

Model 805M1 Accelerometer

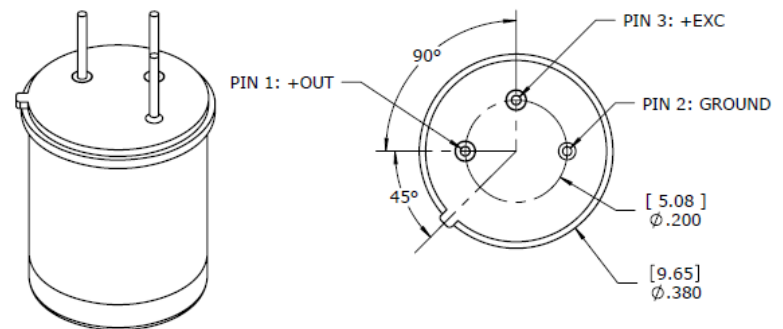


TO-5 Series Accelerometer
3-Wire Voltage Output
Low-Cost, Embedded Applications
<0.10mA Power Consumption



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 $\pm 500g$ 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 accelerometer is offered in two configurations; one for adhesive mounting and one for stud mounting.

dimensions

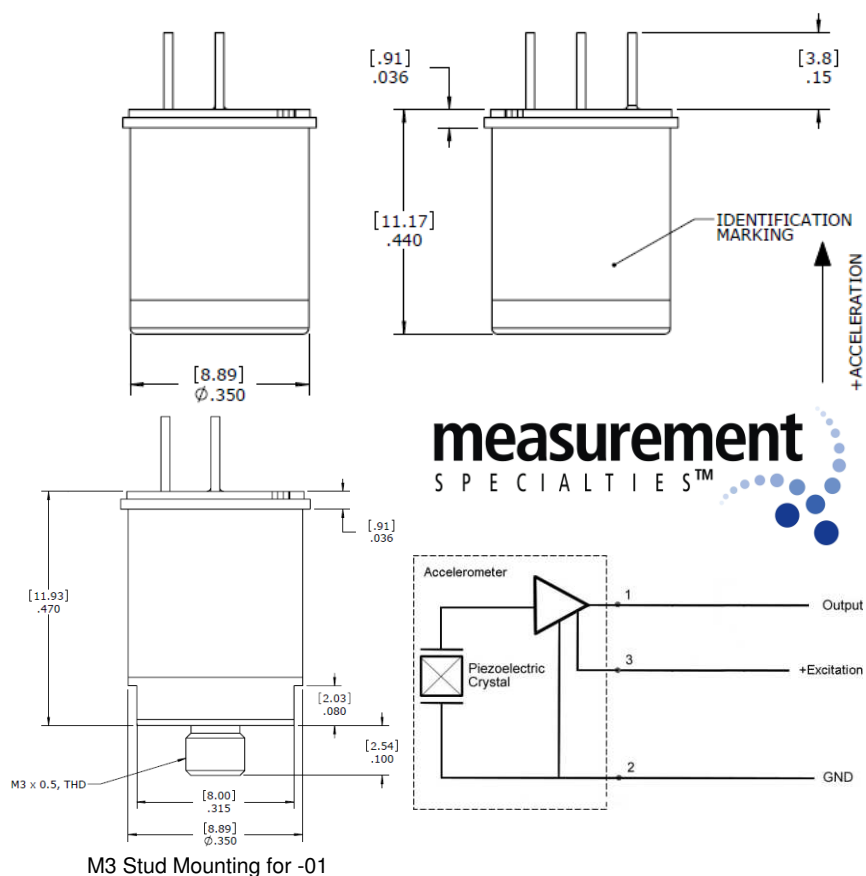


FEATURES

- $\pm 20g$ and $\pm 500g$ 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
- Low-Cost OEM Installation
- Permanent Structural Study
- Embedded Sensing Solution
- Data Loggers



M3 Stud Mounting for -01

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

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

ELECTRICAL

Bias Voltage (Vdc)	Exc Voltage / 2	
Total Supply Current (mA)	<0.60	
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 100Hz

Wiring color code: See schematic

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. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. 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. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

ordering info

PART NUMBERING Model Number+Range

805M1-GGGG-XX

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

Dash Number Stud Options
-01 M3 x 0.5 6g

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