

HS-422I/M Intrinsically Safe Accelerometer

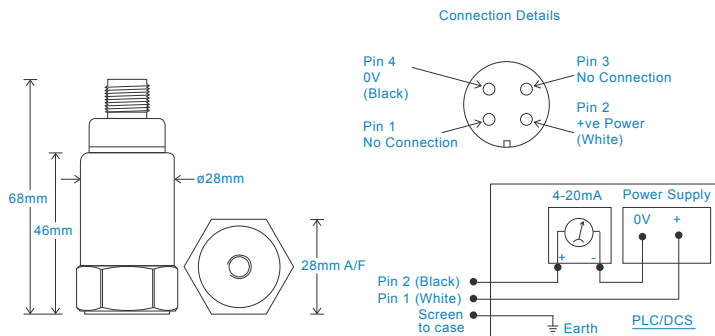
4-20mA acceleration output via M12 Connector

Key Features

- Intrinsically Safe with European, USA, Australian and South African approvals
- For use with PLC/DCS systems
- Customisable 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 $\pm 10\%$ Nominal 80Hz at 22°C
Frequency Response	10Hz (600cpm) to 5kHz (300kcpm) $\pm 5\%$ - 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)
Screened Cable Assembly	HS-AC010 - straight HS-AC011 - right angle
Mounting Threads	see: 'How To Order' table

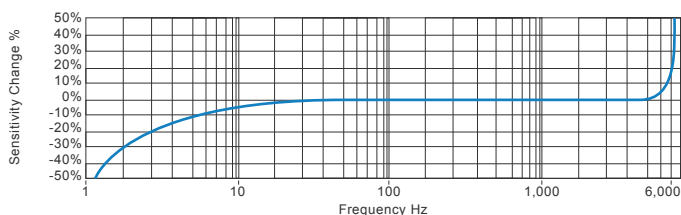
Electrical

Current Output	4-20mA DC proportional to acceleration
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	IP67
Maximum Shock	5000g
EMC	EN61326-1:2013

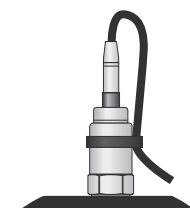
Typical Frequency Response



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
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We reserve the right to alter the specification of this product without prior notice
TS067.13

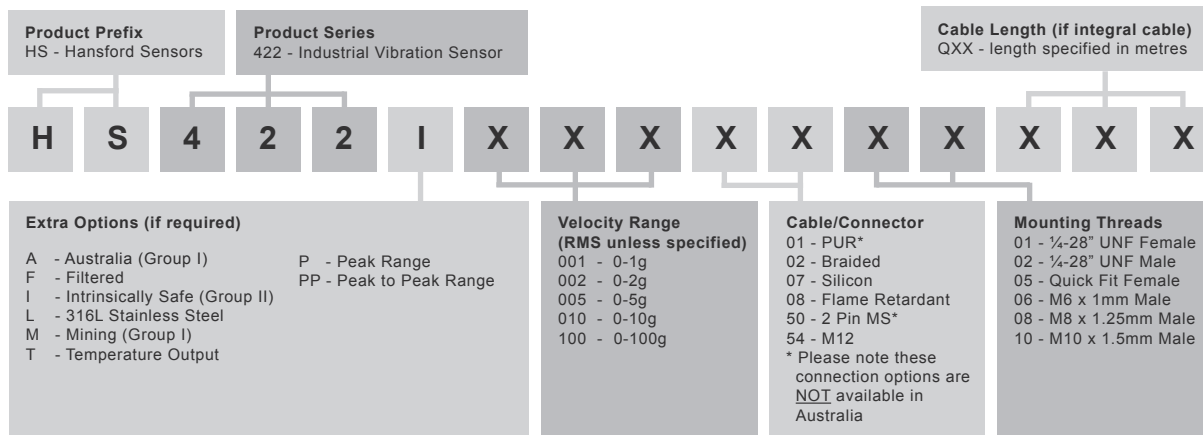


4-20mA acceleration output via M12 Connector

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		IECEX BAS08.0034X	Zone 20, AEx, ia, IIIC, T80°C, IP65, Da, -40°C to +60°C	
		Baseefa08ATEX0086X		
		Ⓜ II 1GD	Barrier	1 x Pepperl + Fuchs Galvanic Isolator
		Ex ia IIC T6 Ga		KFD2-STC4-Ex1, which has superseded
		Ex ia IIIC T80°C IP65 Da		KFD2-CR-Ex1.30300 (BAS00ATEX7164)
		Ⓜ I M1		see attached system drawings
		Ex ia I Ma		
		(-40°C ≤ Ta ≤ +60°C)	1 x MTL Zener Barrier MTL7787+ (BAS01ATEX7217)	
			or Pepperl + Fuchs Zener Barrier	
Accelerometer System Certificate		Baseefa08Y0087	Z787 (BAS01ATEX7005) or any other barrier that	
		Ex ia IIC T6 (-40°C ≤ Ta ≤ +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		
500V Isolation	Units Will Pass A 500V Isolation Test		Terminal Parameters	Ui = Vmax = 28V
				Ii = Imax = 115mA
				Pi = 0.65W
Certified Temperature Range	Ex ia IIC T6 Ga (-40°C ≤ Ta ≤ +60°C) (Gas)		Notes:	Special conditions of safe use for Group II dust.
	Ex ia IIIC T80°C IP65 Da (-40°C ≤ Ta ≤ +60°C) (Dust)			The free end of the cable on the integral cable
	Ex ia I Ma (-40°C ≤ Ta ≤ +60°C) (Mining)			version of the apparatus must be terminated in
Australia Approval Group 1	IECEX ITA 10.0003X		an appropriately certified dust-proof enclosure.	
	Ex ia I Ma		The unit has no serviceable parts.	
	(-40°C ≤ Ta ≤ +60°C)			
South African Approval	Certificate No. MASC MS/16-0229X			
	Group I and II (As Baseefa/ATEX)			

How To Order



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