



## MODEL 8811-01 LIGHTNING PROTECTED ACCELEROMETER

### Specifications

- Industrial IEPE Accelerometer
- Lightning Protected to >5,000V
- -55°C to +125°C Operating Range
- Top Exit Connector
- Low Noise, Wide Bandwidth

### Features

- ±5g, ±10g, ±20g & ±80g Ranges
- Frequency Response >10kHz
- Case Isolated, Internally Shielded
- Hermetically Sealed, Welded
- Annular Shear Mode
- Reverse Wiring Protection
- Lightning Protection

### Applications

- Wind Tower Monitoring Applications
- Machine Condition Monitoring
- Preventive & Predictive Maintenance
- Industrial Applications
- Harsh Environments
- Gearbox Monitoring

The model 8811-01 are internally shielded rugged IEPE accelerometers with custom lightning protection up to ±2.5kV for harsh installations that could be exposed to lightning strikes. The accelerometers are available in four standard dynamic ranges from ±5g to ±80g and have a wide bandwidth up to greater than 10kHz.

The model 8811-01 accelerometers feature a top exit MIL-C-5015 connector and are designed to operate in ambient temperature ranges from -55°C to +125°C.

For installations where the accelerometer will not be exposed to lightning induced transients, the standard model 8711-01 accelerometer can be considered as a good alternate option.

# MODEL 8811-01 ACCELEROMETER

## Performance Specifications

All values are typical at +24°C, 80Hz and 4mA excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

### 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)	0.1-6000	0.1-6000	0.3-10000	0.3-10000	±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)	±2500	
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

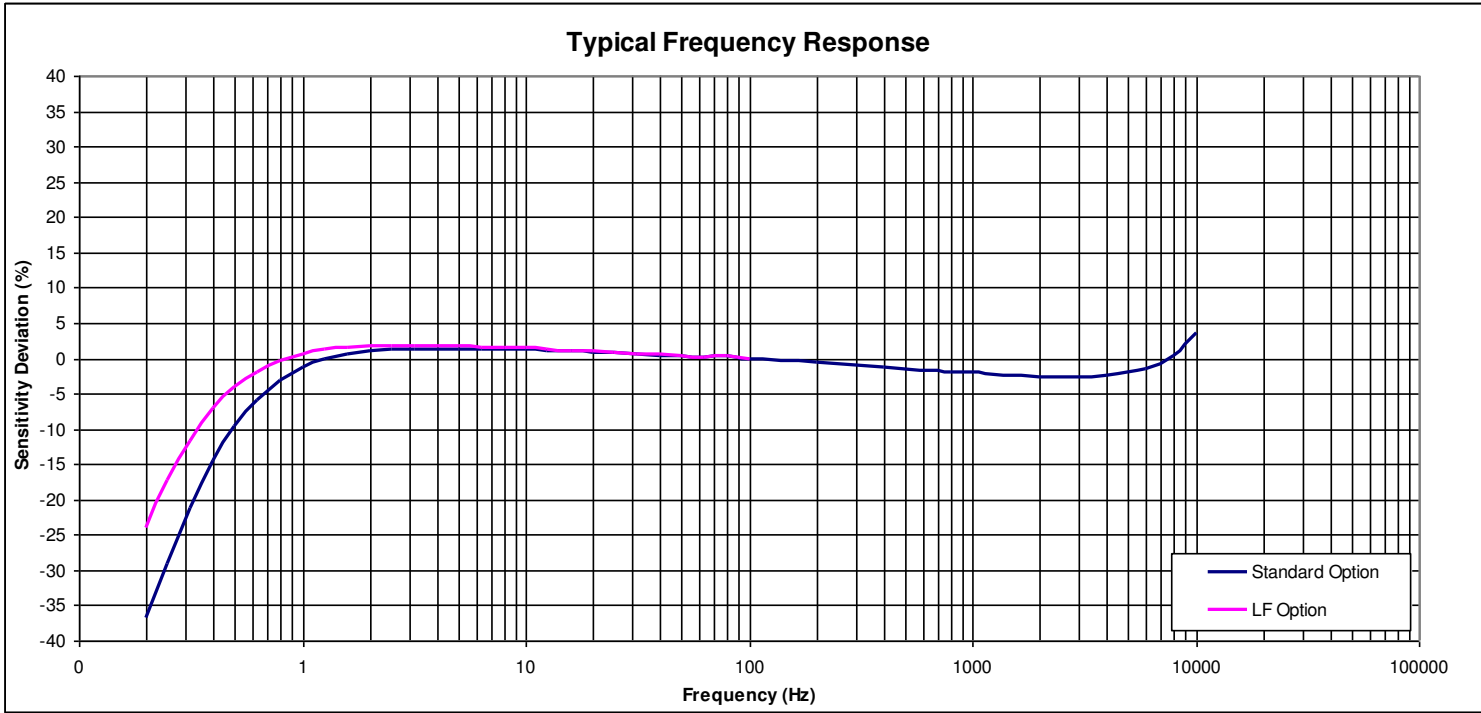
Sensing Element	Ceramic (shear mode)
Case Material	Stainless Steel
Mounting Torque	24 lb-in (2.7 N-m)

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

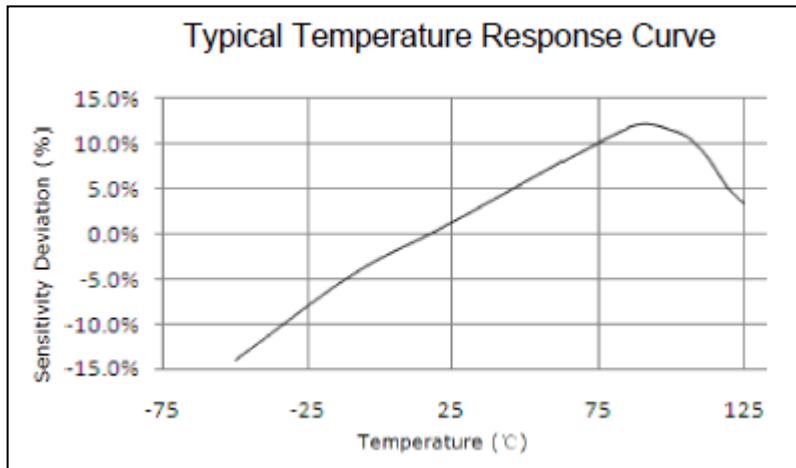
<b>Calibration supplied:</b>	CS-SENS-0100	NIST Traceable Amplitude Calibration at 80Hz
<b>Supplied accessories:</b>	AC-A03663	¼-28 to ¼-28 mounting stud
<b>Optional accessories:</b>	316A-XXX	Cable Assembly, Straight (XXX designates length in inches, 10ft standard)
	318A-XXX	Cable Assembly, 90 Degrees (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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Typical Frequency Response

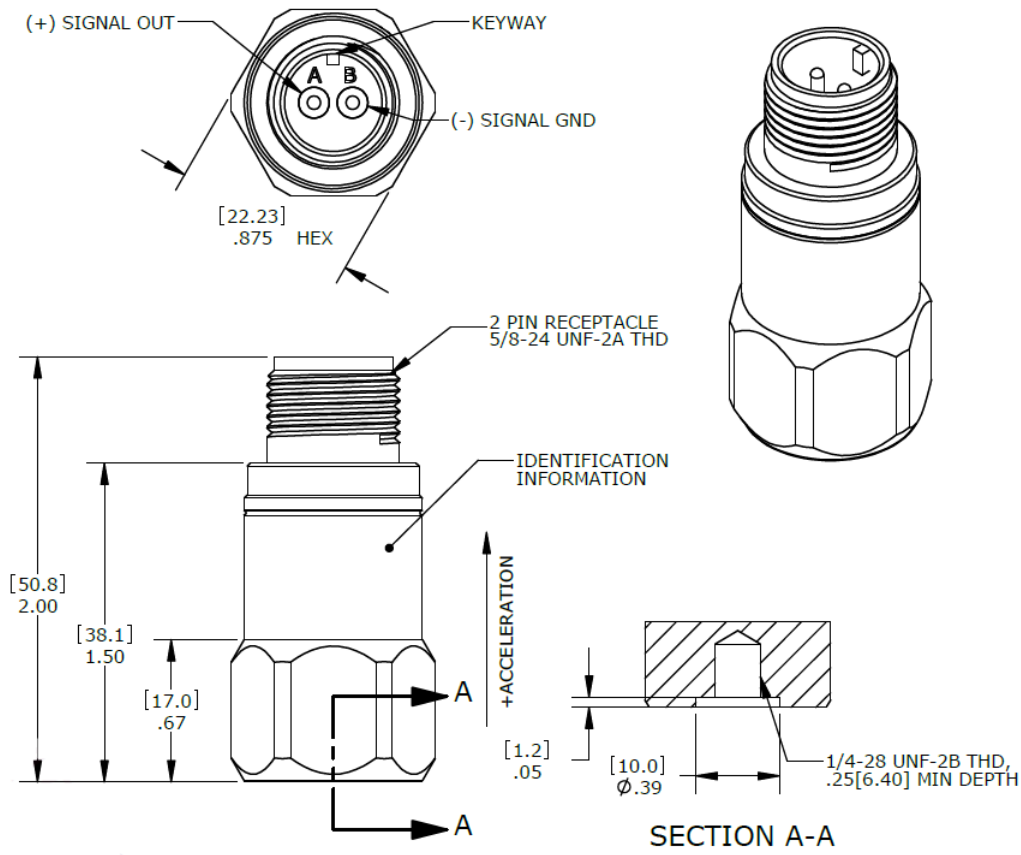


Typical Thermal Sensitivity Response

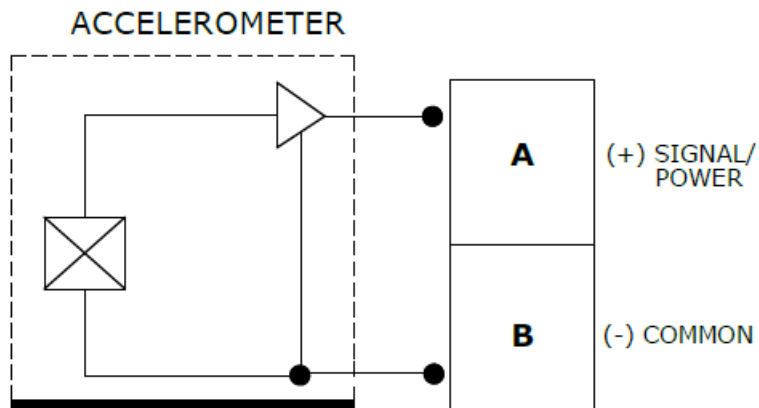


# MODEL 8811-01 ACCELEROMETER

## Dimensions



## Schematic



## MODEL 8811-01 ACCELEROMETER

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### Ordering Information

8811LF-01 for 5g and 10g Range  
8811-01 for 20g and 80g Range

GGG

#### Range

005 = 5g  
010 = 10g  
020 = 20g  
080 = 80g

Standard model numbers:

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

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