

# HS-104S Low Power Accelerometer

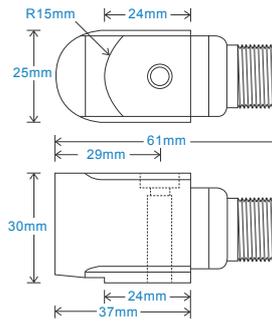
## AC acceleration output via 3 Pin MS Connector

### Key Features

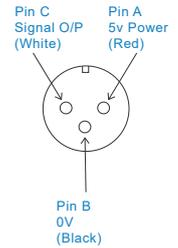
- Low voltage
- Ultra low power consumption
- Customisable features

### 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                       | 185gms (nominal) body only  |
| 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   |

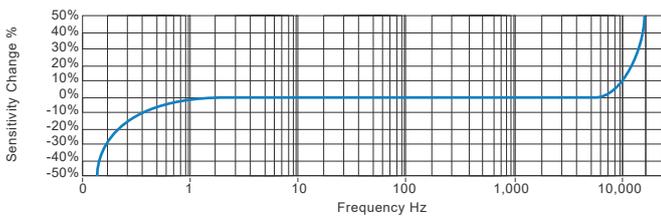
### Electrical

|                     |   |
|---------------------|---|
| 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   | S | X  | X | X   | X | X | X  | X | X | X |
| Extra Options (if required)  |                                  | Sensitivity   |   | Range   |   | Resonant Frequency   |   | Cable/Connector   |   |   | Mounting Threads   |   |   |   |
| F - Filtered<br>L - 316L Stainless Steel<br>RT - Temperature Output PT100<br>S - 90° Side Exit<br>T - Temperature Output |                                  | 010 - 10mV/g<br>030 - 30mV/g<br>050 - 50mV/g<br>100 - 100mV/g<br>250 - 250mV/g<br>500 - 500mV/g |   | $\pm 200$ g<br>$\pm 66$ g<br>$\pm 40$ g<br>$\pm 20$ g<br>$\pm 8$ g<br>$\pm 4$ g |   | 25kHz (1,500kcpm)<br>25kHz (1,500kcpm)<br>25kHz (1,500kcpm)<br>25kHz (1,500kcpm)<br>25kHz (1,500kcpm)<br>25kHz (1,500kcpm) |   | 01 - PUR<br>03 - Braided<br>07 - Silicon<br>13 - Flame Retardant<br>52 - 3 Pin MS<br>54 - M12 |   |   | 02 - 1/4-28" UNF Male<br>06 - M6 x 1mm Male<br>08 - M8 x 1.25mm 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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