

## High EMI resistance accelerometers HV100 and HV200 series

Wilcoxon's HV series are designed for demanding applications requiring high electrical isolation between the sensor and machine. HV sensors can withstand arcing between the sensor base and its internal electronics to levels as high as 6,000 volts. The sensors offer improved EMI resistance in areas where high electromagnetic interference occurs, such as wind turbines, railway systems and other high-voltage generators. Improvements in EFT and ESD resistance improve survivability during extreme transient events. The HV series are available with a variety of mounting options to ensure compatibility with every application.



#### **Key features**

- Case-base isolated up to 6 kV
- Ideal for power generation
  applications
- Rapid shock recovery
- Improved EMI resistance
- Manufactured in an approved ISO 9001 facility

#### Models available

HV models	Output connector	Integral mounting	
HV100		M8 x 1.25	
HV101	4 pin, M12	1/4-28 UNF	
HV102		M6	
HV200		1/4-28 UNF	
HV201	2 pin, MIL-5015	M8 x 1.25	
HV202		M6	

#### Certifications



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

Wilcoxon Sensing Technologies An Amphenol Company

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### High EMI resistance accelerometers HV100 and HV200 series

#### SPECIFICATIONS

Sensitivity, ±5%, 25°C	100 mV/g	
Acceleration range, VDC > 22 V	80 g peak	
Amplitude nonlinearity	1%	
Frequency response: ±5%	3 - 5,000 Hz	
±10%	1 - 7,000 Hz	
±3 dB	0.5 - 12,000 Hz	
Resonance frequency	25 kHz	
Transverse sensitivity, max	5% of axial	
Temperature response: -40°C	-10%	
+120°C	+10%	
Temperature range	–40° to +120° C	
Power requirement:	18 - 30 VDC	
Voltage source Current regulating diode	18 - 30 VDC 2 - 10 mA	
Dielectric withstand voltage between		
connector and surface: 6,000 VDC	1 min.	
5,000 VAC	1 min.	
Electrical noise, equiv. g:		
Broadband 2.5 Hz to 25 kHz	700 µg	
Spectral 10 Hz	10 μg/√Hz	
100 Hz 1,000 Hz	5 µg/√Hz 5 µg/√Hz	
Output impedance	100 Ω	
	100 12	
Impedance, between connector and base:	>100 GΩ	
100 Hz	>100 MΩ	
1.0 kHz	>10 MΩ	
10 kHz	>1 MΩ	
Bias output voltage	12 VDC	
Grounding	case isolated, internally shielded	
Vibration limit	500 g peak	
Shock limit	5,000 g peak	
Electromagnetic sensitivity, equiv. g, max	70 μg/gauss	
Sealing	hermetic	
Base strain sensitivity	<0.0002 g/µstrain	
Sensing element design	PZT, shear	
Sensor case material	stainless steel	
Isolation material	ceramic	
Recommended cabling	J10 / J9T2A	

Connections - HV100 series		
Function	Connector pin	
signal	P1	
to pin 3 inner shield	P2	
common	P3	
case	P4	
connector shell	case	

Connections - HV200 series		
Function	Connector pin	
signal	A	
common	В	
connector shell	case	

See page 3 for further specifications, dimensions and drawings.

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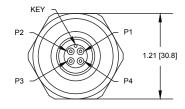
# SENSING TECHNOLOGIES

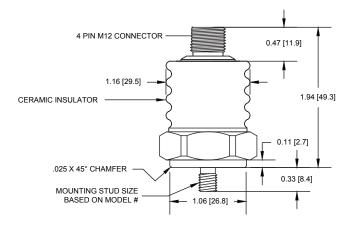
### HV100 series

SPECIFICATION	S	HV100	HV101	HV102
Output connecto	or <sup>1</sup>	4 pin M12	4 pin M12	4 pin M12
Integral mountin	g	M8 x 1.25 x 8.4 mm	1/4-28 UNF x 0.33 in.	M6 x 1.00 x 6.2 mm
Mounting torque	, recommended	40 in-lb / 4.5 Nm	30 in-lb / 3.4 Nm	30 in-lb / 3.4 Nm
Dimensions:	A B C	1.93 in. (49.5 mm) 0.325 in. (8.3 mm) 1.21 in. (31.0 mm)	1.93 in. (49.5 mm) 0.325 in. (8.3 mm) 1.21 in. (31.0 mm)	1.93 in. (49.5 mm) 0.325 in. (8.3 mm) 1.21 in. (31.0 mm)
Weight		126 grams (4.44 oz)	126 grams (4.44 oz)	126 grams (4.44 oz)

**Notes:** <sup>1</sup> For best performance, it is recommended that the connector shell be tied to the cable shield.

Recommended connector: R75S



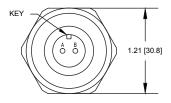


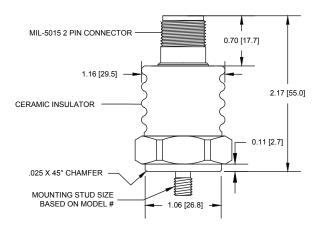
### HV200 series

SPECIFICATION	S	HV200	HV201	HV202
Output connecto	or <sup>1</sup>	2 pin MIL-5015	2 pin MIL-5015	2 pin MIL-5015
Integral mountin	g	1/4-28 UNF x 0.33 in.	M8 x 1.25 x 8.4 mm	M6 x 1.00 x 6.2 mm
Mounting torque	, recommended	30 in-lb / 3.4 Nm	40 in-lb / 4.5 Nm	30 in-lb / 3.4 Nm
Dimensions:	Α	2.15 in. (55.1 mm)	2.15 in. (55.1 mm)	2.15 in. (55.1 mm)
	В	0.325 in. (8.3 mm)	0.325 in. (8.3 mm)	0.325 in. (8.3 mm)
	C	1.21 in. (31.0 mm)	1.21 in. (31.0 mm)	1.21 in. (31.0 mm)
Weight		122 grams (4.35 oz)	122 grams (4.35 oz)	122 grams (4.35 oz)

**Notes:** <sup>1</sup> For best performance, it is recommended that the connector shell be tied to the cable shield.

Recommended connector: R6Q





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