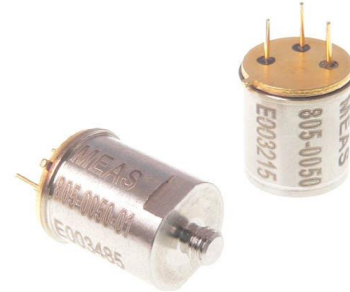


# Model 805 Accelerometer



## TO-5 Series Accelerometer 2-Wire IEPE Interface Low-Cost, Embedded Applications Wide Bandwidth to 15kHz



**The Model 805** is a miniature adhesive mount IEPE accelerometer built on a 3-pin TO-5 header. It is available in  $\pm 50g$  and  $\pm 500g$  dynamic ranges and offers a flat frequency response to 15kHz. 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 accelerometer is offered in two configurations; one for adhesive mounting and one for stud mounting.

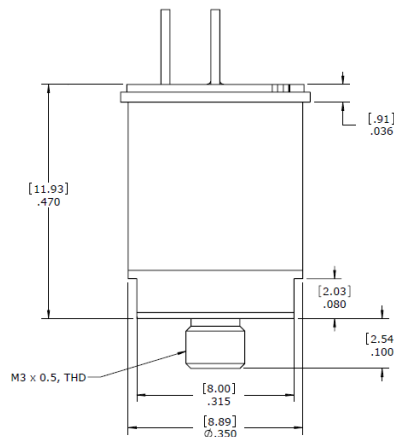
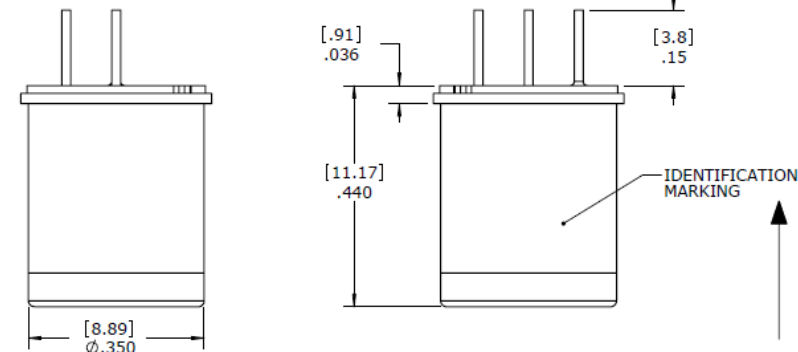
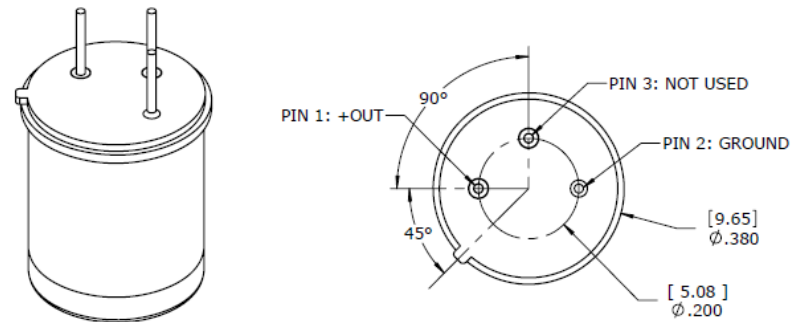
### FEATURES

- $\pm 50g$  and  $\pm 500g$  Range
- Wide bandwidth up to 15kHz
- TO-5 Configuration
- Hermetically Sealed
- $-40^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$  Operating Range
- Case Grounded Design

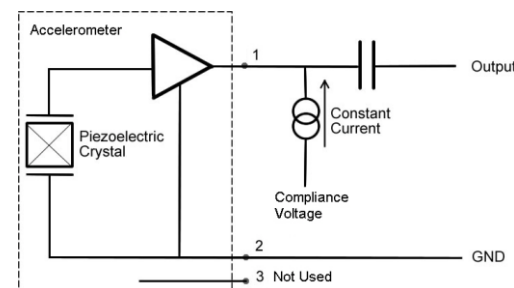
### APPLICATIONS

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

### dimensions



M3 Stud Mounting for -01



# Model 805 Accelerometer

## performance specifications

All values are typical at +24°C, 100Hz and 4mA 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                    |   |           | Notes                            |
|-------------------------------|---|-----------|----------------------------------|
| <b>DYNAMIC</b>                |   |           |                                  |
| Range (g)                     | ±50   | ±500      |                                  |
| Sensitivity (mV/g)            | 100   | 10        | ±10% (see Note 1 for ±5% option) |
| Frequency Response (Hz)       | 1-8000  | 1-8000    | ±1dB                             |
| Frequency Response (Hz)       | 0.3-10000   | 0.3-12000 | ±3dB                             |
| Natural Frequency (Hz)        | 34000   | 34000     |                                  |
| Non-Linearity (%FSO)          | ±1  | ±1        |                                  |
| Transverse Sensitivity (%)    | 5   | 5         |                                  |
| Shock Limit (g)               | 5000  | 5000      |                                  |
| Residual Noise (g RMS)        | 0.0004  | 0.0009    | Broadband 1Hz to 10kHz           |
| <b>ELECTRICAL</b>             |   |           |                                  |
| 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                           |           |                                  |
| <b>ENVIRONMENTAL</b>          |   |           |                                  |
| Temperature Response (%)      | ±10   |           |                                  |
| Operating Temperature (°C)    | -40 to +100   |           | +120°C option, see Note 2        |
| Storage Temperature (°C)      | -54 to +125   |           |                                  |
| <b>PHYSICAL</b>               |   |           |                                  |
| 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 100Hz

**Wiring color code:** See schematic

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## ordering info

PART NUMBERING Model Number+Range

805-GGGG-XX

I I\_\_\_\_\_ Optional Stud Dash Number  
I\_\_\_\_\_ Range (0050 is 50g)

Dash Number Stud Options  
-01 M3 x 0.5 6g

Example: 805-0050  
Model 805, 50g