

HS-173R Premium Triaxial Accelerometer

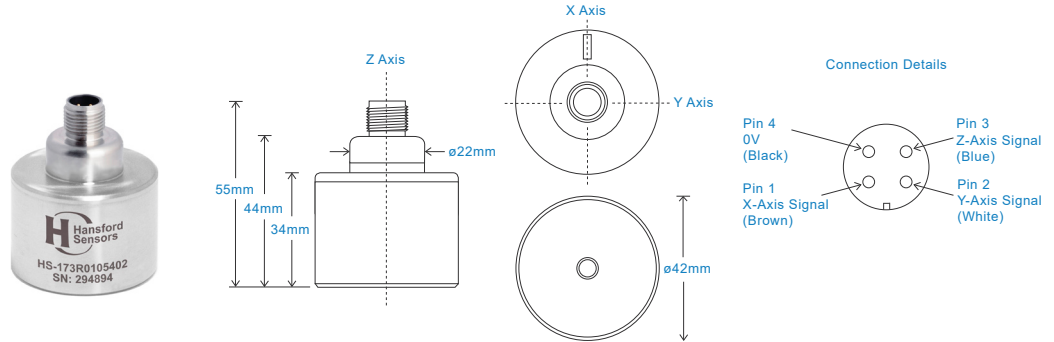
Three AC outputs via M12 Connector

Key Features

- Output via three axes
- For use with data collector
- Customisable features

Industries

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



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal) +3kHz for aluminium version
Sensitivity	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C per axes
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) $\pm 5\%$ 1.5Hz (90cpm) to 12kHz (720kcpm) $\pm 10\%$ 0.8Hz (48cpm) to 15kHz (900kcpm) $\pm 3\text{dB}$
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel unless specified Aluminium
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Weight	194gms (nominal) - Stainless Steel 100gms (nominal) - Aluminium
Screened Cable Assembly	HS-AC010 - straight
Mounting Threads	see: 'How To Order' table

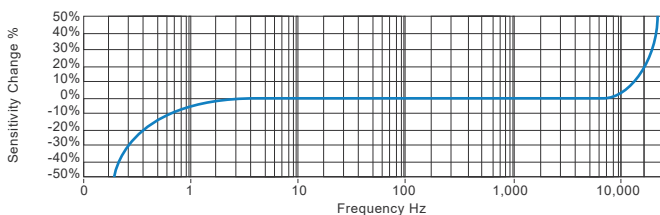
Electrical

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	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-55 to 150°C
Sealing	IP67
Maximum Shock	5000g
EMC	EN61326-1:2013

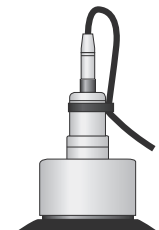
Typical Frequency Response (at 100mV/g)



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	Product Series										
HS - Hansford Sensors	173 - Triaxial Industrial Vibration Sensor										
H	S	1	7	3	X	X	X	X	X	X	X
Extra Options (if required)		Sensitivity		Range		Resonant Frequency		Cable/Connector		Mounting Threads	
R - Round Design		010 - 10mV/g		$\pm 800\text{g}$		20kHz (1,800kcpm)		54 - M12		01 - 1/4-28" UNF Female	
AL - Aluminium Material		030 - 30mV/g		$\pm 250\text{g}$		19kHz (1,680kcpm)				02 - 1/4-28" UNF Male	
F - Filtered		050 - 50mV/g		$\pm 160\text{g}$		18kHz (1,560kcpm)				06 - M6 x 1mm Male	
		100 - 100mV/g		$\pm 80\text{g}$		17kHz (1,440kcpm)				08 - M8 x 1.25mm Male	
		250 - 250mV/g		$\pm 32\text{g}$		16kHz (1,320kcpm)					
		500 - 500mV/g		$\pm 16\text{g}$		15kHz (1,200kcpm)					



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TS692.4



HS-173R Premium Triaxial Accelerometer

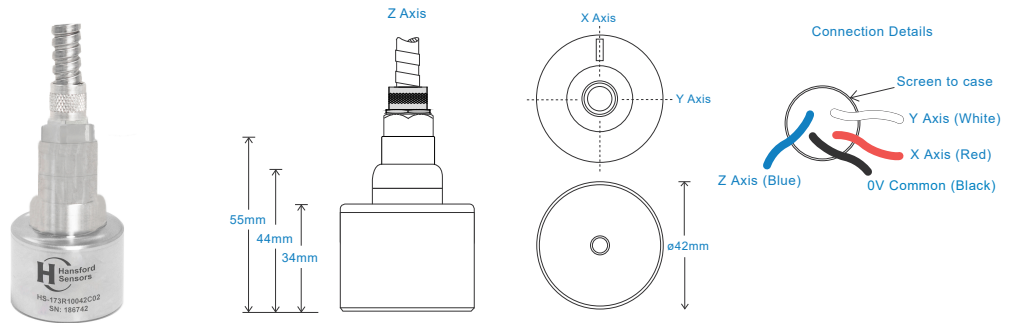
AC acceleration output via 4 Core Screened FEP Cable with Protective Conduit

Key Features

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

Industries

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



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
Sensitivity	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C per axes
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) $\pm 5\%$ 1.5Hz (90cpm) to 12kHz (720kcpm) $\pm 10\%$ 0.8Hz (48cpm) to 15kHz (900kcpm) $\pm 3\text{dB}$
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Weight	194gms (nominal) - Stainless Steel
Maximum Cable Length	1000 metres
Standard Cable Length	5 metres
Screened Cable	4 Core Screened FEP- length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)

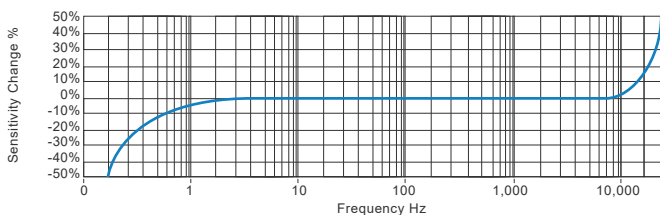
Electrical

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	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-55 to 150°C
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

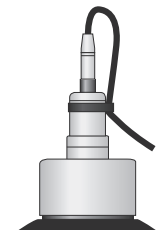
Typical Frequency Response (at 100mV/g)



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	Product Series										
HS - Hansford Sensors	173 - Triaxial Industrial Vibration Sensor										
		H	S	1	7	3	R	X	X	X	X
		Extra Options (if required)		Sensitivity		Range		Resonant Frequency		Cable/Connector	
		F - Filtered		010 - 10mV/g		$\pm 800\text{g}$		20kHz (1,800kcpm)		42C - 4 Core Screened	
		R - Round Design		030 - 30mV/g		$\pm 250\text{g}$		19kHz (1,680kcpm)		FEP Cable with	
				050 - 50mV/g		$\pm 160\text{g}$		18kHz (1,560kcpm)		Protective Conduit	
				100 - 100mV/g		$\pm 80\text{g}$		17kHz (1,440kcpm)			
				250 - 250mV/g		$\pm 32\text{g}$		16kHz (1,320kcpm)			
				500 - 500mV/g		$\pm 16\text{g}$		15kHz (1,200kcpm)			
										Mounting Threads	
										01 - 1/4-28" UNF Female	
										02 - 1/4-28" UNF Male	
										06 - M6 x 1mm Male	
										08 - M8 x 1.25mm Male	



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TS1071.1



HS-173RHT Premium Triaxial Accelerometer

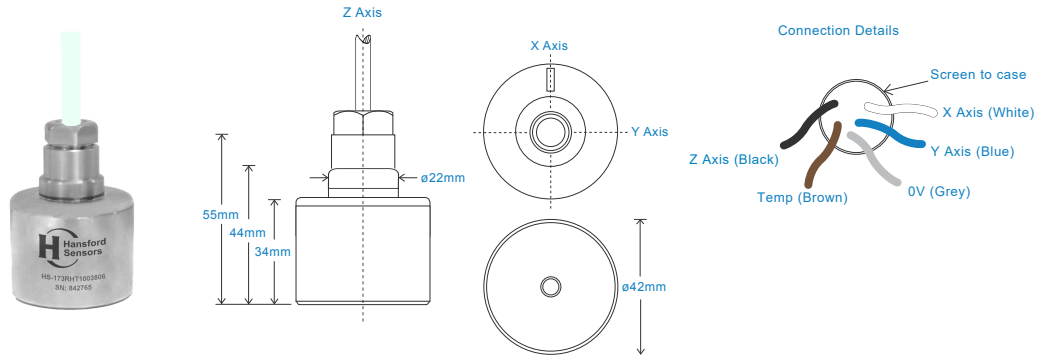
AC Acceleration and Temperature Output via 5 Core PTFE Cable

Key Features

- High Temperature
- For use with data collector
- Output via three axes

Industries

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



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
Sensitivity	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C per axes
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) $\pm 5\%$ 1.5Hz (90cpm) to 12kHz (720kcpm) $\pm 10\%$ 0.8Hz (48cpm) to 15kHz (900kcpm) $\pm 3\text{dB}$
Isolation	Base isolated
Range	see: 'How To Order' table
Temperature Output	10 mV/°C - 150°C
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Weight	194gms (nominal) - Stainless Steel
Maximum Cable Length	1000 metres
Standard Cable Length	5 metres
Screened Cable	PTFE Cable - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)

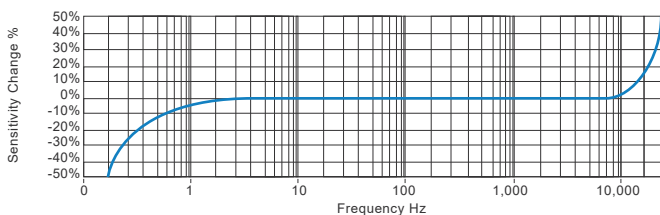
Electrical

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	$> 10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-55 to 150°C
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

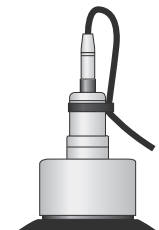
Typical Frequency Response (at 100mV/g)



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		Product Series											
HS - Hansford Sensors		173 - Triaxial Industrial Vibration Sensor											
H	S	1	7	3	R	H	T	X	X	X	X	X	X
Extra Options (if required)		Sensitivity		Range		Resonant Frequency		Cable/Connector		Mounting Threads			
F - Filtered		010 - 10mV/g		±800g		20kHz (1,800cpm)		38 - 5 Core PTFE Cable		01 - ¼-28" UNF Female			
R - Round Design		030 - 30mV/g		±250g		19kHz (1,680cpm)		38C - 5 Core PTFE Cable with Protective conduit.		02 - ¼-28" UNF Male			
H - High Temperature		050 - 50mV/g		±160g		18kHz (1,560cpm)				06 - M6 x 1mm Male			
T - Temperature Output		100 - 100mV/g		±80g		17kHz (1,440cpm)				08 - M8 x 1.25mm Male			
		250 - 250mV/g		±32g		16kHz (1,320cpm)							
		500 - 500mV/g		±16g		15kHz (1,200cpm)							



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TS1133.1



HS-173RHT Premium Triaxial Accelerometer

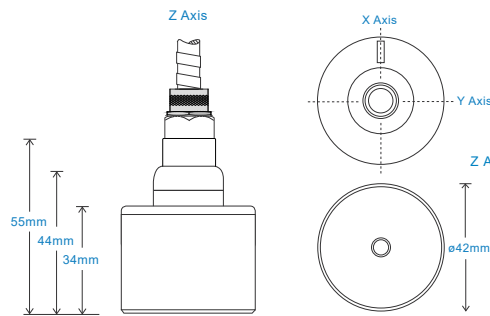
AC Acceleration and Temperature Output via 5 Core PTFE Cable with Protective Conduit

Key Features

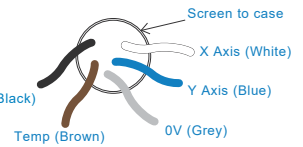
- High Temperature
- For use with data collector
- Protective Conduit

Industries

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



Connection Details



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
Sensitivity	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C per axes
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) $\pm 5\%$ 1.5Hz (90cpm) to 12kHz (720kcpm) $\pm 10\%$ 0.8Hz (48cpm) to 15kHz (900kcpm) $\pm 3\text{dB}$
Isolation	Base isolated
Range	see: 'How To Order' table
Temperature Output	10 mV/°C - 150°C
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Weight	194gms (nominal) - Stainless Steel
Maximum Cable Length	1000 metres
Standard Cable Length	5 metres
Screened Cable	PTFE Cable - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)
Conduit Material	Stainless Steel
Conduit Length	Conduit Length is approx. 0.5m shorter than the cable

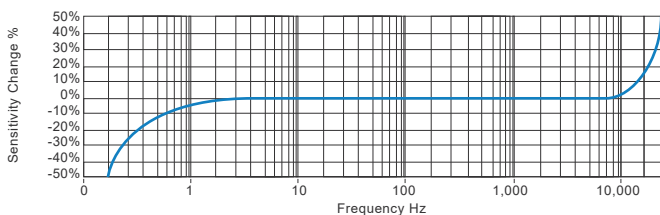
Electrical

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	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	-55 to 150°C
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

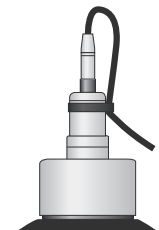
Typical Frequency Response (at 100mV/g)



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		Product Series 173 - Triaxial Industrial Vibration Sensor													
H	S	1	7	3	R	H	T	X	X	X	X	X	X	X	X
Extra Options (if required) F - Filtered R - Round Design H - High Temperature T - Temperature Output		Sensitivity		Range		Resonant Frequency		Cable/Connector				Mounting Threads			
		010	- 10mV/g	$\pm 800\text{g}$		20kHz	(1,800kcpm)	38 - 5 Core PTFE Cable				01 - 1/4-28" UNF Female			
		030	- 30mV/g	$\pm 250\text{g}$		19kHz	(1,680kcpm)	38C - 5 Core PTFE Cable with Protective conduit.				02 - 1/4-28" UNF Male			
		050	- 50mV/g	$\pm 160\text{g}$		18kHz	(1,560kcpm)					06 - M6 x 1mm Male			
		100	- 100mV/g	$\pm 80\text{g}$		17kHz	(1,440kcpm)					08 - M8 x 1.25mm Male			
		250	- 250mV/g	$\pm 32\text{g}$		16kHz	(1,320kcpm)								
		500	- 500mV/g	$\pm 16\text{g}$		15kHz	(1,200kcpm)								

HS-173IR Premium ATEX Triaxial Accelerometer

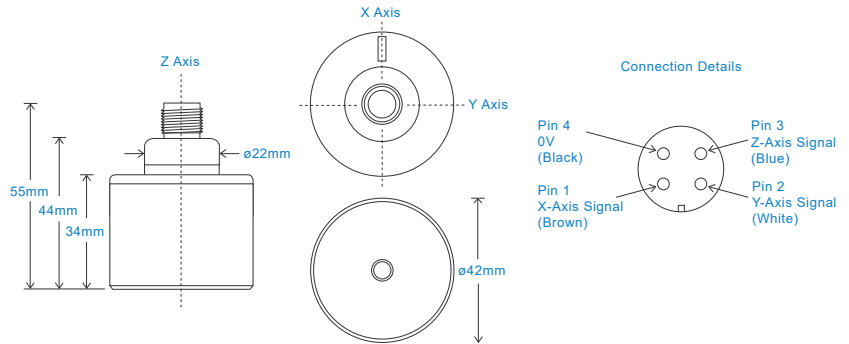
Three AC outputs via M12 Connector

Key Features

- Intrinsically Safe with European, USA and Australian approvals
- Output via three axes
- For use with data collector
- Customisable features

Industries

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



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal) +3kHz for aluminium version
Sensitivity	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C per axes
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) $\pm 5\%$ 1.5Hz (90cpm) to 12kHz (720kcpm) $\pm 10\%$ 0.8Hz (48cpm) to 15kHz (900kcpm) $\pm 3\text{dB}$
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel unless specified Aluminium
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Weight	194gms (nominal) - Stainless Steel 100gms (nominal) - Aluminium
Screened Cable Assembly	HS-AC010 - straight
Mounting Threads	see: 'How To Order' table

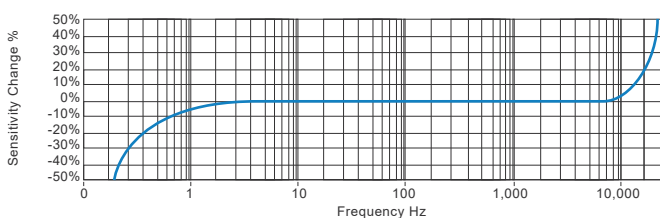
Electrical

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	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	see: attached certification details
Sealing	IP67
Maximum Shock	5000g
EMC	EN61326-1:2013

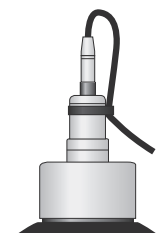
Typical Frequency Response (at 100mV/g)



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.)



Certifications



This product is certified in accordance with
UL 60079-0, 6th Ed. Rev. July 26, 2013
UL 60079-11, 6th Ed. Rev. September 6, 2013
CAN/CSA C22.2 No. 60079-0:15 Rev. October 2015
CAN/CSA C22.2 No. 60079-11:14
UL 913, 8th Ed. Rev. October 16, 2015



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TS922.5



HS-173IR Premium ATEX Triaxial Accelerometer

Three AC outputs via M12 Connector

Intrinsically Safe Requirements

Certificate details: Group II and III	IECEX 18.0082X Baseefa18ATEX0130X Ex II 1GD Ex ia II T6...T4 Ex ia IIIC T135°C Da Ex ia IIIB T102°C...T131°C Da	Certified Temperature Range	Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +69°C) (Gas) Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +104°C) (Gas) Ex ia IIIB T102°C Da (-55°C ≤ Ta ≤ +69°C) (Dust) Ex ia IIIB T131°C Da (-55°C ≤ Ta ≤ +98°C) (Dust) Ex ia IIIC T135°C Da (-55°C ≤ Ta ≤ +70°C) (Dust) Ex ia I Ma (-55°C ≤ Ta ≤ +104°C) (Dust)
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Certificate details: Group I	IECEX 18.0082X Baseefa18ATEX0130X Ex I M 1 Ex ia I Ma Ex ia IIIC T110°C...T145°C Da	Australia Approval Group I	IECEX ExTC 18.0032X Ex ia I Ma (-55°C ≤ Ta ≤ +104°C)
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Terminal Parameters Connector	Ui = 28V, Ii = 93mA, Pi = 0.65W Ci = 3.6nF Li = 0	US/Canada Approvals	Certificate No. SGSNA/19/BAS/00005 CI I, II, III, Div 1, 2 Gr A-G T* CI I Zn 0 AEx ia IIC T6...T4 Ga CI II Zn 20 AEx ia IIIC T135°C Da Ex ia IIC T6...T4 Ga Ex ia IIIC T135°C Da
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500V Isolation	Units Will Pass A 500V Isolation Test	Or
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Standards Applied to Product	EN IEC 60079-0:2018 EN 60079-11:2012 IEC 60079-0 Edition 7 2017 IEC 60079-11 Edition 6 2011	CI I, II, III, Div 1, 2 Gr A-D G and F T* CI I Zn 0 AEx ia IIC T6...T4 Ga CI II Zn 20 AEx ia IIIC T135°C Da CI II Zn 20 AEx ia IIIB T102°C...T131°C Da Ex ia IIC T6...T4 Ga Ex ia IIIC T135°C Da
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Barrier	1 x Pepperl + Fuchs Galvanic Isolator KFD2-VR4-Ex1.26 (BAS02ATEX7206) 1 x MTL Zener Barrier MTL7728+ (BAS01ATEX7217) or Pepperl + Fuchs Zener Barrier Z728 (BAS01ATEX7005) or any other barrier that conforms with the terminal parameters	Control Drawing	M06-088-A
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Special conditions of use: When a sensor is supplied with integral cable, this must be terminated in an enclosure providing at least degree of protection IP20.

Note: If the equipment is to be used in unusual environments or aggressive substances are likely to be encountered, contact the manufacturer to discuss suitability.

How To Order

Product Prefix	Product Series												
HS - Hansford Sensors	173I - Premium Intrinsically Safe Triaxial Industrial Vibration Sensor												
H	S	1	7	3	I	R	X	X	X	X	X	X	X
Extra Options (If required)		Sensitivity		Range		Resonant Frequency		Cable/Connector		Mounting Threads			
A - Australia (Group I)		010 - 10mV/g		±800g		20kHz (1,800kcpm)		54 - M12		02 - ¼-28" UNF Male			
R - Round Design		030 - 30mV/g		±250g		19kHz (1,680kcpm)				06 - M6 x 1mm Male			
I - Intrinsically Safe (Group II)		050 - 50mV/g		±160g		18kHz (1,560kcpm)				08 - M8 x 1.25mm Male			
L - 316L Stainless Steel		100 - 100mV/g		±80g		17kHz (1,440kcpm)							
M - Mining (Group I)		250 - 250mV/g		±32g		16kHz (1,320kcpm)							
Y - 5% tolerance on sensitivity		500 - 500mV/g		±16g		15kHz (1,200kcpm)							

HS-173IR Premium ATEX Triaxial Accelerometer

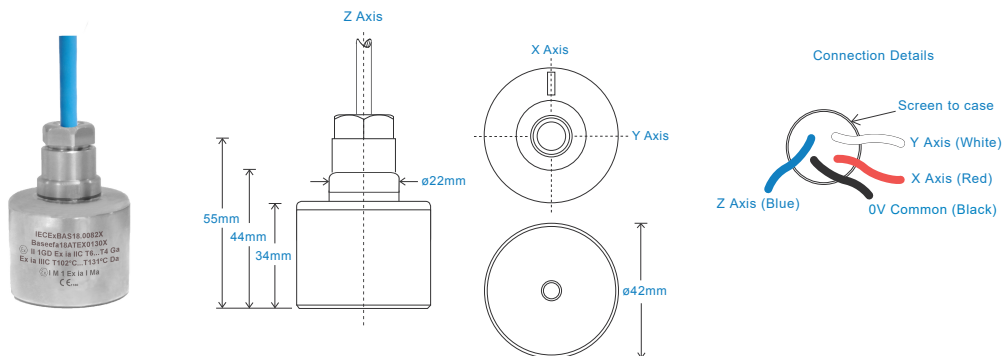
Three AC outputs via PUR cable

Key Features

- Intrinsically Safe with European, USA and Australian approvals
- Output via three axes
- For use with data collector

Industries

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



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
Sensitivity	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C per axes
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) $\pm 5\%$ 1.5Hz (90cpm) to 12kHz (720kcpm) $\pm 10\%$ 0.8Hz (48cpm) to 15kHz (900kcpm) $\pm 3\text{dB}$
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Weight	194gms (nominal) - Stainless Steel
Maximum Cable Length	See certificate
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)

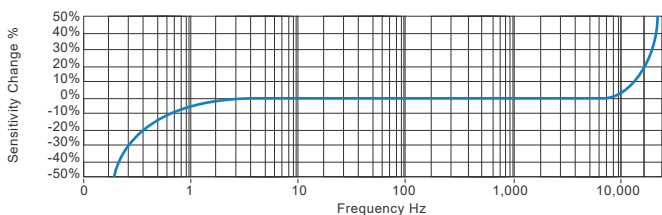
Electrical

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	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	see: attached certification details
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

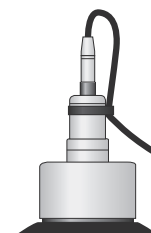
Typical Frequency Response (at 100mV/g)



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.)



Certifications



This product is certified in accordance with
UL 60079-0, 6th Ed. Rev. July 26, 2013
UL 60079-11, 6th Ed. Rev. September 6, 2013
CAN/CSA C22.2 No. 60079-0:15 Rev. October 2015
CAN/CSA C22.2 No. 60079-11:14
UL 913, 8th Ed. Rev. October 16, 2015



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TS1068.1



HS-173IR Premium ATEX Triaxial Accelerometer

Three AC outputs via PUR cable

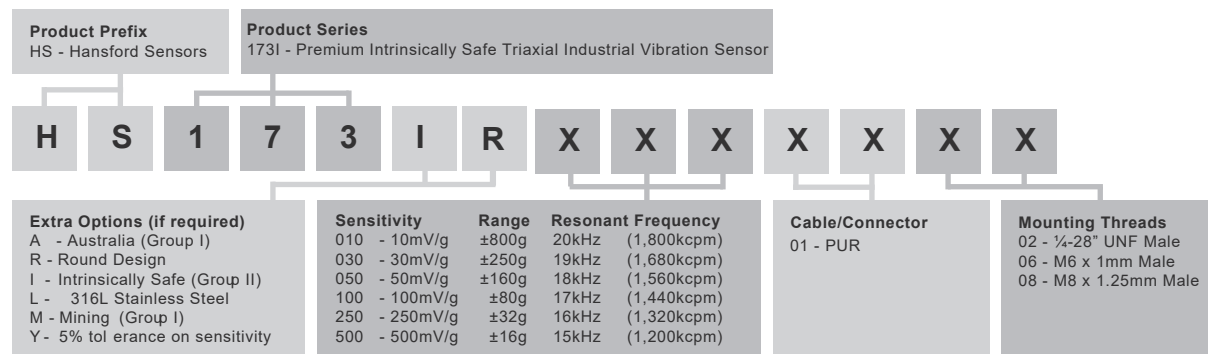
Intrinsically Safe Requirements

Certificate details: Group II and III	IECExBAS 18.0082X Baseefa18ATEX0130X Ex II 1GD Ex ia II T6...T4 Ex ia IIIC T135°C Da Ex ia IIIB T102°C...T131°C Da	Certified Temperature Range	Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +69°C) (Gas) Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +104°C) (Gas) Ex ia IIIB T102°C Da (-55°C ≤ Ta ≤ +69°C) (Dust) Ex ia IIIB T131°C Da (-55°C ≤ Ta ≤ +98°C) (Dust) Ex ia IIIC T135°C Da (-55°C ≤ Ta ≤ +70°C) (Dust) Ex ia I Ma (-55°C ≤ Ta ≤ +104°C) (Dust)
Certificate details: Group I	IECEX 18.0082X Baseefa18ATEX0130X Ex I M 1 Ex ia I Ma Ex ia IIIC T110°C...T145°C Da	Australia Approval Group I	IECEX ExTC 18.0032X Ex ia I Ma (-55°C ≤ Ta ≤ +104°C)
Terminal Parameters 10m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W Ci = 7.4nF Li = 7.2µH	US/Canada Approvals	Certificate No. SGSNA/19/BAS/00005 CI I, II, III, Div 1, 2 Gr A-G T* CI I Zn 0 AEx ia IIC T6...T4 Ga CI II Zn 20 AEx ia IIIC T135°C Da Ex ia IIC T6...T4 Ga Ex ia IIIC T135°C Da
Terminal Parameters 92m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W Ci = 38.3nF Li = 66µH		Or
500V Isolation	Units Will Pass A 500V Isolation Test		CI I, II, III, Div 1, 2 Gr A-D G and F T* CI I Zn 0 AEx ia IIC T6...T4 Ga CI II Zn 20 AEx ia IIIC T135°C Da
Standards Applied to Product	EN IEC 60079-0:2018 EN 60079-11:2012 IEC 60079-0 Edition 7 2017 IEC 60079-11 Edition 6 2011		CI II Zn 20 AEx ia IIIB T102°C...T131°C Da Ex ia IIC T6...T4 Ga Ex ia IIIC T135°C Da Ex ia IIIB T102°C...T131°C Da
Barrier	1 x Pepperl + Fuchs Galvanic Isolator KFD2-VR4-Ex1.26 (BAS02ATEX7206) 1 x MTL Zener Barrier MTL7728+ (BAS01ATEX7217) or Pepperl + Fuchs Zener Barrier Z728 (BAS01ATEX7005) or any other barrier that conforms with the terminal parameters	Control Drawing	M06-088-A

Special conditions of use: When a sensor is supplied with integral cable, this must be terminated in an enclosure providing at least degree of protection IP20.

Note: If the equipment is to be used in unusual environments or aggressive substances are likely to be encountered, contact the manufacturer to discuss suitability.

How To Order



HS-173IR Premium ATEX Triaxial Accelerometer

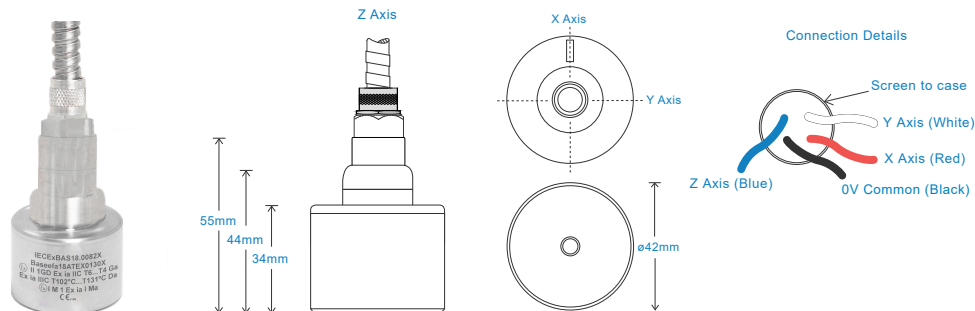
Three AC outputs via PUR cable with Protective Conduit

Key Features

- Intrinsically Safe with European, USA and Australian approvals
- Output via three axes
- For use with data collector
- Protective Conduit

Industries

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



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
Sensitivity	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C per axes
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) $\pm 5\%$ 1.5Hz (90cpm) to 12kHz (720kcpm) $\pm 10\%$ 0.8Hz (48cpm) to 15kHz (900kcpm) $\pm 3\text{dB}$
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	8Nm
Weight	194gms (nominal) - Stainless Steel
Maximum Cable Length	See certificate
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)

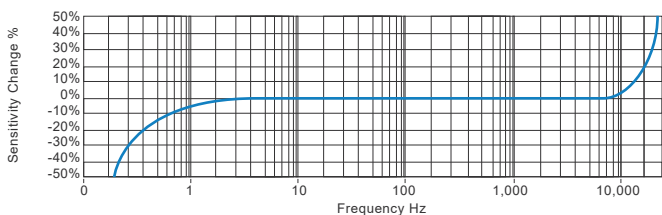
Electrical

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	$>10^8$ Ohms at 500 Volts

Environmental

Operating Temperature Range	see: attached certification details
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

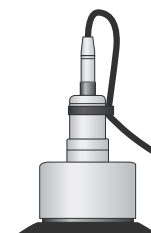
Typical Frequency Response (at 100mV/g)



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.)



Certifications



This product is certified in accordance with
 UL 60079-0, 6th Ed. Rev. July 26, 2013
 UL 60079-11, 6th Ed. Rev. September 6, 2013
 CAN/CSA C22.2 No. 60079-0:15 Rev. October 2015
 CAN/CSA C22.2 No. 60079-11:14
 UL 913, 8th Ed. Rev. October 16, 2015



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TS1067.1



HS-173IR Premium ATEX Triaxial Accelerometer

Three AC outputs via PUR cable with Protective Conduit

Intrinsically Safe Requirements

Certificate details: Group II and III	IECExBAS 18.0082X Baseefa18ATEX0130X Ⓔ II 1GD Ex ia II T6...T4 Ex ia IIIC T135°C Da Ex ia IIIB T102°C...T131°C Da	Certified Temperature Range	Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +69°C) (Gas) Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +104°C) (Gas) Ex ia IIIB T102°C Da (-55°C ≤ Ta ≤ +69°C) (Dust) Ex ia IIIB T131°C Da (-55°C ≤ Ta ≤ +98°C) (Dust) Ex ia IIIC T135°C Da (-55°C ≤ Ta ≤ +70°C) (Dust) Ex ia I Ma (-55°C ≤ Ta ≤ +104°C) (Dust)
Certificate details: Group I	IECEX 18.0082X Baseefa18ATEX0130X Ⓔ I M 1 Ex ia I Ma Ex ia IIIC T110°C...T145°C Da	Australia Approval Group I	IECEX ExTC 18.0032X Ex ia I Ma (-55°C ≤ Ta ≤ +104°C)
Terminal Parameters 10m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W Ci = 7.4nF Li = 7.2μH	US/Canada Approvals	Certificate No. SGSNA/19/BAS/00005 CI I, II, III, Div 1, 2 Gr A-G T* CI I Zn 0 AEx ia IIC T6...T4 Ga CI II Zn 20 AEx ia IIIC T135°C Da Ex ia IIC T6...T4 Ga Ex ia IIIC T135°C Da
Terminal Parameters 92m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W Ci = 38.3nF Li = 66μH		Or
500V Isolation	Units Will Pass A 500V Isolation Test		CI I, II, III, Div 1, 2 Gr A-D G and F T* CI I Zn 0 AEx ia IIC T6...T4 Ga CI II Zn 20 AEx ia IIIC T135°C Da CI II Zn 20 AEx ia IIIB T102°C...T131°C Da Ex ia IIC T6...T4 Ga Ex ia IIIC T135°C Da Ex ia IIIB T102°C...T131°C Da
Standards Applied to Product	EN IEC 60079-0:2018 EN 60079-11:2012 IEC 60079-0 Edition 7 2017 IEC 60079-11 Edition 6 2011	Control Drawing	M06-088-A
Barrier	1 x Pepperl + Fuchs Galvanic Isolator KFD2-VR4-Ex1.26 (BAS02ATEX7206) 1 x MTL Zener Barrier MTL7728+ (BAS01ATEX7217) or Pepperl + Fuchs Zener Barrier Z728 (BAS01ATEX7005) or any other barrier that conforms with the terminal parameters		

Special conditions of use: When a sensor is supplied with integral cable, this must be terminated in an enclosure providing at least degree of protection IP20.

Note: If the equipment is to be used in unusual environments or aggressive substances are likely to be encountered, contact the manufacturer to discuss suitability.

How To Order

