





# **MODEL 810M1 ACCELEROMETER**

# **SPECIFICATIONS**

- Piezoelectric Linear Accelerometer
- ±25g & ±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° to +125°C Operating Range

# **APPLICATIONS**

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

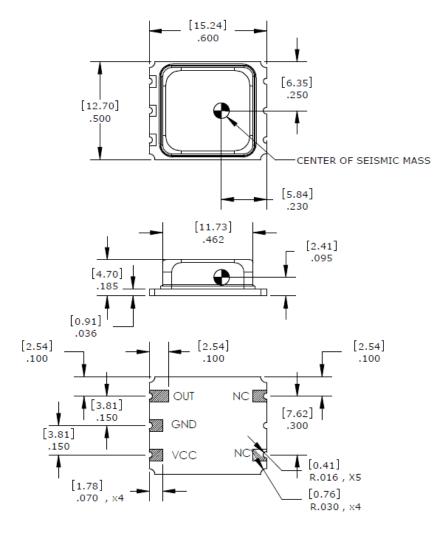
## PERFORMANCE SPECIFICATIONS

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> Range (g) Sensitivity (mV/g) Frequency Response (Hz) Resonant Frequency (Hz) Name Lingerith (PCED)	±25 50.0 2-6000 >30000	±100 12.5 2-6000 >30000	Notes ±30% ±1dB	
Non-Linearity (%FSO) Transverse Sensitivity (%) Shock Limit (g) Residual Noise (g RMS) Spectral Noise, 10Hz (µg√Hz) Spectral Noise, 10Hz (µg√Hz) Spectral Noise, 1kHz (µg√Hz)	±2 <8 2000 0.0026 160 40 16	±2 <8 2000 0.0032 160 40 16	2Hz to 10kHz	
ELECTRICAL Bias Voltage (Vdc) Full Scale Output Voltage (V) Total Supply Current ( $\mu$ A) Excitation Voltage (Vdc) Output Impedance ( $\Omega$ ) Insulation Resistance (M $\Omega$ ) Shielding Warm-up Time (msec)	Excitation Voltage / 2 ±1.25 22 3.3 to 5.5 <100 >100 100% 30		@100Vdc	
<b>ENVIRONMENTAL</b> Temperature Response (%) Operating Temperature (°C) Storage Temperature (°C) Humidity	-20/+30 from -40°C to +125°C -40 to +125 -40 to +125 Hermetically Sealed			
<b>PHYSICAL</b> Sensing Element Case Material Weight (grams) Mounting	Ceramic (shear mode) Ceramic Base, Nickel Silver Cover 3.0 Solder			
Calibration supplied: CS-SENS-0100 NIST Traceable Amplitude Calibration at 80Hz				

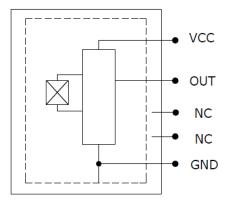
The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. TE Connectivity reserves the right to make changes without further notice to any product herein. TE Connectivity makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does TE Connectivity assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. TE Connectivity does not convey any license under its patent rights nor the rights of others.

## DIMENSIONS



## SCHEMATIC

### ACCELEROMETER



## ORDERING INFORMATION

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

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



#### **NORTH AMERICA**

Measurement Specialties, Inc., a TE Connectivity Company Tel: 800-522-6752 customercare.hmpt@te.com

#### EUROPE

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

#### ASIA

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

#### TE.com/sensorsolutions

MEAS France SAS and Measurement Specialties (China) , Inc., are TE Connectivity companies.

TE Connectivity, TE, TE connectivity (logo) are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2017 TE Connectivity Ltd. All Rights Reserved.