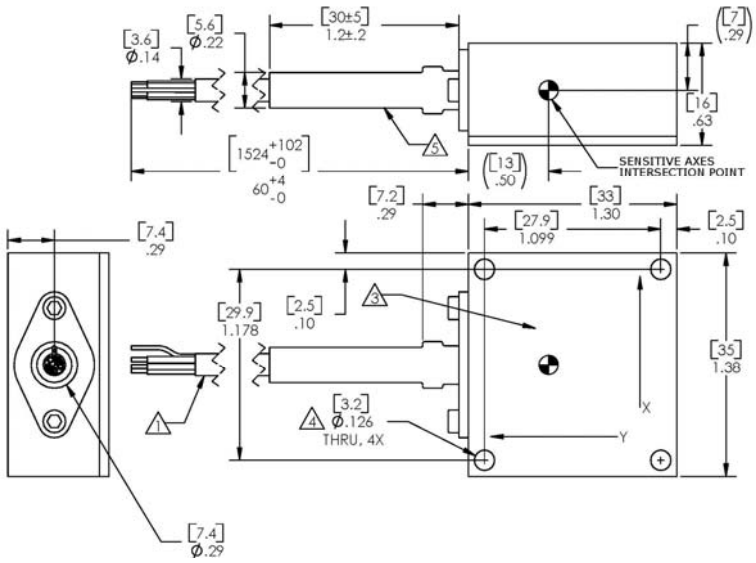
Model 4202 Accelerometer

Biaxial Accelerometer
Critically Gas Damped
Silicon MEMS Technology
Temperature Compensation
EMI/RFI Protection
Custom 8-Pole LP Filters

The Model 4202 Biaxial Accelerometer is designed with performance and reliability in mind. The rugged Piezoresistive MEMS sensing element comes straight from our world renowned crash test accelerometers. The internal ASIC amplifier performs sensitivity and zero compensation 20 times per second over its operating temperature. The low-pass corner frequency can be custom ordered. Its 8-pole filter ensures no high frequency noise will leak into the passband. A heavy-duty shielded cable and an EMI/RFI module protects the accelerometer from the harsh operating environment, including ESD damage.

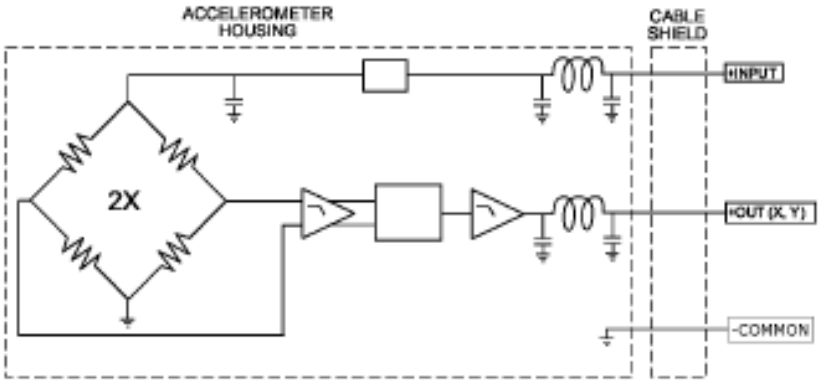
dimensions

Dimensions in [mm]



FEATURES

- 8-16 Vdc Excitation
- Ranges up to ±30 g's full scale
- Measures static & dynamic acceleration
- Over shock protection to ±5,000 g's
- Operating temperature from -40 to 125°C
- Built-in 8-pole low-pass filter
- EMI/RFI protection
- Linearity ±1% FS
- Transverse sensitivity <1% available



APPLICATIONS

- Formula 1
- NASCAR
- IRL
- Test & Measurement

Model 4202 Accelerometer

performance specifications

All values are typical at ±24°C, and 10 Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters						**Notes**
DYNAMIC	-06	-08	-10	-20	-30	Dash Number
Range(g)	±6	±7.5	±10	±20	±30	
Sensitivity (mV/g)	333	267	200	100	67	±5%
Standard Frequency Response (Hz)	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60	Or custom order
Customizable LP Corner Range (Hz)	5 to 100	5 to 100	5 to 100	5 to 100	5 to 100	-3dB, -160dB/decade
Shock Limit (g)	5000	5000	5000	5000	5000	
Non-Linearity (% FSO)	±1	±1	±1	±1	±1	
Transverse Sensitivity (%)	<3/<1.5	<3/<1.5	<3/<1.5	<3/<1.5	<3/<1.5	Standard/Optional
Zero Acceleration Output (mV)	±100	±100	±100	±100	±100	From 2.5Vdc bias
Thermal Zero Shift (%FSO/50°C)	±2.5/±1.5	±2.5/±1.5	±2.5/±1.5	±2.5/±1.5	±2.5/±1.5	Standard/Optional
Thermal Sensitivity Shift (%/50°C)	±2.5/±1.5	±2.5/±1.5	±2.5/±1.5	±2.5/±1.5	±2.5/±1.5	Standard/Optional
ELECTRICAL						
Excitation (Vdc)	8 to 16	8 to 16	8 to 16	8 to 16	8 to 16	
Current (mA)	<5	<5	<5	<5	<5	
Output Impedance (Ω)	<100	<100	<100	<100	<100	
Insulation Resistance (MΩ)	>100	>100	>100	>100	>100	@50Vdc
PHYSICAL						
Case Material	Al Alloy	Al Alloy	Al Alloy	Al Alloy	Al Alloy	Anodized
Cable (Teflon Jacket, 5 wire+shield)	24 AWG	24 AWG	24 AWG	24 AWG	24 AWG	Teflon insulated
Weight (grams)	<60	<60	<60	<60	<60	Without cable
Mounting			M3 Screws			4X
ENIVRONMENTAL						
Operating Temperature (°C)			-40 to +125			
Sealing						Potted Construction

PART NUMBERING
4202-XX-YY-WW where XX, YY represent the g ranges for each of the 2 axes, WW is optional frequency cutoff.

Wiring color code: +Input = Red; -Input/+Output = Black; +Output X = Green; +Output Y = Blue; +Output Z = White

ordering info

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