







# **MODEL 805M1 ACCELEROMETER**

### **SPECIFICATIONS**

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

The Model 805M1 is a miniature adhesive mount voltage output accelerometer built on a 3-pin TO-5 header. It is available in ±20g to ±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**

- ±20g to ±500g Range
- Wide bandwidth up to 12kHz
- TO-5 Configuration
- Hermetically Sealed
- -40°C to +100°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						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**

 $\begin{array}{lll} \text{Bias Voltage (Vdc)} & \text{Exc Voltage / 2} \\ \text{Total Supply Current (mA)} & <0.80 \\ \text{Excitation Voltage (Vdc)}^{\,1} & 3.0 \text{ to } 5.5 \\ \text{Output Impedance } (\Omega) & <100 \\ \text{Insulation Resistance (M}\Omega) & >100 \\ \end{array}$ 

Full Scale Output Voltage (V) ±2

Grounding Case grounded to mounting surface

### **ENVIRONMENTAL**

Temperature Response (%)  $\pm 10$ Operating Temperature (°C) -40 to +100Storage 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)

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

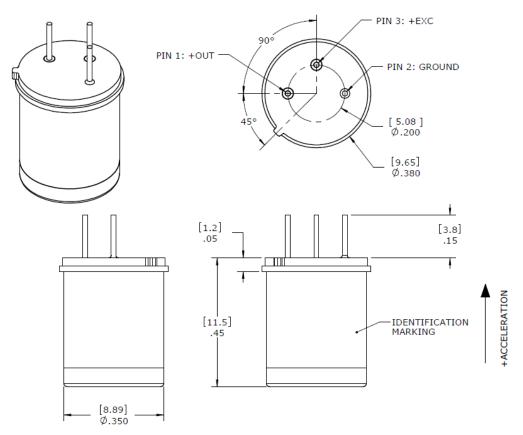
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@50Vdc

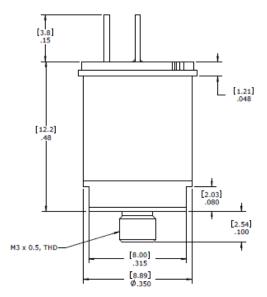
<sup>&</sup>lt;sup>1</sup> The model 805M1 can be operated with 2.8V excitation but the full-scale range will be limited.

# **DIMENSIONS**

# Standard Model 805M1



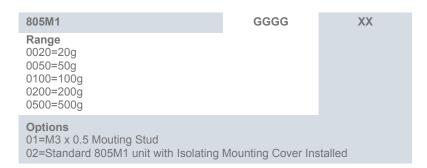
# Model 805M1 with M3 Mounting Stud Option



### **SCHEMATIC**

# + EXCITATION (PIN 3) + OUTPUT (PIN 1) GROUND (PIN2)

# **ORDERING INFORMATION**





**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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