

# HS-173IR Premium ATEX Triaxial Accelerometer

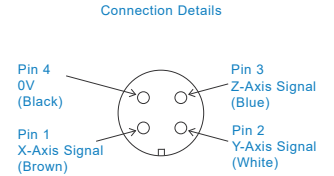
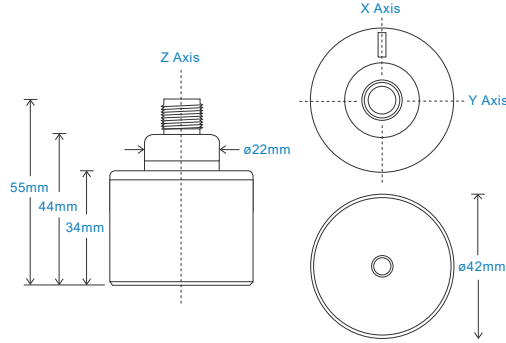
Three AC outputs via M12 Connector

## 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 axis
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) $\pm 5\%$ 1.5Hz (90cpm) to 12kHz (720kcpm) $\pm 10\%$ 0.8Hz (48cpm) to 15kHz (900kcpm) $\pm 3\text{dB}$ Base isolated
Isolation	see: 'How To Order' table
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
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	194gms (nominal) - Stainless Steel 100gms (nominal) - Aluminium
Screened Cable Assembly	HS-AC010 - straight
Mounting Threads	see: 'How To Order' table

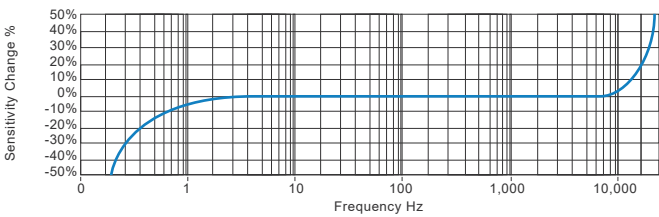
## Electrical

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

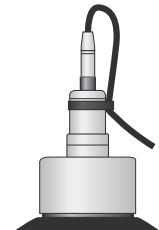
## Typical Frequency Response (at 100mV/g)



## 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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We reserve the right to alter the specification of this product without prior notice

TS922.4



# 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 Ⓢ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 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
500V Isolation	Units Will Pass A 500V Isolation Test		Or
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 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

<b>Product Prefix</b> HS - Hansford Sensors	<b>Product Series</b> 1731 - Premium Intrinsically Safe Triaxial Industrial Vibration Sensor												
	H	S	1	7	3	I	R	X	X	X	X	X	X
<b>Extra Options (if required)</b> A - Australia (Group I) R - Roud Design I - Intrinsically Safe (Group II) L - 316L Stainless Steel M - Mining (Group I) Y - 5% tol erance on sensitivity	<b>Sensitivity</b> 010 - 10mV/g 030 - 30mV/g 050 - 50mV/g 100 - 100mV/g 250 - 250mV/g 500 - 500mV/g		<b>Range</b> ±800g ±250g ±160g ±80g ±32g ±16g		<b>Resonant Frequency</b> 20kHz (1,800kcpm) 19kHz (1,680kcpm) 18kHz (1,560kcpm) 17kHz (1,440kcpm) 16kHz (1,320kcpm) 15kHz (1,200kcpm)		<b>Cable/Connector</b> 54 - M12		<b>Mounting Threads</b> 02 - ¼-28" UNF Male 06 - M6 x 1mm Male 08 - M8 x 1.25mm Male				



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