

# HS-420I/M Intrinsically Safe Accelerometer

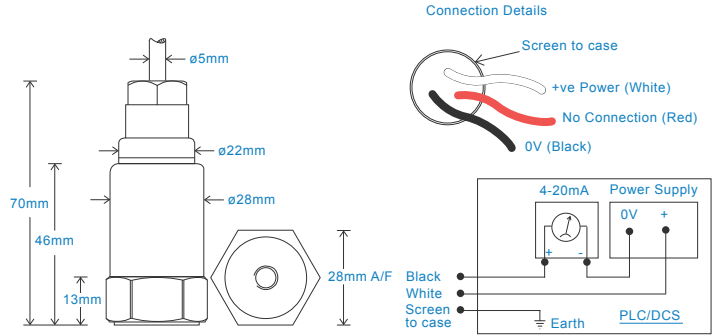
## 4-20mA velocity output via Silicon Cable

### Key Features

- Intrinsically Safe with European, USA, Australian and South African approvals
- For use with PLC/DCS systems
- Waterproof

### Industries

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



### Technical Performance

Mounted Base Resonance	5kHz min
Velocity Ranges	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C
Frequency Response	10Hz (600cpm) to 1kHz (60kcpm) $\pm 5\%$ - ISO10816
Isolation	Base isolated
Range	50g peak
Transverse Sensitivity	Less than 5%

### Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	8Nm
Weight	150gms (nominal)
Maximum Cable Length	1000 metres
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)

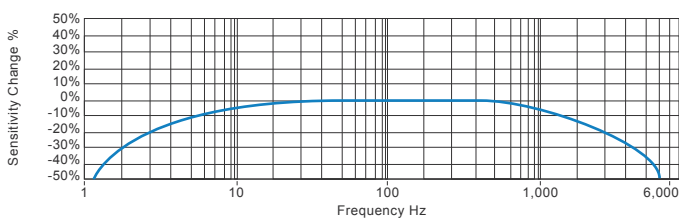
### Electrical

Current Output	4-20mA DC proportional to Velocity Range
Supply Voltage	15-30 Volts DC (for 4-20mA)
Settling Time	2 seconds
Output Impedance	Loop Resistance 600 Ohms max. at 24 Volts
Case Isolation	$>10^8$ Ohms at 500 Volts

### Environmental

Operating Temperature Range	see: attached certification details
Sealing	IP68
Maximum Shock	5000g
EMC	EN61326-1:2013

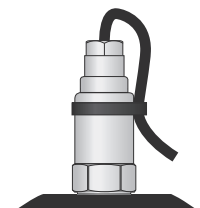
### Typical Frequency Response



### 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



[www.hansfordsensors.com](http://www.hansfordsensors.com)  
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We reserve the right to alter the specification of this product without prior notice  
TS063.13

# HS-420I/M Intrinsically Safe Accelerometer

## 4-20mA velocity output via Silicon Cable

### Intrinsically Safe Requirements

Maximum Cable Length	nominal 100 metres see attached system drawings	US/Canada Approvals	Certificate No. USTC/15/FAI/01350 Class I, II, III, Division 1, 2, Groups A - G, T6, -40°C to +60°C, IP65 Class I, Zone 0, AEx, ia, IIC, T6, Ga, -40°C to +60°C Zone 20, AEx, ia, IIIC, T80°C, IP65, Da, -40°C to +60°C
Certificate details: Group I + II	IECEX BAS08.0034X Baseefa08ATEX0086X ⓈII 1GD Ex ia IIC T6 Ga Ex ia IIIC T80°C IP65 Da ⓈI M1 Ex ia I Ma (-40°C ≤ Ta ≤ +60°C)	Barrier	1 x Pepperl + Fuchs Galvanic Isolator KFD2-STC4-Ex1, which has superseded KFD2-CR-Ex1.30300 (BAS00ATEX7164) see attached system drawings
Accelerometer System Certificate	Baseefa08Y0087 Ex ia IIC T6 (-40°C ≤ Ta ≤ +60°C) *On request - consult Sales Office		1 x MTL Zener Barrier MTL7787+ (BAS01ATEX7217) or Pepperl + Fuchs Zener Barrier Z787 (BAS01ATEX7005) or any other barrier that conforms to system drawings attached
Terminal Parameters	Ui = 28V, li = 115mA, Pi = 0.65W Group II Ui = 16.5V Pi = 0.65W or Ui = 28V li = 115mA Pi = 0.65W Group I	System Connections for Zener Barrier	see attached system drawings
500V Isolation	Units Will Pass A 500V Isolation Test	System Connections for Galvanic Isolator	see attached system drawings
Certified Temperature Range	Ex ia IIC T6 Ga (-40°C ≤ Ta ≤ +60°C) (Gas) Ex ia IIIC T80°C IP65 Da (-40°C ≤ Ta ≤ +60°C) (Dust) Ex ia I Ma (-40°C ≤ Ta ≤ +60°C) (Mining)	Terminal Parameters	Ui = Vmax = 28V li = lmax = 115mA Pi = 0.65W
Australia Approval Group 1	IECEX ITA 10.0003X Ex ia I Ma (-40°C ≤ Ta ≤ +60°C)	Notes:	Special conditions of safe use for Group II dust. The free end of the cable on the integral cable version of the apparatus must be terminated in an appropriately certified dust-proof enclosure. The unit has no serviceable parts.
South African Approval	Certificate No. MASC MS/16-0229X Group I and II (As Baseefa/ATEX)		

### How To Order

