leads to substrate)	Ω	100M minimum
Physical		
Base material	Stainless steel	
Cover material	Anodized 6061-T6 aluminum alloy	
Cable	Integral 12 conductor No. 32 AWG, Teflon® insulated leads, braided shield, white polyurethane jacket	
Mounting	One M2 screw supplied for alignment of axes, mounting surface should have two alignment pins as shown in outline drawing to ensure accurate alignment of the 1(X) and 2(Y) axes.	
Mounting Torque	2 lbf-in(0.2 Nm) to 5 lbf-in(0.6 Nm)	
Weight	8 gm (cable weighs 14 gm/meter)	
Environmental		
Acceleration limits (any direction)		
Shock (half-sine shock pulse duration)		10 000g (200 μ sec) (min)
Temperature		
Operating		0°F to 150°F (-18°C to +66°C)
Storage		-40°F to +212°F (-40°C to +100°C)
Humidity		Unit is epoxy sealed, IP60
Calibration data supplied		
Sensitivity (at 100 Hz and 10 g pk)	In mV/g @ 5 10 Vdc	
Frequency response	20 Hz to 3000 Hz, % deviation reference 100 Hz, dB plot continued from 3000 to 40 000 Hz (z axis)	
	20 Hz to 1500 Hz, % deviation reference 100 Hz, dB plot continued from 1500 to 40 000 Hz (X Y axis)	
Zero measurand output	In mV @ 5 10 Vdc	
Maximum transverse sensitivity	% of sensitivity	
Input and output resistance	ohms	

Piezoresistive triaxial accelerometer

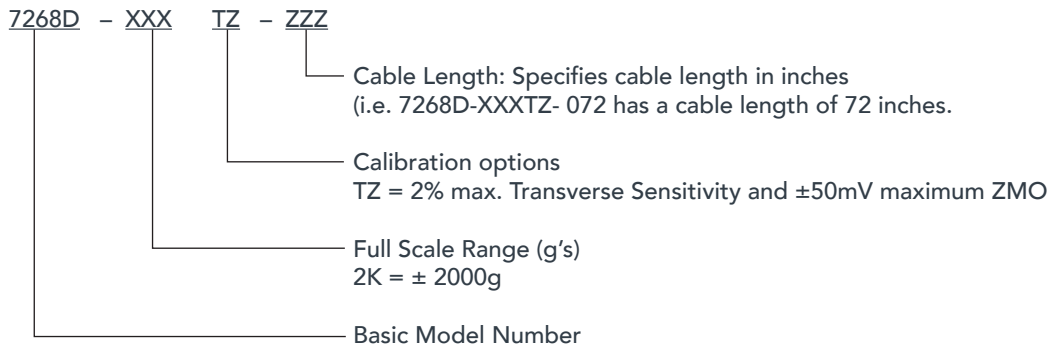
Model 7268D

Accessories

Product	Description	7268D
EH750	Screw, Pan Head, M2 x 16 mm	Included
EHW200	Flat Washer, #2, CRES	Included
136	DC Differential Voltage Amplifier	Optional

Notes

1. Positive acceleration along Axes No. 1 (X), 2 (Y) & 3 (Z) (in the directions marked on the block) will cause positive change in the output voltage for each of the sensors.
2. Busing the (3) black wires is recommended before making resistance or voltage measurements. An alternative is to use a continuity check to determine which black lead goes to which axis.
3. Model number identification:



Ordering information

1. Maintain high levels of precision and accuracy using Endeveco's factory calibration services. Call Endeveco'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.