

## MODEL 805M1 ACCELEROMETER

### SPECIFICATIONS

- TO-5 Series Accelerometer
- 3-Wire Voltage Output
- Low-Cost, Embedded Applications
- <0.80mA Power Consumption

The Model 805M1 is a miniature adhesive mount voltage output accelerometer built on a 3-pin TO-5 header. It is available in  $\pm 20g$  to  $\pm 500g$  dynamic ranges and offers a flat frequency response to 12kHz. The accelerometer features a hermetic construction in a TO-5 header configuration. The model 805M1 incorporates a stable piezo-ceramic crystal with low power electronics in a 100% shielded housing suitable for many embedded OEM applications.

The model 805M1 accelerometer is offered in two configurations; one for adhesive mounting and one for stud mounting. An isolating cover option is also included for the standard model.

### FEATURES

- $\pm 20g$  to  $\pm 500g$  Range
- Wide bandwidth up to 12kHz
- TO-5 Configuration
- Hermetically Sealed
- $-40^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$  Operating Range
- Case Grounded Design
- 3.0-5.5 Excitation Voltage

### APPLICATIONS

- Machine Monitoring
- Embedded Preventive Maintenance
- Low-Cost OEM Installation
- Permanent Structural Study
- Embedded Sensing Solution

## PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz and 5Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

### Parameters

#### DYNAMIC

	±20	±50	±100	±200	±500	Notes
Range (g)	±20	±50	±100	±200	±500	
Sensitivity (mV/g)	100	40	20	10	4	±10%
Frequency Response (Hz)	1-8000	1-8000	1-8000	1-8000	1-8000	±1dB
Frequency Response (Hz)	0.4-10000	0.4-10000	0.4-12000	0.4-12000	0.4-12000	±3dB
Natural Frequency (Hz)	34000	34000	34000	34000	34000	
Non-Linearity (%FSO)	±1	±1	±1	±1	±1	
Transverse Sensitivity (%)	5	5	5	5	5	
Shock Limit (g)	5000	5000	5000	5000	5000	
Residual Noise (g RMS)	0.001	0.001	0.003	0.003	0.005	Broadband 1Hz to 10kHz

#### ELECTRICAL

Bias Voltage (Vdc)	Exc Voltage / 2	
Total Supply Current (mA)	<0.80	
Excitation Voltage (Vdc) <sup>1</sup>	3.0 to 5.5	
Output Impedance (Ω)	<100	
Insulation Resistance (MΩ)	>100	@50Vdc
Full Scale Output Voltage (V)	±2	
Grounding	Case grounded to mounting surface	

#### ENVIRONMENTAL

Temperature Response (%)	±10
Operating Temperature (°C)	-40 to +100
Storage Temperature (°C)	-54 to +125

#### PHYSICAL

Sensing Element	Piezo-Ceramic
Case Material	Stainless Steel
Weight (grams)	5.0
Mounting	Adhesive or Circuit Board (M3 Stud Mounting for -01 Option)

<sup>1</sup> The model 805M1 can be operated with 2.8V excitation but the full-scale range will be limited.

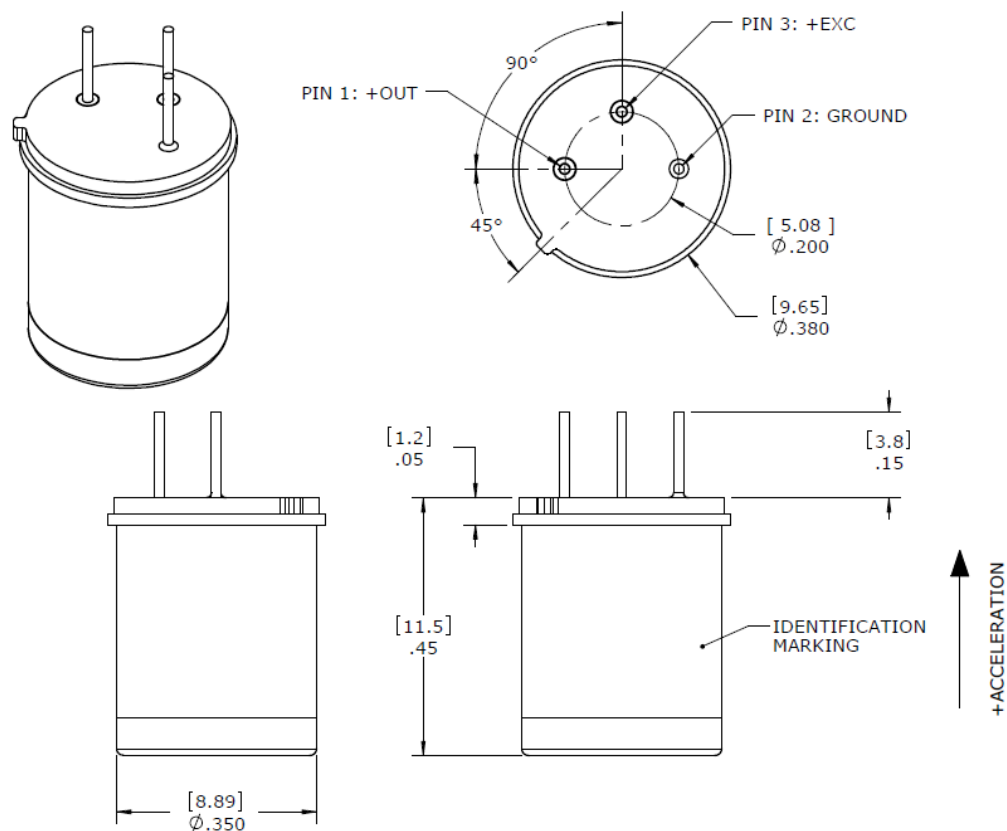
**Calibration supplied:** CS-SENS-0100 NIST Traceable Amplitude Calibration at 80Hz

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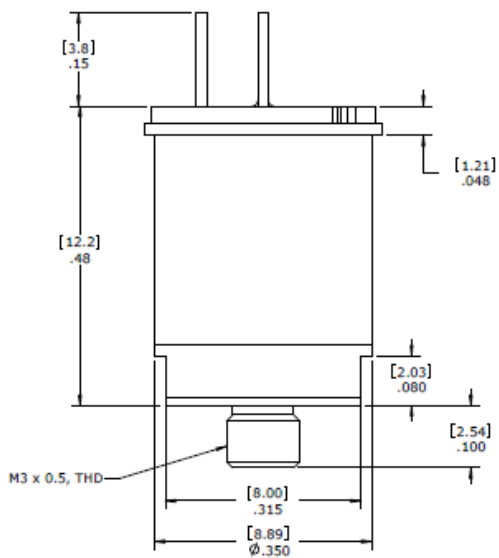
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### DIMENSIONS

#### Standard Model 805M1

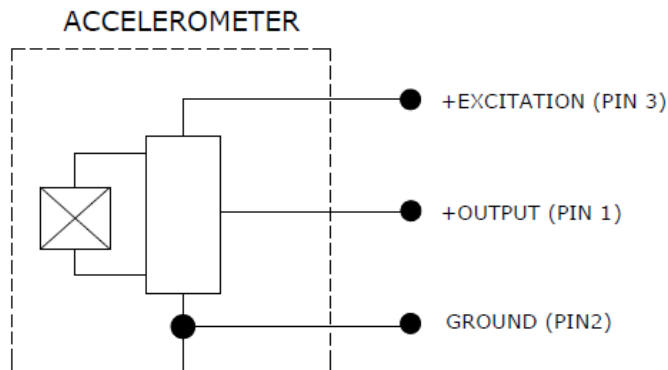


#### Model 805M1 with M3 Mounting Stud Option



## MODEL 805M1 ACCELEROMETER

### SCHEMATIC



### ORDERING INFORMATION

<b>805M1</b>	<b>GGGG</b>	<b>XX</b>
<b>Range</b>		
0020=20g		
0050=50g		
0100=100g		
0200=200g		
0500=500g		
<b>Options</b>		
01=M3 x 0.5 Mounting Stud		
02=Standard 805M1 unit with Isolating Mounting Cover Installed		



Isolating Cover Option

Examples;  
805M1-0020  
Model 805M1, 20g range

805M1-0200-01  
Model 805M1 with M3 mounting stud, 200g range

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