

Intrinsically safe low-frequency accelerometer

786-500-M12-IS



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SPECIFICATIONS

Sensitivity, $\pm 5\%$, 25°C	500 mV/g
Acceleration range, VDC > 22 V	10 g peak
Amplitude nonlinearity	1%
Frequency response ¹ :	
$\pm 5\%$	0.7 - 5,000 Hz
$\pm 10\%$	0.5 - 9,000 Hz
± 3 dB	0.2 - 14,000 Hz
Resonance frequency	30 kHz
Transverse sensitivity, max	5% of axial
Temperature response:	
-25°C	-10%
+120°C	+10%
Power requirement:	
Voltage source	18 - 30 VDC
Current regulating diode	2 - 10 mA
Electrical noise, equiv. g ¹ :	
Broadband 2.5 Hz to 25 kHz	250 μ g
Spectral 10 Hz	2.5 μ g/ $\sqrt{\text{Hz}}$
100 Hz	1.5 μ g/ $\sqrt{\text{Hz}}$
1,000 Hz	1.5 μ g/ $\sqrt{\text{Hz}}$
Output impedance, max	100 Ω
Bias output voltage	12 VDC
Grounding	case isolated, internally shielded
Temperature range	-50° to +120°C
Vibration limit	500 g peak
Shock limit	5,000 g peak
Electromagnetic sensitivity, equiv. g, max	70 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
Output connector	M12 style, 4 pin

Notes: ¹ Frequency response limits and spectral noise values are typical.

Accessories supplied: SF6M-1 mounting stud; calibration data (level 2)

Certifications

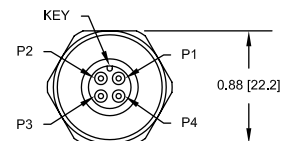
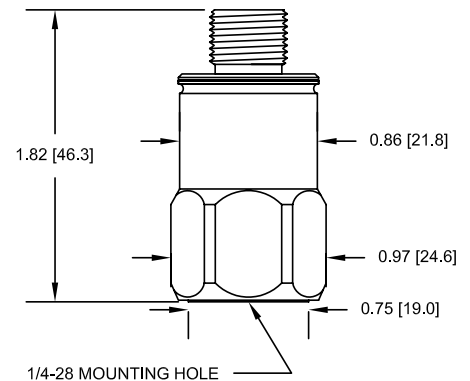
	Class I, Div 1 Groups A, B, C, D Class II, Div 1 Groups E, F, G Class III Class I Zone 0 AEx/Ex ia IIC T4 Ta = -50°C to 120°C		II 1 G Ex ia IIC T4 Ga Ta = -50°C to 120°C	

Must be installed per document 12879. For application in explosive atmospheres caused by gases, vapours or mists and where the use of apparatus of category 1G is required, electrostatic charges on the cable and non-metallic parts of the enclosure shall be avoided. The ambient temperature range for these applications is -40°C to +80°C.



Key features

- Class I, Div 1/Zone 0/1 certified intrinsically safe
- High sensitivity
- Extended low frequency response
- Manufactured in ISO 9001 facility



Connections	
Function	Connector pin
power/signal	1
common	2
N/C	3
N/C	4
ground	shell

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