

# Class I Div 2 certified low-frequency accelerometer

## 787-500-D2




### SPECIFICATIONS

|  |                          |  |
|--|--------------------------|--|
| Sensitivity, $\pm 5\%$ , 25°C              |                          | 500 mV/g   |
| Acceleration range, VDC > 22 V             |                          | 10 g peak  |
| Amplitude nonlinearity                     |                          | 1%   |
| Frequency response <sup>1</sup> :          | $\pm 10\%$               | 0.5 - 5,000 Hz   |
|  | $\pm 3$ dB               | 0.2 - 10,000 Hz  |
| Resonance frequency                        |                          | 22 kHz   |
| Transverse sensitivity, max                |                          | 5% of axial  |
| Temperature response:                      | -20°C                    | -10%   |
|  | +120°C                   | +10%   |
| Power requirement:                         | Voltage source           | 18 - 28 VDC  |
|  | Current regulating diode | 2 - 10 mA  |
| Electrical noise, equiv. g <sup>1</sup> :  |                          |  |
| Broadband                                  | 2.5 Hz to 25 kHz         | 250 $\mu$ g  |
| Spectral                                   | 10 Hz                    | 2.5 $\mu$ g/ $\sqrt{\text{Hz}}$                                    |
|  | 100 Hz                   | 1.5 $\mu$ g/ $\sqrt{\text{Hz}}$                                    |
|  | 1,000 Hz                 | 1.5 $\mu$ g/ $\sqrt{\text{Hz}}$                                    |
| Output impedance, max                      |                          | 100 $\Omega$   |
| Bias output voltage                        |                          | 12 VDC   |
| Grounding                                  |                          | case isolated, internally shielded                                 |
| Temperature range                          |                          | -50° to +120°C   |
| Vibration limit                            |                          | 500 g peak   |
| Shock limit, min                           |                          | 5,000 g peak   |
| Electromagnetic sensitivity, equiv. g, max |                          | 70 $\mu$ g/gauss   |
| Sealing                                    |                          | hermetic   |
| Base strain sensitivity, max               |                          | 0.0002 g/ $\mu$ strain   |
| Sensing element design                     |                          | PZT, shear   |
| Weight                                     |                          | 145 grams  |
| Case material                              |                          | 316L stainless steel   |
| Mounting                                   |                          | 1/4-28 captive hex head screw,<br>0.046" diameter safety wire hole |
| Output connector                           |                          | 2 pin, MIL-C-5015 style  |
| Mating connector                           |                          | R6D2   |
| Recommended cabling                        |                          | J10 / J9T2A, <100 ft.  |

**Notes:** <sup>1</sup> Frequency response limits and spectral noise values are typical.

**Accessories supplied:** 1/4-28 captive hex head screw; calibration data (level 2)

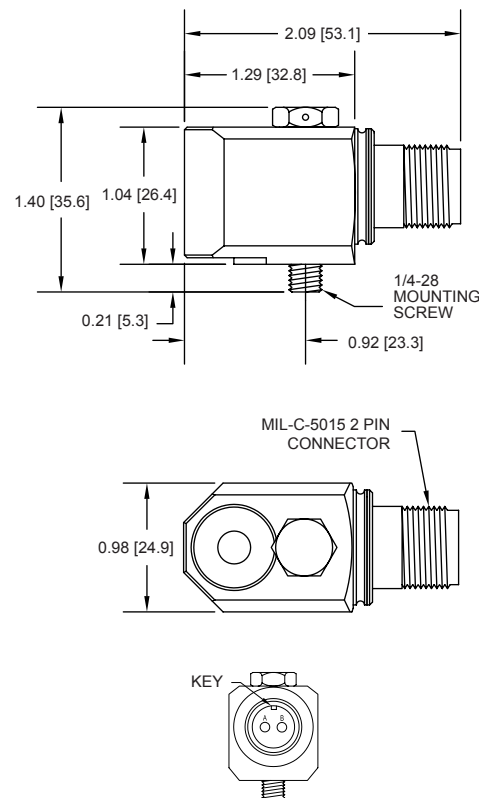
### Certifications

|   |                                  |   |                 |   |
|---|----------------------------------|---|-----------------|---|
|   | Class I, Div 2 Groups A, B, C, D |  | II 3 G          |  |
|   | Class I, Zone 2                  |   | Ex nA IIC T4 Gc |   |
| AEx/Ex nA II T4   |                                  |   |                 |   |
| Tamb: -50°C to 120°C  |                                  |   |                 |   |
| Must be installed per 13029. • Ambient temperature range depends on the type cable used during installation. • Cable with FEP jacket, Ta=-50°C to +120°C. • Cable with Santoprene jacket, Ta=-45°C to +115°C. |                                  |   |                 |   |



### Key features

- Class I, Div 2/Zone 2 certified - non-incendive
- High sensitivity
- Extended low frequency response
- Manufactured in ISO 9001 facility



| Connections  |               |
|--------------|---------------|
| Function     | Connector pin |
| power/signal | A             |
| common       | B             |
| ground       | shell         |

Note: Due to continuous process improvement, specifications are subject to change without notice. This document is cleared for public release.