

# Intrinsically safe low-frequency accelerometer

## 786-500-IS

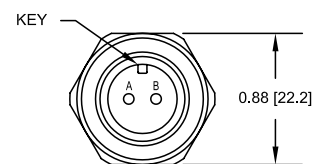
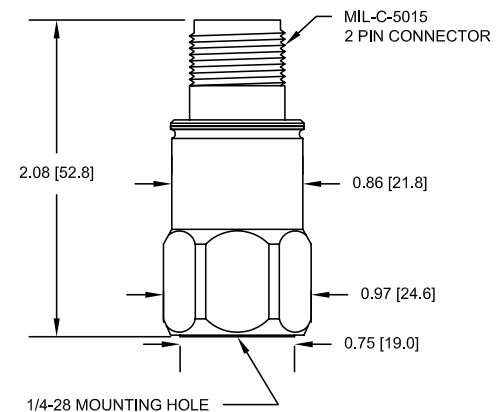
### SPECIFICATIONS

Sensitivity, $\pm 5\%$ , 25°C		500 mV/g
Acceleration range, VDC > 22 V		10 g peak
Amplitude nonlinearity		1%
Frequency response <sup>1</sup> :	$\pm 5\%$	0.7 - 5,000 Hz
	$\pm 10\%$	0.5 - 9,000 Hz
	$\pm 3$ dB	0.2 - 14,000 Hz
Resonance frequency		30 kHz
Transverse sensitivity, max		5% of axial
Temperature response:	-20°C	-10%
	+120°C	+10%
<b>Power requirement:</b>		
Voltage source		18 - 30 VDC
Current regulating diode		2 - 10 mA
<b>Electrical noise, equiv. g:</b>		
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		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		90 grams
Case material		316L stainless steel
Mounting		1/4-28 captive hex head screw, 0.046" diameter safety wire hole
Output connector		2 pin, MIL-5015 style
Mating connector		R6 type
Recommended cabling		J10 / J9T2A, <100 ft.



### Key features

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



Notes: <sup>1</sup> Frequency response limits, spectral and noise values are typical.  
Accessories supplied: 1/4-28 captive hex head screw; calibration data (level 2)

### Certifications

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

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.

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