

HS-150IS Premium Intrinsically Safe Accelerometer

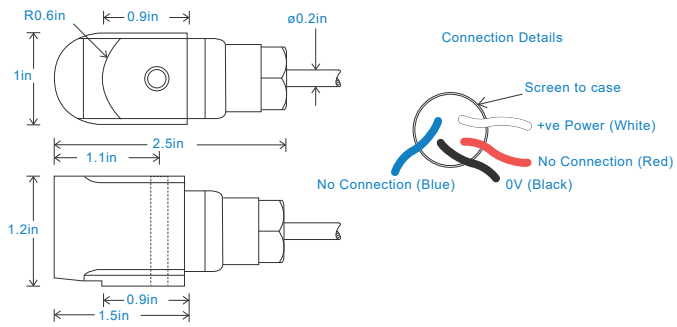
AC acceleration output via Filled PUR Cable

Key Features

- Intrinsically Safe with European approval
- Side entry for easy access

Industries

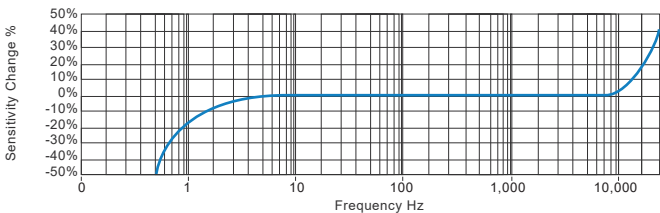
Building services, Pulp and Paper, Mining, Metals, Utilities, Automotive, Water, Pharmaceutical



Technical Performance		Mechanical	
Mounted Base Resonance	see 'How To Order' table (nominal)	Case Material	Super Duplex 1.4547
Sensitivity	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 72°F	Sensing Element/Construction	PZT/Shear
Frequency Response	120cpm (2Hz) to 600kcpm (10kHz) $\pm 5\%$ 90cpm (1.5Hz) to 720kcpm (12kHz) $\pm 10\%$ 48cpm (0.8Hz) to 900kcpm (15kHz) $\pm 3\text{dB}$	Mounting Torque	5.9ft. lbs
Isolation	Base isolated	Mounting Bolt provided	see: 'How To Order' table x 1.4in long
Range	see: 'How To Order' table	Weight	7.2 oz. (nominal) body only
Transverse Sensitivity	Less than 5%	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		Environmental	
Excitation Voltage:	18-30Volts DC	Operating Temperature Range	see: attached certification details
Electrical Noise	0.1mg max	Sealing	IP68
Current Range	0.5mA to 8mA	Maximum Shock	5000g
Bias Voltage	10 - 12 Volts DC	EMC	EN61326-1:2013
Settling Time	2 seconds		
Output Impedance	200 Ohms max.		
Case Isolation	$>10^8$ Ohms at 500 Volts		

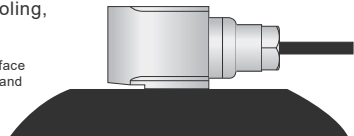
Typical Frequency Response (at 100mV/g)



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.)



Certifications



www.hansfordsensors.com
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We reserve the right to alter the specification of this product without prior notice

TS1021U.3



AC acceleration output via Filled PUR Cable

Intrinsically Safe Requirements

Sensor Maximum Cable Length	300 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	Control Drawing	M06-083-A Overbraided Cable
	Baseefa18ATEX0130X		M06-084-A PUR Cable
	ⓈII 1GD		M06-085-A Silicone Cable
	Ex ia IIC T6..T4 Ga		M06-086-A FR PUR Cable
	Ex ia IIIC T110°C..T145 Da		M06-087-A Various Cables (HS-150IT Only)

Terminal Parameters 10m of cable	Ui = 28V, li = 93mA, Pi = 0.65W Ci = 5.0nF Li= 7.2μH	Barrier	1 x Pepperl + Fuchs Galvanic Isolator KFD2-VR4-Ex1.26 (BAS02ATEX7206) 1 x MTL Zener Barrier MTL7728+ (BAS01ATEX7217) or Pepperl + Fuchs Zener Barrier
Terminal Parameters 92m of cable	Ui = 28V, li = 93mA, Pi = 0.65W Ci = 35.9nF Li= 66μH		Z728 (BAS01ATEX7005) or any other barrier that conforms with the terminal parameters

Terminal Parameters 300m of cable	$U_i = 28V$, $I_i = 93mA$, $P_i = 0.65W$ $C_i = 64.2nF$ $L_i = 150\mu H$
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500V Isolation Units Will Pass A 500V Isolation Test

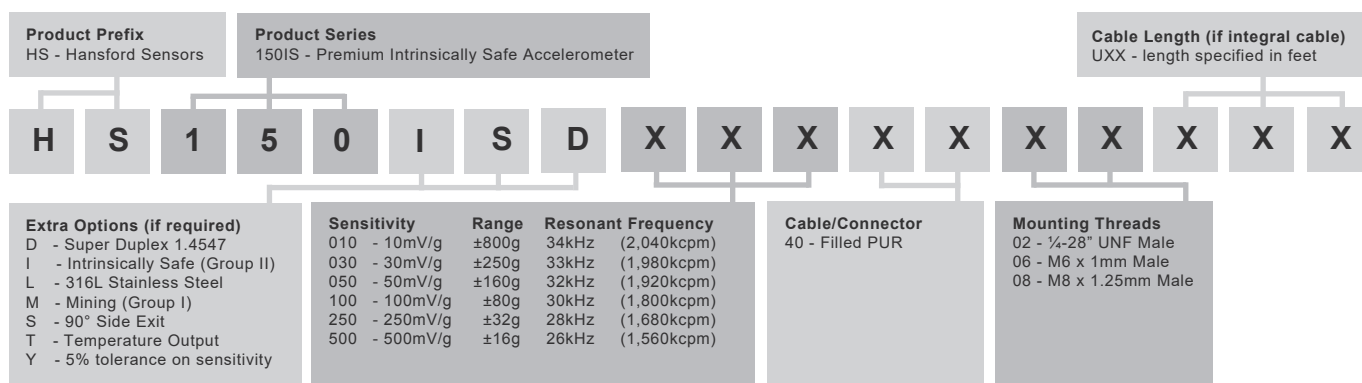
Standards Applied to Product	EN IEC 60079-0:2018 EN 60079-11:2012
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IEC 60079-0 Edition 7 2017
IEC 60079-11 Edition 6 2011

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



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