# HS-420I/M Intrinsically Safe Accelerometer 4-20mA velocity output via 2 Pin MS Connector

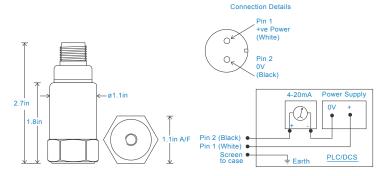
# **Key Features**

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

#### Industries

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





# **Technical Performance**

5kHz min Mounted Base Resonance Velocity Ranges see: 'How To Order' table ±10% Nominal 80Hz at 72°F Frequency Response 600cpm (10Hz) to 60kcpm (1kHz) ± 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	5.9ft. lbs
Weight	5.2 oz. (nominal)
Sheilded Cable Asssembly	see: www.hansfordsensors.com for options
Connector	HS-AA004 - non-booted
	HS-AA053 or HS-0054 - booted
Mounting Threads	see: 'How To Order' table

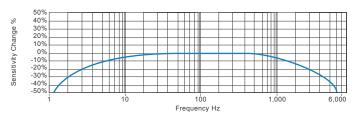
# Electrical

Current Output 4-20mA DC proportional to Velocity Range 15-30 Volts DC (for 4-20mA) Supply Voltage Settling Time 2 seconds **Output Impedance** Loop Resistance 600 Ohms max. at 24 Volts >108 Ohms at 500 Volts Case Isolation

### 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 sales@hansfordsensors.com



# **HS-420I/M Intrinsically Safe Accelerometer**

4-20mA velocity output via 2 Pin MS Connector

# Intrinsically Safe Requirements

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IECEx BAS08 0034X Baseefa08ATEX0086X Barrier **⊌II 1GD** 1 x Pepperl + Fuchs Galvanic Isolator KFD2-STC4-Ex1, which has superseded Ex ia IIC T6 Ga Ex ia IIIC T80°C IP65 Da KFD2-CR-Ex1.30300 (BAS00ATEX7164) □ I M1 see attached system drawings Fx ia I Ma  $(-40^{\circ}\text{C} \le \text{Ta}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

# How To Order

