

# HS-107I Intrinsically Safe Accelerometer

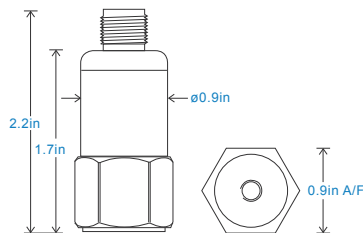
## AC acceleration output via M12 Connector

### Key Features

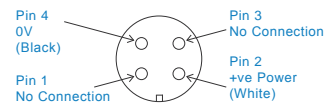
- Intrinsically Safe with European approval
- Line drive
- Customisable features
- For use with data collector

### 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 72°F
Frequency Response	120cpm (2Hz) to 600kcpm (10kHz) $\pm 5\%$ 90cpm (1.5Hz) to 720kcpm (12kHz) $\pm 10\%$ 48cpm (0.8Hz) to 900kcpm (15kHz) $\pm 3\text{dB}$
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	5.9ft. lbs
Weight	3.7 oz. (nominal) body only
Screened Cable Assembly	HS-AC010 - straight HS-AC011 - right angle
Mounting Threads	see: 'How To Order' table

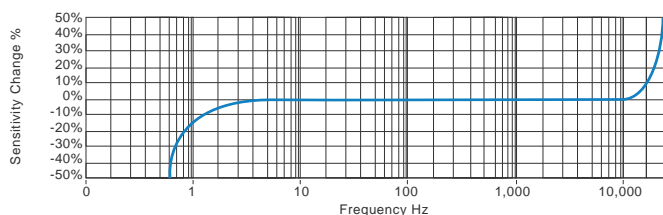
### Electrical

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

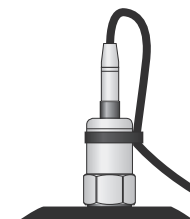
### Typical Frequency Response



### 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](http://www.hansfordsensors.com)  
[sales@hansfordsensors.com](mailto:sales@hansfordsensors.com)

We reserve the right to alter the specification of this product without prior notice  
TS1318U



# HS-107I Intrinsically Safe Accelerometer

## AC acceleration output via M12 Connector

### Intrinsically Safe Requirements

Sensor Maximum Cable Length	See website <a href="http://www.hansfordsensors.com">www.hansfordsensors.com</a>	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 IIC T <sub>200</sub> 130°C Da Ex ia IIIC T <sub>200</sub> 80°C...130°C IP65 Da	Ex ia IIIC T <sub>200</sub> 130°C IP65 Da (-55°C ≤ Ta ≤ +110°C) (Dust) Ex ia IIIC T <sub>200</sub> 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 IEC 60079-0 Edition 7 2017 IEC 60079-11 Edition 6 2011
500V Isolation	Units Will Pass A 500V Isolation Test	Barrier	1 x MTL Zener Barrier MTL7728+ (BAS01ATEX7217)

#### 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

