

# HS-150IS Premium Intrinsically Safe Accelerometer

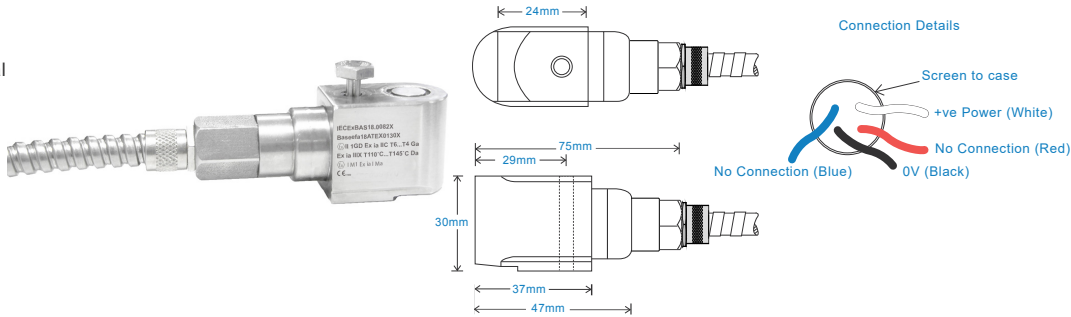
AC acceleration output via 4 Core PUR Cable with Removable Stainless Steel Conduit

### Key Features

- Intrinsically Safe with European, Indiana, USA and Australian approval
- Side entry for easy access
- Removable Stainless Steel Conduit

### Industries

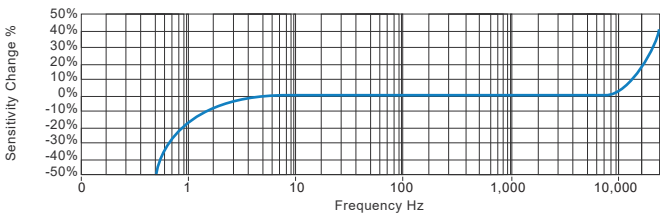
Building services, Pulp and Paper,  
Mining, Metals, Utilities, Automotive,  
Water, Pharmaceutical



| Technical Performance  |                                                                                                                                               | Mechanical                   |                                         |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------|
| Mounted Base Resonance | see 'How To Order' table (nominal)                                                                                                            | Case Material                | Stainless Steel                         |
| Sensitivity            | see: 'How To Order' table $\pm 10\%$<br>Nominal 80Hz at 22°C                                                                                  | Sensing Element/Construction | PZT/Shear                               |
| Frequency Response     | 2Hz (120cpm) to 10kHz (600kcpm) $\pm 5\%$<br>1.5Hz (90cpm) to 12kHz (720kcpm) $\pm 10\%$<br>0.8Hz (48cpm) to 15kHz (900kcpm) $\pm 3\text{dB}$ | Mounting Torque              | 8Nm                                     |
| Isolation              | Base isolated                                                                                                                                 | Mounting Bolt provided       | see: 'How To Order' table x 35mm long   |
| Range                  | see: 'How To Order' table                                                                                                                     | Weight                       | 205gms (nominal) body only              |
| Transverse Sensitivity | Less than 5%                                                                                                                                  | 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               |

| 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 |                             |                                     |

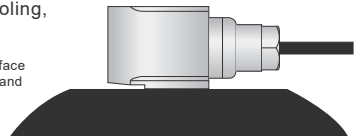
### Typical Frequency Response (at 100mV/g)



### 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



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

TS1120.3



# HS-150IS Premium Intrinsically Safe Accelerometer

AC acceleration output via 4 Core PUR Cable with Removable Stainless Steel Conduit

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

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

