

# HS-104 Low Power Accelerometer

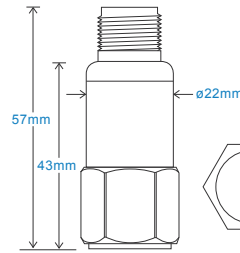
## AC acceleration output via 3 Pin MS Connector

### Key Features

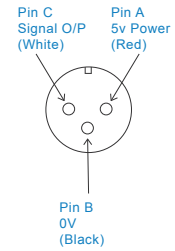
- Low voltage
- Ultra low power consumption
- Customisable features

### 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 $\pm 10\%$<br>Nominal 80Hz at 22°C |
| Frequency Response     | 0.3Hz (18cpm) to 10kHz (600kcpm) $\pm 10\%$                  |
| Isolation              | Base isolated  |
| Range                  | see: 'How To Order' table @ 5V power                         |
| Transverse Sensitivity | Less than 5%   |
| Amplitude Linearity    | $\pm 1\%$  |

### Mechanical

|                              |   |
|------------------------------|---|
| Case Material                | Stainless Steel   |
| Sensing Element/Construction | PZT/Shear   |
| Mounting Torque              | 8Nm   |
| Weight                       | 106gms (nominal)  |
| Screened Cable Assembly      | see: <a href="http://www.hansfordsensors.com">www.hansfordsensors.com</a> for options |
| Connector                    | HS-AA005 - non-booted<br>HS-AA068 or HS-AA069 - booted                                |
| Mounting Threads             | see: 'How To Order' table   |

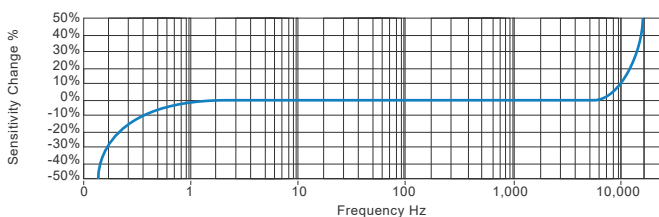
### Electrical

|                     |   |
|---------------------|---|
| Electrical Noise    | < 500 $\mu$ g   |
| Power Requirements  | 5V nominal (other voltages 1.8 to 24V on request)     |
| 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      | >10 <sup>8</sup> Ohms at 500 Volts                    |

### Environmental

|                             |                |
|-----------------------------|----------------|
| Operating Temperature Range | -50 to 125°C   |
| Sealing                     | IP68           |
| Maximum Shock               | 5000g          |
| EMC                         | EN61326-1:2013 |

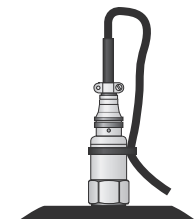
### Typical Frequency Response (at 100mV/g)



### Applications

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

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.)



### How To Order

| Product Prefix                | Product Series                   | Cable Length (if integral cable) |   |            |                    |   |                      |   |                         |   |   |   |   |   |
|-------------------------------|----------------------------------|----------------------------------|---|------------|--------------------|---|----------------------|---|-------------------------|---|---|---|---|---|
| HS - Hansford Sensors         | 104 - Low Power Vibration Sensor | QXX - length specified in metres |   |            |                    |   |                      |   |                         |   |   |   |   |   |
| H                             | S                                | 1                                | 0 | 4          | X                  | X | X                    | X | X                       | X | X | X | X | X |
| Extra Options (if required)   |                                  | Sensitivity                      |   | Range      | Resonant Frequency |   | Cable/Connector      |   | Mounting Threads        |   |   |   |   |   |
| F - Filtered                  |                                  | 010 - 10mV/g                     |   | $\pm 200g$ | 25kHz (1,500kcpm)  |   | 01 - PUR             |   | 01 - 1/4-28" UNF Female |   |   |   |   |   |
| L - 316L Stainless Steel      |                                  | 030 - 30mV/g                     |   | $\pm 66g$  | 25kHz (1,500kcpm)  |   | 03 - Braided         |   | 02 - 1/4-28" UNF Male   |   |   |   |   |   |
| RT - Temperature Output PT100 |                                  | 050 - 50mV/g                     |   | $\pm 40g$  | 25kHz (1,500kcpm)  |   | 07 - Silicon         |   | 05 - Quick Fit Female   |   |   |   |   |   |
| S - 90° Side Exit             |                                  | 100 - 100mV/g                    |   | $\pm 20g$  | 25kHz (1,500kcpm)  |   | 13 - Flame Retardant |   | 06 - M6 x 1mm Male      |   |   |   |   |   |
| T - Temperature Output        |                                  | 250 - 250mV/g                    |   | $\pm 8g$   | 25kHz (1,500kcpm)  |   | 52 - 3 Pin MS        |   | 08 - M8 x 1.25mm Male   |   |   |   |   |   |
|                               |                                  | 500 - 500mV/g                    |   | $\pm 4g$   | 25kHz (1,500kcpm)  |   | 54 - M12             |   | 10 - M10 x 1.5mm Male   |   |   |   |   |   |



[www.hansfordsensors.com](http://www.hansfordsensors.com)  
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We reserve the right to alter the specification of this product without prior notice

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