MODEL 820M1 ACCELEROMETER

SPECIFICATIONS

- **Piezoelectric Accelerometer**
- **±25g to ±100g Dynamic Ranges**
- **Wide Bandwidth to 6000Hz**
- **Circuit Board Mountable**

The Model 820M1 is a low cost, board mountable accelerometer designed for embedded condition monitoring and predictive maintenance applications. The piezo-electric accelerometer is available in ranges from ±25g to ±100g and features a flat frequency response up to >6kHz. Featuring stable piezo-ceramic crystals in shear mode, the accelerometer incorporates an amplified ±1.25V output with optimum measurement resolution.

FEATURES

- Amplified ±1.25V Signal Output
- 2.8 to 5.5Vdc Excitation Voltage
- Hermetically Sealed
- Piezo-Ceramic Shear Design
- -40° to +125°C Operating Range

APPLICATIONS

- Machine Health Monitoring
- Preventive Maintenance Installations
- Embedded Vibration Monitoring
- Impact & Shock Monitoring

PERFORMANCE SPECIFICATIONS

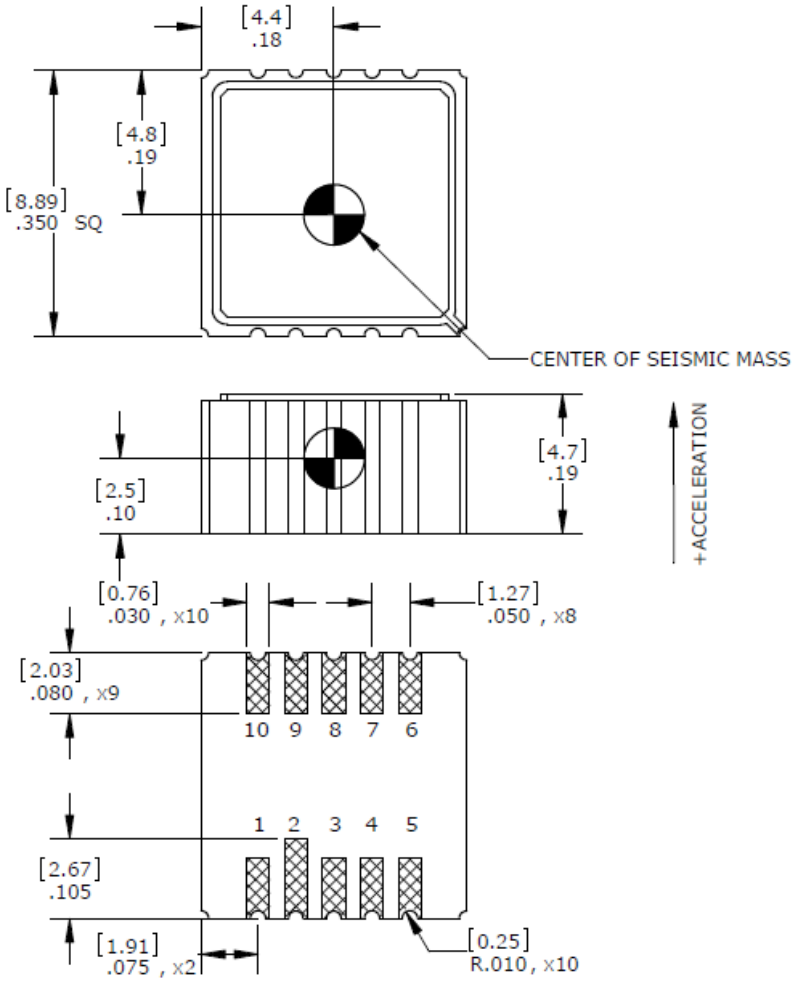
All values are typical at +24°C, 80Hz and 3.3Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

Parameters				
DYNAMIC				Notes
Range (g)	±25	±50	±100	
Sensitivity (mV/g)	50.0	25.0	12.5	±30%
Frequency Response (Hz)	2-6000	2-6000	2-6000	±1dB
Resonant Frequency (Hz)	>30000	>30000	>30000	
Non-Linearity (%FSO)	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	
Shock Limit (g)	2000	2000	2000	
Residual Noise (g RMS)	0.0026	0.0030	0.0032	2Hz to 10kHz
Spectral Noise, 10Hz (µg√Hz)	160	160	160	
Spectral Noise, 100Hz (µg√Hz)	40	40	40	
Spectral Noise, 1kHz (µg√Hz)	16	16	16	

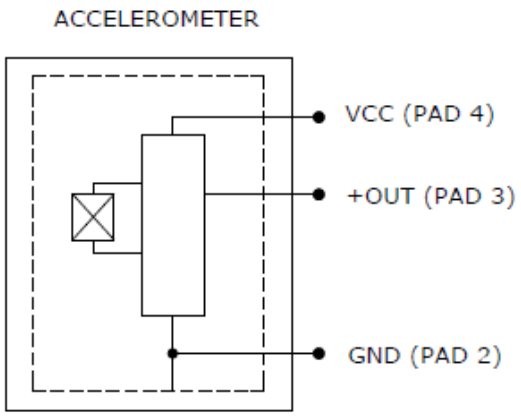
ELECTRICAL	
Excitation Voltage (Vdc)	2.8 to 5.5
Bias Voltage (Vdc)	Excitation Voltage / 2
Full Scale Output Voltage (V)	±1.25
Total Supply Current (µA)	22
Output Impedance (Ω)	<100
Insulation Resistance (MΩ)	>100 @100Vdc
Shielding	100%
Warm-up Time (msec)	30
ENVIRONMENTAL	
Temperature Response (%)	-20/+30 from -40°C to +125°C
Operating Temperature (°C)	-40 to +125
Storage Temperature (°C)	-40 to +125
Humidity	Hermetically Sealed
PHYSICAL	
Sensing Element	PZT (Lead Zirconate Titanate)
Case Material	Ceramic Base and Cover
Weight (grams)	1.0
Mounting	Solder Reflow

Calibration supplied: CS-SENS-0100 NIST Traceable Amplitude Calibration at 80Hz

DIMENSIONS



SCHEMATIC



ORDERING INFORMATION

820M1-GGGG
l_____ **Range** (0100 is 100g)

Part Number	Range
820M1-0025	25g
820M1-0050	50g
820M1-0100	100g

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