







# **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  $\pm 50$ g to  $\pm 500$ 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 piezoceramic 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**

- ±50g to ±500g Range
- Wide bandwidth up to 12kHz
- TO-5 Configuration
- Hermetically Sealed
- -40°C to +100°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  $\pm 24^{\circ}$ C, 80Hz and 4mA excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

| Parameters                                  |                 |           |           |                                  |
|---|-----------------|-----------|-----------|----------------------------------|
| DYNAMIC                                     |                 |           |           | 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      | Due selle see did le de did le   |
| 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                               | .40             |           |           |                                  |
| Temperature Response (%)                    | ±10             |           |           | 10000 antian and Nata 0          |
| 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 |           |           |                                  |
|   |                 |           |           |                                  |

<sup>&</sup>lt;sup>1</sup> Contact factory for model number to order with ±5% sensitivity tolerance

5.0

Weight (grams)

Mounting

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

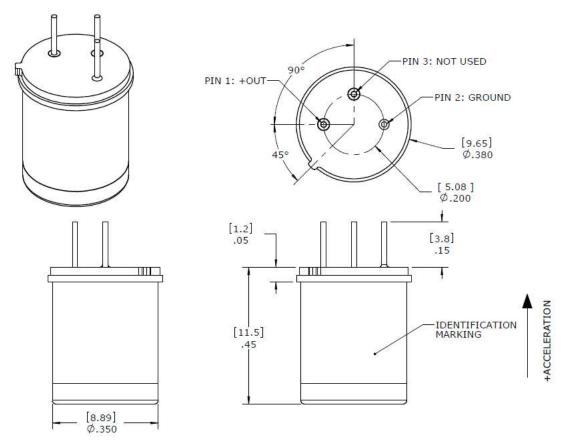
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Adhesive or Circuit Board (M3 Stud Mounting for -01 Option)

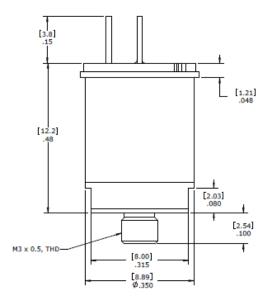
<sup>&</sup>lt;sup>2</sup> Contact factory for model number to order with +120°C operating temperature

# **DIMENSIONS**

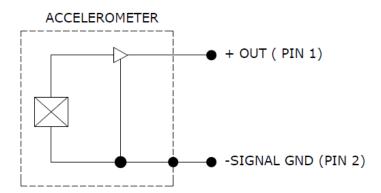
#### Standard Model 805



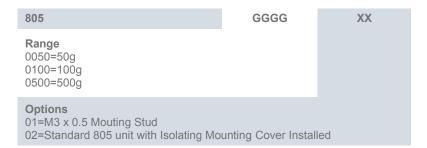
# Model 805 with M3 Mounting Stud Option



#### **SCHEMATIC**



#### ORDERING INFORMATION





**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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