

## MODEL 810M1 ACCELEROMETER



### SPECIFICATIONS

- ◆ **Piezoelectric Linear Accelerometer**
- ◆  **$\pm 25g$  &  $\pm 100g$  Dynamic Ranges**
- ◆ **Wide Bandwidth to 6000Hz**
- ◆ **Circuit Board Mountable**

The Model 810M1 is a low cost, board mountable accelerometer designed for general purpose vibration measurements. The accelerometer is available in  $\pm 25g$  or  $\pm 100g$  range and provides a flat frequency response up to  $>6kHz$ . Featuring stable piezo-ceramic crystals in shear mode, the accelerometer incorporates an amplified  $\pm 1.25V$  output and is offered in two measurement direction options (X or Z axis).

### FEATURES

- ◆ Two Measurement Directions
- ◆ 3.3 to 5.5Vdc Excitation Voltage
- ◆ Hermetically Sealed
- ◆ Piezo-Ceramic Shear Design
- ◆  $-40^{\circ}$  to  $+125^{\circ}C$  Operating Range

### APPLICATIONS

- ◆ Asset Monitoring
- ◆ Data Loggers
- ◆ Impact Monitoring
- ◆ Machine Health Monitoring
- ◆ System Wake-Up Switch

**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.

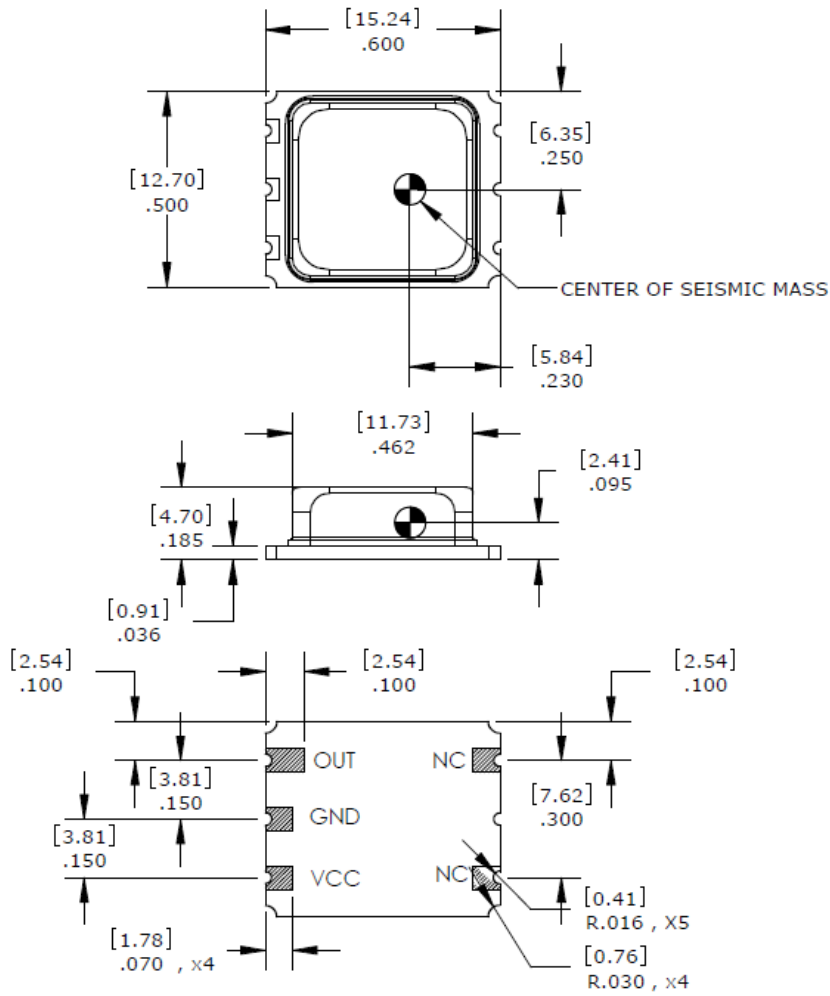
Parameters			
<b>DYNAMIC</b>			Notes
Range (g)	±25	±100	
Sensitivity (mV/g)	50.0	12.5	±30%
Frequency Response (Hz)	2-6000	2-6000	±1dB
Resonant Frequency (Hz)	>30000	>30000	
Non-Linearity (%FSO)	±2	±2	
Transverse Sensitivity (%)	<8	<8	
Shock Limit (g)	2000	2000	
Residual Noise (g RMS)	0.0026	0.0032	2Hz to 10kHz
Spectral Noise, 10Hz (µg√Hz)	160	160	
Spectral Noise, 100Hz (µg√Hz)	40	40	
Spectral Noise, 1kHz (µg√Hz)	16	16	
<b>ELECTRICAL</b>			
Bias Voltage (Vdc)	Excitation Voltage / 2		
Full Scale Output Voltage (V)	±1.25		
Total Supply Current (µA)	22		
Excitation Voltage (Vdc)	3.3 to 5.5		
Output Impedance (Ω)	<100		
Insulation Resistance (MΩ)	>100		
Shielding	100%		
Warm-up Time (msec)	30		
<b>ENVIRONMENTAL</b>			
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		
<b>PHYSICAL</b>			
Sensing Element	Ceramic (shear mode)		
Case Material	Ceramic Base, Nickel Silver Cover		
Weight (grams)	3.0		
Mounting	Solder		

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

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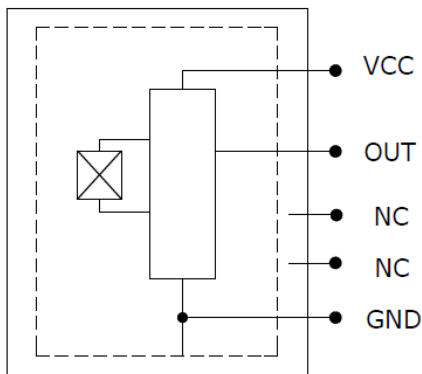
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## DIMENSIONS



## SCHEMATIC

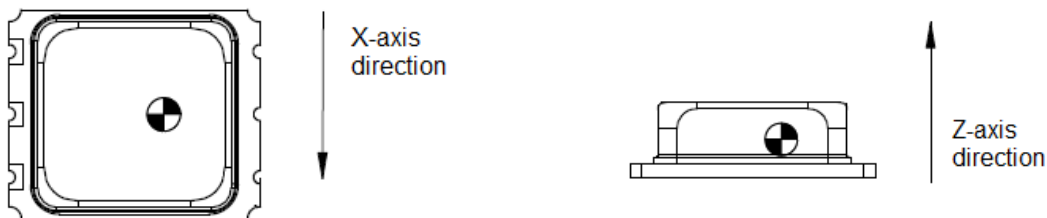
### ACCELEROMETER



## ORDERING INFORMATION

<b>810M1</b>	<b>GGGG</b>	<b>X</b>
<b>Range</b> 0025=25g 0100=100g		
<b>Measurement Direction (see figures below)</b> X=X-axis Z=Z-axis		

Examples;  
810M1-0025X  
Model 810M1, 25g range, X-axis measurement



### NORTH AMERICA

Measurement Specialties, Inc.,  
a TE Connectivity Company  
Tel: 800-522-6752  
[customercare.hmp1@te.com](mailto:customercare.hmp1@te.com)

### EUROPE

MEAS France SAS  
a TE Connectivity Company  
Tel: +31 73 624 6999  
[customercare.lcsb@te.com](mailto:customercare.lcsb@te.com)

### ASIA

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
Tel: 0400-820-6015  
[customercare.shzn@te.com](mailto:customercare.shzn@te.com)

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