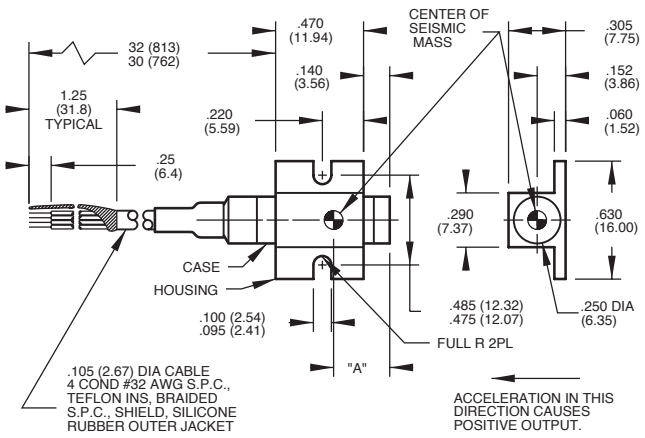
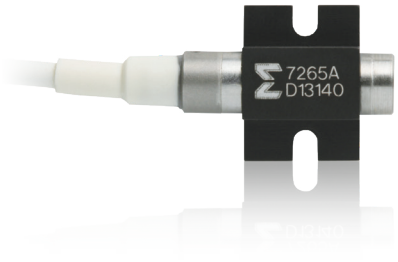
ENDEVCO
AN AMPHENOL COMPANY

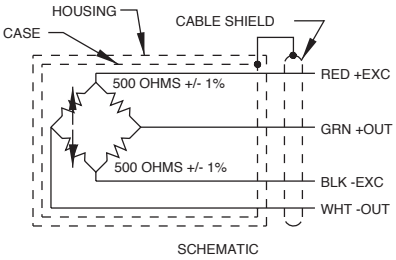
Piezoresistive accelerometer

Model 7265A/7265A-HS





TABULATION	
MODEL#	DIM. "A"
7264A-HS	.30 (7.6)
7265A	.25 (6.4)



SCHEMATIC

STANDARD TOLERANCE
INCHES (MILLIMETERS)
.XX = +/- .03 (.X = +/- .8)
.XXX = +/- .010 (.XX = +/- .25)

Key features

- Small size
- 20 and 100 g full scale
- Damped
- DC response
- Motion studies

Description

The Endevco® model 7265A series, with sensitivity up to 25 mV/g, is a family of very low mass (6 gram), piezoresistive accelerometers designed for flutter testing, biomedical motion studies, and similar applications requiring high sensitivity, good low frequency response and minimum mass loading.

The model 7265A series has viscous damping to extend the useful high frequency range and to reduce the effects of spurious high frequency excitation. Mechanical stops prevent damage when the transducer is subjected to overrange shock. The model 7265A series utilizes two of Endevco's silicon gages and two fixed resistors in a full-bridge circuit. This configuration provides a low impedance output of 500 mV full scale with 10 Vdc excitation.

The model 7265A has a sensitivity of 5 mV/g and a full scale of 100 g. The model 7265A-HS (high sensitivity) has a very high sensitivity of 25 mV/g with a full scale of 20 g.

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The following performance specifications are typical values, referenced at +75˚F (+24˚C) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Specifications

Dynamic characteristics	Units	7265A	7265A-HS
Range	g pk	±100	±20
Sensitivity (at 100 Hz)	mV/g typ	5	25
	Min	3.75	20
Amplitude response ± 5% [1]	Hz	0 to 800	0 to 500
Mounted resonance frequency [1]	Hz	2700	1400
Damping ratio [2]		0.7	0.7
Non-linearity and hysteresis			
(% of reading, to full range)	% Max	±2	±2
Transverse sensitivity	% Max	5	5
Zero measurand output [3]	mV Max	±50	±50
Thermal zero shift			
from 0 to 150˚F (-18˚C to +66˚C)	mV Max	±25	±25
Thermal sensitivity shift			
from 0 to 150˚F (-18˚C to +66˚C)	% Typ	-5	-5
Warm-up time	Minutes max	2	2
Electrical			
Excitation [4] [5]	10.0 Vdc, 15 Vdc maximum		
Input resistance [4] [6]	750 ohms		
Output resistance [4] [6]	900 ohms		
Fixed resistors	500 ohms ±1%		
Insulation resistance	100 megohms minimum at 100 Vdc; between sensors, cable shield and housing		
Physical			
Case, material	Anodized aluminum alloy		
Electrical, connections	Integral cable, four conductor No. 32 AWG, Teflon® insulated leads, braided shield, silicone jacket		
Mounting/torque	Slots for two 2-56 mounting screws / 5 lbf-in (0.6 Nm)		
Weight	5 grams for 7265A; 5.9 grams for 7265A-HS		
Environmental			
Acceleration limits (in any direction)			
Static	g	2000	2000
Sinusoidal vibration	g pk	1000	200
Shock (half-sine pulse)	g	2000	2000
Temperature			
Operating	0˚F to 150˚F (-18˚C to +66˚C)		
Storage	-65˚F to +185˚F (-54˚C to +85˚C)		
Humidity	Unaffected. Hermetically sealed		
Altitude	Unaffected		
Calibration data supplied			
Sensitivity (at 100 Hz and 10 g pk)	mV/g		
Frequency response	20 Hz to 1000 Hz, % deviation reference 100 Hz		
Zero measurand output	mV		
Maximum transverse sensitivity	% of sensitivity		
Mounted resonance frequency	Hz		
Input and output resistance	Ohms		

Accessories		
Options	**Description**	
EHM178	Allen wrench	Included
EHW200	(2) size-2 flat washers	Included
EH3	(2) 2-56 x 1/4 inch socket head cap screws	Included
7955	Triaxial mounting block for 7265A-HS	Optional
7955M1	Triaxial mounting block for 7265A	Optional

Notes

1. Frequency response is ±5%, typical, over entire operating temperature range, 0 Hz to 200 Hz for model 7265A and 0 Hz to 125 Hz for model 7265A-HS. The sensitivity increase at the mounted resonant frequency is less than 10%, reference 100 Hz.
2. Damping ratio is 2.1/0.3, typical, at 0°/150°F (-18°/+66°C).
3. Zero Measurand Output (ZMO) is the transducer output with 0 acceleration applied.
4. 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.
5. Other excitation voltages may be used to 15.0 Vdc. Specify at time of order to obtain a more accurate calibration.
6. Bridge resistance increases with applied voltage due to heat dissipation in the strain gage elements.
7. The safety sleeve should be kept on the unit when not in use to prevent possible handling damage.
8. 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.

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