

Low-power, low-voltage accelerometer

LPA100T

SPECIFICATIONS

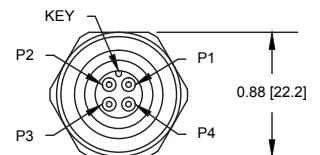
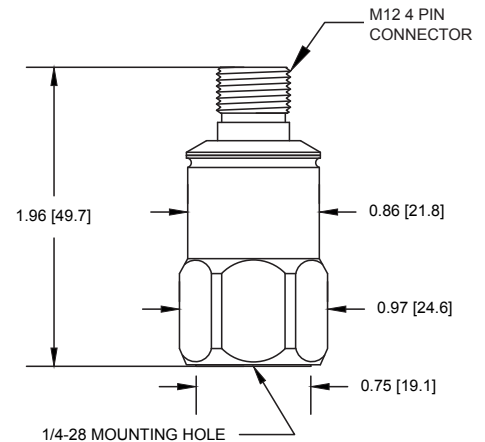
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|---|--------------------|------------------------------------|
| Sensitivity, $\pm 5\%$, 25°C | | 50 mV/g |
| Acceleration range | | 25 g peak |
| Amplitude nonlinearity | | 1% |
| Frequency response: | $\pm 5\%$ | 3 - 5,000 Hz |
| | $\pm 10\%$ | 1 - 9,000 Hz |
| | ± 3 dB | 0.3 - 15,000 Hz |
| Resonance frequency | | 30 kHz |
| Transverse sensitivity, max | | 5% of axial |
| Sensitivity variation with temp: | -25°C | -10% |
| | +120°C | +10% |
| Temperature sensor: | | |
| Temperature range | | -40°C to +120°C |
| Voltage range | | +2.52 to +0.77 V |
| Temperature signal sensitivity | | -10.9 mV/°C |
| Voltage at 0°C | | +2.1 V |
| Power requirement: | Voltage source | 3.0 - 5.5 VDC |
| | Current (no cable) | 100 μ A, max |
| Electrical noise, equiv. g: | | |
| Broadband | 2.5 Hz to 25 kHz | 660 μ g |
| Spectral | 10 Hz | 60 μ g/ $\sqrt{\text{Hz}}$ |
| | 100 Hz | 16 μ g/ $\sqrt{\text{Hz}}$ |
| | 1,000 Hz | 5 μ g/ $\sqrt{\text{Hz}}$ |
| Output impedance, max | | 1,000 Ω |
| Bias output voltage, settling time, 25°C | | <10 ms |
| Including temp effects | | 1.5 VDC $\pm 5\%$ |
| Grounding | | case isolated, internally shielded |
| Vibration limit | | 500 g peak |
| Shock limit | | 5,000 g peak |
| Electromagnetic sensitivity, equiv. g, max | | 150 μ g/gauss |
| Sealing | | hermetic |
| Base strain sensitivity, max | | 0.0002 g/ μ strain |
| Sensing element design | | PZT, shear |
| Weight | | 90 grams |
| Case material | | 316L stainless steel |
| Mounting | | 1/4-28 UNF tapped hole |
| Mating connector | | M12 style, socket |
| Recommended cabling | | J12 / J9T4A |

Accessories supplied: SF6 mounting stud; calibration data (level 2)



Key features

- 300 μ W power consumption
- BOV settling time of <10 ms
- Certified version available for use in hazardous areas (LPA100T-D2)
- Internal temperature sensor
- Manufactured in ISO 9001 facility



| Connections | |
|--------------|---------------|
| Function | Connector pin |
| power | 1 |
| common | 2 |
| accel signal | 3 |
| temp signal | 4 |
| shield* | shell |

*For installations requiring CE conformance, cable shield must be tied to sensor case.



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