High EMI resistance accelerometers

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.



HV100 and HV200 series

Danetech srl 📖

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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

CE

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% ±10% ±3 dB	3 - 5,000 Hz 1 - 7,000 Hz 0.5 - 12,000 Hz
Resonance frequency	25 kHz
Transverse sensitivity, max	5% of axial
Temperature response: -40°C +120°C	-10% +10%
Temperature range	–40° to +120° C
Power requirement: Voltage source Current regulating diode	18 - 30 VDC 2 - 10 mA
Dielectric withstand voltage between connector and surface: 6,000 VDC 5,000 VAC	1 min. 1 min.
Electrical noise, equiv. g: Broadband 2.5 Hz to 25 kHz Spectral 10 Hz 100 Hz 1,000 Hz	700 μg 10 μg/√Hz 5 μg/√Hz 5 μg/√Hz
Output impedance	100 Ω
Impedance, between connector and base: DC 100 Hz 1.0 kHz 10 kHz	>100 GΩ >100 MΩ >10 MΩ >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	А	
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	or ¹	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: ¹ For best performance, it is recommended that the connector shell be tied to the cable shield.

Recommended connector: R75S





HV200 series

SPECIFICATION	6	HV200	HV201	HV202
Output connecto	r ¹	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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