Low-frequency, high EMI resistance accelerometers



HV100LF and HV200LF series

Wilcoxon's HV series are designed for low-frequency applications where high electrical isolation between the sensor and machine is required. 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 HV100LF/200LF series has superior performance down to 0.1 Hz.



Models available

HV models	Output connector	Integral mounting	Sensitivity
HV100LF	4 pin, M12	M8 x 1.25	100 mV/g
HV100LF-500		WO X 1.25	500 mV/g
HV101LF		1/4-28 UNF	100 mV/g
HV101LF-500		1/4-20 UNF	500 mV/g
HV102LF		M6	100 mV/g
HV102LF-500		IVIO	500 mV/g
HV200LF	2 pin, MIL-5015	1/4-28 UNF	100 mV/g
HV200LF-500		1/4-20 UNF	500 mV/g
HV201LF		M0 x 4 05	100 mV/g
HV201LF-500		M8 x 1.25	500 mV/g
HV202LF		M6	100 mV/g
HV202LF-500		OIVI	500 mV/g

Key features

- Ultra low-frequency measurements
- 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

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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Low-frequency, high EMI resistance accelerometers



HV100LF and HV200LF series

SPECIFICATIONS

		LF series	LF-500 series
Sensitivity, ±5%, 25°C		100 mV/g	500 mV/g
Acceleration range, VDC > 22 V		80 g peak	10 g peak
Amplitude nonlinearity		1%	
Frequency response:	±5% ±10% ±3 dB	0.35 - 5,000 Hz 0.25 - 7,000 Hz 0.1 - 11,000 Hz	
Resonance frequency, nominal		28 kHz	
Transverse sensitivity, max		5% of axial	
Temperature response:	–25°C +120°C	-10% +15%	
Temperature range		–50° to +120° C	
Power requirement: Voltage source Current regulating diode		18 - 30 VDC 2 - 10 mA	
,	ween 00 VDC 00 VAC	1 min. 1 min.	
Electrical noise, equiv. g: Broadband 2.5 Hz to Spectral	9 25 kHz 10 Hz 100 Hz I,000 Hz	400 μg rms 10 μg/√Hz 5 μg/√Hz 5 μg/√Hz	250 μg rms 3 μg/√Hz 2 μg/√Hz 2 μg/√Hz
Output impedance, max		100 Ω	300 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		13 VDC	
Grounding		case isolated, internally shielded	
Vibration limit		500 g peak	
Shock limit		5,000 g peak	
Electromagnetic sensitivity, equ	iv. g, max	70 µg/gauss	
Sealing		hermetic	
Base strain sensitivity, max		0.0002 g/µstrain	
Sensing element design		PZT, shear	
Sensor case material		stainless steel	
Isolation material		ceramic	
Recommended cabling		J10 / J9T2A	

Connections - HV100LF series			
Function	Connector pin		
signal	P1		
to pin 3 inner shield	P2		
common	P3		
case	P4		
connector shell	case		

Connections - HV200LF series			
Function Connector pi			
signal	A		
common	В		
connector shell	case		

See page 3 for further specifications, dimensions and drawings.

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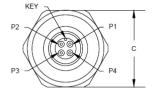
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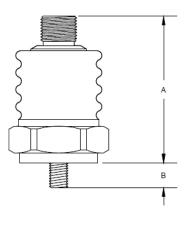


HV100LF series

SPECIFICATIONS	6	HV100LF/HV100LF-500	HV101LF/HV101LF-500	HV102LF/HV102LF-500
Output connecto	r ¹	4 pin M12	4 pin M12	4 pin M12
Integral mounting	g	M8 x 1.25	1/4-28 UNF	M6 x 1.00
Dimensions:	Α	1.98 in. (50.3 mm)	1.98 in. (50.3 mm)	1.98 in. (50.3 mm)
	В	0.33 in. (8.4 mm)	0.33 in. (8.4 mm)	0.33 in. (8.4 mm)
	С	1.21 in. (30.8 mm)	1.21 in. (30.8 mm)	1.21 in. (30.8 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

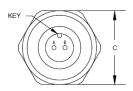


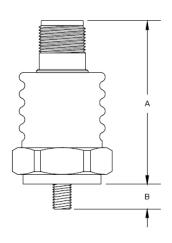


HV200LF series

SPECIFICATIONS	5	HV200LF/HV200LF-500	HV201LF/HV201LF-500	HV202LF/HV202LF-500
Output connecto	r ¹	2 pin MIL-5015	2 pin MIL-5015	2 pin MIL-5015
Integral mounting	9	1/4-28 UNF	M8 x 1.25	M6 x 1.00
Dimensions:	Α	2.21 in. (56.0 mm)	2.21 in. (56.0 mm)	2.21 in. (56.0 mm)
	В	0.33 in. (8.4 mm)	0.33 in. (8.4 mm)	0.33 in. (8.4 mm)
	С	1.21 in. (30.8 mm)	1.21 in. (30.8 mm)	1.21 in. (30.8 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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