# **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.



#### 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

### **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

### Certifications



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

# **High EMI resistance accelerometers**



# HV100 and HV200 series

### **SPECIFICATIONS**

<u> </u>	
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:	40, 00,1/00
Voltage source Current regulating diode	18 - 30 VDC 2 - 10 mA
	2 - 10 IIIA
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	5 μg/√Hz
1,000 Hz	5 μg/√Hz
Output impedance	100 Ω
Impedance, between connector and base:	400.00
DC 400 He	>100 GΩ
100 Hz 1.0 kHz	>100 MΩ >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			
Connector pin			
P1			
P2			
P3			
P4			
case			

Connections - HV200 series		
Function Connector pi		
signal	Α	
common	В	
connector shell	case	

See page 3 for further specifications, dimensions and drawings.

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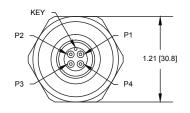


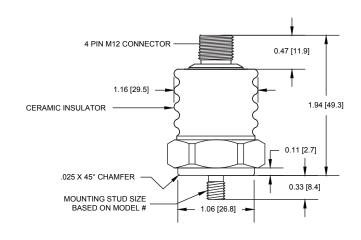
## HV100 series

SPECIFICATION	S	HV100	HV101	HV102
Output connecto	or¹	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:	Α	1.93 in. (49.5 mm)	1.93 in. (49.5 mm)	1.93 in. (49.5 mm)
	В	0.325 in. (8.3 mm)	0.325 in. (8.3 mm)	0.325 in. (8.3 mm)
	С	1.21 in. (31.0 mm)	1.21 in. (31.0 mm)	1.21 in. (31.0 mm)
Weight		126 grams (4.44 oz)	126 grams (4.44 oz)	126 grams (4.44 oz)

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

Recommended connector: R75S



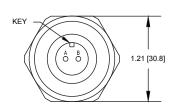


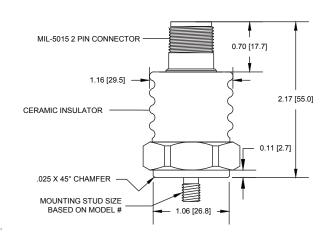
## HV200 series

SPECIFICATIONS	S	HV200	HV201	HV202
Output connecto	or¹	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:	A B C	2.15 in. (55.1 mm) 0.325 in. (8.3 mm) 1.21 in. (31.0 mm)	2.15 in. (55.1 mm) 0.325 in. (8.3 mm) 1.21 in. (31.0 mm)	2.15 in. (55.1 mm) 0.325 in. (8.3 mm) 1.21 in. (31.0 mm)
Weight		122 grams (4.35 oz)	122 grams (4.35 oz)	122 grams (4.35 oz)

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

Recommended connector: R6Q





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Wilcoxon Sensing Technologies An Amphenol Company

8435 Progress Drive Frederick, MD 21701 USA

Tel: +1 (301) 330-8811 Fax: +1 (301) 330-8873 info@wilcoxon.com

buy.wilcoxon.com www.wilcoxon.com