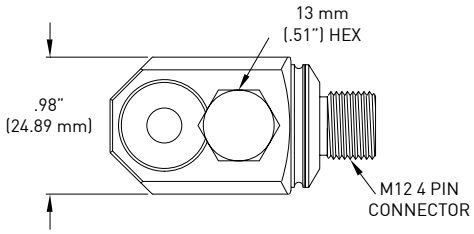
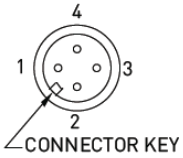
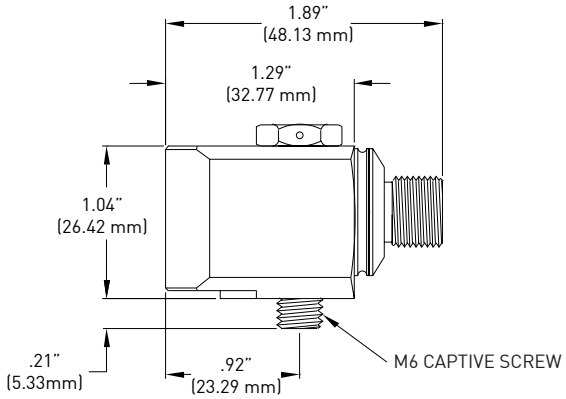
Low-frequency accelerometer with M12 connector

787-500-M12

Wilcoxon's side-exit 787-500-M12 high-sensitivity broadband sensor is supplied with the popular 4 pin M12 connector. The accelerometer offers an interior sensing element capable of producing 500 mV/g. The low-end frequency cutoff of the amplifier is designed to offer clear signals down to 0.2 Hz. The low-end frequency response makes it ideal for slow-speed applications such as wind turbine generators and cooling towers. Broadband frequency response to 10,000 Hz means the sensor is capable of detecting signals of early bearing fault, gearbox wear, and other high-speed applications such as spindles.







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

Key features

- Low profile
- Rugged design
- High sensitivity
- Hermetically sealed
- ESD protected
- Reverse wiring protection
- Clear signals at low vibration levels
- Extended low-end frequency response
- Improved signal-to-noise ratio versus other general purpose accelerometers
- Comes with industry popular M12 connector
- Manufactured in an approved ISO 9001 facility

Certifications

CE

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

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Wilcoxon Sensing Technologies
An Amphenol Company

99155 Rev. C 08/17

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787-500-M12

SPECIFICATIONS

	English	Metric
Sensitivity, ± 5%, 25° C	500 mV/g	51.0 mV/m/sec^2
Acceleration range, VDC >22V	10 g peak	98 m/sec^2 peak
Amplitude nonlinearity	1%	1%
Frequency response[1]:		
± 10%	30 - 300,000 CPM	0.5 - 5,000 Hz
± 3 dB	12 - 600,000 CPM	0.2 - 10,000 Hz
Resonance frequency	1.32 kCPM	22 kHz
Transverse sensitivity, max	5% of axial	5% of axial
Temperature response:		
–25° C	-10%	-10%
+120° C	+10%	+10%
Voltage source	18 - 30 VDC	18 - 30 VDC
Current regulating diode	2 - 10 mA	2 - 10 mA
Electrical noise, equiv g:		
Broadband 2. 5 Hz to 25 kHz	250 µg	2.4 x 10^{-3} m/sec^2/√Hz
Spectral 10 Hz	2.5 µg/√Hz	2.4 x 10^{-5} m/sec^2/√Hz
100 Hz	1.5 µg/√Hz	1.5 x 10^{-5} m/sec^2/√Hz
1000 Hz	1.5 µg/√Hz	1.5 x 10^{-5} m/sec^2/√Hz
Output impedance, max	100 Ω	100 Ω
Bias output voltage	12 VDC	12 VDC
Grounding	case isolated, internally shielded	
Temperature range	-58 to 248° F	-50 to 120° C
Vibration limit	500 g peak	4,900 m/sec^2 peak
Shock limit	5,000 g peak	49,000 m/sec^2 peak
Electromagnetic sensitivity, equiv g, max	70 µg/gauss	6.9 x 10^{-4} m/sec^2/gauss
Sealing	hermetic	hermetic
Base strain sensitivity, max	0.0002 g/µstrain	1.9 x 10^{-3} m/sec^2/µstrain
Sensing element design	PZT, shear	PZT, shear
Weight	5.11 oz	145 g
Case material	316L stainless steel	316L stainless steel
Mounting	M6 captive screw, 0.046” diameter safety wire hole	
Output connector	M12, 4 pin	M12, 4 pin
Recommended cabling	J10/J9T2A	J10/J9T2A

Contact

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Note: [1] Frequency response limits, spectral and noise values are typical.

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