### **HS-173 Premium Triaxial Accelerometer**

Three AC outputs via M12 Connector

#### **Key Features**

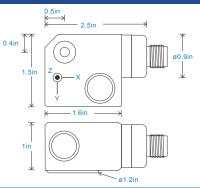
- Output via three axies
- · For use with data collector
- Customizable features

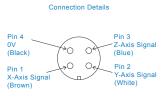


Building services, Pulp and Paper, Mining, Metals, Utilities, Automotive, Water, Pharmaceutical

**Technical Performance** 







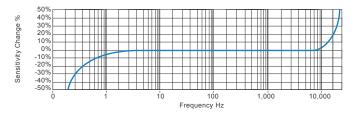
#### Mechanical

Mounted Base Resonance	see 'How To Order' table (nominal)	Case Material
	+3kHz for aluminium version	Sensing Element/Construction
Sensitivity	see: 'How To Order' table ±10%	Mounting Torque
	Nominal 80Hz at 22°C per axies	Mounting Bolt Provided
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%	Weight
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%	
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB	Screened Cable Assembly
Isolation	Base isolated	Mounting Threads
Range	see: 'How To Order' table	
Transverse Sensitivity	Less than 5%	

Material	Stainless Steel unless specified Aluminium
g Element/Construction	PZT/Shear
ing Torque	8Nm
ing Bolt Provided	see: 'How To Order' table x 30mm long
t	235gms (nominal) - Stainless Steel
	115gms (nominal) - Aluminium
ned Cable Assembly	HS-AC010 - straight
ing Threads	see: 'How To Order' table

Electrical		Environmental	
Electrical Noise	0.1mg max	Operating Temperature Range	-67 to 266°F
Current Range	0.5mA to 8mA	Sealing	IP67
Bias Voltage	10 - 12 Volts DC	Maximum Shock	5000g
Settling Time	1 second	EMC	EN61326-1:2013
Output Impedance	200 Ohms max.		
Case Isolation	>10 <sup>8</sup> Ohms at 500 Volts		

#### Typical Frequency Response (at 100mV/g)



#### Applications

팬, 모터, 펌프, 압축기, 원심분리기, 컨베 이어, 에어 핸들러, 기어박스, 롤, 건조기, 프레스, 냉각, VAC, 스핀들, 공작 기계, 공정 장비

진동 센서는 평평한 표면에 단단히 고정되어야 합니다 (스폿 면이 필요할 수 있으며 센서 본체에 케이블 고정).



CE

### How To Order

	<b>duct Series</b> - Triaxial Industrial Vi	oration Sensor			
H S - 1 7	3 X	X X	x x	x x x	
Extra Options (if required) AL - Aluminium Material F - Filtered RT - Temperature Output PT100 T - Temperature Output	Sensitivity 010 - 10mV/g 050 - 30mV/g 100 - 100mV/g 250 - 250mV/g 500 - 500mV/g	±800g 1,800k ±250g 1,680k ±160g 1,560k ±80g 1,440k ±32g 1,320k	cpm (19kHz) cpm (18kHz) cpm (17kHz) cpm (16kHz)	Cable/Connector 54 - M12	Mounting Threads 02 - ¼-28' UNF Male 06 - M6 x 1mm Male 08 - M8 x 1.25mm Male



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# HS-173 Premium Triaxial Accelerometer

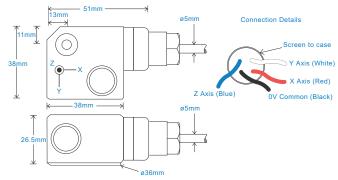
#### **Key Features**

- · Output via three axes
- Waterproof
- Resistant to oil

#### Industries

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

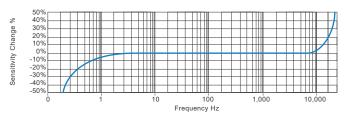




Technical Performance		Mechanical	
Mounted Base Resonance	see 'How To Order' table (nominal)	Case Material	Stainless Steel unless specified Aluminium
Sensitivity	see: 'How To Order' table ±10%	Sensing Element/Construction	PZT/Shear
	Nominal 80Hz at 22°C per axies	Mounting Torque	8Nm
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%	Mounting Bolt Provided	see: 'How To Order' table x 30mm long
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%	Weight	235gms (nominal) - Stainless Steel
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB	Maximum Cable Length	1000 metres
Isolation	Base isolated	Standard Cable Length	5 metres
Range	see: 'How To Order' table	Screened Cable	PUR - length to be specified with order
Transverse Sensitivity	Less than 5%	Mounting Threads	see: 'How To Order' table
		Submersible Depth	100 metres max (10 bar)

Electrical		Environmental	
Electrical Noise	0.1mg max	Operating Temperature Range	-30 to 90°C
Current Range	0.5mA to 8mA	Sealing	IP68
Bias Voltage	10 - 12 Volts DC	Maximum Shock	5000g
Settling Time	1 second	EMC	EN61326-1:2013
Output Impedance	200 Ohms max.		
Case Isolation	>10 <sup>8</sup> Ohms at 500 Volts		

#### Typical Frequency Response (at 100mV/g)



#### 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	<b>Product Se</b> 173 - Triaxia	<b>ries</b> al Industrial Vib	ration Sens	or						
H S 1	7 3	8 X	X	X	X	Χ	X	X	X	
Extra Options (if required) AL - Aluminium Material F - Filtered		i0 - 50mV/g 10 - 100mV/g 10 - 250mV/g	Range ±800g ±250g ±160g ±80g ±32g ±16g	Resona 20kHz 19kHz 18kHz 17kHz 16kHz 15kHz		(cpm) (cpm) (cpm)	Cable/ 01 - Pl	' <b>Connecto</b> UR	or	Mounting Threads 02 - ¼-28" UNF Male 06 - M6 x 1mm Male 08 - M8 x 1.25mm Male



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## HS-173 Premium Triaxial Accelerometer AC acceleration output via 4 Core Polyolefin HFFR

#### **Key Features**

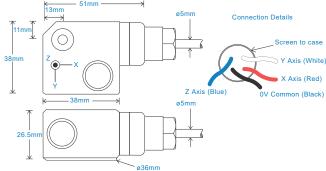
- · Output via three axes
- For use with data collector
- · Resistant to oil

#### Industries

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

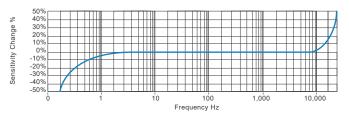


>108 Ohms at 500 Volts



<b>T</b> 1 1 1 <b>D</b> 4			
Technical Performance		Mechanical	
Mounted Base Resonance	see 'How To Order' table (nominal)	Case Material	Stainless Steel unless specified Aluminium
	+3kHz for aluminium version	Sensing Element/Construction	PZT/Shear
Sensitivity	see: 'How To Order' table ±10%	Mounting Torque	8Nm
	Nominal 80Hz at 22°C per axies	Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%	Weight	235gms (nominal) - Stainless Steel
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%		115gms (nominal) - Aluminium
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB	Maximum Cable Length	1000 metres
Isolation	Base isolated	Standard Cable Length	5 metres
Range	see: 'How To Order' table	Screened Cable Polyc	blefin HFFR - length to be specified with order
Transverse Sensitivity	Less than 5%	Mounting Threads	see: 'How To Order' table
		Submersible Depth	100 metres max (10 bar)
Electrical		Environmental	
Electrical Noise	0.1mg max	Operating Temperature Range	-55 to 130°C
Current Range	0.5mA to 8mA	Sealing	IP68
Bias Voltage	10 - 12 Volts DC	Maximum Shock	5000g
Settling Time	1 second	EMC	EN61326-1:2013
Output Impedance	200 Ohms max.	LINO	EN01320-1.2013
output impodatioe	200 Ollins Illax.		

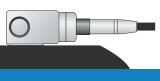
#### Typical Frequency Response (at 100mV/g)



#### 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

Case Isolation

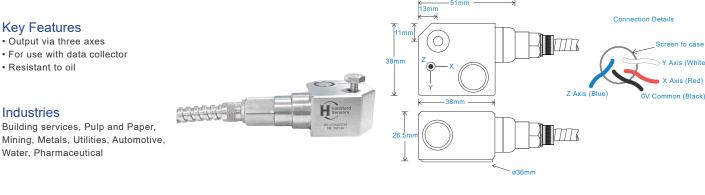
Product Prefix HS - Hansford Sensors	Product Series 173 - Triaxial Industrial Vibra	ation Sensor		
H S 1	7 3 X	x x x x	x x x	
Extra Options (if required) AL - Aluminium Material F - Filtered	Sensitivity 010 - 10mV/g 030 - 30mV/g 050 - 50mV/g 100 - 100mV/g 250 - 250mV/g 500 - 500mV/g	Range Resonant Frequency   ±800g 20kHz (1,200kcpm)   ±250g 19kHz (1,140kcpm)   ±160g 18kHz (1,080kcpm)   ±80g 17kHz (1,020kcpm)   ±32g 16kHz (960kcpm)   ±16g 15kHz (900kcpm)	Cable/Connector 37 - 4 Core Polyolefin HFFR	Mounting Threads 02 - ¼-28" UNF Male 06 - M6 x 1mm Male 08 - M8 x 1.25mm Male



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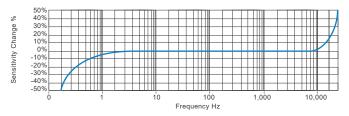
## HS-173 Premium Triaxial Accelerometer AC acceleration output via 4 Core Polyolefin HFFR with Protective Conduit



Technical Performance		Mechanical	
Mounted Base Resonance	see 'How To Order' table (nominal)	Case Material	Stainless Steel unless specified Aluminium
	+3kHz for aluminium version	Sensing Element/Constru	uction PZT/Shear
Sensitivity	see: 'How To Order' table ±10%	Mounting Torque	8Nm
	Nominal 80Hz at 22°C per axies	Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%	Weight	235gms (nominal) - Stainless Steel
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%		115gms (nominal) - Aluminium
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB	Maximum Cable Length	1000 metres
Isolation	Base isolated	Standard Cable Length	5 metres
Range	see: 'How To Order' table	Screened Cable	Polyolefin HFFR - length to be specified with order
Transverse Sensitivity	Less than 5%	Mounting Threads	see: 'How To Order' table
		Submersible Depth	100 metres max (10 bar)
Electrical		Environmental	

Electrical		Environmental	
Electrical Noise	0.1mg max	Operating Temperature Range	-55 to 130°C
Current Range	0.5mA to 8mA	Sealing	IP68
Bias Voltage	10 - 12 Volts DC	Maximum Shock	5000g
Settling Time	1 second	EMC	EN61326-1:2013
Output Impedance	200 Ohms max.		
Case Isolation	>10 <sup>8</sup> Ohms at 500 Volts		

### Typical Frequency Response (at 100mV/g)



#### 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	<b>Product Series</b> 173 - Triaxial Industrial Vibr	ation Sensor			
H S 1	7 3 X	X X	X X	X X X	
Extra Options (if required) AL - Aluminium Material F - Filtered	Sensitivity 010 - 10mV/g 030 - 30mV/g 050 - 50mV/g 100 - 100mV/g 250 - 250mV/g 500 - 500mV/g	Range Resona   ±800g 20kHz   ±250g 19kHz   ±160g 18kHz   ±80g 17kHz   ±32g 16kHz   ±16g 15kHz	ant Frequency (1,200kcpm) (1,140kcpm) (1,080kcpm) (1,020kcpm) (960kcpm) (900kcpm)	Cable/Connector 37C - 4 Core Polyolefin HFFR with Protective Conduit	Mounting Thread 02 - ¼-28" UNF M 06 - M6 x 1mm Mi 08 - M8 x 1.25mm



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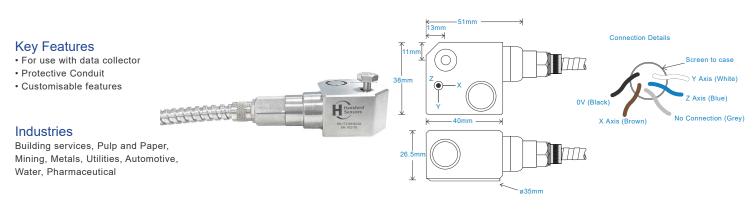
Screen to case

Axis (White

X Axis (Red)

We reserve the right to alter the specification of this product without prior notice TS988.3

### HS-173 Premium Triaxial Accelerometer AC Acceleration Output via 5 Core PTFE Cable with Protective Conduit



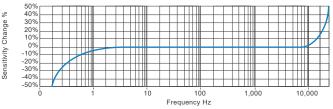
Technical Performance	)	Mechanical	
Mounted Base Resonance	see 'How To Order' table (nominal)	Case Material	Stainless Steel
Sensitivity	see: 'How To Order' table ±10%	Sensing Element/Construction	PZT/Shear
	Nominal 80Hz at 22°C per axies	Mounting Torque	8Nm
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%	Mounting Bolt Provided	see: 'How To Order' table x 30mm long
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%	Weight-Sensor Only	235gms (nominal) - Stainless Steel
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB	Maximum Cable Length	1000 metres
Isolation	Base isolated	Standard Cable Length	5 metres
Range	see: 'How To Order' table	Screened Cable P	TFE Cable - length to be specified with order
Transverse Sensitivity	Less than 5%	Mounting Threads	see: 'How To Order' table
		Submersible Depth	100 metres max (10 bar)
		Conduit Material	Stainless Steel
		Conduit Length Conduit L	ength is approx. 0.5m shorter than the cable
Electrical		Environmental	

Sealing Maximum Shock

EMC

Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	1 second
Output Impedance	200 Ohms max.
Case Isolation	>10 <sup>8</sup> Ohms at 500 Volts

Typical Frequency Response (at 100mV/g	g)
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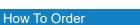


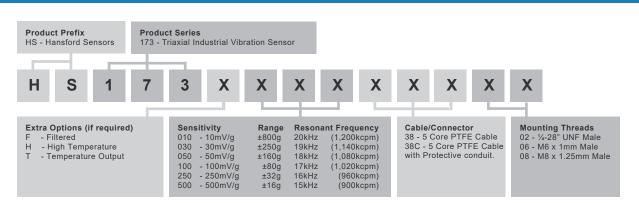
#### Applications

**Operating Temperature Range** 

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.)







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-55 to 150°C

EN61326-1:2013

IP68

5000g

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