

# HS-170 Premium Accelerometer

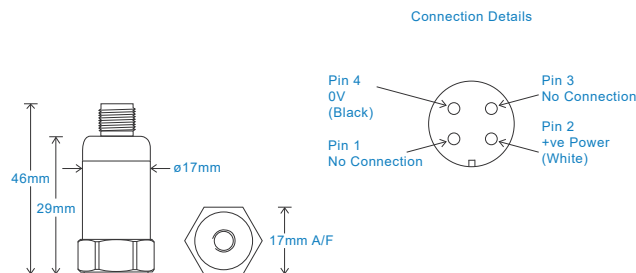
## AC acceleration output via M12 Connector

### Key Features

- Compact design
- Premium design
- Customisable features

### 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 $\pm 10\%$<br>Nominal 80Hz at 22°C  |
| Frequency Response     | 2Hz (120cpm) to 14kHz (840kcpm) $\pm 5\%$<br>1.5Hz (90cpm) to 16kHz (960kcpm) $\pm 10\%$<br>0.8Hz (48cpm) to 19kHz (1,140kcpm) $\pm 3\text{dB}$ |
| Isolation              | Base isolated   |
| Range                  | see: 'How To Order' table   |
| Transverse Sensitivity | Less than 5%  |

### Mechanical

|                              |                                       |
|------------------------------|---------------------------------------|
| Case Material                | Stainless Steel                       |
| Sensing Element/Construction | PZT/Shear                             |
| Mounting Torque              | 8 Nm                                  |
| Mounting Bolt Provided       | see: 'How To Order' table x 30mm long |
| Weight                       | 52gms (nominal)                       |
| Connector                    | Use booted connector only             |
| Mounting Threads             | see: 'How To Order' table             |

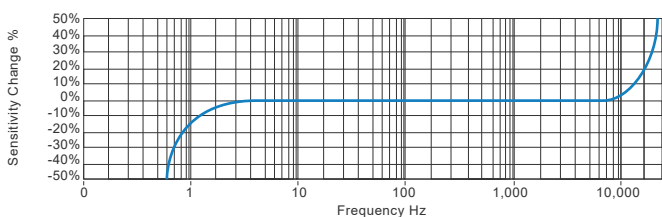
### Electrical

|                  |                           |
|------------------|---------------------------|
| Electrical Noise | 0.1mg max                 |
| Current Range    | 0.5mA to 8mA              |
| Bias Voltage     | 10 - 12 Volts DC          |
| Settling Time    | 1 second                  |
| Output Impedance | 200 Ohms max.             |
| Case Isolation   | $>10^8$ Ohms at 500 Volts |

### Environmental

|                             |                |
|-----------------------------|----------------|
| Operating Temperature Range | -55 to 150°C   |
| Sealing                     | IP67           |
| Maximum Shock               | 5000g          |
| EMC                         | EN61326-1:2013 |

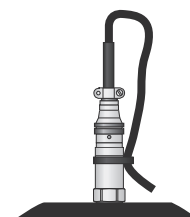
### Typical Frequency Response (at 100mV/g)



### 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

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>Product Prefix</b><br>HS - Hansford Sensors   | <b>Product Series</b><br>170 - Compact Premium Industrial Vibration Sensor  | <b>Cable Length (if integral cable)</b><br>QXX - length specified in metres   |   |   |   |   |   |   |   |   |   |   |   |   |
| H  | S   | 1   | 7   | 0   | X   | X | X | X | X | X | X | X | X | X |
| <b>Extra Options (if required)</b><br>F - Filtered<br>L - 316L Stainless Steel<br>S - 90° Side Exit<br>Y - 5% tolerance on sensitivity | <b>Sensitivity</b><br>010 - 10mV/g<br>030 - 30mV/g<br>050 - 50mV/g<br>100 - 100mV/g<br>250 - 250mV/g<br>500 - 500mV/g | <b>Range</b><br>$\pm 800\text{g}$<br>$\pm 250\text{g}$<br>$\pm 160\text{g}$<br>$\pm 80\text{g}$<br>$\pm 32\text{g}$<br>$\pm 16\text{g}$ | <b>Resonant Frequency</b><br>30kHz (1,800kcpm)<br>28kHz (1,680kcpm)<br>26kHz (1,560kcpm)<br>24kHz (1,440kcpm)<br>22kHz (1,320kcpm)<br>20kHz (1,200kcpm) | <b>Cable/Connector</b><br>02 - Braided<br>08 - Flame Retardant<br>50 - 2 Pin MS<br>54 - M12 | <b>Mounting Threads</b><br>02 - 1/4-28" UNF Male<br>06 - M6 x 1mm Male<br>08 - M8 x 1.25mm Male |   |   |   |   |   |   |   |   |   |



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