



# Model 1210F Accelerometer

## performance specifications

All values are typical at +24°C, 100Hz and 10Vdc 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

	±2	±5	±10	±20	±50	±100	±200	Notes
Range (g)	±2	±5	±10	±20	±50	±100	±200	
Sensitivity (mV/g) <sup>1</sup>	27	16	9	4.5	2	0.9	0.7	@10Vdc Excitation
Frequency Response (Hz)	0-100	0-200	0-300	0-400	0-800	0-1300	0-1500	±5%
Frequency Response (Hz)	0-200	0-300	0-400	0-500	0-1000	0-1500	0-1800	±1dB
Phase Response	0-50	0-60	0-70	0-100	0-300	0-500	0-500	<±5°
Natural Frequency (Hz)	700	800	1000	1500	4000	6000	7000	
Non-Linearity (%FSO)	±1	±1	±1	±1	±1	±1	±1	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<3	
Damping Ratio	0.7	0.7	0.7	0.7	0.6	0.6	0.5	
Shock Limit (g)	5000	5000	5000	5000	5000	5000	5000	

#### ELECTRICAL

Zero Acceleration Output (mV)	±40							Differential
Excitation Voltage (Vdc)	2 to 10							
Input Resistance (Ω)	2400-5000							
Output Resistance (Ω)	2400-5000							
Insulation Resistance (MΩ)	>100							@50Vdc
Residual Noise (μV RMS)	10							Maximum
Ground Isolation	Isolated from Mounting Surface							

#### ENVIRONMENTAL

Thermal Zero Shift (%FSO/°C)	±0.05
Thermal Sensitivity Shift (%/°C)	-0.20 ±0.05
Operating Temperature (°C)	-40 to +100
Compensated Temperature (°C)	-20 to +85
Storage Temperature (°C)	-40 to +100
Humidity	Epoxy Sealed

#### PHYSICAL

Case Material	Anodized Aluminum
Cable	PFA Insulated Leads, Braided Shield, Polyurethane Jacket
Weight (grams)	3.5
Mounting	2x #4 or M3 Screws
Mounting Torque	4.0 lb-in (0.5 N-m)
AWG	#28

<sup>1</sup> Output is ratiometric to excitation voltage

**Wiring color code:** +Excitation = Red; -Excitation = Black; +Output = Green; -Output = White;

**Calibration supplied:** CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±5% Frequency Response Limit

**Supplied accessories:** 2x #4-40 (1/4" length) Socket Head Cap Screw and Washer

**Optional accessories:** 101 Three Channel DC Signal Conditioner Amplifier  
140 Auto-zero Inline Amplifier

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## ordering info

**PART NUMBERING** Model Number+Range+Cable Length

1210F-XXXX-ZZZ

| | Cable (360 is 360 inches)  
| Range (0050 is 50g)

Example: 1210F-0050-360  
Model 1210F, 50g, 360" (30ft) Cable

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