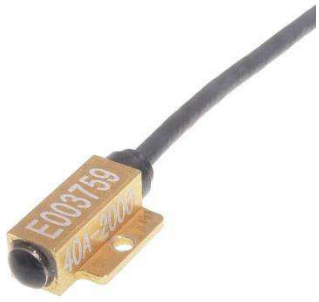
AUTHORIZED DISTRIBUTOR



MODEL 40A CRASH TEST ACCELEROMETER

Specifications

- Critically Damped DC Accelerometer
- Pedestrian Impact Testing
- Compliant to SAE J211/J2570
- Compliant to ISO 6487
- ±25g to ±2000g Dynamic Range
- Temperature Compensated

Features

- Low Transverse Sensitivity
- Critical 0.7 Damping Ratio
- Standard <25mV ZMO
- 10,000g Shock Protection
- 2-10Vdc Excitation
- Silicon Piezoresistive Elements
- -20°C to +80°C Temperature Range

Applications

- Anthropomorphic Dummy Instrumentation
- Crush Zone Testing
- Pedestrian Impact Testing
- Auto Safety Testing Applications
- Shock and Impact Testing
- Transient Drop Testing
- Munitions Testing

The TE Connectivity model 40A is a critically fluid damped DC accelerometer designed for anthropomorphic dummy and pedestrian impact testing and is compliant with the latest SAE J211/J2570 safety regulations. The accelerometer features a full bridge output configuration with built-in mechanical over-range stops for optimum protection. The model 40A accelerometer has a standard cross-talk accuracy of <3% (with option for <1%) and a standard ZMO of <±25mV.

The model 40A crash test accelerometer is offered in ranges from ±25g to ±2000g and features anodized aluminum housing with an industry standard mounting footprint.

The crash test accelerometer has a standard operating temperature range of -20°C to +80°C and is environmentally sealed with an integral cable strain relief. The flexible cable is also designed for high-g impact testing with minimal triboelectric induced noise.

For a triaxial option, TE Connectivity also offers the critically damped model 43 accelerometer with identical performance.

Performance Specifications

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

PARAMETERS

DYNAMIC							NOTES
Range (g)	±25	±100	±250	±500	±1000	±2000	
Sensitivity (mV/g)[1]	6.0	1.5	0.60	0.30	0.15	0.075	@10Vdc Excitation
Frequency Response (Hz)	0-200 0-350	0-400 0-675	0-600 0-1100	0-1100 0-2000	0-1500 0-2700	0-2500 0-4500	±2.5%/-8% ±2.5%/-20%
Natural Frequency (Hz)	>800	>1500	>2500	>4500	>6000	>10000	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<1% Option
Non-Linearity (%FSO)	<±1	<±1	<±1	<±1	<±1	<±1	
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	Typical
Shock Limit (g)	5000	10000	10000	10000	10000	10000	

ELECTRICAL		
Zero Acceleration Output (mV)	<±25	Differential
Excitation Voltage (Vdc)	2 to 10	
Input Resistance (Ω)	2000	Nominal
Output Resistance (Ω)	1000	Nominal
Insulation Resistance (MΩ)	>100	@100Vdc
Residual Noise (µV RMS)	<10	
Ground Isolation	Isolated from mounting surface	

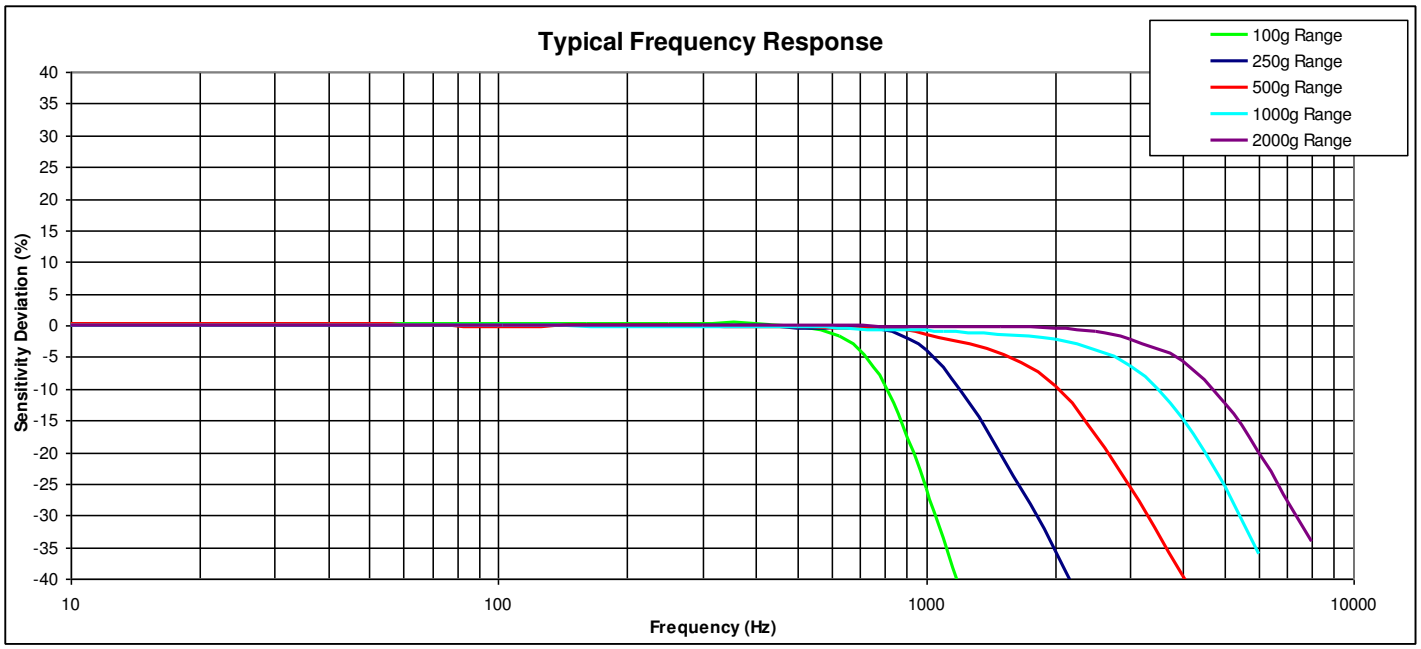
ENVIRONMENTAL		
Thermal Zero Shift (mV)	±3.0	From -10°C to +50°C
Thermal Sensitivity Shift (%/°C)	±0.1	From -10°C to +50°C
Operating Temperature (°C)	-20 to +80	
Humidity	Epoxy Sealed, IP65	

PHYSICAL		
Case Material	Anodized Aluminum	
Cable	5x #30 AWG Leads, PFA Insulated, Braided Shield, PU Jacket	
Weight (grams)	<5	Cable not included
Mounting	2x #0- 80 x 3/16” Socket Head Cap Screws	
Mounting Torque	1.0-1.5 lb-in (0.11-0.17 Nm)	

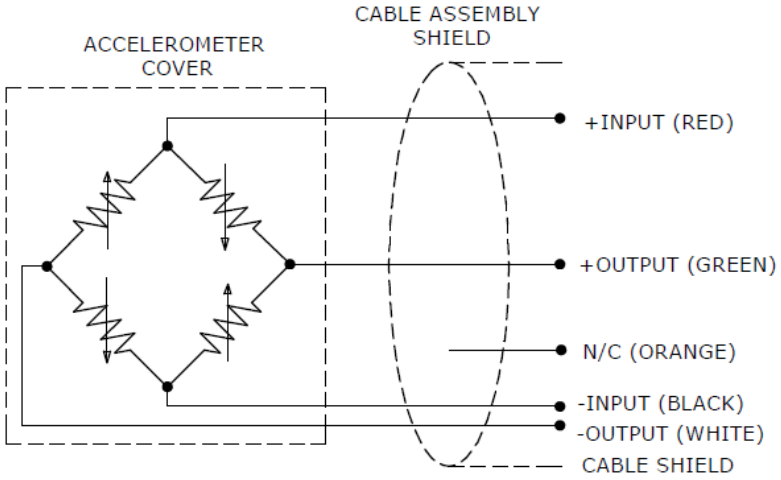
[1] Output is ratiometric to excitation voltage. Tolerance is +50%/-30%.

Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to Upper Frequency Limit
Supplied accessories:	AC-A03923	2x #0-80 (3/16” length) Socket Head Cap Screw, 2x #0 Washer, 1x Allen Key
Optional accessories:	MTG-E2 121	Triaxial Mounting Block 3-Channel Precision Low Noise DC Amplifier

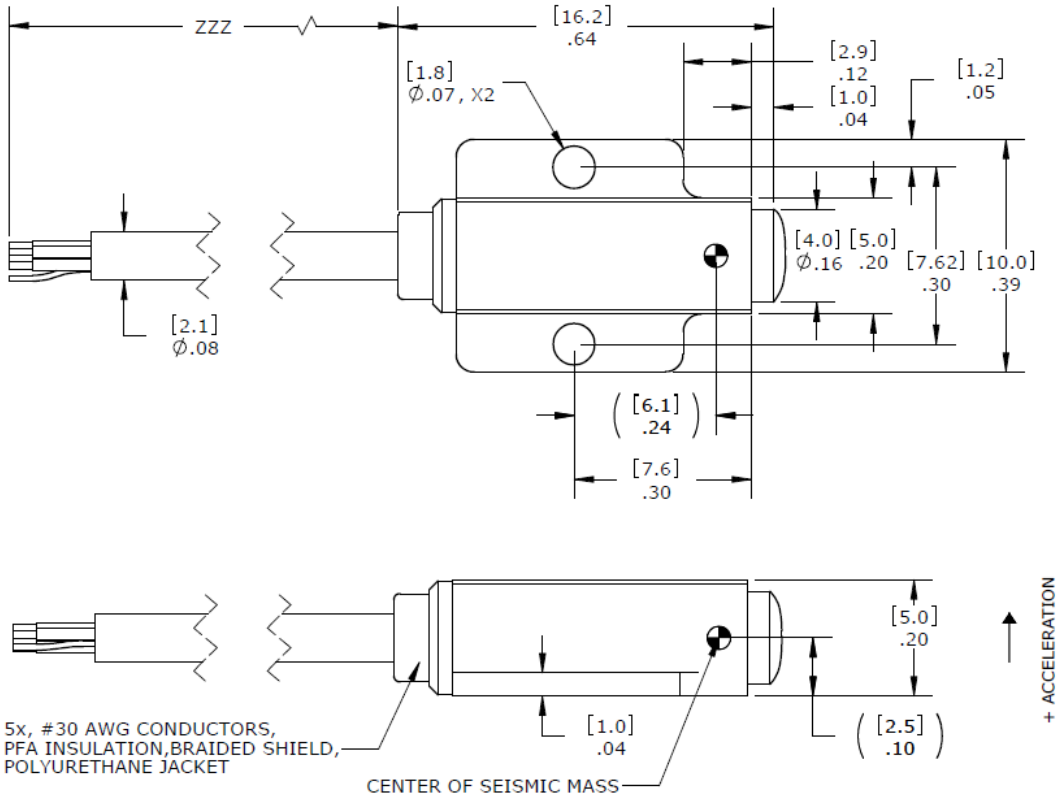
Typical Frequency Response



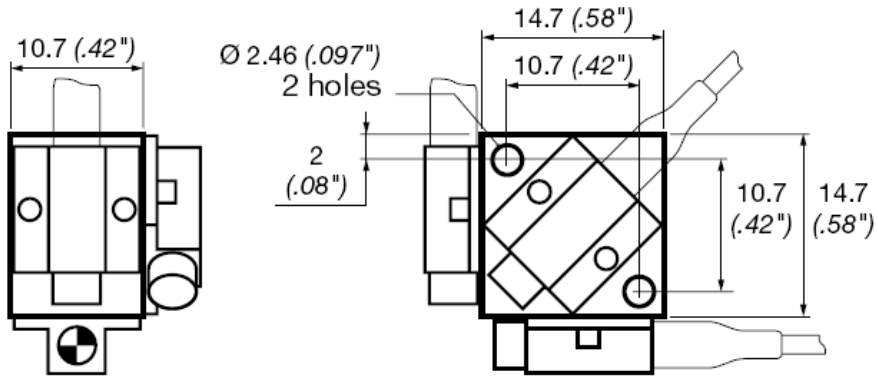
Schematic



Dimensions



Triaxial Mounting Block



Ordering Information

40A	GGGG	ZZZ	T	XXX

Range
0025 = 25g
0100 = 100g
0250 = 250g
0500 = 500g
1000 = 1000g
2000 = 2000g

Cable length
240 = 240 inches, 20 feet
360 = 360 inches, 30 feet
276 = 276 inches, 7 meters (*Minimum order quantity 25 pieces)

Transverse Sensitivity Option
Blank = <3%
T = <1%

Excitation Voltage Option
Blank = 10Vdc
001 = 5Vdc
005 = 2Vdc

Example; 40A-2000-360
Model 40A, 2000g range,360inch (30ft) cable length

Example; 40A-0500-276T
Model 40A, 500g range, 276inch (7m) cable length, <1% transverse sensitivity option

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