

# Model 8811-01 Accelerometer



Industrial IEPE Accelerometer  
Lightning Protected to  $\pm 4\text{kV}$   
 $-55^\circ\text{C}$  to  $+120^\circ\text{C}$  Operating Range  
Top Exit Connector



The Model 8811-01 are internally shielded rugged IEPE accelerometers with custom lightning protection up to  $\pm 4\text{kV}$  designed for harsh industrial condition monitoring where accelerometers could be exposed to lightning. The accelerometers are available in  $\pm 5\text{g}$  to  $\pm 80\text{g}$  dynamic ranges and have a flat bandwidth up to greater than  $10\text{kHz}$ . The model 8811-01 accelerometer features a top exit MIL-C-5015 connector and is designed to operate in temperature ranges from  $-55^\circ\text{C}$  to  $+120^\circ\text{C}$ .

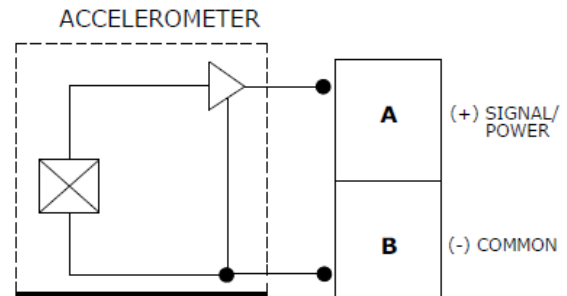
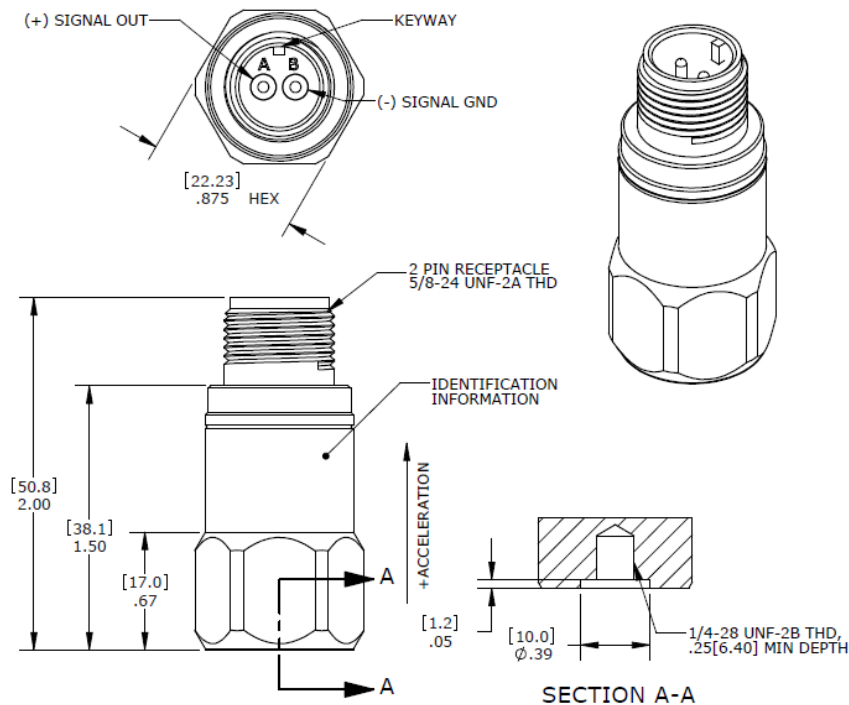
## FEATURES

- $\pm 5\text{g}$ ,  $\pm 10\text{g}$ ,  $\pm 20\text{g}$  &  $\pm 80\text{g}$  Dynamic Ranges
- Wide bandwidth up to  $>10\text{kHz}$
- Case Isolated, Internally Shielded
- Hermetically Sealed, Welded
- Annular Shear Mode
- Reverse Wiring Protection
- Lightning Protection

## APPLICATIONS

- Wind Tower Installations
- Machine Monitoring
- Industrial Applications
- Harsh Environments
- Gearbox Monitoring

## dimensions



# Model 8811-01 Accelerometer

## performance specifications

All values are typical at +24°C, 80Hz 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

	±5	±10	±20	±80	Notes
Range (g)					
Sensitivity (mV/g)	1000	500	250	100	±10%
Frequency Response (Hz)	0.3-4000	0.3-4000	1-7000	1-7000	±5%
Frequency Response (Hz)	0.1-10000	0.1-10000	0.5-13000	0.5-13000	±3dB
Natural Frequency (Hz)	20000	20000	32000	32000	
Non-Linearity (%FSO)	±1	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	<5	
Shock Limit (g)	2000	2000	5000	5000	
Residual Noise (g RMS)	0.00010	0.00015	0.00025	0.00040	
Base Strain Sensitivity (g/μstrain)	<0.0002	<0.0002	<0.0002	<0.0002	
Weight (grams)	105	105	88	88	

#### ELECTRICAL

Compliance Voltage (Vdc)	18 to 30				See Note 1
Excitation Current (mA)	2 to 10				
Bias Voltage (Vdc)	10 to 13				Room Temperature
Output Impedance (Ω)	<100				
Dielectric Strength (Vac)	±4000				
Warm-up Time (sec)	<5				
Grounding	Case Isolated, Internally Shielded				

#### ENVIRONMENTAL

Temperature Response (%)	See typical temperature response on following page
Operating Temperature (°C)	-55 to +120
Storage Temperature (°C)	-55 to +120
Humidity	Hermetically Sealed, IP67

#### PHYSICAL

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

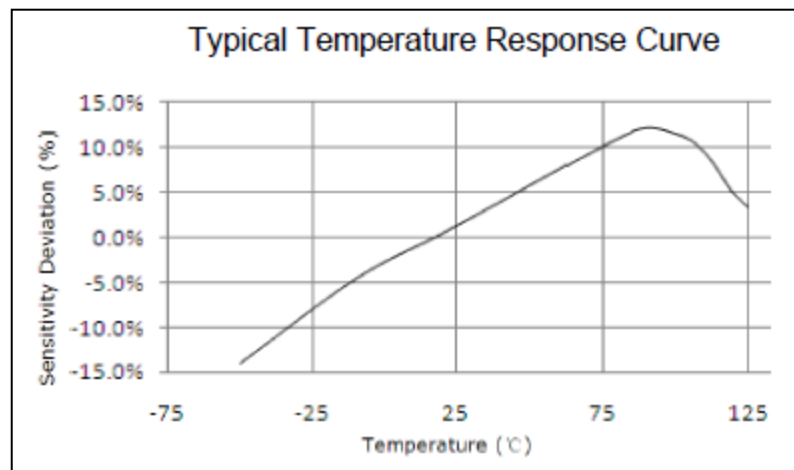
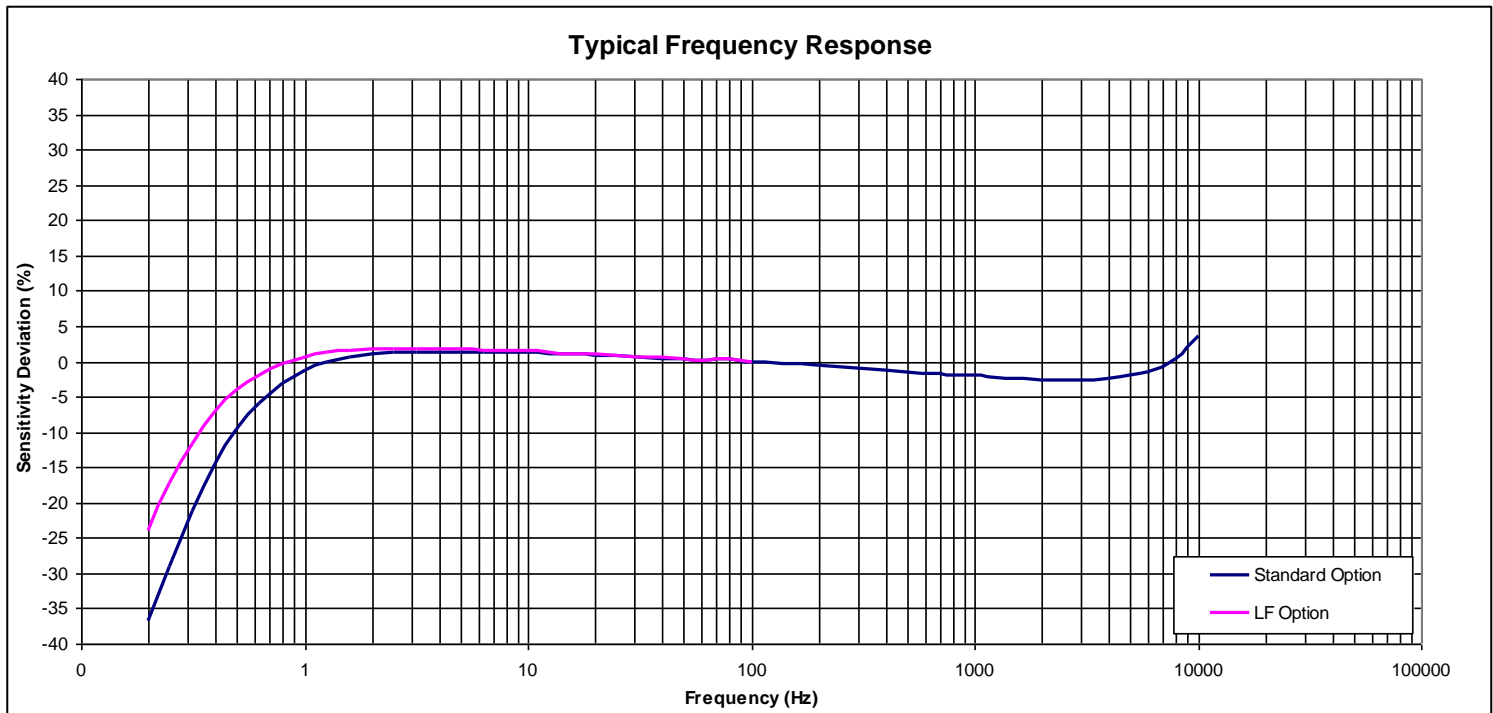
<sup>1</sup> For full dynamic range a minimum compliance voltage of 24Vdc is recommended

<b>Calibration supplied:</b>	CS-SENS-0100	NIST Traceable Amplitude Calibration at 80Hz
<b>Supplied accessories:</b>	AC-A03663	¼-28 to ¼-28 mounting stud
<b>Optional accessories:</b>	316A-XXX	Cable Assembly, Straight (XXX designates length in inches, 10ft standard)
	318A-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

8811LF-01-GGG  
 |            |            Range (080 is 80g)  
 |            |            Low frequency, required for 5g and 10g ranges

Standard model numbers:

8811LF-01-005  
 8811LF-01-010  
 8811-01-020  
 8811-01-080

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