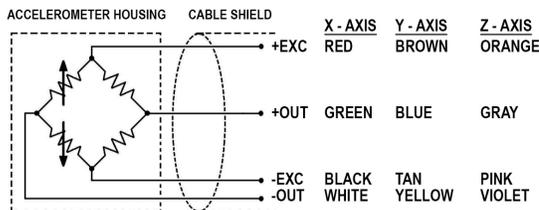


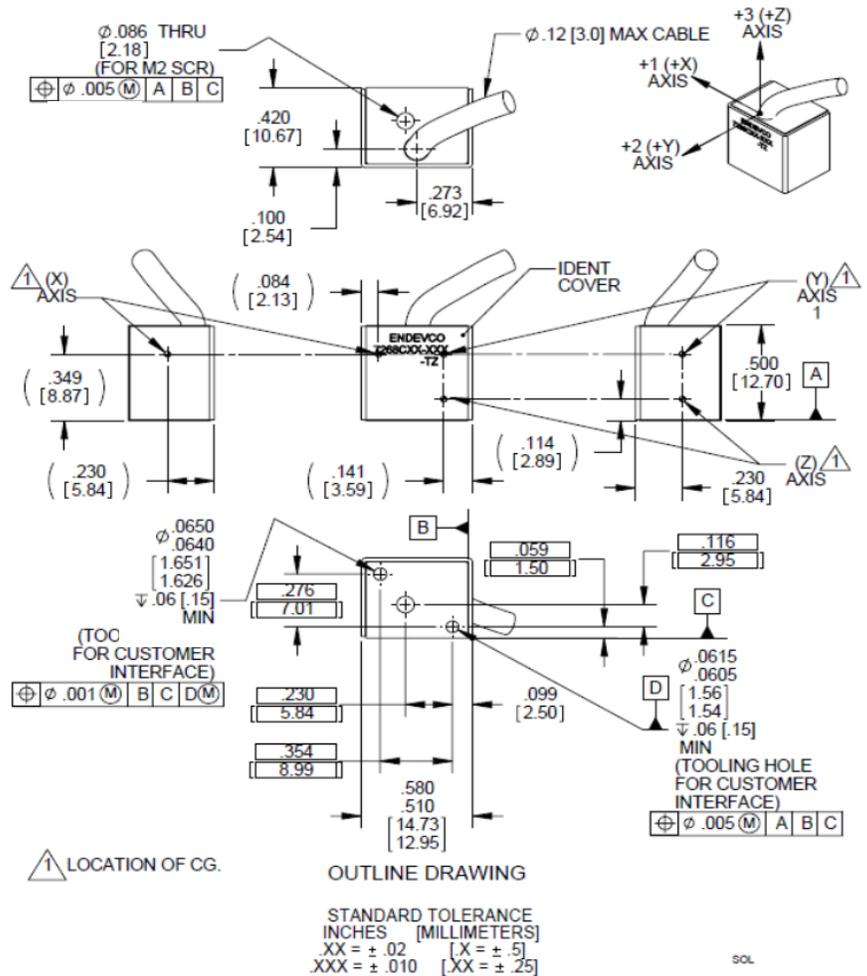
## Piezoresistive triaxial accelerometer

### Model 7268C



SCHEMATIC DIAGRAM

Note: cable shield is not connected to housing.



### Key features

- Small size
- DC response
- 12 wire integral cable
- Mechanical overtravel stops
- Built-in bridge completion resistors

### Description

The Endevco model 7268C is a miniature triaxial accelerometer designed for crash testing and other applications that require minimal mass loading and a broad frequency response. This accelerometer meets SAE J211 specifications for instrumentation for impact testing and SAE J2570 specification for anthropomorphic test device transducers. It is available in two acceleration ranges, 500 g and 2000 g full scale.

The 7268C uses three advanced micromachined sensors with integral mechanical stops for ruggedness and years of reliable service. Endevco's proprietary sensor design features both high output and a high resonance frequency. Each axis has two active arms and two internal precision fixed resistors to provide for shunt calibration. A single integral cable carries the 12 wires to the sensor modules. Since the 7268C is undamped, negligible phase shift is present over the specified frequency range. With a frequency response extending down to DC (steady state) acceleration, this accelerometer is ideal for measuring short duration shocks.

U.S. Patents: 4,498,229 and 4,605,919

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#### 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	7268C-500	7268C-2000
Range	g	±500	±2000
Sensitivity (at 100 Hz & 10 g) [1]	mV/g (typ) mV/g (min)	0.80 0.50	0.20 0.15
Frequency response			
±5% max, ref. 100Hz (Z axis)	Hz	0 to 3000	0 to 3000
X, Y axes	Hz	0 to 1500	0 to 1500
Mounted resonance frequency	Hz	17 000	26 000
Damping ratio	of critical	0.05	0.05
Non-linearity and hysteresis	%FSO	±1	±1
Zero repeatability (after full scale shock)	equiv. g	±0.2	±0.2
Transverse sensitivity [T option for 2%]	% Max	3	3
Zero measurand output [Z option for 50mV]	mV Max	±100	±100
Thermal zero shift			
0 to 150°F (-18°C to +66°C)	mV	±10 typical (±25 max)	±10 typical (±25 max)
Thermal sensitivity shift (typical)			
0 to 150°F (-18°C to +66°C)	% / °F (% / °C)	-0.06 (-0.1)	-0.06 (-0.1)
Base strain sensitivity	equiv. g	0.1	0.1
Mechanical overtravel stops	g	1500 typ, 750 min	5000 typ, 2500 min
<b>Electrical</b>			
Excitation voltage	Vdc	5 and 10	5 and 10
Input resistance	Ω	450 to 960	450 to 960
Output resistance	Ω	450 to 960	450 to 960
Insulation resistance (cable shield to housing)	Ω	100M minimum	100M minimum
<b>Physical</b>			
Base material	Stainless steel		
Cover material	Black anodized 6061-T6 aluminum alloy		
Cable	Integral 12 conductor, 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.		
Weight	8 gm (cable weighs 14 gm/meter)		
<b>Environmental</b>			
Acceleration limits (any direction)			
Static	g	5000	10 000
Shock (half-sine shock pulse duration)	g	5000 (300 μ sec)	10 000 (200 μ sec)
Temperature			
Operating	0°F to 150°F (-18°C to +66°C)		
Storage	-65°F to +250°F (-54°C to +121°C)		
Humidity	Unit is epoxy sealed, IP60		
Altitude	Unaffected		
<b>Calibration data supplied</b>			
Sensitivity (at 100 Hz and 10 g pk)	mV/g at 5V and 10V		
Frequency response	20 Hz to 3000 Hz, dB plot continued to 40kHz (z axis) 20 Hz to 1500 Hz, dB plot continued to 40kHz (X Y axis)		
Zero measurand output	mV/g at 5V and 10V		
Maximum transverse sensitivity	% of sensitivity		

## Piezoresistive triaxial accelerometer

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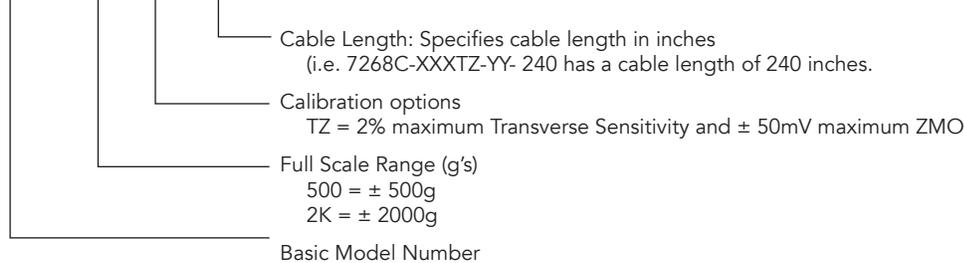
#### Accessories

Product	Description	7268C
EH750	Screw, pan head, M2 x 16mm	Included
EHW200	Flat washer, #2 CRES	Included

#### Notes

1. Positive acceleration along 1, 2 and 3 axes (x,y,z) (in the directions engraved on the cover) will cause positive change in output voltage for each sensor.
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. Excitation voltage should be specified at time of order to obtain best calibration.
4. Model number definition:

7268C - XXX TZ - ZZZ



#### Ordering information

1. 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.