

HS-107I Intrinsically Safe Accelerometer

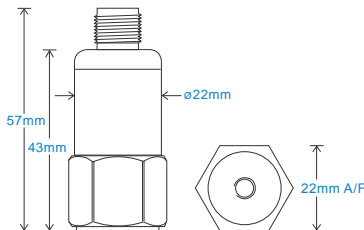
AC acceleration output via M12 Connector

Key Features

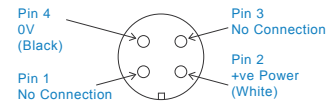
- Intrinsically Safe with European approval
- Line drive
- Customisable features
- For use with data collector

Industries

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



Connection Details



Technical Performance

Mounted Base Resonance	see 'How To Order' table (nominal)
Sensitivity	see: 'How To Order' table $\pm 10\%$ Nominal 80Hz at 22°C
Frequency Response	2Hz (120cpm) to 10kHz (600kcpm) $\pm 5\%$ 1.5Hz (90cpm) to 12kHz (720kcpm) $\pm 10\%$ 0.8Hz (48cpm) to 15kHz (900kcpm) $\pm 3\text{dB}$
Isolation	Base isolated
Range	see: 'How To Order' table
Transverse Sensitivity	Less than 5%

Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Compression
Mounting Torque	8Nm
Weight	106gms (nominal) body only
Screened Cable Assembly	HS-AC010 - straight HS-AC011 - right angle
Mounting Threads	see: 'How To Order' table

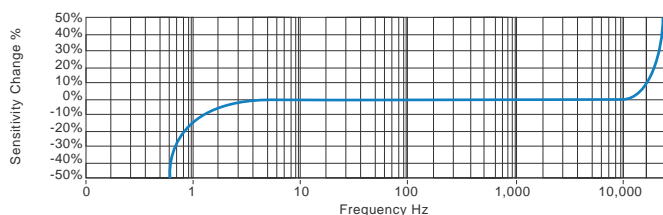
Electrical

Electrical Noise	0.1mg max
Supply Voltage	7.5 - 24Volts DC
Bias Current	3.5mA
Settling Time	2 seconds
Output Impedance	200 Ohms max.
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

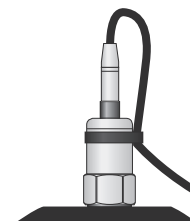
Typical Frequency Response



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
TS1318



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AC acceleration output via M12 Connector

Intrinsically Safe Requirements

Sensor Maximum Cable Length	See website www.hansfordsensors.com	Certified Temperature Range	Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +110°C) (Gas) Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +60°C) (Gas)
Certificate details: Group II	IECEX BAS 22.0041X SGS22ATEX0075X Ex II 1GD Ex ia IIC T6..T4 Ga Ex ia IIIC T ₂₀₀ 130°C Da Ex ia IIIC T ₂₀₀ 80°C...130°C IP65 Da	Ex ia IIIC T ₂₀₀ 130°C IP65 Da (-55°C ≤ Ta ≤ +110°C) (Dust) Ex ia IIIC T ₂₀₀ 80°C IP65 Da (-55°C ≤ Ta ≤ +60°C) (Dust) Ex ia I Ma (-55°C ≤ Ta ≤ +110°C) (Mining)	
Terminal Parameters Connector	Ui = 28V, Ii = 93mA, Pi = 0.65W Ci = 1.0nF Li = 0	Standards Applied to Product	EN IEC 60079-0:2018 EN 60079-11:2012
500V Isolation	Units Will Pass A 500V Isolation Test	Barrier	1 x MTL Zener Barrier MTL7728+ (BAS01ATEX7217)
			IEC 60079-0 Edition 7 2017 IEC 60079-11 Edition 6 2011

Special conditions of use:

1. The Ci of non-fused versions of the equipment (HS-107Mxxxxxxx and HS-107MSxxxxxxx) when fitted with 92m of cable increases from 9.9nF to 83nF. The fused versions when fitted with 92m of cable have Ci = 41nF.
2. The free end of the cable on the integral cable version of the apparatus must be terminated in an appropriately certified dust proof enclosure when dust protection is required.

Note: If the equipment is to be used in unusual environments or aggressive substances are likely to be encountered, contact the manufacturer to discuss suitability.

How To Order

