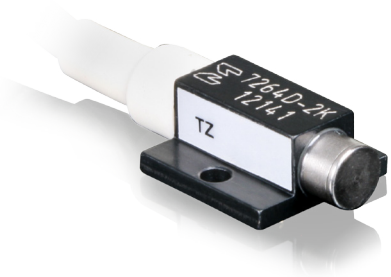
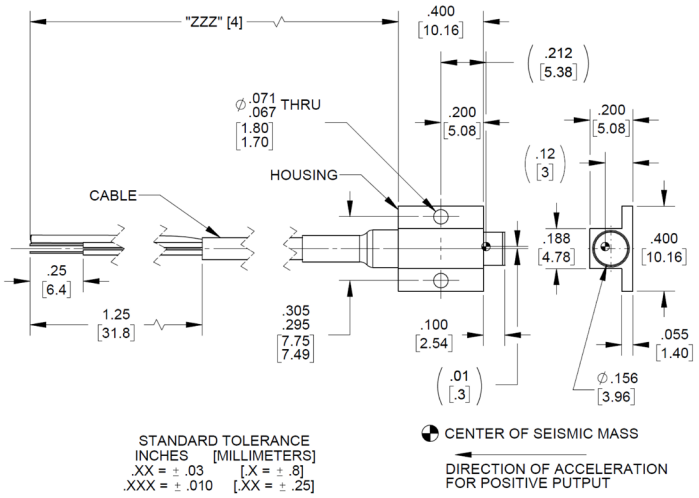
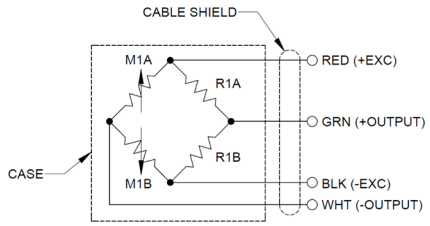
Endevco®

Piezoresistive accelerometer

Model 7264D







Endevco model 7264D is a very low mass piezoresistive accelerometer weighing only 1.4 grams. This accelerometer is designed for crash testing, sled testing and similar applications that require minimal mass loading and a broad frequency response. This accelerometer meets SAEJ211 specifications for instrumentation for impact testing and SAEJ2570 specification for anthromorphic testing.

The model 7264D utilizes an advanced micromachined sensor which includes integral mechanical stops. This model has improved resonant frequency (>40 000 Hz) to capture more data and is undamped, thereby producing no phase shift over the useful frequency range. With a frequency response extending down to dc (steady state acceleration) this accelerometer is ideal for measuring long duration transient shocks.

Model 7264D has a full bridge circuit with fixed resistors for shunt calibration. Full scale output is 400 mV with 10 Vdc excitation. Request "TZ" option for < 1% transverse sensitivity and ZMO of < ± 25 mV. Every unit comes standard with 2V, 5V and 10V calibration data.

Key features

- Small size, rugged
- Crash and shock testing
- 2000 g full scale range
- 40 000 Hz resonant frequency
- DC response - long duration transients

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Specifications

All specifications are referenced at +75°F (+24°C) and 10 Vdc, unless otherwise noted. Sensitivity and zero measureand offset are provided at 2V, 5V and 10V excitation. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Dynamic characteristics	Units	7264D-2000
Range	g	± 2000
Sensitivity (at 100 Hz, 10 g and 10 V)	mV/g typ	0.20
	mV/g min	0.15
Frequency response		
(± 2% max, ref. 100 Hz)	Hz	0 to 3000
(± 5% max, ref. 100 Hz)	Hz	0 to 6000
Mounted resonance frequency	Hz typ	> 40 000
Damping ratio	Max	0.005
Non-linearity		
(% of reading, to full range)	% max	± 1
Zero repeatability		
(after full scale shock)	Equiv. g	0.2
Transverse sensitivity	% max	3 (1 available with T option)
Zero measurand output	mV max	± 50 (± 25 available with Z option)
Thermal zero shift	mV/V typ	± 1
From 0°F to +150°F (-18°C to +66°C), ref 75°F (24°C)	mV/Vmax	± 2.5
Thermal sensitivity shift		
From 0°F to +150°F (-18°C to +66°C)	%/°C typ (%/°F typ)	-0.10 (-0.06)
From 65°F to +85°F (+18°C to +29°C), ref 75°F (24°C)	± % typ	1.0
Warm-up time	ms	1
Base strain sensitivity (per ISA 37.2 @ 250 µ strain)	Equiv. g's	0.1
Mechanical over-travel stops	g typical	5000
	g minimum	2500

Electrical characteristics		
Excitation	Vdc	2.0 to 10
Input resistance	ohms	530 to 900
Output resistance	ohms	530 to 1800
Insulation resistance		100 megohms minimum at 50 Vdc; leads to case and shield

Physical characteristics		
Case material		Black anodized aluminum alloy
Electrical connections		Integral cable, four conductor No. 32 AWG Teflon® insulated leads, braided shield, silicone jacket
Mounting torque		2.6 in-lbf (0.29Nm) recommended
Weight	grams	1.4 (cable weighs 9 grams/meter)

Environmental characteristics		
Acceleration limits (in any direction)		
Static		10 000 g
Sinusoidal vibration		1000 g pk below 5 kHz
Shock (half-sine pulse duration)		10 000 g, 200 µsec or longer
Temperature		
Operating	°F (°C)	0 to +150 (-18 to +66)
Storage	°F (°C)	-65 to +250 (-54 to +121)

Calibration data supplied		
Sensitivity (at 100 Hz and 10 g pk)	mV/g	2 Vdc, 5 Vdc and 10 Vdc
Frequency response	Hz	20 to 6000, % deviation reference 100; dB plot continued from 6000 through resonance @ 10 Vdc
Zero measurand output	mV	@ 2 Vdc, 5 Vdc, and 10 Vdc
Input and output resistance	Ohms	

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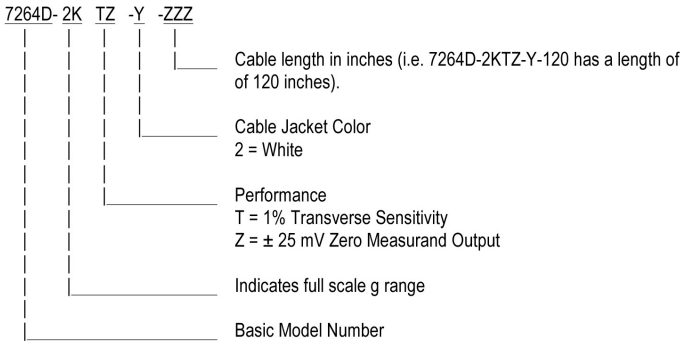
Accessories

Product	Description	7264D
EHM35	Allen wrench	Included
EHW196	Size-0 flat washers (x2)	Included
EH828	0-80 x 3/16 inch socket head cap screw (x2)	Included
24328-3	4 conductor shielded cable	Optional
7953A	Triaxial mounting block	Optional

Notes

1. The safety sleeve should be kept on unit when not in use to prevent possible handling damage.
2. 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.
3. Model number definition:



Contact

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