

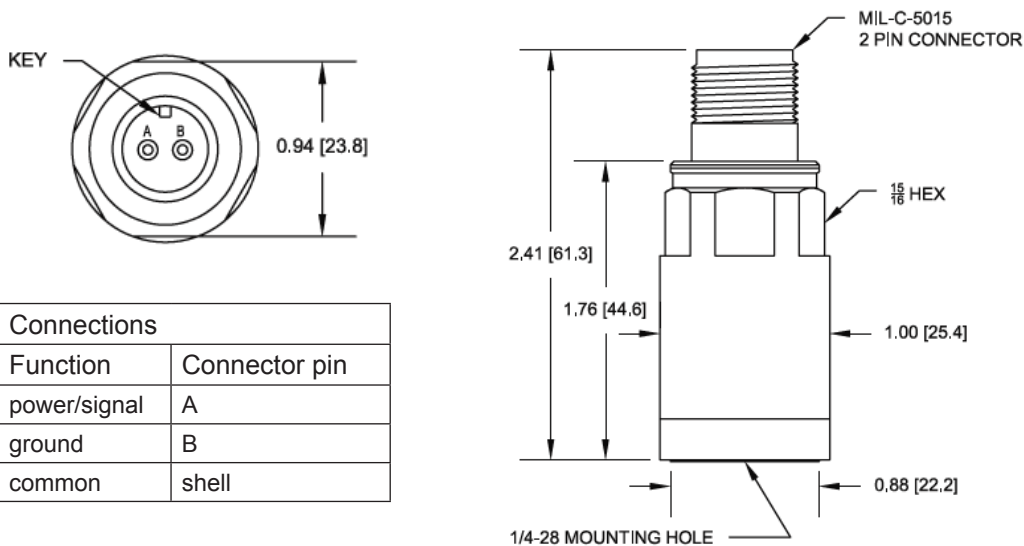
Premium low-frequency accelerometer

793L



Low-frequency measurements for condition monitoring can present some of the biggest challenges for vibration detection. Applications typically include slow-speed agitators, wind turbines, cooling towers, semiconductor lithography, and seismic monitoring. Low-frequency measurements and low levels of acceleration are closely related, making the electronic circuitry critical to obtaining a good measurement. In order to have adequate voltage levels with high signal-to-noise ratio at the acquisition equipment, low-frequency accelerometers must have sensing elements with higher output than general purpose sensors. The low-end frequency cutoff of the amplifier is designed to offer clear signals down to <0.1 Hz.

The 793L sensor is available classified by various testing agencies for usage where ignitable concentrations of flammable gases, vapors or liquids are present continuously under normal operating conditions. For proper protection the installation drawing must be followed.



Connections	
Function	Connector pin
power/signal	A
ground	B
common	shell

Key features

- High sensitivity
- Ultra low-noise electronics for clear signals at low vibration levels
- Low pass filtered to attenuate high frequencies
- Hermetically sealed
- ESD-protected
- Reverse wiring protection
- Manufactured in an approved ISO 9001 facility

Available certifications



Class I, Div 1
Groups A, B, C, D



Class I, Div 1
Groups A, B, C, D,
E, F, G
Class I, Div 2
Groups A, B, C, D,
F, G
Class I, Div 3

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

Premium low-frequency accelerometer 793L

SPECIFICATIONS

Sensitivity, ±5%, 25° C		500 mV/g
Acceleration range		10 g peak
Amplitude nonlinearity		1%
Frequency response:	-5%	0.6 - 700 Hz
	-10%	0.4 - 1,000 Hz
	-3 dB	0.2 - 2,300 Hz
Resonance frequency		15 kHz
Transverse sensitivity, max		5% of axial
Sensitivity variation with temperature:		
	-50° C	-10%
	+120° C	+10%
Voltage source		18 - 30 VDC
Current regulating diode		2 - 10 mA
Electrical noise, equiv. g, nominal:		
Broadband	2.5 Hz to 25 kHz	8.0 µg
Spectral	2 Hz	2.0 µg/√Hz
	100 Hz	0.4 µg/√Hz
	1,000 Hz	0.2 µg/√Hz
Output impedance, max		100 Ω
Bias output voltage		10 VDC
Grounding		case isolated, internally shielded
Temperature range		-50 to +120° C
Vibration limit		250 g peak
Shock limit		5,000 g peak
Electromagnetic sensitivity, equiv. g		20 µg/gauss
Sealing		hermetic
Base strain sensitivity, max		0.0001 g/µstrain
Sensing element design		PZT, compression
Weight		142 grams
Case material		316L stainless steel
Mounting		1/4-28 tapped hole
Output connector		2 pin, MIL-C-5015 style
Mating connector		R6 type
Recommended cabling		J9T2A

Contact

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Accessories supplied:

- Calibration data (level 3)
- SF6 mounting stud (metric mounting available)

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