# **HS-150I Premium Intrinsically Safe Accelerometer**

**AC** acceleration output via Silicon Cable

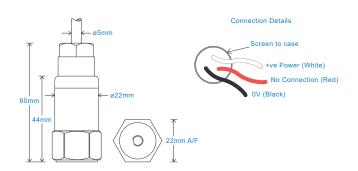
#### **Key Features**

- 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





### **Technical Performance**

Mounted Base Resonance	see 'How To Order' table (nominal)
Sensitivity	see: 'How To Order' table ±10%
	Nominal 80Hz at 22°C
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) ± 5%
	1.5Hz (90cpm) to 12kHz (720kcpm) ± 10%
	0.8Hz (48cpm) to 15kHz (900kcpm) ± 3dB
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
Weight	106gms (nominal) body only
Maximum Cable Length	See certificate
Standard Cable Length	5 metres
Screened Cable	Silicon - length to be specified with order
Mounting Threads	see: 'How To Order' table
Submersible Depth	100 metres max (10 bar)

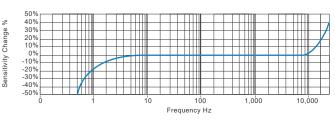
## Electrical

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	>108 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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# **HS-150I Premium Intrinsically Safe Accelerometer**

AC acceleration output via Silicon cable

# Intrinsically Safe Requirements

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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)
	<b>⊚</b> 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 T6T4 Ga		
	Ex ia IIIC T110°CT145°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 T6T4 Ga
	Ci = 5.0nF		CI II Zn 20 AEx ia IIIC T110°CT145°C Da
	Li= 7.2µH		CI II Zn 20 AEx ia IIIB T110°CT145°C Da
			Ex ia IIC T6T4 Ga
Terminal Parameters 92m of cable	Ui = 28V, Ii = 93mA, Pi = 0.65W		Ex ia IIIC T110°CT145°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
			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.

### How To Order

