Model 203 Accelerometer

MEMS Triaxial Accelerometer
Temperature Calibrated
Signal Conditioned Output
Low Cost, Low Noise

The Model 203 is a low noise triaxial accelerometer offering both static and dynamic response. The accelerometer is packaged in an anodized aluminum housing with an integral cable. It is offered in ranges from ±2g to ±100g. Featuring gas damped MEMS sensing elements, the model 203 provides a flat frequency response to 100Hz over an operating temperature range of -40°C to +125°C.

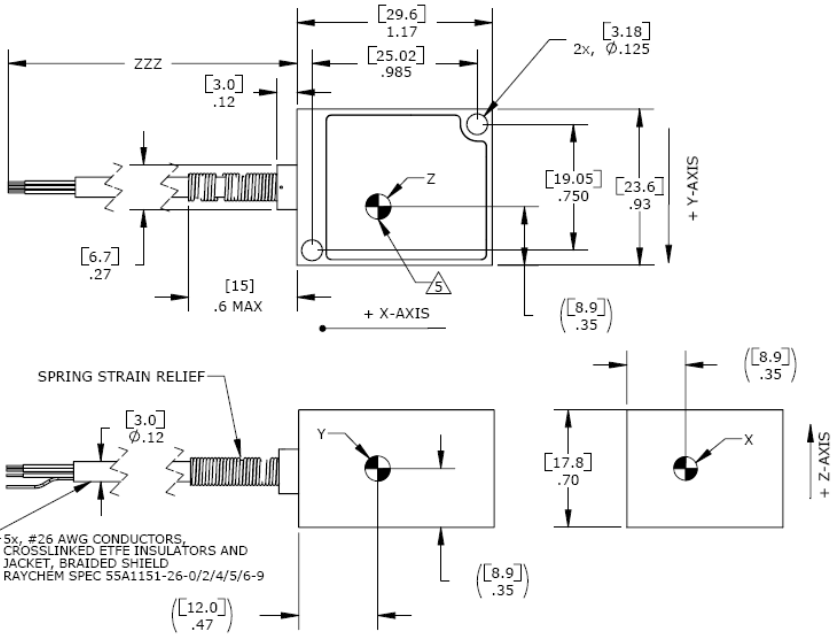
FEATURES

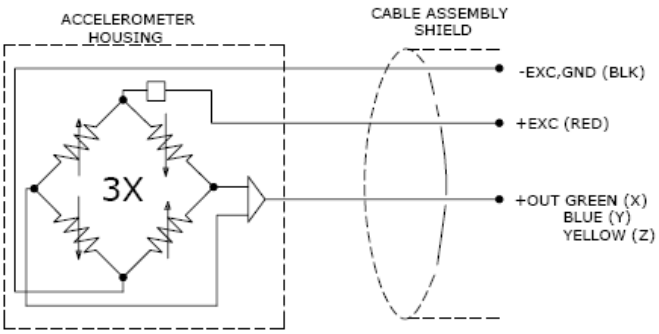
- Low Noise, High Signal-to-Noise
- Three Independent Circuits
- Low Current Consumption
- Ranges: ±2g to ±100g
- DC to 100Hz Frequency Response
- High Over-Range Protection
- Temperature Compensation

APPLICATIONS

- Transportation Measurements
- Vibration & Shock Monitoring
- Road Vehicle Testing
- Low Frequency Applications
- Motion Analysis

dimensions





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performance specifications

All values are typical at +24°C, 100Hz and 12Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1004 for Plug & Play DC Accelerometers.

Parameters								
DYNAMIC								**Notes**
Range (g)	±2	±5	±10	±20	±30	±50	±100	
Sensitivity (mV/g)	1000	400	200	100	67	40	20	
-3dB Cutoff Frequency (Hz)	100 ±15	100 ±15	100 ±15	100 ±15	100 ±15	100 ±15	100 ±15	
Rolloff Above Cutoff Frequency (dB/dec)	-40	-40	-40	-40	-40	-40	-40	
Natural Frequency (Hz)	700	800	1000	1500	1500	4000	6000	
Non-Linearity (%FSO)	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<3	<2 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.6	
Shock Limit (g)	5000	5000	5000	5000	5000	5000	5000	
Residual Noise (μV RMS)	80	50	50	60	50	60	60	Passband
Residual Noise (μg/√Hz RMS)	8	13	25	60	75	150	300	Spectral

ELECTRICAL	
Zero Acceleration Output (V)	2.5 ±0.1
Excitation Voltage (Vdc)	5 to 30
Excitation Current (mA)	<5
Full Scale Output Voltage Swing (Vdc)	0.5 to 4.5
Output Resistance (Ω)	<100
Insulation Resistance (MΩ)	>100 @100Vdc
Turn On Time (msec)	<100
Ground Isolation	Isolated from Mounting Surface
ENVIRONMENTAL	
Thermal Zero Shift (%FSO/°C)	±0.012
Thermal Sensitivity Shift (%/°C)	±0.020
Operating Temperature (°C)	-40 to 125
Compensated Temperature (°C)	0 to 85
Storage Temperature (°C)	-40 to 125
Humidity	Epoxy Encapsulated, IP65
PHYSICAL	
Case Material	Anodized Aluminum
Cable	ETFE Insulated Leads, Braided Shield, Crosslinked ETFE Jacket
Weight (grams)	30
Mounting	2x #4 or M3 Screws
Mounting Torque	6 lb-in (0.7 N-m)

Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to 100Hz
Supplied accessories:	AC-A03655	2x #4-40 (7/8" length) Socket Head Cap Screw and Washer
Optional accessories:	101	Three Channel DC Signal Conditioner Amplifier

ordering info

PART NUMBERING Model Number+Range+Cable Length

203-XX-YY-ZZ-CCC
- CCC: Cable (060 is 60 inches)
- XX-YY-ZZ: Range (05-05-20 is ±5g X & Y axes, ±20g Z axis)

Example: 203-05-05-20-060
Model 203, 5g X & Y axes, 20g Z axis, 60" (5ft) Cable

联系方式

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