Extremely low-frequency accelerometer

786LF series

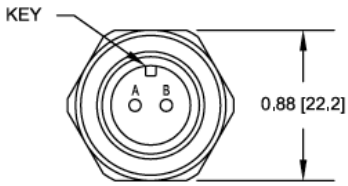
Wilcoxon's 786LF series delivers clear signals at low frequency, low vibration levels. The low frequency series has superior performance down to 0.1 Hz. The sensors are optimized with extended low-end frequency response and improved signal-to-noise ratio compared to other general purpose models. The sensors are designed with unique circuitry helping prevent washover distortion, a condition that can occur when both high amplitude, slow and fast frequencies are present. The 786LF series can be used for detecting vibration on slow turning machinery such as cooling tower fans and slow-speed gearboxes.

Key features

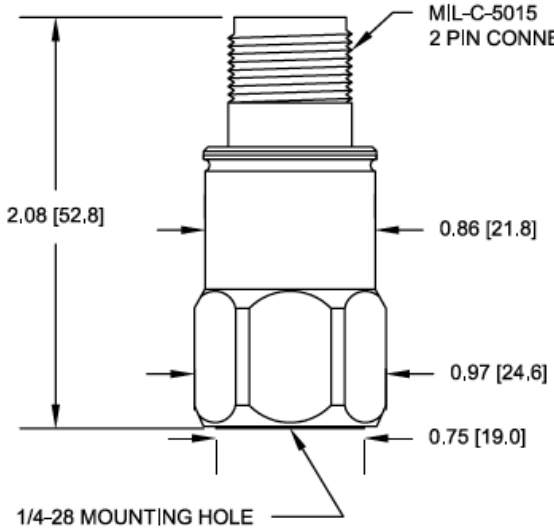
- High sensitivity
- Extended low end frequency response
- Clear signals at low vibration levels
- Low frequency performance
- Hermetically sealed
- ESD-protected
- Reverse wiring protection
- Manufactured in an approved ISO 9001 facility

Certifications

CE



MIL-C-5015 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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Wilcoxon Sensing Technologies
An Amphenol Company

99227 Rev. C.1 02/18

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786LF series

SPECIFICATIONS

	786LF	786LF-250	786LF-500
Sensitivity, ±5%, 25° C	100 mV/g	250 mV/g	500 mV/g
Acceleration range, VDC > 22 V	50 g peak	20 g peak	10 g peak
Amplitude nonlinearity	1%		
Frequency response:			
± 5%	0.35 - 5,000 Hz (18 - 300,000 CPM)		
± 10%	0.25 - 8,000 Hz (12 - 480,000 CPM)		
± 3 dB	0.10 - 13,000 Hz (6 - 780,000 CPM)		
Resonance frequency, nominal	30 kHz (1.80 kCPM)		
Transverse sensitivity, max	5% of axial		
Temperature response:			
–25° C	–10%		
+120° C	+15%		
Power requirement:			
Voltage source	18 - 30 VDC		
Current regulating diode	2 - 10 mA		
Electrical noise, equiv. g:			
Broadband 2.5 Hz to 25 kHz	400 µg rms	350 µg rms	250 µg rms
Spectral 10 Hz	5.0 µg/√Hz	4.0 µg/√Hz	3.0 µg/√Hz
100 Hz	3.0 µg/√Hz	3.0 µg/√Hz	2.0 µg/√Hz
1,000 Hz	3.0 µg/√Hz	3.0 µg/√Hz	2.0 µg/√Hz
Output impedance, max	100 Ω	200 Ω	300 Ω
Bias output voltage	13 VDC		
Grounding	case isolated, internally shielded		
Temperature range	–50 to +120° C (–58 to +248° F)		
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		
Base strain sensitivity, max	0.0002 g/µstrain (1.9 x 10^{-3} m/sec^2/µstrain)		
Sensing element design	PZT, shear		
Weight	90 grams (3.17 oz)		
Case material	316L stainless steel		
Mounting	1/4-28 UNF tapped hole		
Output connector	2-pin, MIL-C-5015 style		
Mating connector	R6 type		
Recommended cabling	J10 / J9T2A, <100 ft (30 m)		

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Contact

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Accessories supplied:

- SF6 mounting stud (metric mounting available on request)
- Calibration data (level 2)