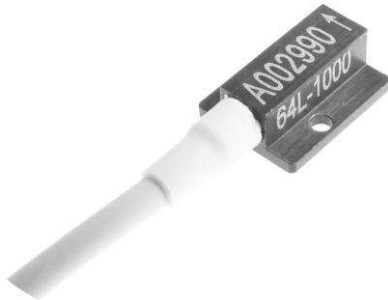
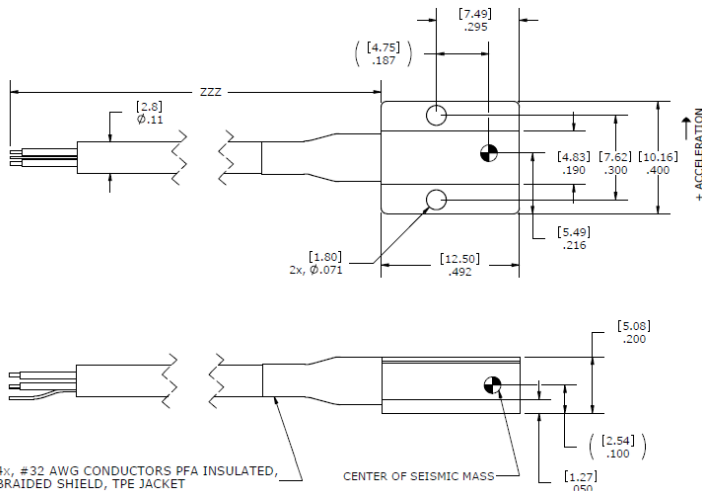


MODEL 64L ACCELEROMETER



DIMENSIONS



SPECIFICATIONS

- ◆ DC Response Accelerometer
- ◆ Durable Cable, Small Package
- ◆ Transverse Sensitive Axis
- ◆ SAE J2570 Compliant

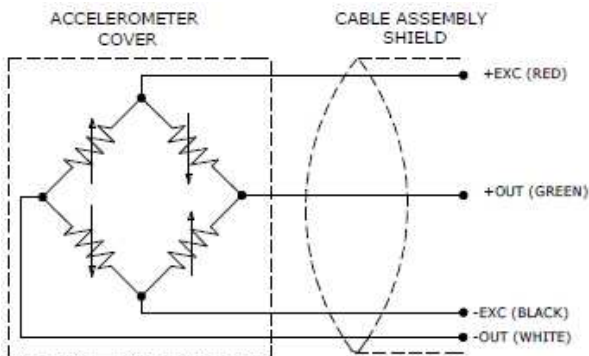
The Model 64L Accelerometer is based on an advanced piezoresistive MEMS sensing element which offers exceptional dynamic range and stability. This unit features a full bridge output configuration with a temperature range from 0 to +50° C. A slight amount of internal gas damping provides outstanding shock survivability and a flat amplitude/phase response up to >4kHz. The Model 64L is compliant with SAE J211 standards for anthropomorphic dummy instrumentation.

FEATURES

- ◆ Piezoresistive MEMS Sensor
- ◆ $\pm 50g$ to $\pm 6,000g$ Ranges
- ◆ 2-10 Vdc Excitation
- ◆ -40 to +121°C Temp Range
- ◆ Low Noise Jacketed Cable
- ◆ 1% Transverse Sensitivity Option
- ◆ $< \pm 25$ mV Zero Offset

APPLICATIONS

- ◆ Safety Crash Testing
 - ◆ Auto
 - ◆ Truck
 - ◆ Recreational Vehicles
- ◆ Shock Testing



PERFORMANCE SPECIFICATIONS

All values are typical at ±24°C, 80Hz and 10Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters

DYNAMIC

| | ±50 | ±100 | ±200 | ±500 | ±2000 | ±6000 | Notes |
|---------------------------------|--------|--------|--------|--------|--------|--------|------------|
| Range(g) | ±50 | ±100 | ±200 | ±500 | ±2000 | ±6000 | |
| Sensitivity (mV/g) ¹ | 2 | 0.9 | 0.8 | 0.4 | 0.15 | 0.10 | |
| Frequency Response (Hz) | 0-400 | 0-500 | 0-500 | 0-600 | 0-2000 | 0-2000 | ± 2% |
| | 0-1000 | 0-1200 | 0-1200 | 0-1400 | 0-3500 | 0-3500 | ± ½dB |
| | 0-1400 | 0-1500 | 0-1500 | 0-2000 | 0-4500 | 0-4500 | ± 1dB |
| Resonant Frequency (Hz) | 4000 | 6000 | 8000 | 15000 | 26000 | 26000 | Typical |
| Damping Ratio | 0.5 | 0.5 | 0.5 | 0.3 | 0.05 | 0.05 | |
| Shock Limit (g) | 5000 | 5000 | 5000 | 10000 | 10000 | 10000 | |
| Non-Linearity (% of reading) | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 | |
| Transverse Sensitivity (%) | <3 | <3 | <3 | <3 | <3 | <3 | <1% Option |

ELECTRICAL

| | | | | | | | |
|-------------------------------|--------------------------------|--|--|--|--|--|---------------|
| Zero Acceleration Output (mV) | <±25 | | | | | | <±10mV Option |
| Excitation (Vdc) | 2 to 10 | | | | | | |
| Input Resistance (Ω) | 2400-6000 | | | | | | |
| Output Resistance (Ω) | 2400-6000 | | | | | | |
| Insulation Resistance (MΩ) | >100 | | | | | | @100Vdc |
| Residual Noise (µV RMS) | <10 | | | | | | |
| Ground Isolation | Isolated from mounting surface | | | | | | |

ENVIRONMENTAL

| | | | | | | | |
|----------------------------------|--------------------|--|--|--|--|--|-----------------|
| Thermal Zero Shift (%FSO/°C) | ±0.04 | | | | | | From 0 to +50°C |
| Thermal Sensitivity Shift (%/°C) | -0.20 ±0.05 | | | | | | From 0 to +50°C |
| Operating Temperature (°C) | -40 to +121 | | | | | | |
| Storage Temperature (°C) | -40 to +121 | | | | | | |
| Humidity | Epoxy Sealed, IP61 | | | | | | |

PHYSICAL

| | | | | | | | |
|--------------------------------|---|--|--|--|--|--|--------------------|
| Case & Cover Material | Anodized Aluminum | | | | | | |
| Cable (Integral 30 Foot Cable) | 4x #32 AWG Conductors PFA Insulated, Braided Shield, TPE Jacket | | | | | | |
| Weight (grams) | 1.0 | | | | | | Cable Not Included |
| Mounting | 2x #0-80 x 3/16" Socket Head Cap Screws | | | | | | Torque 3 lb-in |

¹ Output is ratiometric to excitation voltage

Calibration supplied: CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Limit

Supplied accessories: AC-A02053 2x #0-80 (3/16 length) Socket Head Cap Screw, 2x #0 Washer, 1x Allen Key

Optional accessories: MTG-E2 Triaxial Mounting Block
 121 3-Channel Precision Low Noise DC Amplifier
 140A Auto-Zero Inline Amplifier

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ORDERING INFORMATION

PART NUMBERING Model Number+Range+Cable Length+Options

64L-GGGG-CCCT-ZZZ

| | | | Options
| | | 1% Transverse Sensitivity when "T" is present
| | Cable (360 is 360 inches)
| Range (0100 is 100 g)

Optional Dash Numbers
-001 5Vdc Calibration
-002 2Vdc Calibration

Example: 64L-2000-360
Model 64L, 2000g, 360" (30ft) Cable), No Options.

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