

# MEC

## HS-420I/M Intrinsically Safe Accelerometer

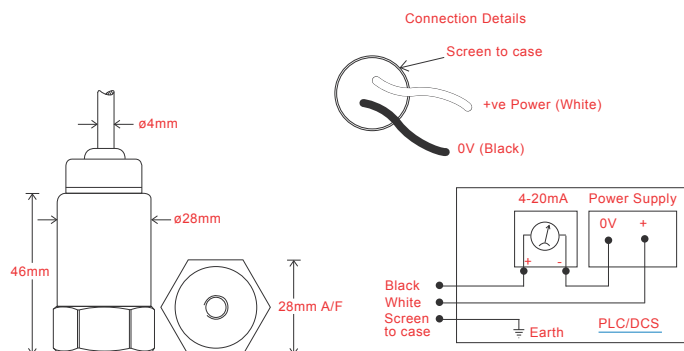
4-20mA velocity output via Braided Cable

### 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	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	Braided - length to be specified with order
Mounting Threads	see: 'How To Order' table

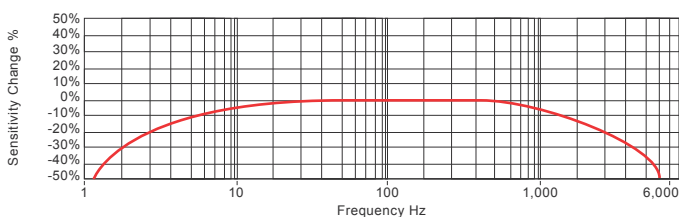
### Electrical

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	IP65
Maximum Shock	5000g
EMC	EN61326-1:2013

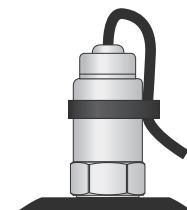
### Typical Frequency Response



### 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



\*All pictures are for illustration purpose only. Actual markings may vary due to certification

Machine Electrical Components CC

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## 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		
	E 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)
	E 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		
		Terminal Parameters	Ui = Vmax = 28V
500V Isolation	Units Will Pass A 500V Isolation Test		Ii = Imax = 115mA
			Pi = 0.65W
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)	Notes:	Special conditions of safe use for Group II dust.
	Ex ia I Ma ( -40°C ≤ Ta ≤ +60°C) (Mining)		The free end of the cable on the integral cable
			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

