

Model 53 Accelerometer

performance specifications

All values are typical at $\pm 24^{\circ}\text{C}$, 100 Hz and 10 Vdc 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

	± 50	± 200	± 500	± 2000	Notes
Range(g)	± 50	± 200	± 500	± 2000	
Sensitivity (mV/g)	2	0.9	0.4	0.15	
Frequency Response (Hz)	0-1000	0-1200	0-3000	0-5000	± 1 dB (Z-Axis)
Frequency Response (Hz)	0-500	0-1000	0-1500	0-2000	± 1 dB (X&Y Axis)
Resonant Frequency (Hz)	4000	8000	15000	26000	
Non-Linearity (% FSO)	± 1	± 1	± 1	± 1	Of Reading
Transverse Sensitivity (%)	3	3	3	3	
Thermal Zero Shift (%FSO/ $^{\circ}\text{C}$)	± 0.2	± 0.2	± 0.2	± 0.2	From 0 to $+50^{\circ}\text{C}$
Thermal Sensitivity Shift (%/ $^{\circ}\text{C}$)	± 0.4	± 0.4	± 0.4	± 0.4	From 0 to $+50^{\circ}\text{C}$

ELECTRICAL

Zero Acceleration Output (mV)	$<\pm 50$	$<\pm 50$	$<\pm 50$	$<\pm 50$	
Transverse Sensitivity	<3	<3	<3	<3	
Non-Linearity	± 1				
Excitation (Vdc)	2 to 10	2 to 10	2 to 10	2 to 10	
Input Resistance	3500-4800	3500-4800	3500-4800	3500-4800	
Output Resistance (Ω)	2400-4800	2400-4800	2400-4800	2400-4800	
Insulation Resistance (M Ω)	>100	>100	>100	>100	@50Vdc
Ground Isolation					Isolated from Mounting Surface

ENVIRONMENTAL

Shock Limit (g)	5000	5000	5000	5000	
Operating Temperature ($^{\circ}\text{C}$)	-20 to +85	-20 to +85	-20 to +85	-20 to +85	
Humidity	EpoxySealed				

PHYSICAL

Case Material	Aluminum				
Cable (Integral 30 Foot Cable)					
Weight (grams)	3.5				Cable Not Included
Mounting	Adhesive				
Length (Inches)	360				
Insulation Material	Teflon				

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ordering info

PART NUMBERING Model Number+Range+Excitation+Cable Length+Options

53-GGGG-CCC-XXX
 | | | Options
 | | | Cable (360 is 360 inches)
 |
 | _____ Range (0100 is 100 g)

Example: 53-2000-360
 Model 53, 2000g, 10V Excitation, 360" (30 ft.) cable, No Options