HS-420 Accelerometer

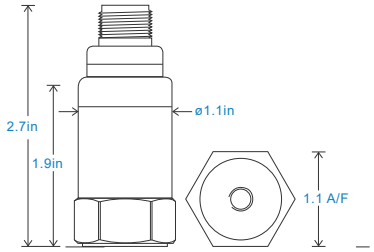
4-20mA velocity output via 2 Pin MS Connector

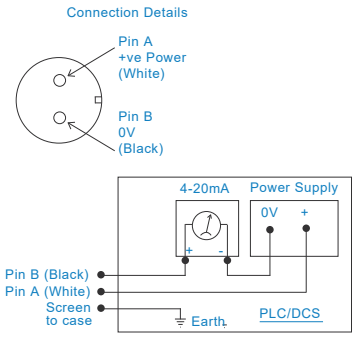
Key Features

- For use with PLC/DCS systems
- Customizable 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 ±10%
	Nominal 80Hz at 72°F
Frequency Response	600cpm (10Hz) to 60kcpm (1kHz) ± 5% - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	5.9ft. lbs
Weight	5.2 oz. (nominal) body only
Sheilded Cable Asssembly	see: www.hansfordsensors.com for options
Connector	HS-AA004 - non-booted
	HS-AA053 or HS-0054 - booted
Mounting Threads	see: 'How To Order' table

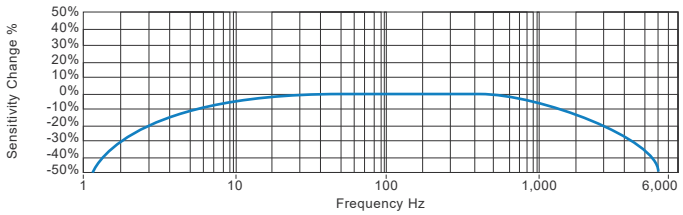
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	2 seconds
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-13 to 248°F
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

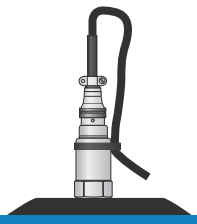
Typical Frequency Response



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

H	S	4	2	0	X	X	X	X	X	X	X	X

Extra Options (if required)

F - Filtered	U - Imperial Range
I - Intrinsically Safe	UP - Imperial Peak Range
L - 316L Stainless Steel	UPP - Imperial Peak to Peak Range
RT - Temperature Output PT100	
S - 90° Side Exit	
T - Temperature Output	

Velocity Range (RMS unless specified)
012 - ½ IPS
025 - 1 IPS
050 - 2 IPS
100 - 4 IPS

Cable/Connector
01 - PUR
02 - Braided
07 - Silicon
08 - Flame Retardant
50 - 2 Pin MS
54 - M12

Mounting Threads
01 - ¼-28" UNF Female
02 - ¼-28" UNF Male
05 - Quick Fit Female
06 - M6 x 1mm Male
08 - M8 x 1.25mm Male
10 - M10 x 1.5mm Male

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HS-420 Accelerometer

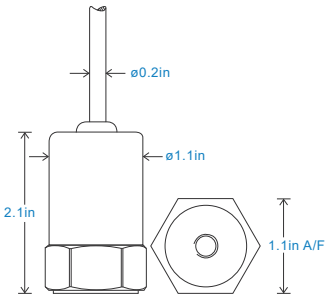
4-20mA velocity output via Braided Cable

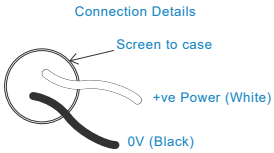
Key Features

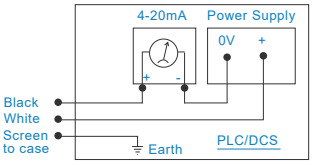
- For use with PLC/DCS systems
- Customizable features

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 ±10%
	Nominal 80Hz at 72°F
Frequency Response	600cpm (10Hz) to 60kcpm (1kHz) ± 5% - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	5.9ft. lbs
Weight	5.2 oz. (nominal) body only
Maximum Cable Length	3,280 ft.
Standard Cable Length	16 ft.
Shielded Cable	Braided - length to be specified with order
Mounting Threads	see: 'How To Order' table

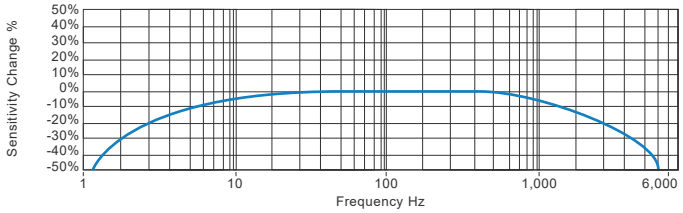
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	2 seconds
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-13 to 248°F
Sealing	IP65
Maximum Shock	5000g
EMC	EN61326-1:2013

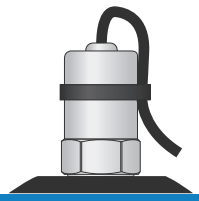
Typical Frequency Response



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)
UXX - length specified in feet

H	S	4	2	0	X	X	X	X	X	X	X	X	X	X	X

Extra Options (if required)

F - Filtered	U - Imperial Range
I - Intrinsically Safe	UP - Imperial Peak Range
L - 316L Stainless Steel	UPP - Imperial Peak to Peak Range
RT - Temperature Output PT100	
S - 90° Side Exit	
T - Temperature Output	

Velocity Range (RMS unless specified)
012 - ½ IPS
025 - 1 IPS
050 - 2 IPS
100 - 4 IPS

Cable/Connector
01 - PUR
02 - Braided
07 - Silicon
08 - Flame Retardant
50 - 2 Pin MS
54 - M12

Mounting Threads
01 - ¼-28" UNF Female
02 - ¼-28" UNF Male
05 - Quick Fit Female
06 - M6 x 1mm Male
08 - M8 x 1.25mm Male
10 - M10 x 1.5mm Male

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TS009U.6

HS-420 Accelerometer

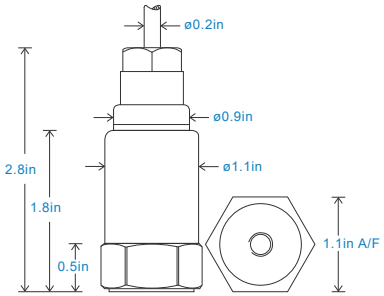
4-20mA velocity output via Silicon Cable

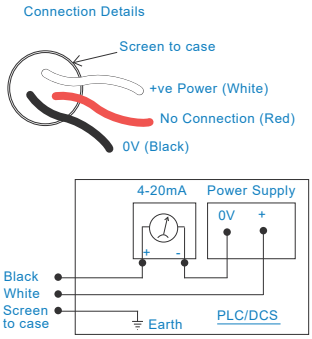
Key Features

- For use with PLC/DCS systems
- Waterproof

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 ±10%
	Nominal 80Hz at 72°F
Frequency Response	600cpm (10Hz) to 60kcpm (1kHz) ± 5% - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	5.9ft. lbs
Weight	5.2 oz. (nominal) body only
Maximum Cable Length	3,280 ft.
Standard Cable Length	16 ft.
Shielded Cable	Silicon - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	328 ft. max (10 bar)

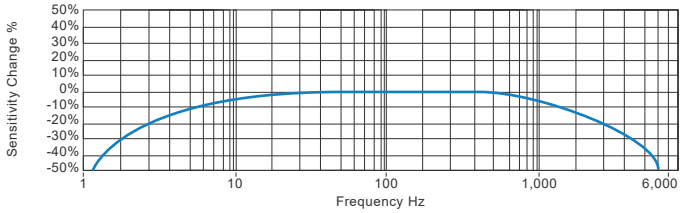
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	2 seconds
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-13 to 248°F
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

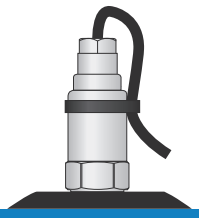
Typical Frequency Response



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)
UXX - length specified in feet

H	S	4	2	0	X	X	X	X	X	X	X	X	X	X	X

Extra Options (if required)

F - Filtered
I - Intrinsically Safe
L - 316L Stainless Steel
RT - Temperature Output PT100
S - 90° Side Exit
T - Temperature Output
U - Imperial Range
UP - Imperial Peak Range
UPP - Imperial Peak to Peak Range

Velocity Range (RMS unless specified)

012 - ½ IPS
025 - 1 IPS
050 - 2 IPS
100 - 4 IPS

Cable/Connector

01 - PUR
02 - Braided
07 - Silicon
08 - Flame Retardant
50 - 2 Pin MS
54 - M12

Mounting Threads

01 - ¼-28" UNF Female
02 - ¼-28" UNF Male
05 - Quick Fit Female
06 - M6 x 1mm Male
08 - M8 x 1.25mm Male
10 - M10 x 1.5mm Male

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TS016U.5

HS-420 Accelerometer

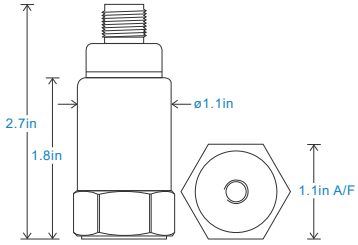
4-20mA velocity output via M12 Connector

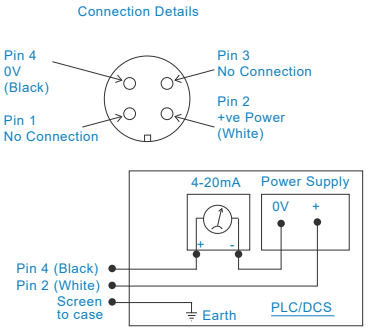
Key Features

- For use with PLC/DCS systems
- Customizable 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 ±10%
	Nominal 80Hz at 72°F
Frequency Response	600cpm (10Hz) to 60kcpm (1kHz) ± 5% - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	5.9ft. lbs
Weight	5.2 oz. (nominal) body only
Sheilded Cable Assembly	HS-AC010 - straight
	HS-AC011 - right angle
Mounting Threads	see: 'How To Order' table

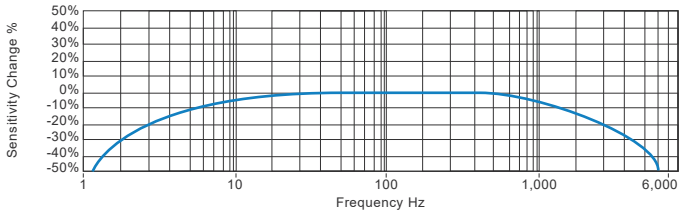
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	2 seconds
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-13 to 248°F
Sealing	IP67
Maximum Shock	5000g
EMC	EN61326-1:2013

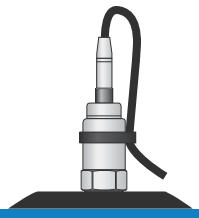
Typical Frequency Response



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
HS - Hansford Sensors

Product Series
420 - Industrial Vibration Sensor

H	S	4	2	0	X	X	X	X	X	X	X	X

Extra Options (if required)

F - Filtered	U - Imperial Range
I - Intrinsically Safe	UP - Imperial Peak Range
L - 316L Stainless Steel	UPP - Imperial Peak to Peak Range
RT - Temperature Output PT100	
S - 90° Side Exit	
T - Temperature Output	

Velocity Range (RMS unless specified)
012 - ½ IPS
025 - 1 IPS
050 - 2 IPS
100 - 4 IPS

Cable/Connector
01 - PUR
02 - Braided
07 - Silicon
08 - Flame Retardant
50 - 2 Pin MS
54 - M12

Mounting Threads
01 - ¼-28" UNF Female
02 - ¼-28" UNF Male
05 - Quick Fit Female
06 - M6 x 1mm Male
08 - M8 x 1.25mm Male
10 - M10 x 1.5mm Male

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TS029U.5

HS-420 Accelerometer

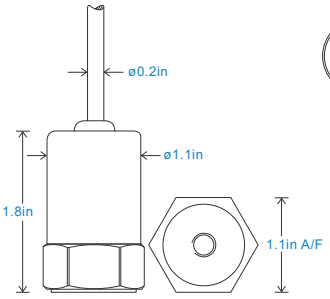
4-20mA velocity output via Flame Retardant Cable

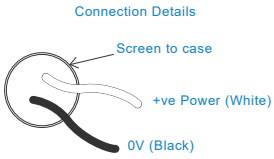
Key Features

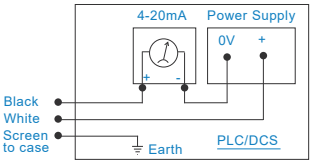
- For use with PLC/DCS systems
- Customizable features
- Low smoke, halogen free cable

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 ±10%
	Nominal 80Hz at 72°F
Frequency Response	600cpm (10Hz) to 60kcpm (1kHz) ± 5% - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	5.9ft. lbs
Weight	5.2 oz. (nominal) body only
Maximum Cable Length	3,280 ft.
Standard Cable Length	16 ft.
Shielded Cable	Flame Retardant - length to be specified with order
Mounting Threads	see: 'How To Order' table

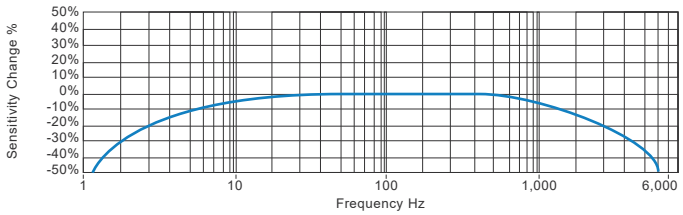
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	2 seconds
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-13 to 194°F
Sealing	IP65
Maximum Shock	5000g
EMC	EN61326-1:2013

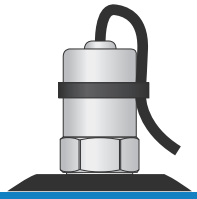
Typical Frequency Response



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)
UXX - length specified in feet

H	S	4	2	0	X	X	X	X	X	X	X	X	X	X	X

Extra Options (if required)

F - Filtered
I - Intrinsically Safe
L - 316L Stainless Steel
RT - Temperature Output PT100
S - 90° Side Exit
T - Temperature Output
U - Imperial Range
UP - Imperial Peak Range
UPP - Imperial Peak to Peak Range

Velocity Range (RMS unless specified)

012 - ½ IPS
025 - 1 IPS
050 - 2 IPS
100 - 4 IPS

Cable/Connector

01 - PUR
02 - Braided
07 - Silicon
08 - Flame Retardant
50 - 2 Pin MS
54 - M12

Mounting Threads

01 - ¼-28" UNF Female
02 - ¼-28" UNF Male
05 - Quick Fit Female
06 - M6 x 1mm Male
08 - M8 x 1.25mm Male
10 - M10 x 1.5mm Male

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HS-420 Accelerometer

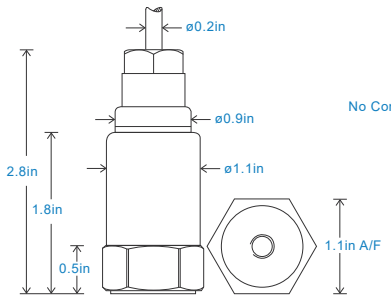
4-20mA velocity output via PUR Cable

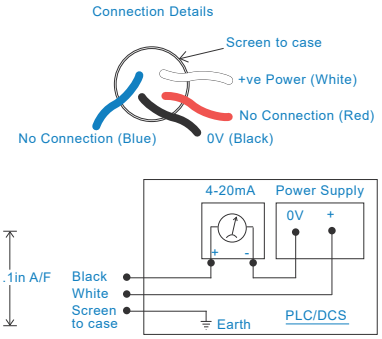
Key Features

- Waterproof
- Resistant to oil
- For use with PLC/DCS systems

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 ±10%
	Nominal 80Hz at 72°F
Frequency Response	600cpm (10Hz) to 60kcpm (1kHz) ± 5% - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	5.9ft. lbs
Weight	5.2 oz. (nominal) body only
Maximum Cable Length	3,280 ft.
Standard Cable Length	16 ft.
Shielded Cable	PUR - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	328 ft. max (10 bar)

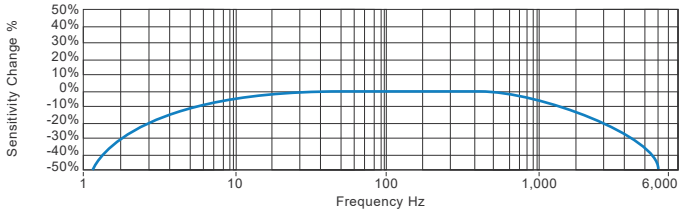
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	2 seconds
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	>10^8 Ohms at 500 Volts

Environmental

Operating Temperature Range	-13 to 194°F
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

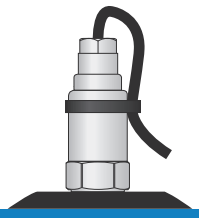
Typical Frequency Response



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)
UXX - length specified in feet

H	S	4	2	0	X	X	X	X	X	X	X	X	X	X	X

Extra Options (if required)

F - Filtered
I - Intrinsically Safe
L - 316L Stainless Steel
RT - Temperature Output PT100
S - 90° Side Exit
T - Temperature Output
U - Imperial Range
UP - Imperial Peak Range
UPP - Imperial Peak to Peak Range

Velocity Range (RMS unless specified)

012 - ½ IPS
025 - 1 IPS
050 - 2 IPS
100 - 4 IPS

Cable/Connector

01 - PUR
02 - Braided
07 - Silicon
08 - Flame Retardant
50 - 2 Pin MS
54 - M12

Mounting Threads

01 - ¼-28" UNF Female
02 - ¼-28" UNF Male
05 - Quick Fit Female
06 - M6 x 1mm Male
08 - M8 x 1.25mm Male
10 - M10 x 1.5mm Male

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HS-420 Accelerometer

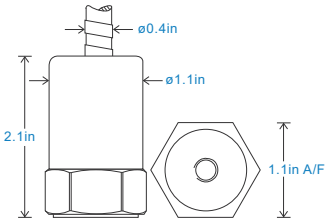
4-20mA velocity output via FEP with Protective Conduit

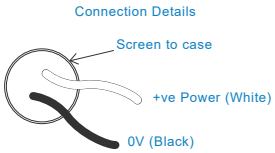
Key Features

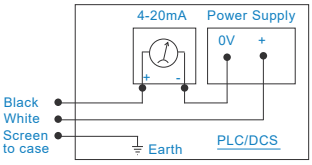
- For use with PLC/DCS systems
- Customizable features

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 ±10%
	Nominal 80Hz at 72°F
Frequency Response	600cpm (10Hz) to 60kcpm (1kHz) ± 5% - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	5.9ft. lbs
Weight	5.2 oz. (nominal) body only
Maximum Cable Length	3,280 ft.
Standard Cable Length	16 ft.
Mounting Threads	see: 'How To Order' table
Conduit Material	304 Stainless Steel
Conduit Length	Conduit Length is approx. 1.6ft shorter than the cable Maximum Conduit Length:98 ft.

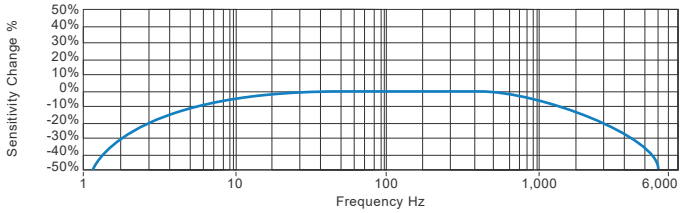
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	2 seconds
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	>10^8 Ohms at 500 Volts

Environmental

Operating Temperature Range	-13 to 248°F
Sealing	IP65
Maximum Shock	5000g
EMC	EN61326-1:2013

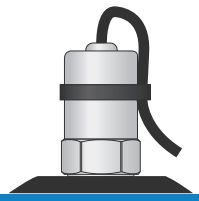
Typical Frequency Response



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)
UXX - length specified in feet

H	S	4	2	0	X	X	X	X	X	X	X	X	X	X	X	X

Extra Options (if required)

F - Filtered	U - Imperial Range
I - Intrinsically Safe	UP - Imperial Peak Range
L - 316L Stainless Steel	UPP - Imperial Peak to Peak Range
RT - Temperature Output PT100	
S - 90° Side Exit	
T - Temperature Output	

Velocity Range (RMS unless specified)
012 - ½ IPS
025 - 1 IPS
050 - 2 IPS
100 - 4 IPS

Cable/Connector
30C - FEP with Protective Conduit

Mounting Threads
02 - ¼-28" UNF Male
06 - M6 x 1mm Male
08 - M8 x 1.25mm Male

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TS813U.3

HS-420 Accelerometer

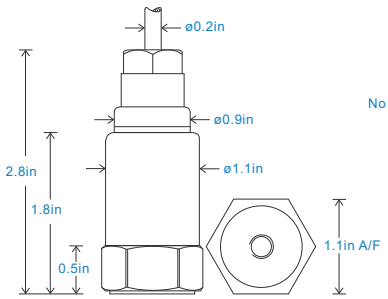
4-20mA velocity output via 4 Core Polyolefin HFFR

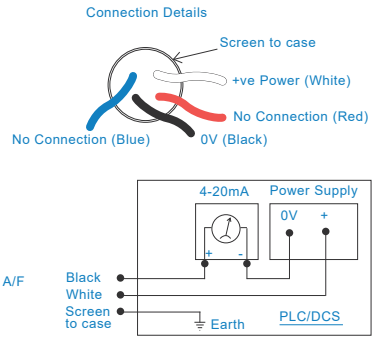
Key Features

- Halogen free cable
- Resistant to oil
- For use with PLC/DCS systems

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 ±10%
	Nominal 80Hz at 72°F
Frequency Response	600cpm (10Hz) to 60kcpm (1kHz) ± 5% - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	5.9ft. lbs
Weight	5.2 oz. (nominal) body only
Maximum Cable Length	3,280 ft.
Standard Cable Length	16 ft.
Screened Cable	Polyolefin HFFR - length to be specified with order
Mounting Threads	see: 'How To Order' table

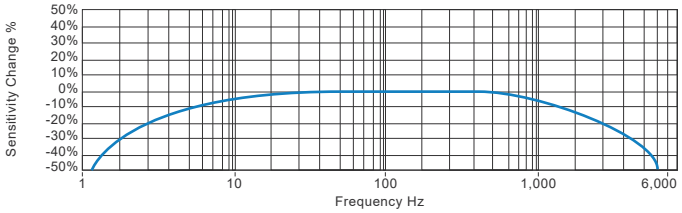
Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	2 seconds
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-67 to 266°F
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

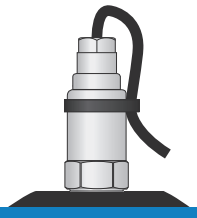
Typical Frequency Response



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)
UXX - length specified in feet

H	S	4	2	0	X	X	X	X	X	X	X	X	X	X	X

Extra Options (if required)

F - Filtered	U - Imperial Range
L - 316L Stainless Steel	UP - Imperial Peak Range
RT - Temperature Output PT100	UPP - Imperial Peak to Peak Range
S - 90° Side Exit	
T - Temperature Output	

Velocity Range (RMS unless specified)
012 - ½ IPS
025 - 1 IPS
050 - 2 IPS
100 - 4 IPS

Cable/Connector
37 - 4 Core Polyolefin HFFR

Mounting Threads
01 - ¼-28" UNF Female
02 - ¼-28" UNF Male
05 - Quick Fit Female
06 - M6 x 1mm Male
08 - M8 x 1.25mm Male
10 - M10 x 1.5mm Male

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TS1065U.1