

HS-420S Accelerometer

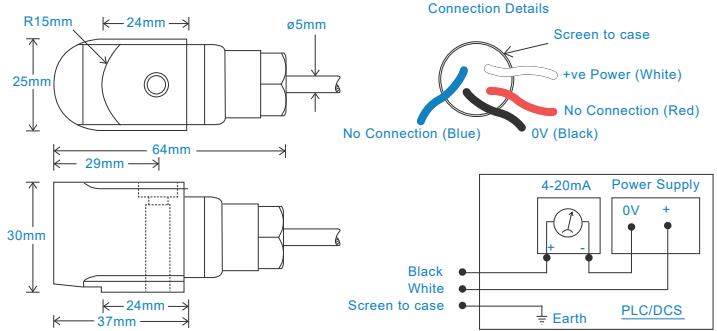
4-20mA velocity output via PUR Cable

Key Features

- Waterproof
- Resistant to oil
- Side entry for easy access

Industries

Building services, Pulp and Paper,
Mining, Metals, Utilities, Automotive,
Water, Pharmaceutical



Technical Performance

Mounted Base Resonance	5kHz min
Velocity Ranges	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C
Frequency Response	10Hz (600cpm) to 1kHz (60kcpm) $\pm 5\%$ - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	185gms (nominal) body only
Maximum Cable Length	1000 metres
Standard Cable Length	5 metres
Screened Cable	PUR - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)

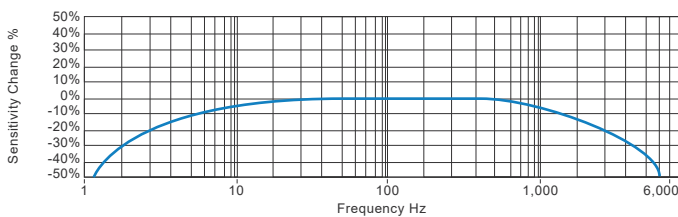
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	1 second
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-25 to 90°C
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

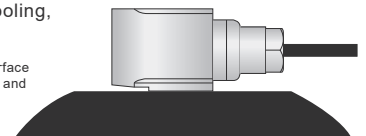
Typical Frequency Response



Applications

Fans, Motors, Pumps, Compressors,
Centrifuges, Conveyors, Air Handlers,
Gearboxes, Rolls, Dryers, Presses,
Cooling, VAC, Spindles, Machine Tooling,
Process Equipment

Vibration sensor should be firmly fixed to a flat surface
(spot face surface may be needed to be produced and
cable anchored to sensor body.)



How To Order

Product Prefix HS - Hansford Sensors			Product Series 420 - Industrial Vibration Sensor			Cable Length (if integral cable) QXX - length specified in metres									
H	S		4	2	0	S	X	X	X	X	X	X	X	X	X
Extra Options (if required)						Velocity Range (RMS unless specified)			Cable/Connector			Mounting Threads			
F	-	Filtered	P - Peak Range			010	-	0-10 mm/sec	01	-	PUR	02	-	1/4-28" UNF Male	
L	-	316L Stainless Steel	PP - Peak to Peak Range			020	-	0-20 mm/sec	02	-	Braided	06	-	M6 x 1mm Male	
RT	-	Temperature Output PT100				025	-	0-25 mm/sec	07	-	Silicon	08	-	M8 x 1.25mm Male	
S	-	90° Side Exit				050	-	0-50 mm/sec	08	-	Flame Retardant	50	-	2 Pin MS	
T	-	Temperature Output				100	-	0-100 mm/sec	54	-	M12				



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TS321.9



HS-420S Accelerometer

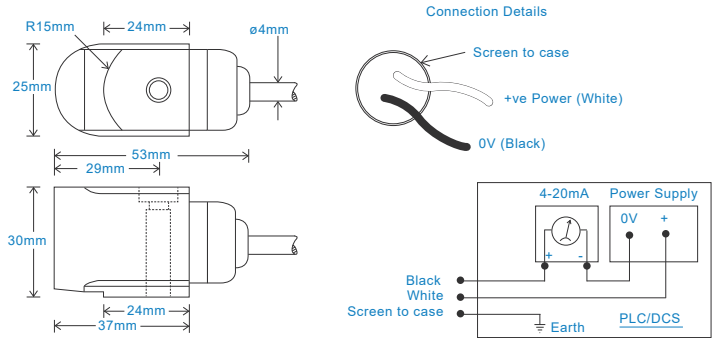
4-20mA velocity output via Braided Cable

Key Features

- For use with PLC/DCS systems
- Side entry for easy access
- Customisable features

Industries

Building services, Pulp and Paper,
Mining, Metals, Utilities, Automotive,
Water, Pharmaceutical



Technical Performance

Mounted Base Resonance	5kHz min
Velocity Ranges	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C
Frequency Response	10Hz (600cpm) to 1kHz (60kcpm) $\pm 5\%$ - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	185gms (nominal) body only
Maximum Cable Length	1000 metres
Standard Cable Length	5 metres
Screened Cable	Braided - length to be specified with order
Mounting Threads	see: 'How To Order' table

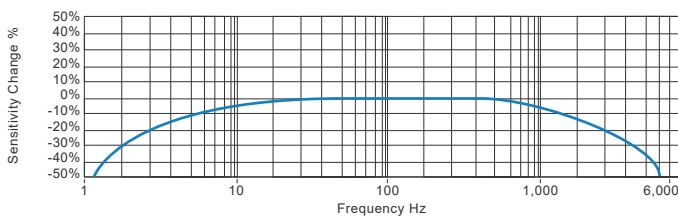
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	1 second-
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-25 to 120°C
Sealing	IP65
Maximum Shock	5000g
EMC	EN61326-1:2013

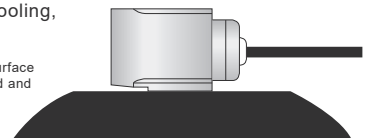
Typical Frequency Response



Applications

Fans, Motors, Pumps, Compressors,
Centrifuges, Conveyors, Air Handlers,
Gearboxes, Rolls, Dryers, Presses,
Cooling, VAC, Spindles, Machine Tooling,
Process Equipment

Vibration sensor should be firmly fixed to a flat surface
(spot face surface may be needed to be produced and
cable anchored to sensor body.)



How To Order

Product Prefix HS - Hansford Sensors		Product Series 420 - Industrial Vibration Sensor					Cable Length (if integral cable) QXX - length specified in metres							
H	S	4	2	0	S	X	X	X	X	X	X	X	X	X
Extra Options (if required) F - Filtered L - 316L Stainless Steel RT - Temperature Output PT100 S - 90° Side Exit T - Temperature Output						Velocity Range (RMS unless specified) 010 - 0-10 mm/sec 020 - 0-20 mm/sec 025 - 0-25 mm/sec 050 - 0-50 mm/sec 100 - 0-100 mm/sec			Cable/Connector 01 - PUR 02 - Braided 07 - Silicon 08 - Flame Retardant 50 - 2 Pin MS 54 - M12			Mounting Threads 02 - ¼-28" UNF Male 06 - M6 x 1mm Male 08 - M8 x 1.25mm Male		



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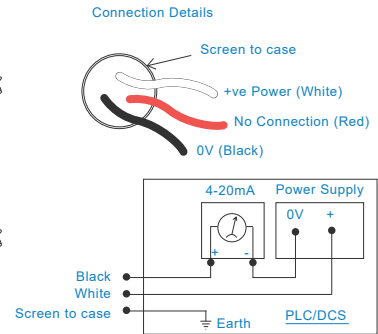
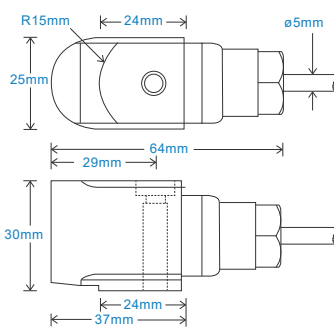
4-20mA velocity output via Silicon Cable

Key Features

- For use with PLC/DCS systems
- Side entry for easy access
- Waterproof

Industries

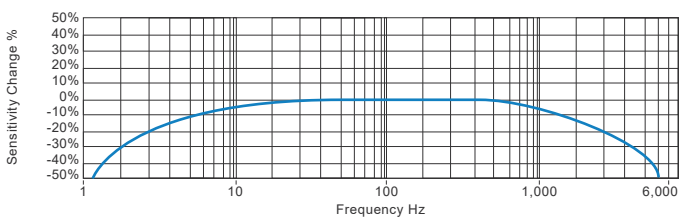
Building services, Pulp and Paper,
Mining, Metals, Utilities, Automotive,
Water, Pharmaceutical



Technical Performance			Mechanical	
Mounted Base Resonance		5kHz min	Case Material	Stainless Steel
Velocity Ranges		see: 'How To Order' table ±10%	Sensing Element/Construction	PZT/Shear
		Nominal 80Hz at 22°C	Mounting Torque	8Nm
Frequency Response	10Hz (600cpm) to 1kHz (60kcpm) ± 5% - ISO10816		Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Isolation		Base isolated	Weight	185gms (nominal) body only
Range		50g peak	Maximum Cable Length	1000 metres
Transverse Sensitivity		Less than 5%	Standard Cable Length	5 metres
			Screened Cable	Silicon - length to be specified with order
			Mounting Threads	see: 'How To Order' table
			Submersible Depth	100 metres max (10 bar)

Electrical		Environmental	
Current Output	4-20mA DC proportional to Velocity Range	Operating Temperature Range	-25 to 120°C
Supply Voltage	15-30 Volts DC (for 4-20mA)	Sealing	IP68
Settling Time	1 second	Maximum Shock	5000g
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts	EMC	EN61326-1:2013
Case Isolation	>10 ⁸ Ohms at 500 Volts		

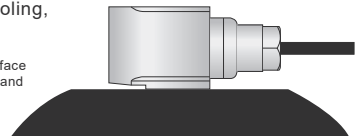
Typical Frequency Response



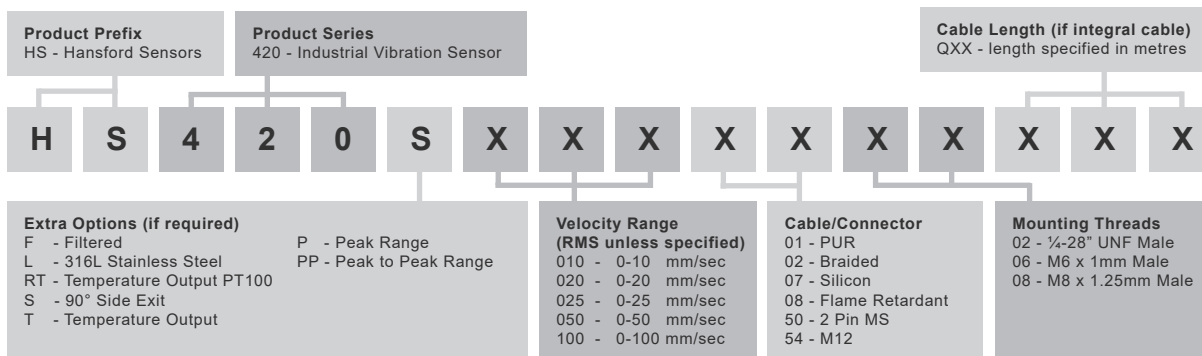
Applications

Fans, Motors, Pumps, Compressors,
Centrifuges, Conveyors, Air Handlers,
Gearboxes, Rolls, Dryers, Presses,
Cooling, VAC, Spindles, Machine Tooling,
Process Equipment

Vibration sensor should be firmly fixed to a flat surface (spot face surface may be needed to be produced and cable anchored to sensor body.)



How To Order



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TS320.10



HS-420S Accelerometer

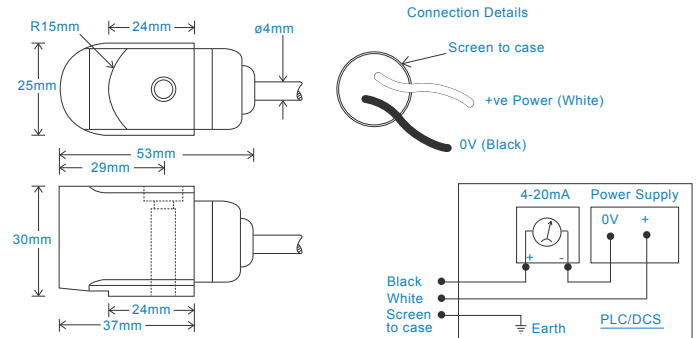
4-20mA velocity output via Flame Retardant Cable

Key Features

- For use with PLC/DCS systems
- Side entry for easy access
- Low smoke, halogen free cable

Industries

Building services, Pulp and Paper,
Mining, Metals, Utilities, Automotive,
Water, Pharmaceutical



Technical Performance

Mounted Base Resonance	5kHz min
Velocity Ranges	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C
Frequency Response	10Hz (600cpm) to 1kHz (60kcpm) $\pm 5\%$ - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	185gms (nominal)
Maximum Cable Length	1000 metres
Standard Cable Length	5 metres
Screened Cable	Flame Retardant - length to be specified with order
Mounting Threads	see: 'How To Order' table

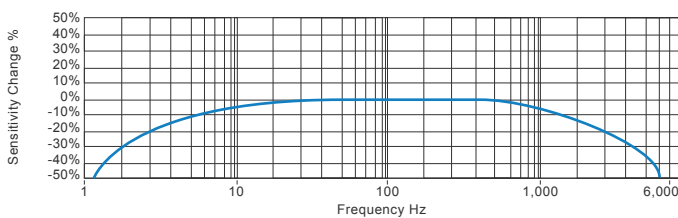
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	1 second
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-25 to 90°C
Sealing	IP65
Maximum Shock	5000g
EMC	EN61326-1:2013

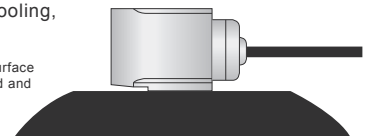
Typical Frequency Response



Applications

Fans, Motors, Pumps, Compressors,
Centrifuges, Conveyors, Air Handlers,
Gearboxes, Rolls, Dryers, Presses,
Cooling, VAC, Spindles, Machine Tooling,
Process Equipment

Vibration sensor should be firmly fixed to a flat surface
(spot face surface may be needed to be produced and
cable anchored to sensor body.)



How To Order

Product Prefix HS - Hansford Sensors	Product Series 420 - Industrial Vibration Sensor	Cable Length (if integral cable) QXX - length specified in metres
H	S	4
2	0	S
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X

Extra Options (if required) F - Filtered L - 316L Stainless Steel RT - Temperature Output PT100 S - 90° Side Exit T - Temperature Output	P - Peak Range PP - Peak to Peak Range	Velocity Range (RMS unless specified) 010 - 0-10 mm/sec 020 - 0-20 mm/sec 025 - 0-25 mm/sec 050 - 0-50 mm/sec 100 - 0-100 mm/sec	Cable/Connector 01 - PUR 02 - Braided 07 - Silicon 08 - Flame Retardant 50 - 2 Pin MS 54 - M12	Mounting Threads 02 - 1/4-28" UNF Male 06 - M6 x 1mm Male 08 - M8 x 1.25mm Male
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HS-420S Accelerometer

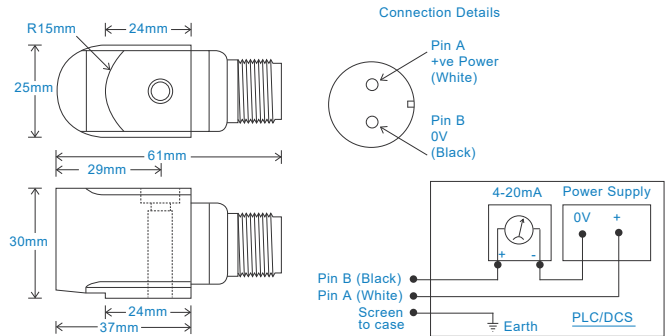
4-20mA velocity output via 2 Pin MS Connector

Key Features

- For use with PLC/DCS systems
- Side entry for easy access
- Customisable features

Industries

Building services, Pulp and Paper,
Mining, Metals, Utilities, Automotive,
Water, Pharmaceutical



Technical Performance

Mounted Base Resonance	5kHz min
Velocity Ranges	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C
Frequency Response	10Hz (600cpm) to 1kHz (60kcpm) $\pm 5\%$ - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	185gms (nominal) body only
Screened Cable Assembly	see: www.hansfordsensors.com for options
Connector	HS-AA004 - non-booted HS-AA053 or HS-AA054 - booted
Mounting Threads	see: 'How To Order' table

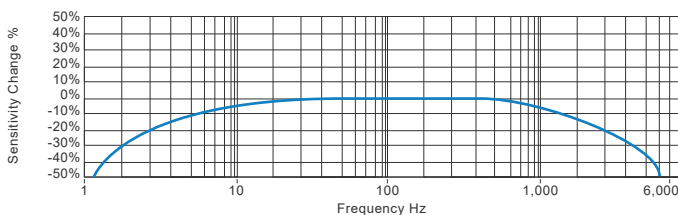
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	1 second
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-25 to 120°C
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

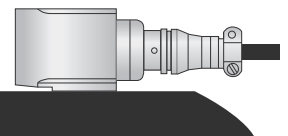
Typical Frequency Response



Applications

Fans, Motors, Pumps, Compressors,
Centrifuges, Conveyors, Air Handlers,
Gearboxes, Rolls, Dryers, Presses,
Cooling, VAC, Spindles, Machine Tooling,
Process Equipment

Vibration sensor should be firmly fixed to a flat surface
(spot face surface may be needed to be produced and
cable anchored to sensor body.)



How To Order

Product Prefix	Product Series										
HS - Hansford Sensors	420 - Industrial Vibration Sensor										
H	S	4	2	0	S	X	X	X	X	X	X
Extra Options (if required)		Velocity Range (RMS unless specified)		Cable/Connector		Mounting Threads					
F - Filtered L - 316L Stainless Steel RT - Temperature Output PT100 S - 90° Side Exit T - Temperature Output		P - Peak Range PP - Peak to Peak Range 010 - 0-10 mm/sec 020 - 0-20 mm/sec 025 - 0-25 mm/sec 050 - 0-50 mm/sec 100 - 0-100 mm/sec		01 - PUR 02 - Braided 07 - Silicon 08 - Flame Retardant 50 - 2 Pin MS 54 - M12		02 - 1/4-28" UNF Male 06 - M6 x 1mm Male 08 - M8 x 1.25mm Male					



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HS-420S Accelerometer

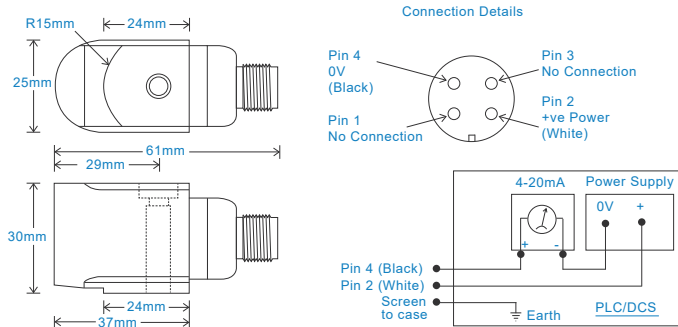
4-20mA velocity output via M12 Connector

Key Features

- For use with PLC/DCS systems
- Side entry for easy access
- Customisable features

Industries

Building services, Pulp and Paper,
Mining, Metals, Utilities, Automotive,
Water, Pharmaceutical



Technical Performance

Mounted Base Resonance	5kHz min
Velocity Ranges	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C
Frequency Response	10Hz (600cpm) to 1kHz (60kcpm) $\pm 5\%$ - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	185gms (nominal) body only
Screened Cable Assembly	HS-AC010 - straight HS-AC011 - right angle
Mounting Threads	see: 'How To Order' table

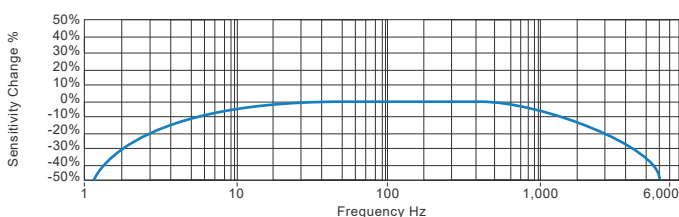
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	1 second
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-25 to 120°C
Sealing	IP67
Maximum Shock	5000g
EMC	EN61326-1:2013

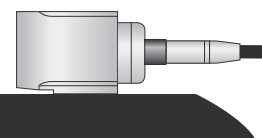
Typical Frequency Response



Applications

Fans, Motors, Pumps, Compressors,
Centrifuges, Conveyors, Air Handlers,
Gearboxes, Rolls, Dryers, Presses,
Cooling, VAC, Spindles, Machine Tooling,
Process Equipment

Vibration sensor should be firmly fixed to a flat surface
(spot face surface may be needed to be produced and
cable anchored to sensor body.)



How To Order

Product Prefix		Product Series									
HS - Hansford Sensors		420 - Industrial Vibration Sensor									
H	S	4	2	0	S	X	X	X	X	X	X
Extra Options (if required)						Velocity Range (RMS unless specified)			Cable/Connector		Mounting Threads
F - Filtered L - 316L Stainless Steel RT - Temperature Output PT100 S - 90° Side Exit T - Temperature Output						P - Peak Range PP - Peak to Peak Range			01 - PUR 02 - Braided 07 - Silicon 08 - Flame Retardant 50 - 2 Pin MS 54 - M12		02 - 1/4-28" UNF Male 06 - M6 x 1mm Male 08 - M8 x 1.25mm Male
						010 - 0-10 mm/sec 020 - 0-20 mm/sec 025 - 0-25 mm/sec 050 - 0-50 mm/sec 100 - 0-100 mm/sec					



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TS318.8



HS-420S Accelerometer

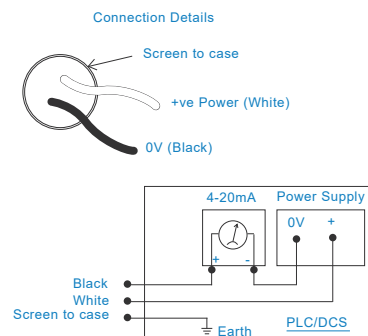
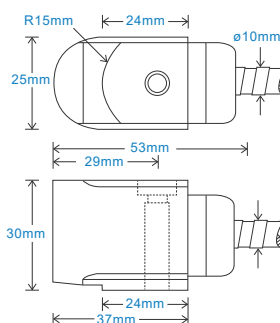
4-20mA velocity output via FEP Cable with Protective Conduit

Key Features

- For use with PLC/DCS systems
- Side entry for easy access
- Protective Conduit

Industries

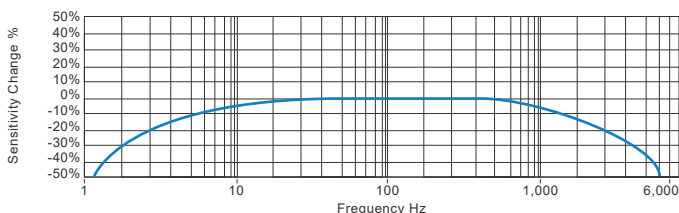
Building services, Pulp and Paper,
Mining, Metals, Utilities, Automotive,
Water, Pharmaceutical



Technical Performance			Mechanical	
Mounted Base Resonance		5kHz min	Case Material	
Velocity Ranges		see: 'How To Order' table ±10%	Sensing Element/Construction	
		Nominal 80Hz at 22°C	PZT/Compression	
			Mounting Torque	
Frequency Response	10Hz (600cpm) to 1kHz (60kcpm) ± 5% - ISO10816		8Nm	
Isolation		Base isolated	150gms (nominal) body only	
Range		50g peak	Maximum Cable Length	
Transverse Sensitivity		Less than 5%	1000 metres	
			Standard Cable Length	
			5 metres	
			Mounting Threads	
			see: 'How To Order' table	
			Conduit Material	
			316 Stainless Steel	
			Conduit Length	Conduit Length is approx. 0.5m shorter than the cable
			Maximum Conduit Length: 30m	

Electrical		Environmental	
Current Output	4-20mA DC proportional to Velocity Range	Operating Temperature Range	-25 to 120°C
Supply Voltage	15-30 Volts DC (for 4-20mA)	Sealing	IP65
Settling Time	2 seconds	Maximum Shock	5000g
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts	EMC	EN61326-1:2013
Case Isolation	>10 ⁸ Ohms at 500 Volts		

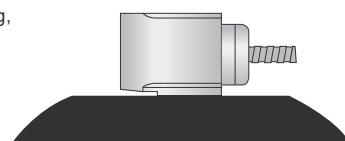
Typical Frequency Response



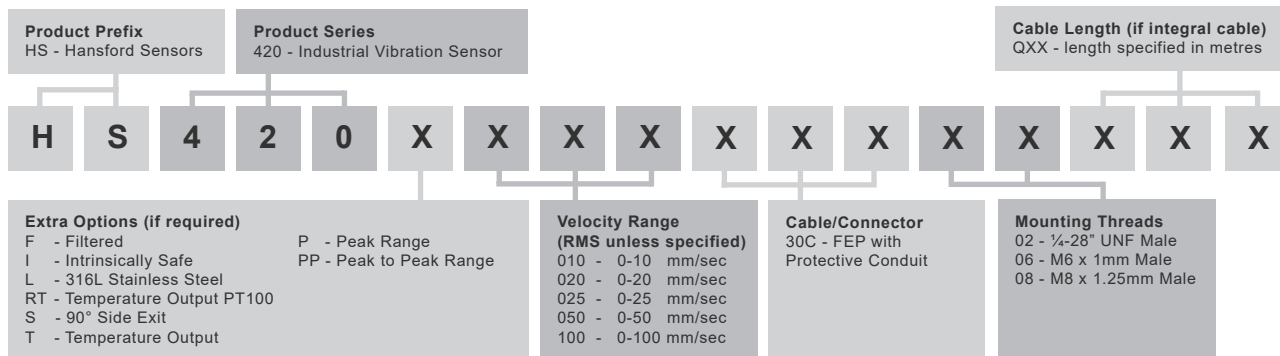
Applications

Fans, Motors, Pumps, Compressors,
Centrifuges, Conveyors, Air Handlers,
Gearboxes, Rolls, Dryers, Presses,
Cooling, VAC, Spindles, Machine Tooling,
Process Equipment

Vibration sensor should be firmly fixed to a flat surface (spot face surface may be needed to be produced and cable anchored to sensor body.)



How To Order



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