

# HS-004IS ATEX Low Power Accelerometer Capsule

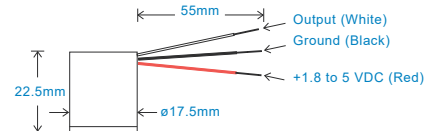
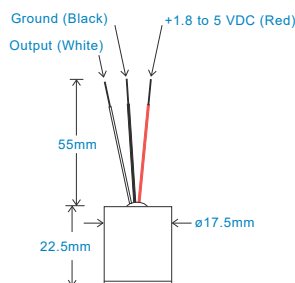
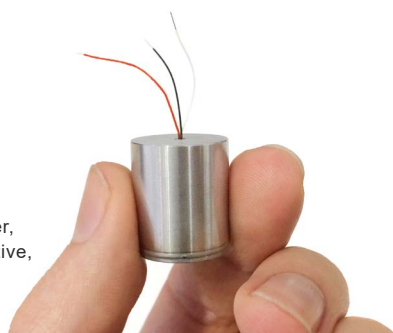
## AC acceleration output

### Key Features

- OEM Capsule
- Low voltage
- Ultra low power consumption

### Industries

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



## 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	0.3Hz (18cpm) to 15kHz (900kcpm) $\pm 3$ dB
Isolation	Base isolated
Range	see: 'How To Order' table @ 5V power
Transverse Sensitivity	Less than 5%
Broadband Resolution	<500 $\mu$ g
Amplitude Linearity	$\pm 1\%$

## Mechanical

Case Material	Stainless Steel
Sensing Element/Construction	PZT/Shear
Weight	18gms (nominal)

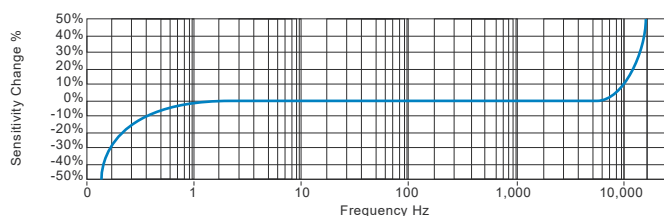
## Electrical

Electrical Noise	< 500 $\mu$ g
Power Requirements	see: 'How To Order' table
Current Consumption	100 $\mu$ A nominal at 5V supply (60 $\mu$ A at 1.8V)
Bias Voltage	50% of supply voltage
Settling Time	1 second
Output Impedance	100 Ohms max.
Case Isolation	>108 Ohms at 500 Volts

## Environmental

Operating Temperature Range	-40 to 120°C
Sealing	IP55
Maximum Shock	5000g
EMC	EN61326-1:2013
Electromagnetic Sensitivity	150 $\mu$ g/gauss

## Typical Frequency Response (at 100mV/g)



## Applications

Fans, Motors, Pumps, Compressors, Centrifuges, Conveyors, Air Handlers, Gearboxes, Rolls, Dryers, Presses, Cooling, VAC, Spindles, Machine Tooling, Process Equipment

## Certificates



[www.hansfordsensors.com](http://www.hansfordsensors.com)  
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TS776.3

# HS-004IS ATEX Low Power Accelerometer Capsule

## AC acceleration output

### Intrinsically Safe Requirements

Certificate details: Group II

IECEX BAS 18.0072U

Standards Applied to Product

EN IEC 60079-0:2018

Baseefa18ATEX0110U

EN 60079-11:2012

Ⓜ II 1G

Ex ia IIC T6...T1 G

IEC 60079-0 Edition 7 2017

IEC 60079-11 Edition 6 2011

Terminal Parameters

Ui = 5.2V, li = 367mA, Pi = 305mW

Ci = 12pF

Li = 0

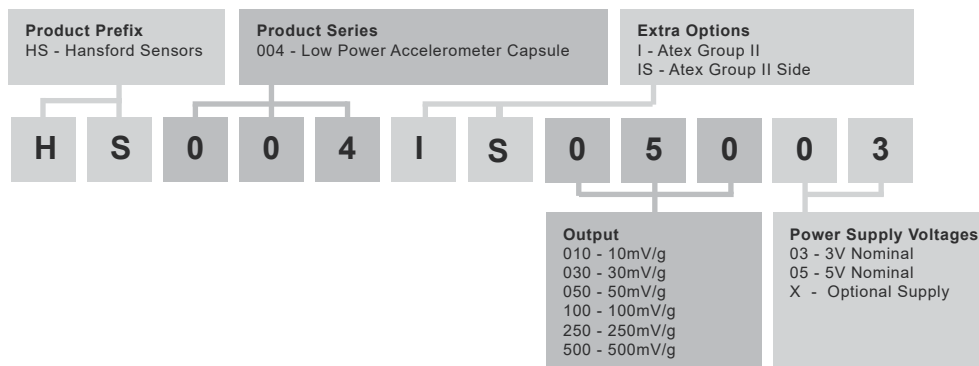
Certified temperature range:

	T6	T5	T4	T3	T2	T1
Mounted in free space (11K surface temperature rise)	69°C	84°C	110°C	110°C	110°C	110°C
Mounted in enclosed space with approximately 61cm <sup>3</sup> of free space around the capsule (16.5K surface temperature rise)	63.5°C	78.5°C	110°C	110°C	110°C	110°C
Mounted in enclosed space with approximately 40cm <sup>3</sup> of free space around the capsule (20K surface temperature rise)	60°C	75°C	110°C	110°C	110°C	110°C

Schedule of Limitations:

1. The piezo-electric crystal within the assembly is internally protected by adequately rated, triplicated zener diodes and so no further consideration is required.
2. The HS-004I Capsule shall be completely encased within an equipment enclosure providing a degree of ingress protection of at least IP20.

## How To Order



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