



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°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) ¹	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)

¹ 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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DIMENSIONS

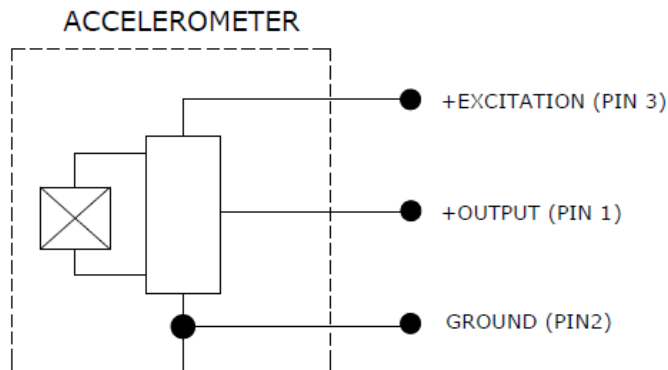
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Technical drawing of a 1/2" NPT female fitting. The drawing shows a side view of the fitting with dimensions in inches (in brackets) and millimeters (below brackets). The dimensions are:

- Top thread length: [3.8] in, .15 mm
- Overall height: [12.2] in, .48 mm
- Bottom thread length: [2.03] in, .080 mm
- Bottom thread diameter: [2.54] in, .100 mm
- Bottom thread pitch: M3 x 0.5, THD
- Bottom thread length: [8.00] in, .315 mm
- Bottom thread diameter: [8.89] in, Ø.350 mm

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SCHEMATIC



ORDERING INFORMATION

805M1	GGGG	XX
Range		
0020=20g		
0050=50g		
0100=100g		
0200=200g		
0500=500g		
Options		
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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