

# General purpose, compact accelerometers

## 780B and 780C

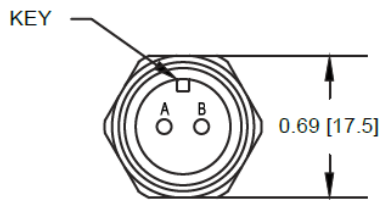


Wilcoxon's top-exit 100 mV/g sensors are designed for monitoring areas with limited space. The general purpose accelerometer is ideal for monitoring machine vibration on a wide range of rotating equipment such as motors, pumps, fans, compressors, turbines and generators. A 316L stainless steel casing 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.

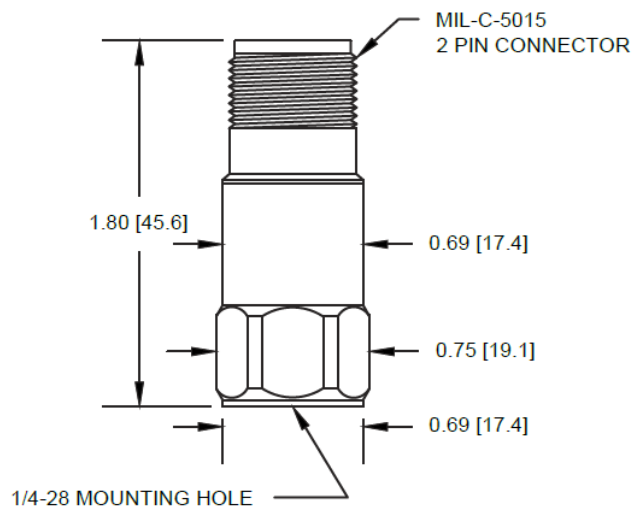
### Key features

- 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 facility

### Certifications



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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SPECIFICATIONS	English	Metric
<b>Sensitivity, 25° C</b>		
780B, ±10%	100 mV/g	9.8 mV/m/sec <sup>2</sup>
780C, ±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>Power requirement:</b>		
Voltage source	18 - 30 VDC	18 - 30 VDC
Current regulating diode	2 - 10 mA	2 - 10 mA
<b>Electrical noise, equiv. g:</b>		
Broadband      2.5 Hz to 25 kHz	700 µg	6.9 x 10 <sup>-3</sup> m/s <sup>2</sup>
Spectral         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>
1,000 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	
<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	
<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	
<b>Weight</b>	2.19 oz	62 grams
<b>Case material</b>	316L stainless steel	
<b>Mounting</b>	1/4-28 UNF tapped hole	
<b>Output connector</b>	2-pin, MIL-C-5015 style	
<b>Mating connector</b>	R6 type	
<b>Recommended cabling</b>	J10 / J9T2A	

### Contact

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### Accessories supplied:

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

**Note:** Frequency response and spectral noise values are typical.

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