

# High frequency, integral cable accelerometers

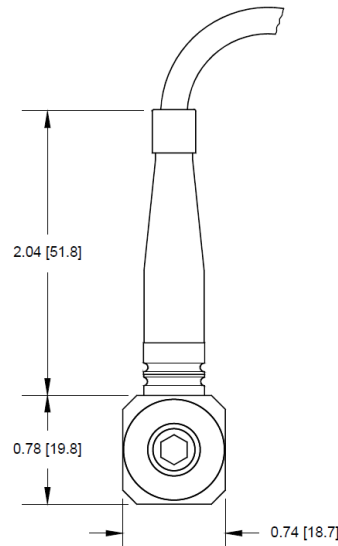
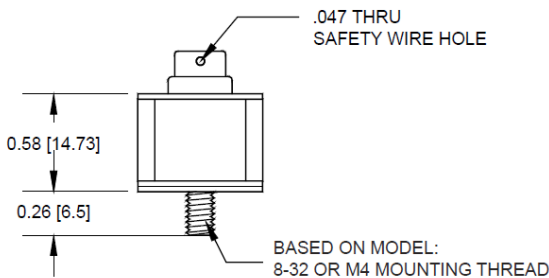
## 997 series



High frequency accelerometers are ideal for applications involving high speed components such as machine tool spindles, compressors, and turbines. These applications often include gear mesh frequencies with higher harmonics or blade pass frequencies exceeding 60,000 CPM. Wilcoxon's high frequency 997 series sensors offer 10 mV/g sensitivity, preventing sensor overload. Sensors with 10 mV/g output are most commonly used due to their high amplitude range (600 g) which can be present in high speed applications. Typically there is little measurable vibration in terms of displacement and velocity at high frequency; however tremendous amounts of acceleration may be present.

### Key features

- Corrosion resistant
- Hermetically sealed
- ESD-protected
- Reverse wiring protection
- Internal ring offers extra isolation
- IP67 integral cable
- Manufactured in an approved ISO 9001 facility



Connections	
Function	Cable conductor color
power/signal	white
common	black
case	shield

### Models available

- 997: 8-32 captive screw
- 997-M4: M4 captive screw

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

Wilcoxon Sensing Technologies  
20511 Seneca Meadows Parkway  
Germantown, MD 20876  
info@wilcoxon.com

Tel: (301) 330 8811  
Fax: (301) 330 8873  
www.wilcoxon.com

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An Amphenol Company

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### SPECIFICATIONS

<b>Sensitivity, <math>\pm 10\%</math>, 25° C</b>		10 mV/g
<b>Acceleration range</b>		600 g peak
<b>Amplitude nonlinearity</b>		1%
<b>Frequency response:</b>	<b>5%</b>	1.5 - 20,000 Hz
	<b>10%</b>	1.0 - 25,000 Hz
	<b><math>\pm 3</math> dB</b>	0.5 - 29,000 Hz
<b>Resonance frequency, mounted</b>		>45 kHz
<b>Transverse sensitivity, max</b>		3% of axial
<b>Temperature response:</b>	<b>-50° C</b>	+1%
	<b>-25° C</b>	-1%
	<b>+120° C</b>	+8%
<b>Power requirement:</b>		
<b>Voltage source</b>		18 - 30 VDC
<b>Current regulating diode</b>		2 - 10 mA
<b>Electrical noise, equiv. g, nominal:</b>		
<b>Broadband</b>	<b>2.5 Hz to 25 kHz</b>	1,000 $\mu$ g
<b>Spectral</b>	<b>10 Hz</b>	25 $\mu$ g/ $\sqrt$ Hz
	<b>100 Hz</b>	9 $\mu$ g/ $\sqrt$ Hz
	<b>1,000 Hz</b>	7 $\mu$ g/ $\sqrt$ Hz
<b>Output impedance, max</b>		100 $\Omega$
<b>Bias output voltage, nominal</b>		12 VDC
<b>Grounding</b>		case isolated, internally shielded
<b>Turn-on time</b>		<1 sec
<b>Temperature range</b>		-50 to +120° C
<b>Vibration limit</b>		1,000 g
<b>Shock limit</b>		5,000 g peak
<b>Sealing</b>		hermetic
<b>Base strain sensitivity, max</b>		0.0005 g/ $\mu$ strain
<b>Weight</b>		35 grams
<b>Case material</b>		316L stainless steel
<b>Mounting:</b>	<b>997</b>	8-32 captive screw
	<b>997-M4</b>	M4 captive screw
<b>Integral cabling</b>		J10, 16 ft integral cable, Enviroprene, two conductor shielded

### Contact

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Germantown, MD 20876, USA

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Fax: +1 301 330 8873

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### Accessories supplied:

- Calibration data (level 2)
- Captive screw (type depends on model)

**Options:** cable length

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