

# Model 8711-01 Accelerometer



EMI Shielded Industrial Accelerometer  
16kHz Bandwidth  
-55°C to +125°C Operating Range  
Top Exit Connector or Integral Cable



## The Model 8711-01

are internally shielded rugged IEPE accelerometers designed for harsh environments. The accelerometers are available in  $\pm 10g$ ,  $\pm 80g$  &  $\pm 500g$  dynamic ranges and have a flat bandwidth up to greater than 16kHz. The model 8711-01 features a top exit MIL-C-5015 connector. The units are hermetically sealed and are designed to operating in temperature ranges from -55°C to 125°C.

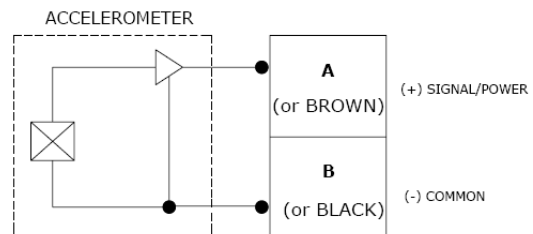
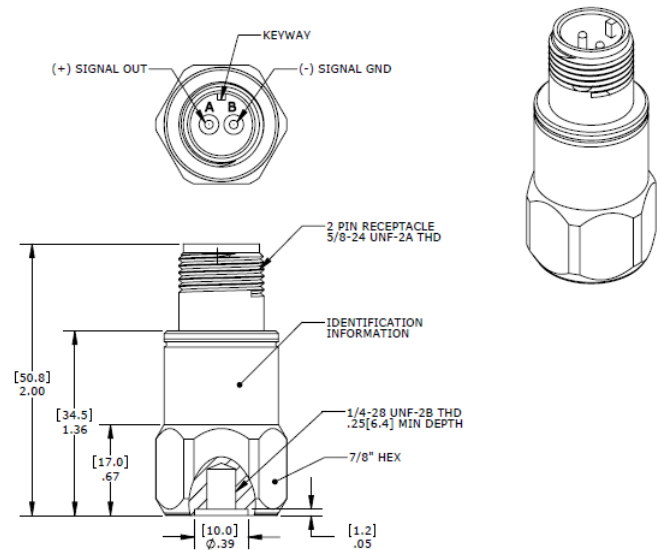
## FEATURES

- $\pm 10g$ ,  $\pm 80g$  &  $\pm 500g$  Dynamic Ranges
- Wide bandwidth up to 16kHz
- Case Isolated, Internally Shielded
- Hermetically Sealed, Welded
- Annular Shear Mode
- Reverse Wiring Protection
- Stable Temperature Response

## APPLICATIONS

- General Purpose
- Machine Monitoring
- Industrial Applications
- Harsh Environments
- Gearbox Monitoring

## dimensions



# Model 8711-01 Accelerometer

## performance specifications

All values are typical at +24°C, 100Hz and 4mA excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1003 for Plug & Play AC Accelerometers.

### Parameters

#### DYNAMIC

	±10	±80	±500	Notes
Range (g)	±10	±80	±500	
Sensitivity (mV/g)	500	100	10	±10% (±5% Option)
Frequency Response (Hz)	1-8000	1-10000	1-10000	±10%
Frequency Response (Hz) <sup>2</sup>	0.5-10000	0.4-16000	0.4-16000	±3dB
Natural Frequency (Hz)	30000	32000	42000	
Non-Linearity (%FSO)	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	
Shock Limit (g)	5000	5000	5000	

#### ELECTRICAL

Compliance Voltage (Vdc)	18 to 30	18 to 30	18 to 30	See Note 1
Excitation Current (mA)	2 to 10	2 to 10	2 to 10	
Bias Voltage (Vdc)	12	12	12	±2
Output Impedance (Ω)	<100	<100	<100	
Insulation Resistance (MΩ)	>100	>100	>100	@100Vdc
Residual Noise (g RMS)	0.0001	0.0001	0.0003	
Warm-up Time (sec)	<1	<1	<1	
Grounding	Case Isolated, Internally Shielded			

#### ENVIRONMENTAL

Temperature Response (%)	±10 (see typical temperature response on following page)
Operating Temperature (°C)	-55 to +125
Storage Temperature (°C)	-55 to +125

#### PHYSICAL

Sensing Element	Ceramic (shear mode)
Case Material	Stainless Steel
Weight (grams)	80
Mounting Torque	24 lb-in (2.7 N-m)

<sup>1</sup> For full dynamic range a minimum compliance voltage of 24Vdc is recommended

<sup>2</sup> LF option offers a low frequency response to 0.1Hz

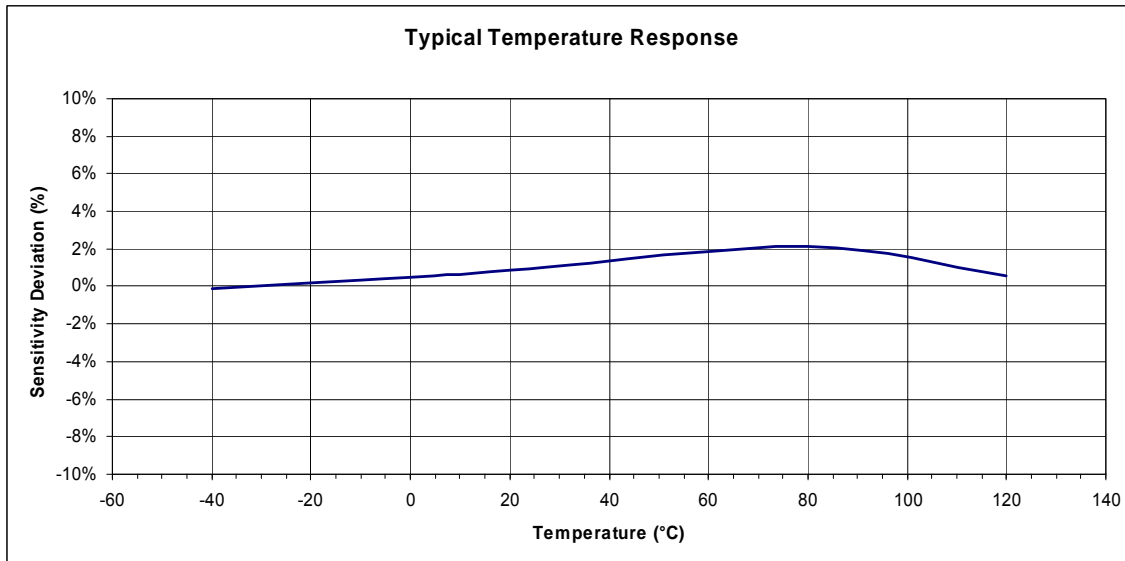
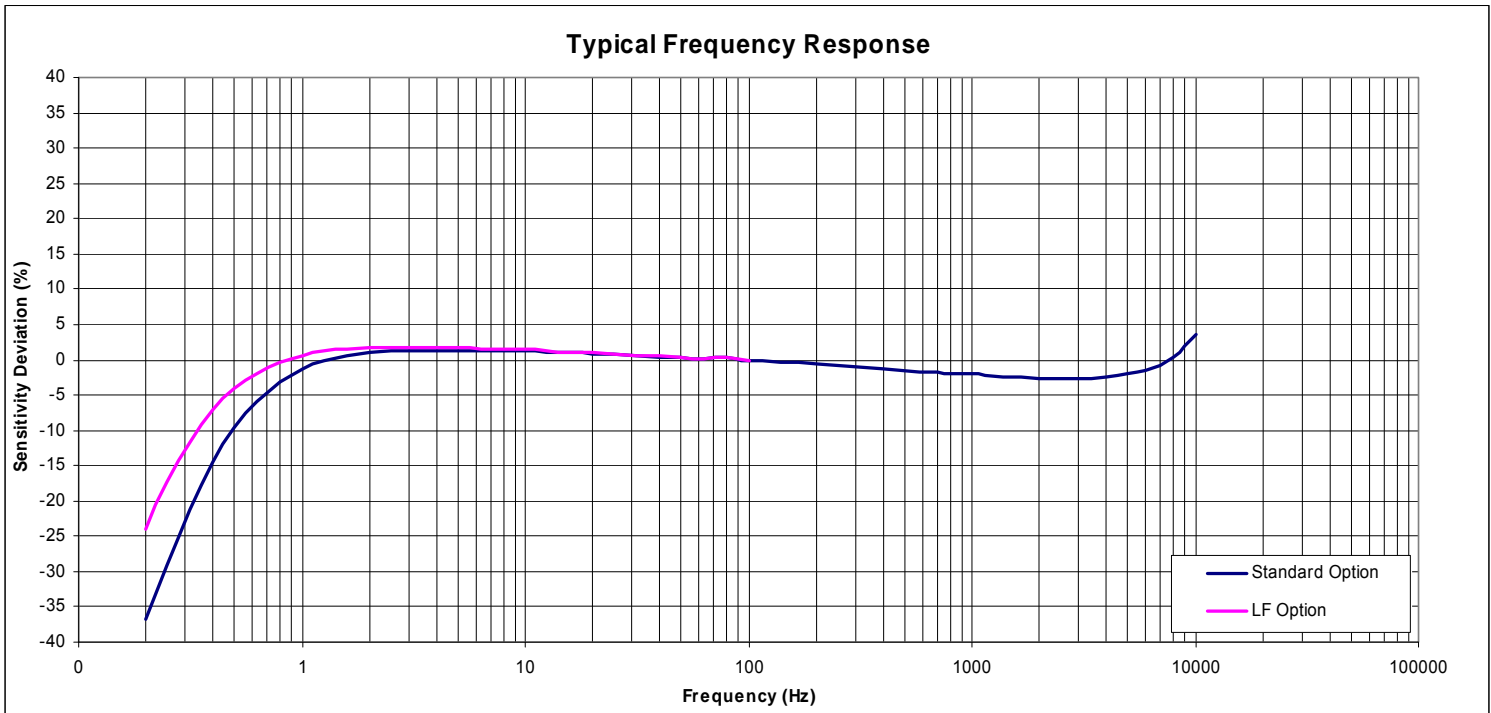
<sup>3</sup> Contact factory for Hazardous Area Approval options

<b>Calibration supplied:</b>	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±10% Frequency Response Limit
<b>Supplied accessories:</b>	AC-A03663	¼-28 to ¼-28 mounting stud
<b>Optional accessories:</b>	316-XXX	Cable Assembly, Straight (XXX designates length in inches, 10ft standard)
	318-XXX	Cable Assembly, 90 Degrees (XXX designates length in inches, 10ft standard)
	AC-D03664	¼-28 to M5 mounting stud
	AC-D03665	¼-28 to M6 mounting stud

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## performance specifications



## ordering info

PART NUMBERING Model Number+Range

8711LF-01-GGG

| | | Range (500 is 500g)

| | Low frequency option, otherwise leave blank

| Electrical Connection Option (1 for 2-pin connector, 2 for integral cable)

Example: 8711-01-500

Model 8711-01, 2-pin connector, 500g range

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