

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.



- 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

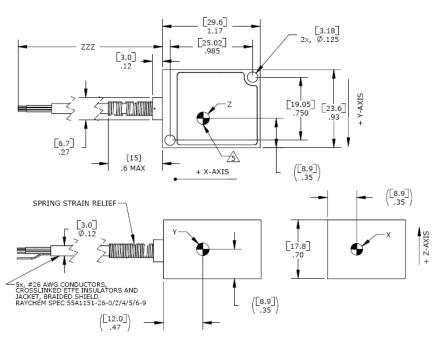
APPLICATIONS

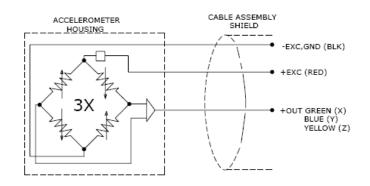
- Transportation Measurements
- Vibration & Shock Monitoring
- Road Vehicle Testing
- Low Frequency Applications
- Motion Analysis





dimensions





Model 203 Accelerometer



@100Vdc

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

Ground Isolation Isolated from Mounting Surface

ENVIRONMENTAL

 $\begin{array}{lll} \mbox{Thermal Zero Shift (\%FSO/^{\circ}C)} & \pm 0.012 \\ \mbox{Thermal Sensitivity Shift (\%/^{\circ}C)} & \pm 0.020 \\ \mbox{Operating Temperature (°C)} & -40 \ \mbox{to } 125 \\ \mbox{Compensated Temperature (°C)} & 0 \ \mbox{to } 85 \\ \mbox{Storage Temperature (°C)} & -40 \ \mbox{to } 125 \\ \end{array}$

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

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ordering info

PART NUMBERING Model Number+Range+Cable Length

203-XX-YY-ZZ-CCC

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Cable (060 is 60 inches)

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