

HS-150I Premium Intrinsically Safe Accelerometer

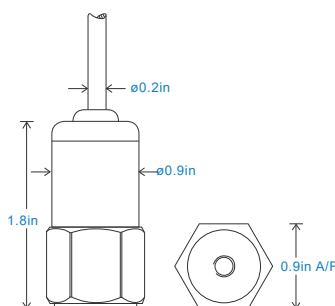
AC acceleration output via Braided Cable

Key Features

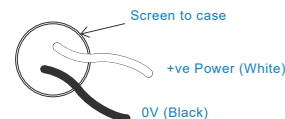
- Intrinsically Safe with European, USA, Indian and Australian approvals
- For use with data collector

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 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) $\pm 3\text{dB}$
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	5.9ft. lbs
Weight	3.7 oz. (nominal) body only
Maximum Cable Length	See certificate
Standard Cable Length	16 ft
Screened Cable	Braided - length to be specified with order
Mounting Threads	see: 'How To Order' table

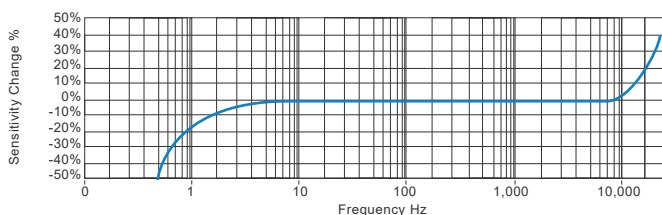
Electrical

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	IP65
Maximum Shock	5000g
EMC	EN61326-1:2013

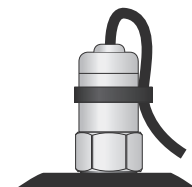
Typical Frequency Response (at 100mV/g)



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.)



Certificates



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

TS881U.10



AC acceleration output via Braided 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)

	Ex ia IIC T6..T4 Ga		
	Ex ia IIIC T110°C..T145°C Da	US/Canada Approvals	Certificate No. SGSNA/19/BAS/00005
			CI I, II, III, Div 1, 2 Gr A-G T*
Terminal Parameters 10m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W		CI I Zn 0 AEx ia IIC T6...T4 Ga
	CI = 5.0nF		CI II Zn 20 AEx ia IIIC T110°C...T145°C Da
	Li = 7.2uH		CI II Zn 20 AEx ia IIIB T110°C...T145°C Da

500V Isolation	Units Will Pass A 500V Isolation Test	M06-084-A FR PUR Cable
		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)

	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
		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.

Product Prefix HS - Hansford Sensors		Product Series 150I - Premium Intrinsically Safe Accelerometer						Cable Length (if integral cable) UXX - length specified in feet						
H	S	1	5	0	I	X	X	X	X	X	X	X	X	X
Extra Options (if required) A - Australia (Group I) G - SGS (US/Canada Approval) I - Intrinsically Safe (Group II) L - 316L Stainless Steel M - Mining (Group I) S - 90° Side Exit 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 02 - Braided 07 - Silicon 08 - Flame Retardant 50 - 2 Pin MS 52 - 3 Pin MS 54 - M12		Mounting Threads 01 - ¼-28" UNF Female 02 - ¼-28" UNF Male 05 - Quick Fit Female 06 - M6 x 1mm Male 08 - M8 x 1.25mm Male 10 - M10 x 1.5mm Male				



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