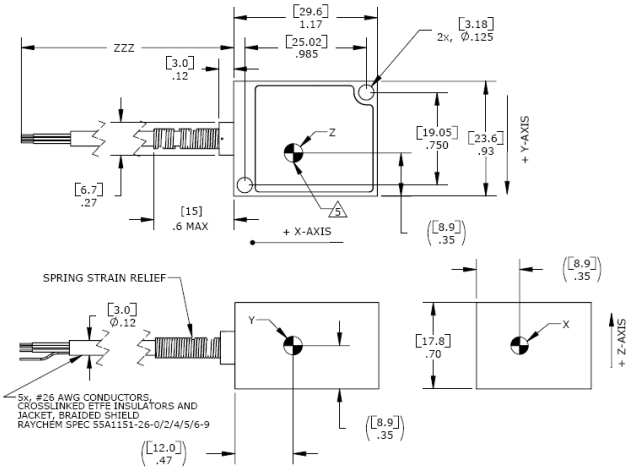
MODEL 203 ACCELEROMETER

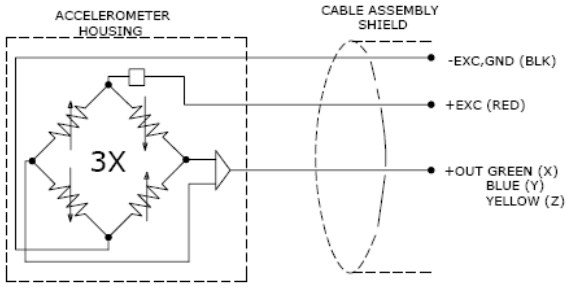
SPECIFICATIONS

- **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 ±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.

DIMENSIONS





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

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								**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:	121	Three Channel DC Differential Amplifier

ORDERING INFORMATION

PART NUMBERING Model Number+Range+Cable Length

203-XX-YY-ZZ-CCC
I I
I I_____Cable (060 is 60 inches)
I_____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

NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity Company
1000 Lucas Way
Hampton, VA 23666
Sales and Customer Service
Tel: +1-800-745-8008 or
+1-757-766-1500
Fax: +1-757-766-4297
t&m@meas-spec.com

EUROPE

MEAS France SAS
a TE Connectivity Company
26 Rue des Dames
F78340 Les Clayes-sous-Bois
France
Sales and Customer Service
Tel: +33 (0) 1 79 33 00
Fax: +33(0)1 34 81 03 59
t&m@meas-spec.com

ASIA

Measurement Specialties (China), Ltd.,
a TE Connectivity Company
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen 518057
China
Sales and Customer Service
Tel: +86 755 3330 5088
Fax: +86 755 3330 5099
t&m@meas-spec.com

TE.com/sensorsolutions