HS-420I/M Intrinsically Safe Accelerometer

4-20mA velocity output via M12 Connector

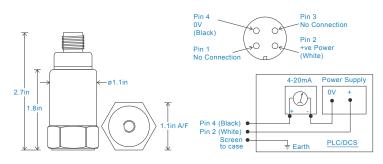
Key Features

- Intrinsically Safe with European, USA, Australian, South African, and Indian approvals
- · Approved SIL 2 and SIL 3
- · For use with PLC/DCS systems
- · Customisable features

Industries

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





Connection Details

Technical Performance

Mounted Base Resonance 5kHz min

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 Assembly HS-AC010 - straight
HS-AC011 - right angle
Mounting Threads see: 'How To Order' table

Electrical

Current Output Supply Voltage Settling Time Output Impedance Case Isolation 4-20mA DC proportional to Velocity Range 15-30 Volts DC (for 4-20mA) 2 seconds

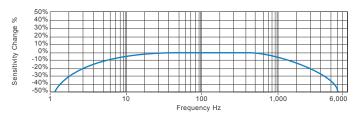
Loop Resistance 600 Ohms max. at 24 Volts >108 Ohms at 500 Volts

Environmental

Operating Temperature Range Sealing Maximum Shock EMC see: attached certification details

5000g 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













This product is certified in accordance with UL 913, 8th Ed. Rev. December 6, 2013 CAN/CSA C22.2 No. 157-92 (R2012) +Upd1 +Upd2



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HS-420I/M Intrinsically Safe Accelerometer

4-20mA velocity output via M12 Connector

Intrinsically Safe Requirements

Maximum Cable Length See website: www.hansfordsensors.com

see attached system drawings

Certificate details: Group I + II IECEx BAS08.0034X

Baseefa08ATEX0086X

Ex ia IIC T6 Ga

Ex ia IIIC T80°C IP65 Da

Ex ia I Ma

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

®II 1GD

Ex ia IIC T4 Ga Ex ia IIIC T130°C IP65 Da

(-40°C ≤ Ta ≤ +110°C)

Accelerometer System Certificate

Certificate details: Group II

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 IIC T4 Ga (-40°C ≤ Ta ≤ +110°C) (Gas)

Ex ia IIIC T80°C IP65 Da (-40°C \leq Ta \leq +60°C) (Dust) Ex ia IIIC T130°C IP65 Da (-40°C \leq Ta \leq +110°C) (Dust)

Ex ia I Ma (-40°C ≤ Ta ≤ +60°C) (Mining)

Australia Approval Group 1 IECEx ITA 10.0003X

Ex ia I Ma

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

South African Approval Certificate No. MASC MS/16-0229X

Group I and II (As Baseefa/ATEX)

US/Canada Approvals Certificate No. SGSNA/18/SUW/0000231
Class I, II, III, Division 1, 2, Groups A - G, T4, -40°C to +110°C,
Class I, Zone 0, AEx, ia, IIC, T4, Ga, -40°C to +110°C

Zone 20, AEx, ia, IIIC, T130°C, IP65, Da, -40°C to +110°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

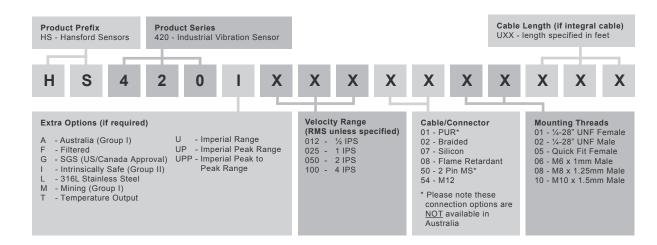
Ii = Imax = 115mA

Pi = 0.65W

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





www.hansfordsensors.com sales@hansfordsensors.com

