

HS-173I Premium ATEX Triaxial Accelerometer

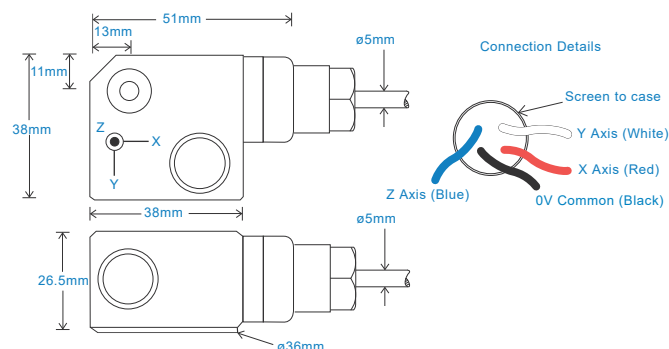
Three AC outputs via PUR cable

Key Features

- Intrinsically Safe with European, USA and Australian approvals
- Output via three axes
- For use with data collector
- 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)
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
Mounting Bolt Provided	see: 'How To Order' table x 30mm long
Weight	235gms (nominal)
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
Mounting Stud	HS-AS226, HS-AS221 or HS-AS222
Submersible Depth	100 metres max (10 bar)

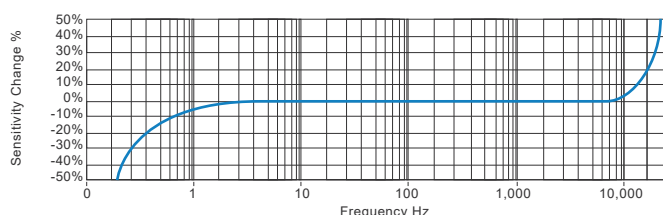
Electrical

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

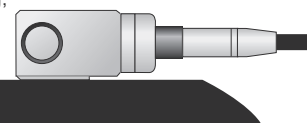
Typical Frequency Response (at 100mV/g)



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

TS1051.8



HS-173I 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 IIC 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

Product Prefix	Product Series										
HS - Hansford Sensors	173I - Premium Intrinsically Safe Triaxial Industrial Vibration Sensor										
H	S	1	7	3	I	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 (1,200kcpm)		01 - PUR		02 - ¼-28" UNF Male	
G - SGS (US/Canada Approval)		030 - 30mV/g		±250g		19kHz (1,140kcpm)				06 - M6 x 1mm Male	
I - Intrinsically Safe (Group II)		050 - 50mV/g		±160g		18kHz (1,080kcpm)				08 - M8 x 1.25mm Male	
L - 316L Stainless Steel		100 - 100mV/g		±80g		17kHz (1,020kcpm)					
M - Mining (Group I)		250 - 250mV/g		±32g		16kHz (960kcpm)					
Y - 5% tolerance on sensitivity		500 - 500mV/g		±16g		15kHz (900kcpm)					