

Wilcoxon Research®

# General purpose, compact accelerometer 780B and 780C

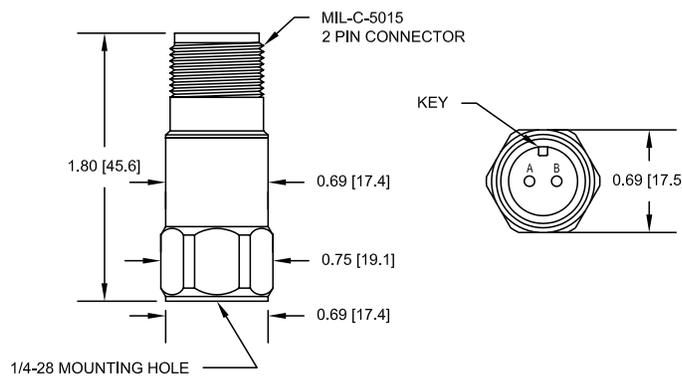


The top-exit Wilcoxon Research® 100 mV/g sensors are designed for monitoring areas with limited space. The general purpose accelerometer is ideal for monitoring machine vibration on a wide range of rotating equipment such as motors, pumps, fans, compressors, turbines and generators. A 316L stainless steel casing provides rugged durability for most extreme environments. The sensing element is housed in a case-isolated Faraday shield, providing maximum protection from ground loops and RF interference.

## Key features

- Lightweight for walkaround programs
- Prevents ground loops in permanent mount applications with proper cabling
- Can be submersed with proper connector
- Hermetically-sealed
- ESD-protected
- Reverse wiring protection
- Manufactured in an approved ISO 9001 and AS9100 facility

## Certifications



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

## Meggitt Sensing Systems

### Our energy product competencies and services

Machinery protection | Condition monitoring | Integrated performance monitoring | Partial discharge monitoring | Sensors for extreme environments  
Ignition systems | Flame detection and analysis | **Industrial monitoring solutions** | Nuclear products

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**MEGGITT**  
smart engineering for  
extreme environments

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## Specifications

		English	Metric	
<b>Sensitivity, 25° C</b>				
<b>780B</b>	± 10%	100 mV/g	9.8 mV/m/sec <sup>2</sup>	
<b>780C</b>	± 15%	100 mV/g	9.8 mV/m/sec <sup>2</sup>	
<b>Acceleration range</b>		80 g peak	784 m/sec <sup>2</sup>	
<b>Amplitude nonlinearity</b>		1%	1%	
<b>Frequency response</b>	± 5%	180 - 300,000 RPM	3 - 5,000 Hz	
	± 10%	60 - 540,000 RPM	1 - 9,000 Hz	
	± 3 dB	30 - 840,000 RPM	0.5 - 14,000 Hz	
<b>Resonance frequency</b>		1.80 kCPM	30 kHz	
<b>Transverse sensitivity, max</b>		5% of axial	5% of axial	
<b>Temperature response</b>	-25° C	-10%	-10%	
	+120° C	+10%	+10%	
<b>Voltage source</b>		18 - 30 VDC	18 - 30 VDC	
<b>Current regulating diode</b>		2 - 10 mA	2 - 10 mA	
<b>Electrical noise, equiv g</b>				
<b>Broadband 2.5 Hz to 25 kHz</b>		700 µg	6.9 x 10 <sup>-3</sup> m/s <sup>2</sup>	
	<b>Spectral</b>	10 Hz	10 µg/√Hz	9.8 x 10 <sup>-5</sup> m/s <sup>2</sup>
		100 Hz	5 µg/√Hz	4.9 x 10 <sup>-5</sup> m/s <sup>2</sup>
		1000 Hz	5 µg/√Hz	4.9 x 10 <sup>-5</sup> m/s <sup>2</sup>
<b>Output impedance, max</b>		100 Ω	100 Ω	
<b>Bias output voltage</b>		12 VDC	12 VDC	
<b>Grounding</b>		case isolated, internally shielded	case isolated, internally shielded	
<b>Temperature range</b>		-58 to +248° F	-50 to +120° C	
<b>Vibration limit</b>		500 g peak	4,900 m/sec <sup>2</sup> peak	
<b>Shock limit</b>		5,000 g peak	49,000 m/sec <sup>2</sup> peak	
<b>Electromagnetic sensitivity, equiv g, max</b>		70 µg/gauss	6.8 x 10 <sup>-4</sup> m/s <sup>2</sup> /gauss	
<b>Sealing</b>		hermetic	hermetic	
<b>Base strain sensitivity, max</b>		0.0002 g/µstrain	1.9 x 10 <sup>-3</sup> m/s <sup>2</sup> /µstrain	
<b>Sensing element design</b>		PZT, shear	PZT, shear	
<b>Weight</b>		2.19 oz	62 g	
<b>Case material</b>		316L stainless steel	316L stainless steel	
<b>Mounting</b>		1/4-28 UNF tapped hole	1/4-28 UNF tapped hole	
<b>Output connector</b>		2 pin, MIL-C-5015 style	2 pin, MIL-C-5015 style	
<b>Mating connector</b>		R6 type	R6 type	
<b>Recommended cabling</b>		J10/J9T2A	J10/J9T2A	

Note: Frequency response and spectral noise values are typical

Accessories supplied: SF6 mounting stud, calibration data (level 2)

Note: Due to continuous process improvement, specifications are subject to change without notice.

This document is cleared for public release.

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## Contact

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