

# HS-170S Premium Accelerometer

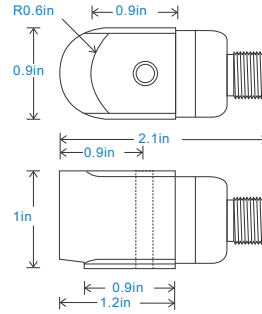
AC acceleration output via M12 Connector

## Key Features

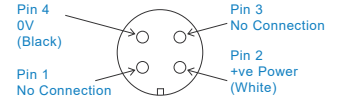
- Compact design
- Premium design
- Side entry for easy access

## 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 72°F  |
| Frequency Response     | 120cpm (2Hz) to 840kcpm (14kHz) $\pm 5\%$<br>90cpm (1.5Hz) to 960kcpm (16kHz) $\pm 10\%$<br>48cpm (0.8Hz) to 1,140kcpm (19kHz) $\pm 3\text{dB}$ |
| 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              | 5.9ft. lbs                             |
| Mounting Bolt Provided       | see: 'How To Order' table x 1.2in long |
| Weight                       | 4.7 oz. (nominal) body only            |
| Connector                    | Use booted connector only              |
| Mounting Threads             | see: 'How To Order' table              |

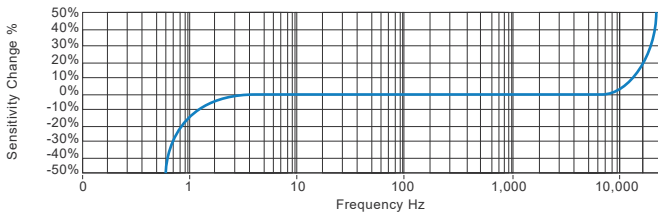
## Electrical

|                  |                           |
|------------------|---------------------------|
| 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 | -67 to 300°F   |
| 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>H S 1 7 0 S X X X X X X X</b>  |   |   |   |   |   |  |  |  |  |  |  |
| <b>Extra Options (if required)</b><br>F - Filtered<br>L - 316L Stainless Steel<br>RT - Temperature Output PT100<br>S - 90° Side Exit<br>T - Temperature Output<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>1,800kcpm (30kHz)<br>1,680kcpm (28kHz)<br>1,560kcpm (26kHz)<br>1,440kcpm (24kHz)<br>1,320kcpm (22kHz)<br>1,200kcpm (20kHz) | <b>Cable/Connector</b><br>01 - PUR<br>02 - Braided<br>07 - Silicon<br>08 - Flame Retardant<br>50 - 2 Pin MS<br>54 - M12 | <b>Mounting Threads</b><br>02 - ¼-28" UNF Male<br>06 - M6 x 1mm Male<br>08 - M8 x 1.25mm Male |  |  |  |  |  |  |



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

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