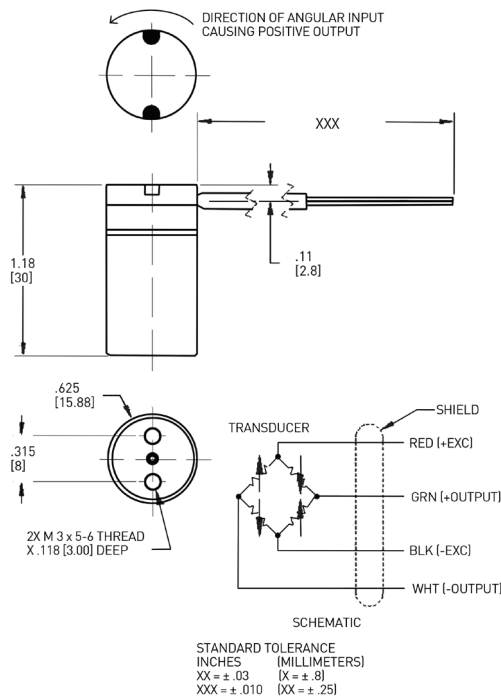


Piezoresistive accelerometer

Model 7302BM5



Key features

- 50 000 rads/s²
- Low cross axis sensitivity
- High shock resistance
- Rugged and reliable design
- -5V and 10V calibration data supplied with every unit

Endevco® model 7302BM5 angular accelerometer is designed to provide accurate measurements of rotational acceleration. The sensing device consists of a temperature compensated piezoresistive accelerometer, uniquely designed to reject cross axis angular and linear accelerations. The sensor is fluid-damped to optimize frequency and phase response throughout the operating temperature range of 0°F to +250°F (-18°C to +121°C).

7302BM5 has a stable frequency to 1000 Hz and offers high angular and linear shock resistance. The accelerometer also provides a nominal sensitivity of 5.0 mV per krad/sec² at 10 Vdc excitation voltage or 2.5 mV per krad/sec² at 5 Vdc excitation voltage (nominal 250 mV full-scale output).

7302BM5 is designed for a variety of automotive, industrial, and aerospace applications. The accelerometer is ideal for dynamic automotive applications including crash testing, suspension and chassis vibration monitoring, and rollover detection. The accelerometer can also be mounted in anthropomorphic test dummies to measure rotational body accelerations experienced under impact. Additional applications for this accelerometer include motion analysis in shaft and drive train rotation for machine and turbine monitoring. Typical aerospace applications include flight control systems and ejection seat testing.

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

Our measurement product competencies:

Piezoelectric accelerometers | Piezoresistive accelerometers | Isotron accelerometers | Variable capacitance accelerometers | Pressure transducers | Acoustic sensors | Electronic instruments | Calibration systems | Shakers | Modal hammers | Cable assemblies

Piezoresistive accelerometer

Model 7302BM5

Specifications

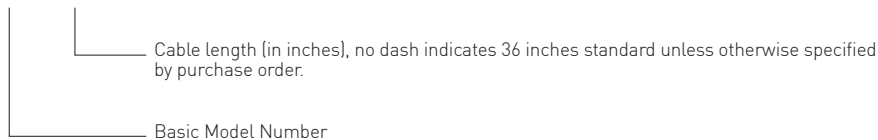
The following performance specifications are typical values, referenced at +75°F (+24°C) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Dynamic characteristics	Units	7302BM5
Range	rad/s ²	50 000
Sensitivity at 100 Hz		
5 Vdc excitation	mV per Krad/s ²	1.3 to 4.0 (2.5 typical)
10 Vdc excitation	mV per Krad/s ²	3.0 to 8.0 (5.0 typical)
Frequency response		
±5% maximum	Hz	3 to 1000
Mounted resonant frequency	Hz	2500 to 3500 (3000 typical)
Transverse angular sensitivity	%	1 typical; 2 maximum
Thermal sensitivity		
typical		-0.1% /°F
maximum		-0.3% /°F
Zero measurand output		
5 vdc excitation	mV	±2.5 (typical), ±12.5 (max)
10 vdc excitation	mV	±5.0 (typical), ±25 (max)
Electrical		
Excitation	Vdc	5.0 and 10.0
Input resistance	Ω	1600
Output resistance	Ω	1600
Isolation resistance (minimum)	MΩ	100
Noise (typical)	µVrms	10
Environmental		
Temperature range		0°F to +250°F (-18°C to +121°C)
Shock		
Angular	rad/s ²	500 000
Linear	g	2500
Physical		
Case material		Stainless steel, passivated
Electrical connections		4 x #32 AWG Teflon® insulated leads shielded with silicone jacket
Weight	grams	35 excluding cable; cable 3.3 g/ft
Calibration data		
Sensitivity	mV per Krads/s ²	100 Hz and 1 Krad/s ²
Frequency response	%	3 Hz to 1000 Hz
Zero measurand output	mV	

Notes

- 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.
- Model number definition:

7302BM5-XXX



Contact

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Continued product improvement necessitates that Endevco reserve the right to modify these specifications without notice. Endevco maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, the support of stringent Quality Control requirements, and compulsory corrective action procedures. These measures, together with conservative specifications have made the name Endevco synonymous with reliability.

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