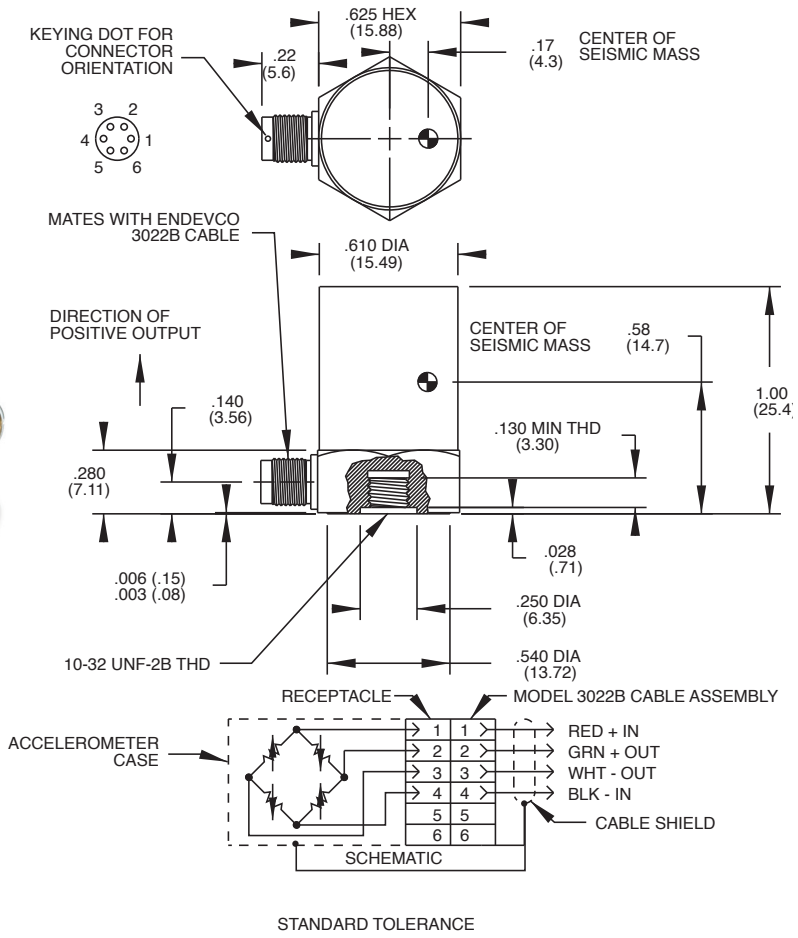
ENDEVCO
AN AMPHENOL COMPANY

Piezoresistive accelerometer

Model 2262A



STANDARD TOLERANCE

Key features

- DC response
- 1000 g and 2000 g full range
- 500 mV full scale output
- Hermetically sealed

The Endevco® model 2262A accelerometers are rugged, fluid damped transducers of the piezoresistive type. Endevco's Piezite® type P-11 semiconductor strain gage elements are used in a bridge configuration, providing a low impedance output with 10 Vdc excitation. The output is high enough to drive most tape recorders, data aquisition systems, and low frequency galvanometers directly, without amplification. Viscous damping extends their useful frequency range and reduces the effect of spurious, high frequency vibrations.

Typical applications for these accelerometers include transportation environmental testing and transient accelerations on structural members.

Endevco model 126, 136 or 436 recommended as signal conditioner and power supply.

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Specifications

Performance characteristics: All values are typical at +75°F (+24°C), 100 Hz and 10 Vdc excitation unless otherwise stated. Calibration data, traceable to the National Institute of Standards and Technology (NIST), is supplied.

	Units	-1000	-2000
Range	g pk	±1000	±2000
Sensitivity (at 100 Hz)	mV/g Typ	0.50	0.25
Amplitude response			
±5%	Hz	1 to 1500	0 to 3000
±1 dB	Hz	1 to 1800	0 to 3600
Maximum deviation (0 Hz to 2000 Hz) [1]	% Max	+5	+5
Mounted resonance frequency	Hz typ	8000	10 000
Damping ratio [2]	Typ	0.7	0.7
Non-linearity and hysteresis			
(% of reading, to full range)	% Max	±2	±2
Transverse sensitivity	% Max	3	3
Zero measurand output [3]	mV Max	±25	±25
Thermal zero shift	ref. 75°F(24°C)		
From 0°F to +200°F (-18°C to +93°C)	mV Max	±20	±20
Thermal sensitivity shift	ref. 75°F(24°C)		
From 0°F 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 maximum, 15 Vdc maximum
Input resistance	600 ohms
Output resistance [4] [6]	400 ohms
Insulation resistance	100 megohms minimum at 100 Vdc; all leads to case

Physical

Case, material	Stainless steel (416 CRES)
Electrical, connections	Endevco model 3022B-30 (supplied)
Indentification	Manufacturer's logo, model number g, serial number and range
Mounting/torque	Hole for 10-32 UNF x 1/8 inch mounting stud/18 lbf-in (2Nm)
Weight	28 grams (cable weighs 18 grams/meter)

Environmental

Acceleration limits (in any direction)			
Static	g	1000	2000
Sinusoidal vibration	g pk	1000	2000
Shock limit (half-sine pulse)	g	2500	5000
Base strain sensitivity			
(at 250 microstrain)	equiv. g typ	0.05	0.05
Temperature			
Operating	0°F to +200°F (-18°C to 93°C)		
Storage	-20°F to +220°F (-29°C to +104°C)		
Humidity	Unaffected. Unit is hermetically sealed		
Altitude	Unaffected		

Calibration data supplied [7]

Sensitivity (at 100 Hz and 10 g pk)	mV/g
Frequency response	20 Hz to 5000 Hz; % deviation reference 100 Hz
Zero measurand output	mV
Maximum transverse sensitivity	% of sensitivity
Input and output resistance	Ohms

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Accessories

Product	Description	2262A-1000, -2000
2981-12	Mounting stud (10-32 UNF-2A)	Included
3022B-30	Cable assembly	Included
EHM464	Wrench, hex key	Included
2950	Triaxial mounting block	Optional
2981-4	Mounting stud (M5-0.8)	Optional
3022B-XX	Cable assembly (XX identifies cable length in inches)	Optional
2981-3	Mounting stud	Optional

Notes:

1. The sensitivity increase at the mounted resonant frequency is less than 10%, reference 100 Hz.
2. Damping ratio is 2.2/0.2, typical, at 0°F/200°F (-18°/+93°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 capability (regulation) should be carefully considered when operating at low temperature extremes, especially when exciting more than one transducer from a single power supply.
5. Other excitation voltages may be used to 15.0 Vdc. Specify at time of order to obtain a more accurate calibration.
6. Measured at approximately 1 Vdc. Bridge resistance increases with applied voltage due to heat dissipation in the strain gage elements.
7. 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.

Contact

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