HS-170IS Premium Intrinsically Safe Accelerometer

AC acceleration output via PUR Cable

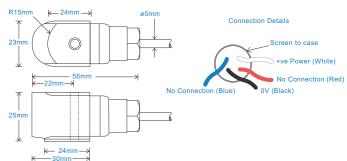
Key Features

- Intrinsically Safe with European, USA, Indian and Australian approvals
- · Compact and Premium design
- Waterproof
- · Resistent to oil

Industries

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





Technical Performance

 $\begin{array}{c} \mbox{Mounted Base Resonance} & \mbox{see 'How To Order' table (nominal)} \\ \mbox{Sensitivity} & \mbox{see: 'How To Order' table $\pm 10\%$} \\ \mbox{Nominal 80Hz at } 22^{\circ}\mbox{C} \\ \mbox{Frequency Response} & \mbox{2Hz (120cpm) to } 14kHz (840kcpm) $\pm 5\%$} \\ \mbox{1.5Hz (90cpm) to } 16kHz (960kcpm) $\pm 10\%$} \\ \mbox{0.8Hz (48cpm) to } 19kHz (1,140kcpm) $\pm 3dB$} \\ \mbox{Isolation} & \mbox{Base isolated} \\ \mbox{Range} & \mbox{see: 'How To Order' table} \\ \mbox{Transverse Sensitivity} & \mbox{Less than } 5\%$} \\ \end{array}$

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	135gms (nominal) body only
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
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

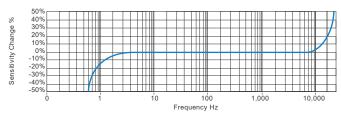
 Output Impedance
 200 Ohms max.

 Case Isolation
 >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



www.hansfordsensors.com sales@hansfordsensors.com



HS-170IS Premium Intrinsically Safe Accelerometer

AC acceleration output via PUR cable

Intrinsically Safe Requirements

munisically Sale Requirem	CHIS		
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 \leq Ta \leq +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 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

