# HS-422I/M Intrinsically Safe Accelerometer 4-20mA acceleration output via 2 Pin MS Connector

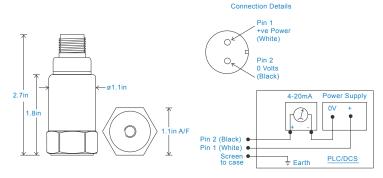
## **Key Features**

- · Intrinsically Safe with European, USA and South African approvals
- · For use with PLC/DCS systems
- · Customizable features

#### Industries

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





## **Technical Performance**

Mounted Base Resonance 10kHz min Acceleration Ranges see: 'How To Order' table ±10% Nominal 80Hz at 72°F Frequency Response 600cpm (10Hz) to 300kcpm (5kHz) ± 5% - ISO10816 Isolation Base isolated Range 50g peak Less than 5% Transverse Sensitivity

## Mechanical

Case Material Stainless Steel Sensing Element/Construction PZT/Compression 5.9ft. lbs Mounting Torque Weight 5.2 oz. (nominal) Sheilded Cable Assembly see: www.hansfordsensors.com for options Connector HS-AA004 - non-booted HS-AA053 or HS-0054 - booted Mounting Threads see: 'How To Order' table

## **Electrical**

**Current Output** Supply Voltage Settling Time **Output Impedance** Case Isolation

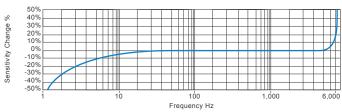
4-20mA DC proportional to acceleration 15-30 Volts DC (for 4-20mA) 2 seconds

Loop Resistance 600 Ohms max. at 24 Volts >108 Ohms at 500 Volts

## Environmental

Operating Temperature Range see: attached certification details **IP68** Sealing 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













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## HS-422I/M Intrinsically Safe Accelerometer 4-20mA acceleration output via 2 Pin MS Connector

## Intrinsically Safe Requirements

Maximum Cable Length nominal 100 metres see attached system drawings

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

 $(-40^{\circ}\text{C} \le \text{Ta} \le +60^{\circ}\text{C})$ 

Accelerometer System Certificate Baseefa08Y0087 Ex ia IIC T6 (-40°C  $\leq$  Ta  $\leq$  +60°C)

\*On request - consult Sales Office

Terminal Parameters Ui = 28V, Ii = 115mA, Pi = 0.65W Group II

Ui = 16.5V Pi = 0.65W

or Ui = 28V Ii = 115mA Pi = 0.65W Group I

500V Isolation Units Will Pass A 500V Isolation Test

Certified Temperature Range Ex ia IIC T6 Ga (-40°C ≤ Ta ≤ +60°C) (Gas)

Ex ia IIIC T80°C IP65 Da (-40°C  $\leq$  Ta  $\leq$  +60°C) (Dust)

Ex ia I Ma ( $-40^{\circ}$ C  $\leq$  Ta  $\leq$  +60 $^{\circ}$ C) (Mining)

South African Approval Certificate No. MASC MS/16-0229X Group I and II (As Baseefa/ATEX)

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

Barrier 1 x Pepperl + Fuchs Galvanic Isolator KFD2-STC4-Ex1, which has superseded KFD2-CR-Ex1.30300 (BAS00ATEX7164)

see attached system drawings

1 x MTL Zener Barrier MTL7787+ (BAS01ATEX7217)

or Pepperl + Fuchs Zener Barrier

Z787 (BAS01ATEX7005) or any other barrier that

conforms to system drawings attached

System Connections for Zener Barrier see attached system drawings

System Connections for Galvanic Isolator see attached system drawings

Terminal Parameters Ui = Vmax = 28V

> Ii = Imax = 115mAPi = 0.65W

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

## How To Order

