te.com

MODEL 8711-01 INDUSTRIAL IEPE ACCELEROMETER

Specifications

- **Industrial IEPE Accelerometer**
- **Low Cost, Quick Delivery**
- **-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
- Stable Temperature Response

Applications

- General Purpose
- Machine Condition Monitoring
- Preventive & Predictive Maintenance
- Industrial Applications
- Harsh Environments
- Gearbox Monitoring

The model 8711-01 are internally shielded rugged IEPE accelerometers designed for industrial condition monitoring. 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 8711-01 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 a side exit form factor with same performance specifications, TE Connectivity also offers the model 8021 industrial accelerometer.

For wind turbines and other elevated installations that could be exposed to lightning strike, the model 8811-01 should be selected with 5,000V protection rating.

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					**Notes**
Range (g)	±5	±10	±20	±80	
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)	0.00003	0.00005	0.00010	0.00015	
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	
Insulation Resistance (MΩ)	>100	@100Vdc
Warm-up Time (sec)	<5	
Grounding	Case Isolated, Internally Shielded	

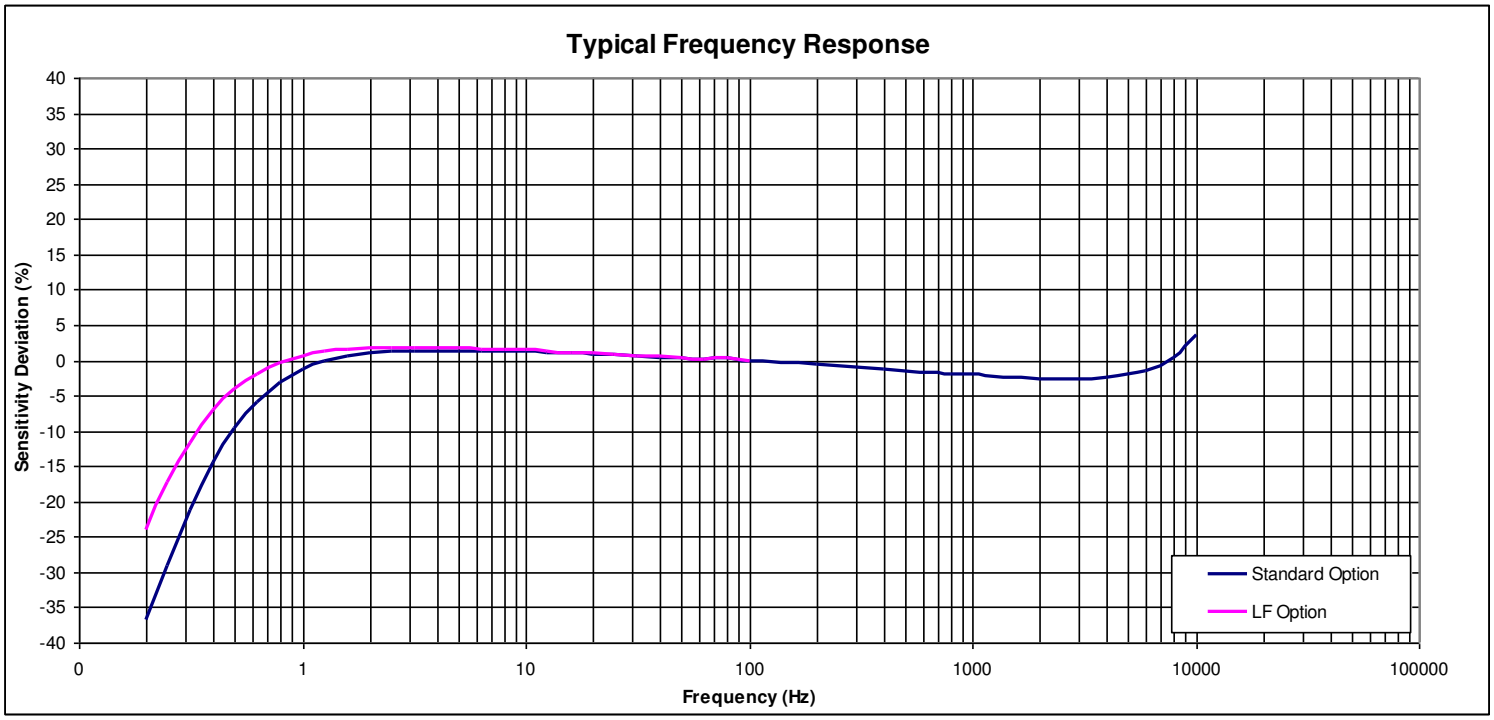
ENVIRONMENTAL	
Temperature Response (%)	See typical temperature response on following page
Operating Temperature (°C)	-55 to +125
Storage Temperature (°C)	-55 to +125
Humidity	Hermetically Sealed, IP67

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

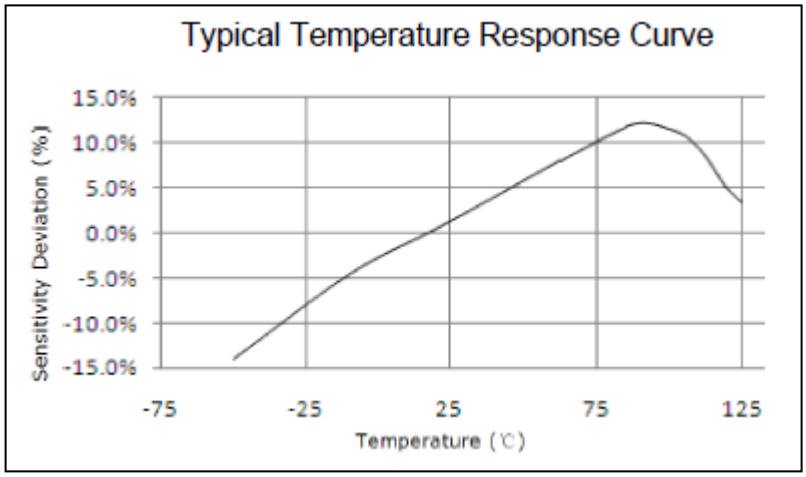
[1] For full dynamic range a minimum compliance voltage of 24Vdc is recommended

Calibration supplied:	CS-SENS-0100	NIST Traceable Amplitude Calibration at 80Hz
Supplied accessories:	AC-D03665	¼-28 to M6 mounting stud
Optional accessories:	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-A03663	¼-28 to ¼-28 mounting stud

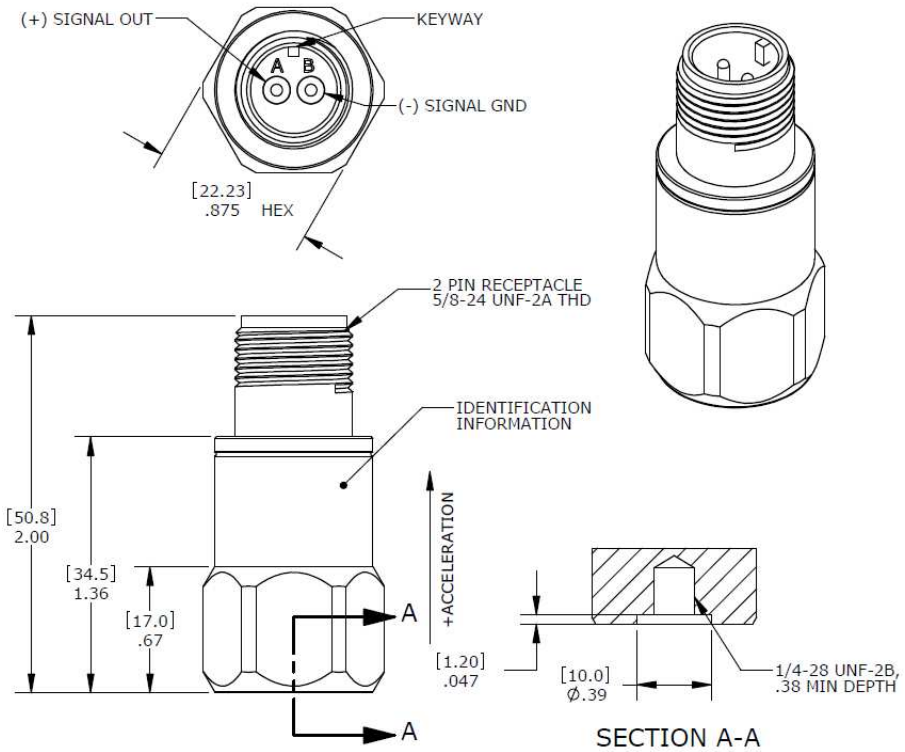
Typical Frequency Response



Typical Thermal Sensitivity Response



Dimensions



Schematic