

HS-150IST Premium Intrinsically Safe Accelerometer

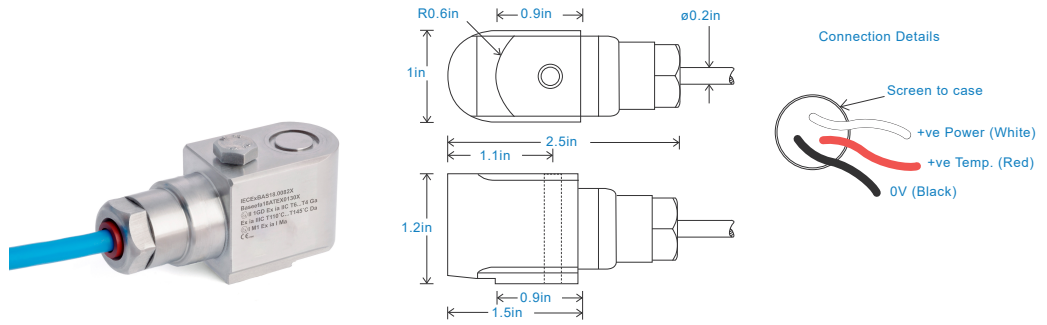
AC acceleration and temperature output via PUR Cable

Key Features

- Intrinsically Safe with European, Indiana, USA and Australian approvals
- Side entry for easy access
- For use with data collector
- Temperature output

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 72°F
Frequency Response	120cpm (2Hz) to 600kcpm (10kHz) $\pm 5\%$ 90cpm (1.5Hz) to 720kcpm (12kHz) $\pm 10\%$ 48cpm (0.8Hz) to 900kcpm (15kHz) $\pm 3dB$
Isolation	Base isolated
Range	see: 'How To Order' table
Temperature Output	10 mV/°C standard 212°F - Option 266°F
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Mounting Torque	5.9ft. lbs
Mounting Bolt provided	see: 'How To Order' table x 1.4in long
Weight	7.2 oz. (nominal) body only
Maximum Cable Length	See certificate
Standard Cable Length	16 ft.
Screened Cable	PUR - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	328 ft. max (10 bar)

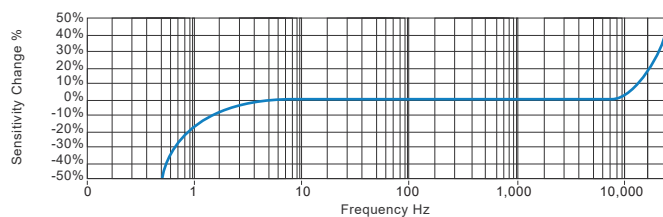
Electrical

Excitation Voltage:	18-30Volts DC
Electrical Noise	0.1mg max
Current Range	0.5mA to 8mA
Bias Voltage	10 - 12 Volts DC
Settling Time	2 seconds
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

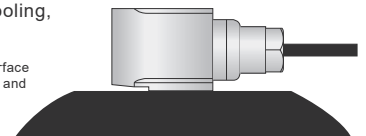
Typical Frequency Response (at 100mV/g)



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
 TS1002U.5



AC acceleration and temperature output via PUR Cable

Sensor Maximum Cable Length	Up to 92 metres	Certified Temperature Range	Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +57°C) (Gas)
			Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +103°C) (Gas)
Certificate details: Group I	IECEx 18.0082X		Ex ia IIIC T110°C Da (-55°C ≤ Ta ≤ +57°C) (Dust)
	Baseefa18ATEX0130X		Ex ia IIIC T135°C Da (-55°C ≤ Ta ≤ +70°C) (Dust)
	Ⓔ I M 1		Ex ia IIIC T145°C Da (-55°C ≤ Ta ≤ +92°C) (Dust)
	Ex ia I Ma		Ex ia I Ma (-55°C ≤ Ta ≤ +103°C) (Mining)
Certificate details: Group II and III	IECEx 18.0082X	Australian Approval Group I	IECEx ExTc 18.0032X
	Baseefa18ATEX0130X		Ex ia I Ma
	Ⓔ II 1GD		(-55°C ≤ Ta ≤ +104°C)
	Ex ia IIC T6..T4 Ga		
	Ex ia IIIC T110°C..T145°C Da	US/Canada Approvals	Certificate No. SGSNA/19/BAS/00005
			Cl I, II, III, Div 1, 2 Gr A-G T*
Terminal Parameters 10m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W		Cl I Zn 0 AEx ia IIC T6...T4 Ga
	Ci = 5.0nF		Cl II Zn 20 AEx ia IIIC T110°C...T145°C Da
	Li = 7.2µH		Cl II Zn 20 AEx ia IIIB T110°C...T145°C Da
			Ex ia IIC T6...T4 Ga
Terminal Parameters 92m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W		Ex ia IIIC T110°C...T145°C
	Ci = 35.9nF		
	Li = 66µH	Control Drawing	M06-083-A Overbraided Cable
			M06-084-A PUR Cable
500V Isolation	Units Will Pass A 500V Isolation Test		M06-085-A Silicone Cable
			M06-086-A FR PUR Cable
Standards Applied to Product	EN IEC 60079-0:2018		M06-087-A Various Cables (HS-150IT Only)
	EN 60079-11:2012		
		Barrier	1 x Pepperl + Fuchs Galvanic Isolator
	IEC 60079-0 Edition 7 2017		KFD2-VR4-Ex1.26 (BAS02ATEX7206)
	IEC 60079-11 Edition 6 2011		1 x MTL Zener Barrier MTL7728+ (BAS01ATEX7217)
			or Pepperl + Fuchs Zener Barrier
Temperature	1 x Pepperl + Fuchs Galvanic Isolator		Z728 (BAS01ATEX7005) or any other barrier that
	KFD2-VR-Ex1.18 (BAS01ATEX7262)		conforms with the terminal parameters
	1 x MTL Zener Barrier MTL7764+ac(BAS01ATEX7217)		
	or Pepperl + Fuchs Zener Barrier		
	Z764 (BAS01ATEX7005) or any other barrier that		
	conforms with the terminal parameters		

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.

Product Prefix		Product Series					Cable Length (if integral cable)																			
HS - Hansford Sensors		150IS - Premium Intrinsically Safe Accelerometer					UXX - length specified in feet																			
H	S	1	5	0	I	S	T	X	X	X	X	X	X	X	X	X										
Extra Options (if required) A - Australia (Group I) I - Intrinsically Safe (Group II) L - 316L Stainless Steel M - Mining (Group I) S - 90° Side Exit T - Temperature Output Y - 5% tolerance on sensitivity		Sensitivity 010 - 10mV/g 030 - 30mV/g 050 - 50mV/g 100 - 100mV/g 250 - 250mV/g 500 - 500mV/g					Range ±800g ±250g ±160g ±80g ±32g ±16g					Resonant Frequency 34kHz (2,040kcpm) 33kHz (1,980kcpm) 32kHz (1,920kcpm) 30kHz (1,800kcpm) 28kHz (1,680kcpm) 26kHz (1,560kcpm)					Cable/Connector 01 - PUR 03 - Braided 07 - Silicon 52 - 3 Pin MS 54 - M12					Mounting Threads 02 - ¼-28" UNF Male 06 - M6 x 1mm Male 08 - M8 x 1.25mm Male				



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