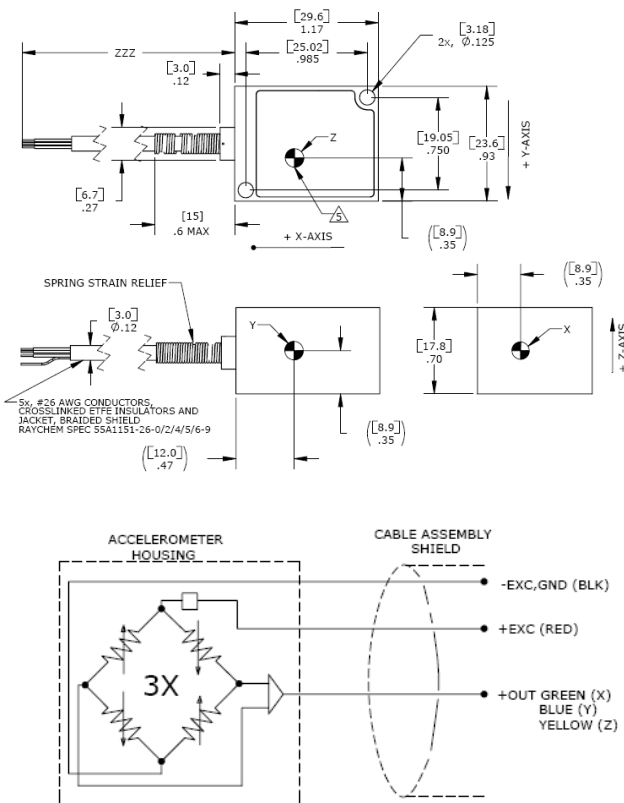


MODEL 203 ACCELEROMETER



DIMENSIONS



SPECIFICATIONS

- 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 $\pm 2g$ to $\pm 100g$. 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 $+125^{\circ}\text{C}$.

FEATURES

- Low Noise, High Signal-to-Noise
- Three Independent Circuits
- Low Current Consumption
- Ranges: $\pm 2g$ to $\pm 100g$
- 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

MODEL 203 ACCELEROMETER

PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz and 12Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters

DYNAMIC

	±2	±5	±10	±20	±30	±50	±100	Notes
Range (g)								
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:	121	Three Channel DC Differential Amplifier

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ORDERING INFORMATION

PART NUMBERING Model Number+Range+Cable Length

203-XX-YY-ZZ-CCC

 | |
 | |_____ Cable (060 is 60 inches)
 |_____ Range (05-05-20 is $\pm 5g$ X & Y axes, $\pm 20g$ Z axis)

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