



## MODEL 805 ACCELEROMETER

### SPECIFICATIONS

- ◆ TO-5 Series Accelerometer
- ◆ 2-Wire IEPE Interface
- ◆ Low-Cost, Embedded Applications
- ◆ Wide Bandwidth to 12kHz

The **Model 805** is a miniature adhesive mount IEPE accelerometer built on a 3-pin TO-5 header. It is available in  $\pm 50\text{g}$  to  $\pm 500\text{g}$  dynamic ranges and offers a flat frequency response to 12kHz. The accelerometer features a hermetic construction in a TO-5 header configuration. The model 805 incorporates a stable piezo-ceramic crystal and an integrated charge converter amplifier in a 100% shielded housing suitable for many embedded OEM applications.

The model 805 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

- ◆  $\pm 50\text{g}$  to  $\pm 500\text{g}$  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

### 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 4mA excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

### Parameters

#### DYNAMIC

|                            | ±50       | ±100      | ±500      | Notes                            |
|----------------------------|-----------|-----------|-----------|----------------------------------|
| Range (g)                  | ±50       | ±100      | ±500      |                                  |
| Sensitivity (mV/g)         | 100       | 50        | 10        | ±10% (see Note 1 for ±5% option) |
| Frequency Response (Hz)    | 1-8000    | 1-8000    | 1-8000    | ±1dB                             |
| Frequency Response (Hz)    | 0.3-10000 | 0.3-10000 | 0.3-12000 | ±3dB                             |
| Natural Frequency (Hz)     | 34000     | 34000     | 34000     |                                  |
| Non-Linearity (%FSO)       | ±1        | ±1        | ±1        |                                  |
| Transverse Sensitivity (%) | 5         | 5         | 5         |                                  |
| Shock Limit (g)            | 5000      | 5000      | 5000      |                                  |
| Residual Noise (g RMS)     | 0.0004    | 0.0005    | 0.0009    | Broadband 1Hz to 10kHz           |

#### ELECTRICAL

|                               |                                   |                  |
|-------------------------------|-----------------------------------|------------------|
| Compliance Voltage (Vdc)      | 18 to 30                          |                  |
| Excitation Current (mA)       | 2 to 10                           |                  |
| Bias Voltage (Vdc)            | 8 to 12                           | Room Temperature |
| Bias Voltage (Vdc)            | 6 to 13                           | -40 to +100°C    |
| Output Impedance (Ω)          | <100                              |                  |
| Full Scale Output Voltage (V) | ±5                                |                  |
| Grounding                     | Case grounded to mounting surface |                  |

#### ENVIRONMENTAL

|                            |             |                           |
|----------------------------|-------------|---------------------------|
| Temperature Response (%)   | ±10         |                           |
| Operating Temperature (°C) | -40 to +100 | +120°C option, see Note 2 |
| 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> Contact factory for model number to order with ±5% sensitivity tolerance

<sup>2</sup> Contact factory for model number to order with +120°C operating temperature

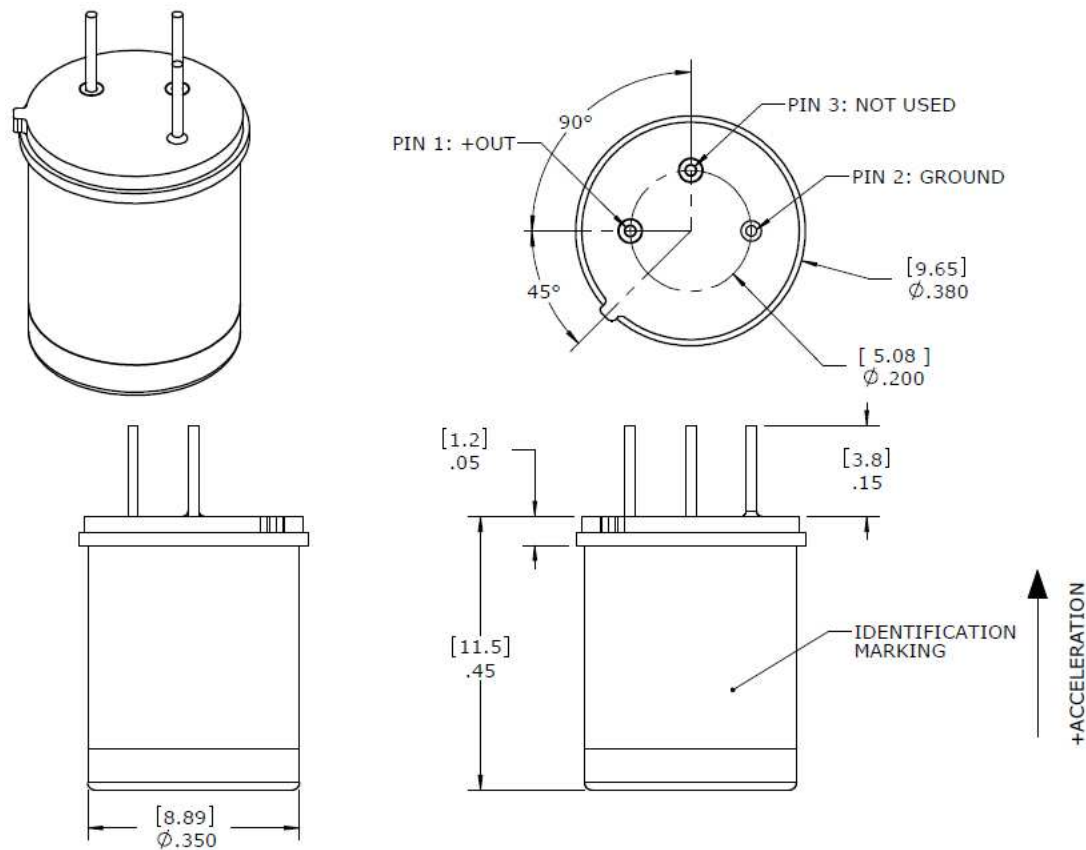
**Calibration supplied:** CS-SENS-0100 NIST Traceable Amplitude Calibration at 80Hz

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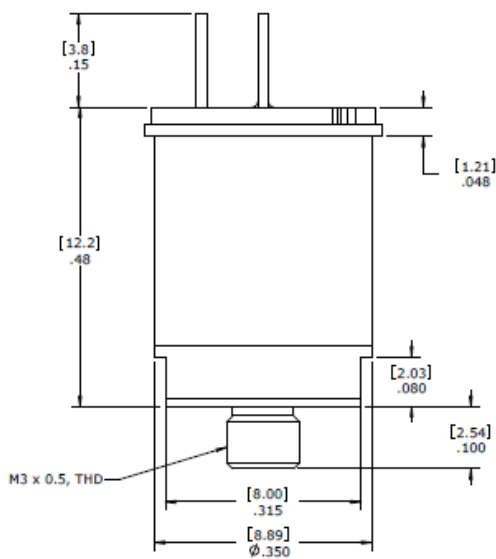
MODEL 805 ACCELEROMETER

DIMENSIONS

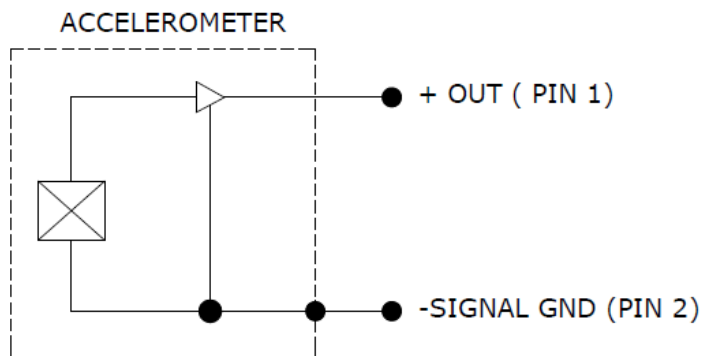
Standard Model 805



Model 805 with M3 Mounting Stud Option



### SCHEMATIC



### ORDERING INFORMATION

805

GGGG

XX

**Range**

0050=50g

0100=100g

0500=500g

**Options**

01=M3 x 0.5 Mounting Stud

02=Standard 805 unit with Isolating Mounting Cover Installed



Isolating Cover Option

Examples;

805-0050

Model 805, 50g range

805-0100-01

Model 805 with M3 mounting stud, 100g range

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