

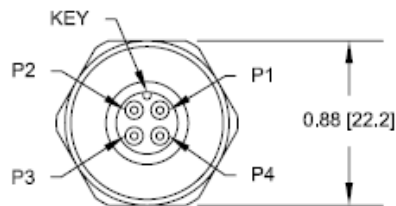
# Class I, Div 2 certified low-frequency accelerometer

## 786-500-M12-D2

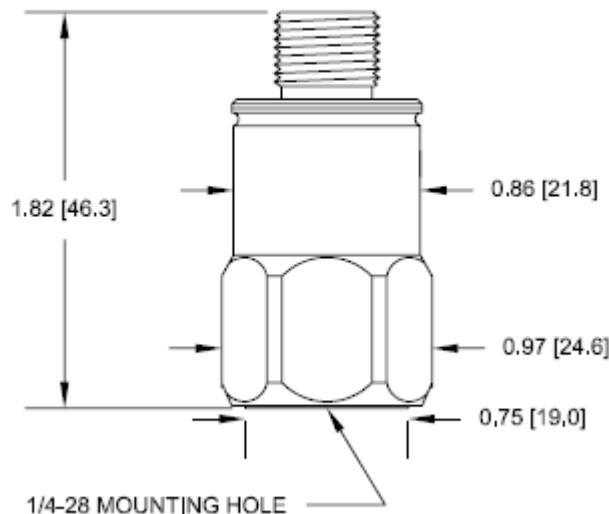


Wilcoxon's top-exit broadband sensor is certified for usage in hazardous areas. The high-sensitivity accelerometer offers an interior sensing element capable of producing 500 mV/g for clear signals at low vibration levels. The low-end frequency response makes it ideal for slow-speed applications such as wind turbine generators and cooling towers. A high top-end frequency response offers clear signals for early bearing fault detection, gearbox wear, and other high-speed applications. The sensor is supplied with the popular M12 connector.

The 786-500-M12-D2 is classified for usage in Class I Division 2/Zone 2 locations where ignitable gases, vapors or liquids are handled, processed or used but are not usually present during normal operation and can only escape through accidental rupture, breakdown or leaks.




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




### Key features

- High sensitivity
- Extended low frequency response
- Clear signals at low vibration levels
- Class I, Div 2/Zone 2 certified, non-incendive
- Comes with industry popular M12 connector
- Hermetically sealed
- ESD-protected
- Reverse wiring protection
- Manufactured in an approved ISO 9001 facility

### Certifications

 Class I, Div 2 Groups A, B, C, D  
Class I, Zone 2  
AEx/Ex nA II T4  
Tamb: -50°C to 120°C

 II 3 G  
Ex nA IIC T4 Gc

For hazardous area locations, sensor must be installed in accordance with installation instructions or local code requirements.

Special conditions for safe use:  
ambient temperature range is dependent on the cable type used:

FEP (Teflon): -50°C to 120°C  
Santoprene: -45°C to 115°C



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

Wilcoxon Sensing Technologies  
20511 Seneca Meadows Parkway  
Germantown, MD 20876  
info@wilcoxon.com

Tel: (301) 330 8811  
Fax: (301) 330 8873  
www.wilcoxon.com

Wilcoxon Sensing Technologies  
An Amphenol Company

# Class I, Div 2 certified low-frequency accelerometer

## 786-500-M12-D2

### SPECIFICATIONS

<b>Sensitivity, <math>\pm 5\%</math>, 25° C</b>	500 mV/g
<b>Acceleration range, VDC &gt; 22V</b>	10 g peak
<b>Amplitude nonlinearity</b>	1%
<b>Frequency response<sup>1</sup>:</b>	
$\pm 5\%$	0.7 - 5,000 Hz
$\pm 10\%$	0.5 - 5,000 Hz
$\pm 3$ dB	0.2 - 10,000 Hz
<b>Resonance frequency</b>	30 kHz
<b>Transverse sensitivity, max</b>	5% of axial
<b>Temperature response:</b>	
-25° 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<sup>1</sup>:</b>	
Broadband	2.5 Hz to 25 kHz
Spectral	10 Hz
	100 Hz
	1,000 Hz
	250 $\mu$ g
	2.5 $\mu$ g/ $\sqrt{\text{Hz}}$
	1.5 $\mu$ g/ $\sqrt{\text{Hz}}$
	1.5 $\mu$ g/ $\sqrt{\text{Hz}}$
<b>Output impedance, max</b>	100 $\Omega$
<b>Bias output voltage</b>	12 VDC
<b>Grounding</b>	case isolated, internally shielded
<b>Temperature range</b>	-50 to +120° C
<b>Vibration limit</b>	500 g peak
<b>Shock limit</b>	5,000 g peak
<b>Electromagnetic sensitivity, equiv. g, max</b>	70 $\mu$ g/gauss
<b>Sealing</b>	hermetic
<b>Base strain sensitivity, max</b>	0.0002 g/ $\mu$ strain
<b>Sensing element design</b>	PZT, shear
<b>Weight</b>	90 grams
<b>Case material</b>	316L stainless steel
<b>Mounting</b>	1/4-28 UNF tapped hole
<b>Output connector</b>	M12 style, 4 pin

### Contact

Wilcoxon Sensing  
Technologies

20511 Seneca Meadows Parkway  
Germantown MD 20876, USA

Tel: +1 301 330 8811  
Fax: +1 301 330 8873

info@wilcoxon.com

www.wilcoxon.com

### Accessories supplied:

- Calibration data (level 2)
- SF6M mounting stud

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

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

Wilcoxon Sensing Technologies  
20511 Seneca Meadows Parkway  
Germantown, MD 20876  
info@wilcoxon.com

Tel: (301) 330 8811  
Fax: (301) 330 8873  
www.wilcoxon.com

**Wilcoxon Sensing Technologies**  
An Amphenol Company