

Model 805M1 Accelerometer



TO-5 Series Accelerometer
3-Wire Voltage Output
Low-Cost, Embedded Applications
<0.10mA 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 $\pm 20g$ and $\pm 200g$ 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 accelerometer is offered in two configurations; one for adhesive mounting and one for stud mounting.

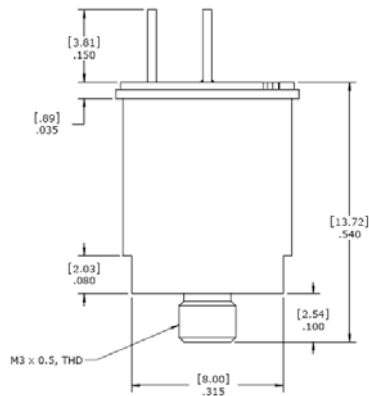
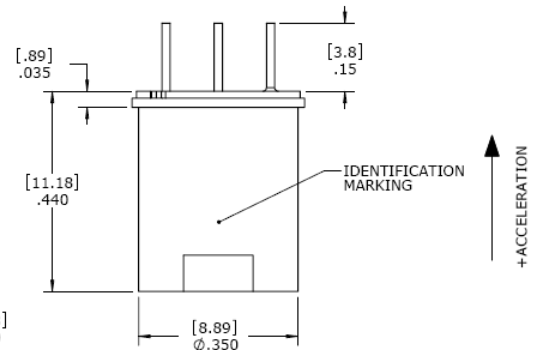
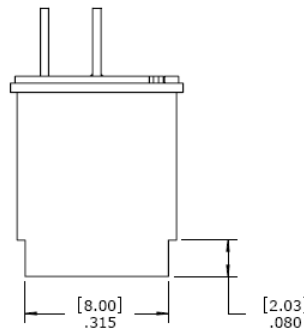
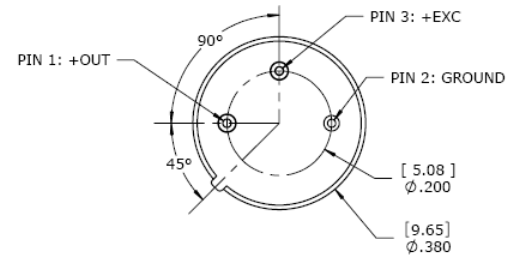
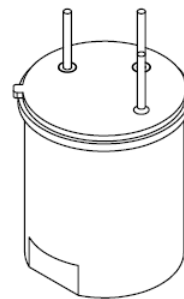
dimensions

FEATURES

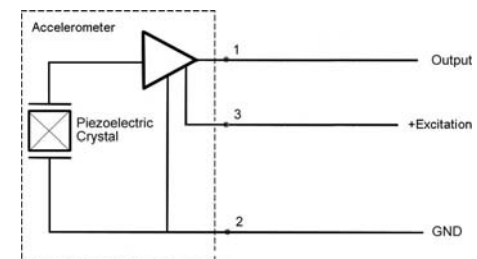
- $\pm 20g$ and $\pm 200g$ Range
- Wide bandwidth up to 12kHz
- TO-5 Configuration
- Hermetically Sealed
- $-54^{\circ}C$ to $+100^{\circ}C$ Operating Range
- Case Grounded Design
- 3.0-5.5 Excitation Voltage

APPLICATIONS

- Machine Monitoring
- Low-Cost OEM Installation
- Permanent Structural Study
- Embedded Sensing Solution
- Data Loggers



M3 Stud Mounting for -01 Option



Model 805M1 Accelerometer

performance specifications

All values are typical at +24°C, 100Hz and 5Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1001 for Embedded AC Accelerometers.

Parameters

DYNAMIC

			Notes
Range (g)	±20	±200	
Sensitivity (mV/g)	100	10	±10%
Frequency Response (Hz)	1-8000	1-8000	±1dB
Frequency Response (Hz)	0.4-10000	0.4-12000	±3dB
Natural Frequency (Hz)	34000	34000	
Non-Linearity (%FSO)	±1	±1	
Transverse Sensitivity (%)	5	5	
Shock Limit (g)	5000	5000	

ELECTRICAL

	Exc Voltage / 2	Exc Voltage / 2	
Bias Voltage (Vdc)	<0.10	<0.10	
Total Supply Current (mA)	<0.10	<0.10	
Excitation Voltage (Vdc) ¹	3.0 to 5.5	3.0 to 5.5	
Output Impedance (Ω)	<100	<100	
Insulation Resistance (MΩ)	>100	>100	@50Vdc
Residual Noise (g RMS)	0.001	0.003	Broadband 1Hz to 10kHz
Grounding	Case grounded to mounting surface		

ENVIRONMENTAL

Temperature Response (%)	±10	±10
Operating Temperature (°C)	-54 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 100Hz

Wiring color code: See schematic

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ordering info

PART NUMBERING Model Number+Range

805M1-GGGG-XX

| | | | Optional Stud Dash Number
| | | | Range (0020 is 20g)

Dash Number
-01

Stud Options
M3 x 0.5 6g

Example: 805M1-0020
Model 805M1, 20g