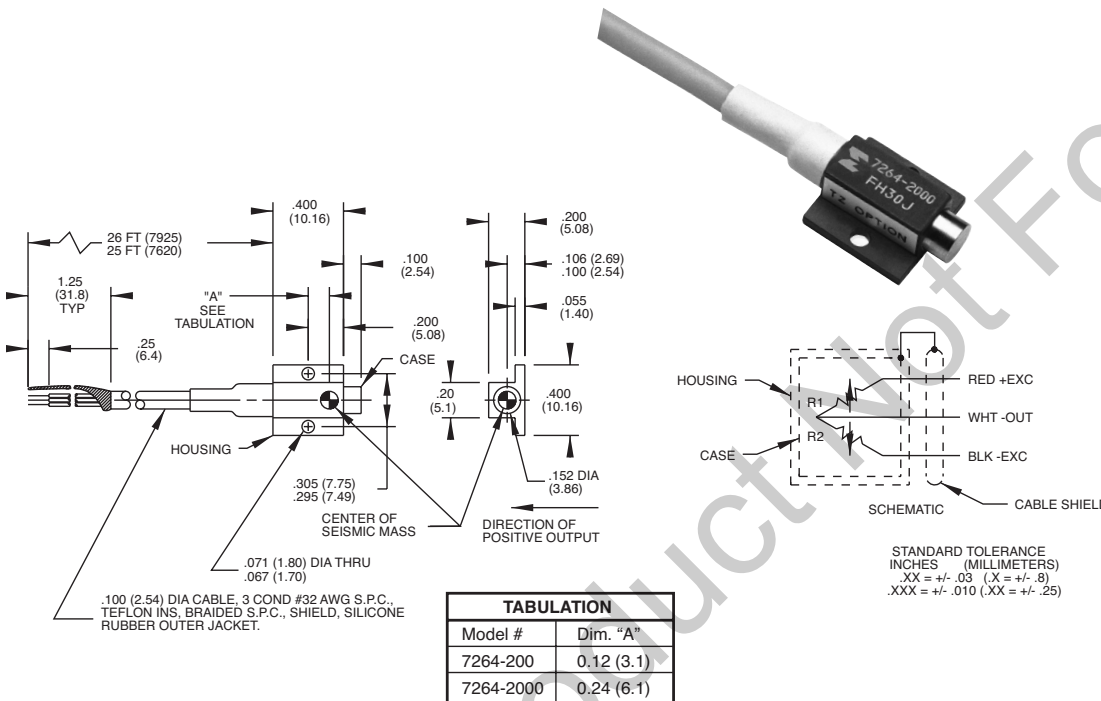


Piezoresistive accelerometer

Model 7264



Key features

- Small size
- 200 and 2000 g full scale
- DC response
- Undamped

The Endevco® model 7264 series is a family of very low mass piezoresistive accelerometers weighing only 1 gram. They are designed for flutter testing, modal testing, biodynamics measurements and similar applications that require minimum mass loading and broad frequency response. They may also be used for shock testing of lightweight systems or structures and meets SAEJ211 specifications for instrumentation for impact testing and SAEJ2570 specification for anthropomorphic test device transducers.

Model 7264 accelerometers have minimum damping, thereby producing no phase shift over their useful frequency range. The model 7264-200 has Endevco's exclusive sapphire needle positive mechanical stops to protect against overrange shock. With a frequency response extending down to DC or steady state acceleration, these transducers are ideal for measuring long duration transients as well as short duration shocks.

The model 7264 utilizes Endevco's Piezite® P-11 semiconductor elements in a half-bridge circuit, providing a low impedance output of 500 mV full scale at 10 Vdc excitation. Bridge completion resistors are normally located in the signal conditioning equipment and allow shunt calibration of the transducer. This unit is also available with increased performance, providing for 1% transverse sensitivity ("T" option), and ±25 mV zero measurand output ("Z" option).

Endevco model 136 three-channel system, model 4430A or Oasis 2000 computer-controlled system are recommended as signal conditioner and power supply.

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Specifications

Dynamic characteristics	Units	-200	-2000
Range	g pk	±200	±2000
Sensitivity (at 100 Hz)	mV/g Typ (Min)	2.5 (2.0)	0.25 (0.20)
Amplitude response ±5%	Hz	0 to 1000	0 to 4000
Mounted resonance frequency	Hz Typ	6000	25 000
Damping ratio	Typ	0.005	0.005
Non-linearity and hysteresis [% of reading, to full range]	% Max	±3	±3
Transverse sensitivity [1]	% Max	3	3
Zero measurand output	mV Max	±50	±50
Thermal zero shift From 0 °F to +150 °F (-18 °C to +66 °C), ref. 75 °F (24 °C)	mV Max	±40	±40
Thermal sensitivity shift At 0 °F to +150 °F (-18 °C to +66 °C)	% Typ	-5	-5
Warm-up time	Minutes max	2	2
Electrical characteristics			
Excitation [2][3][7]	10.0 Vdc, 15 Vdc maximum (5 Vdc + 2 Vdc optional)		
Input resistance [2][4]	2800 ohms		
Insulation resistance	100 megohms minimum at 100 Vdc, between sensors, cable shield and housing		
Physical characteristics			
Case material	Hard anodized aluminum alloy		
Electrical connections	Integral cable, four conductor No. 32 AWG Teflon® insulated leads, braided shield, silicone jacket (-1 red, -2 white, -3 blue - cable color)		
Identification	Manufacturer's logo, model number and serial number		
Mounting/torque	Holes for two 2-56 mounting screws/5 lbf-in (0.6 Nm)		
Weight	1 gram (cable weighs 9 grams/meter)		
Environmental characteristics			
Acceleration limits (in any direction) [5]			
Static	g	1000	5000
Sinusoidal vibration	g pk	1000, below 1000 Hz	1000, below 4000 Hz
Shock (half-sine pulse duration)	g	2000, 1 msec or longer	5000, 200 µsec or longer
Temperature			
Operating	0 °F to 150 °F (-18 °C to +66 °C)		
Storage	-65 °F to +200 °F (-54 °C to +93 °C)		
Humidity			
Unaffected. Sealed by epoxy and silicone rubber			
Altitude			
Unaffected			
Calibration [6]			
Sensitivity (at 100 Hz and 10 g pk)	mV/g		
Frequency response	20 Hz to 1000 Hz for 7264-200, to 4000 Hz for -2000, % deviation reference 100 Hz; dB plot continued through resonance frequency.		
Zero measurand output	mV		
Maximum transverse sensitivity	% of sensitivity		
Input and output resistance	Ohms		

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Notes:

1. 1% transverse sensitivity available as "T" option.
2. Other excitation voltages may be used up to 15.0 Vdc. Specify at time of order to obtain a more accurate calibration.
3. Rated excitation is 10.0 Vdc. The strain gage elements have a positive temperature coefficient of resistance of approximately 0.5% per °F. Power supply current regulating capability should be carefully considered when operating at low temperature extremes, especially when exciting more than one transducer from a single supply.
4. Measured at approximately 1 Vdc. Bridge resistance increases with applied voltage due to heat dissipation in the strain gage elements.
5. The safety sleeve should be kept on the unit when not in use to prevent possible handling damage.
6. 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.
7. 5 Vdc and 2 Vdc excitation should be specified at the time of order.

Included accessories

EHM30	Hex wrench
EHW196	(2) Size-2 flat washers
EH468	(2) 0-80 x 1/8 inch socket head cap screws

Optional accessories

24328 -1, -2, -3	4 Conductor shielded cable
7953A	Triaxial mounting block

Contact

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