

HS-170I Premium Intrinsically Safe Accelerometer

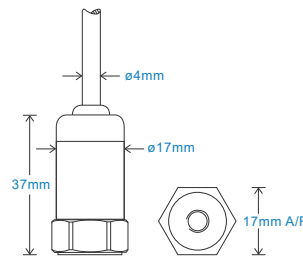
AC acceleration output via Braided Cable

Key Features

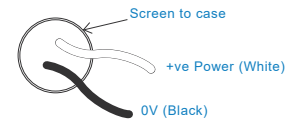
- Intrinsically Safe with European, USA, Indian and Australian approvals
- Compact design
- Premium design
- Customisable features

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 22°C |
| Frequency Response | 2Hz (120cpm) to 14kHz (840kcpm) $\pm 5\%$ 1.5Hz (90cpm) to 16kHz (960kcpm) $\pm 10\%$ 0.8Hz (48cpm) to 19kHz (1,140kcpm) $\pm 3\text{dB}$ |
| 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 | 8Nm |
| Weight | 52gms (nominal) body only |
| Maximum Cable Length | See certificate |
| Standard Cable Length | 5 metres |
| Screened Cable | Braided - length to be specified with order |
| Mounting Threads | see: 'How To Order' table |

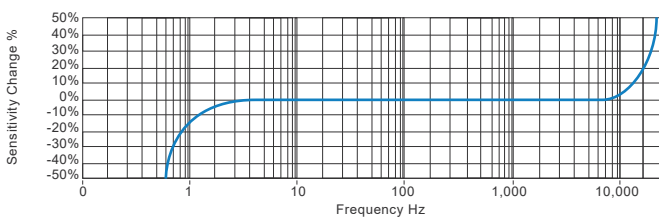
Electrical

| | |
|------------------|---------------------------|
| 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 | $>10^8$ Ohms at 500 Volts |

Environmental

| | |
|-----------------------------|-------------------------------------|
| Operating Temperature Range | see: attached certification details |
| Sealing | IP65 |
| Maximum Shock | 5000g |
| EMC | EN61326-1:2013 |

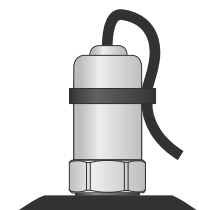
Typical Frequency Response (at 100mV/g)



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.)



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

We reserve the right to alter the specification of this product without prior notice

TS912.4



HS-170I Premium Intrinsically Safe Accelerometer

AC acceleration output via Braided Cable

Intrinsically Safe Requirements

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

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

