

Low-power, low-voltage accelerometer

LPA100T

SPECIFICATIONS

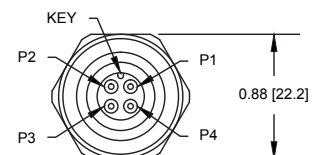
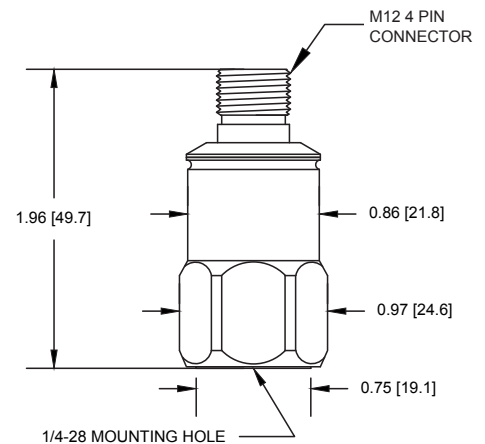
Sensitivity, $\pm 5\%$, 25°C		50 mV/g
Acceleration range		25 g peak
Amplitude nonlinearity		1%
Frequency response:	$\pm 5\%$	3 - 5,000 Hz
	$\pm 10\%$	1 - 9,000 Hz
	± 3 dB	0.3 - 15,000 Hz
Resonance frequency		30 kHz
Transverse sensitivity, max		5% of axial
Sensitivity variation with temp:	-25°C	-10%
	+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.