

# HS-100S Accelerometer

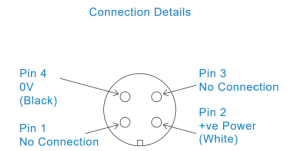
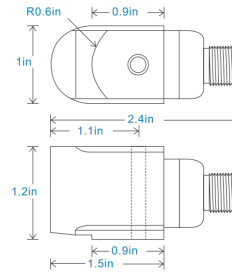
AC acceleration output via M12 Connector

## Key Features

- For use with data collector
- Side entry for easy access
- 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 72°F                                                                                  |
| Frequency Response     | 120cpm (2Hz) to 600kcpm (10kHz) $\pm 5\%$<br>90cpm (1.5Hz) to 720kcpm (12kHz) $\pm 10\%$<br>48cpm (0.8Hz) to 900kcpm (15kHz) $\pm 3\text{dB}$ |
| Isolation              | Base isolated                                                                                                                                 |
| Range                  | see: 'How To Order' table                                                                                                                     |
| Transverse Sensitivity | Less than 5%                                                                                                                                  |

## Mechanical

|                              |                                                                                       |
|------------------------------|---------------------------------------------------------------------------------------|
| Case Material                | Stainless Steel                                                                       |
| Sensing Element/Construction | PZT/Compression                                                                       |
| Mounting Torque              | 5.9ft. Lbs                                                                            |
| Mounting Bolt provided       | see: 'How To Order' table x 1.2in long                                                |
| Weight                       | 7.2 oz. (nominal) body only                                                           |
| Maximum Cable Length         | n/a                                                                                   |
| Standard Cable Length        | n/a                                                                                   |
| Screened Cable               | n/a                                                                                   |
| Screened Cable Assembly      | see: <a href="http://www.hansfordsensors.com">www.hansfordsensors.com</a> for options |
| Connector                    | HS-AC010 - straight or HS-AC011 - right angle                                         |
| Mounting Threads             | see: 'How To Order' table                                                             |

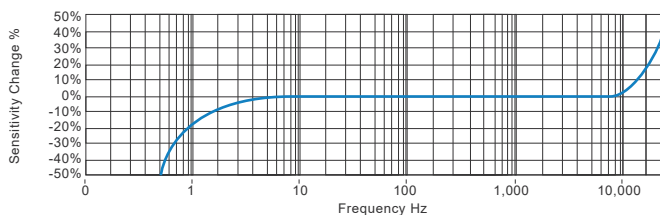
## Electrical

|                    |                           |
|--------------------|---------------------------|
| Excitation Voltage | 18-30Volts DC             |
| Electrical Noise   | 0.1mg max                 |
| Current Range      | 0.5mA to 8mA              |
| Bias Voltage       | 10 - 12 Volts DC          |
| Settling Time      | 2 seconds                 |
| Output Impedance   | 200 Ohms max              |
| Case Isolation     | $>10^8$ Ohms at 500 Volts |

## Environmental

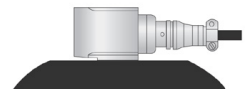
|                             |                |
|-----------------------------|----------------|
| Operating Temperature Range | -67 to 284°F   |
| Sealing                     | IP67           |
| Maximum Shock               | 5000g          |
| EMC                         | EN61326-1:2013 |

## 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

| Product Prefix                  | Product Series                    |               |   |                   |   |                    |   |                      |   |                       |   |
|---------------------------------|-----------------------------------|---------------|---|-------------------|---|--------------------|---|----------------------|---|-----------------------|---|
| HS - Hansford Sensors           | 100 - Industrial Vibration Sensor |               |   |                   |   |                    |   |                      |   |                       |   |
| H                               | S                                 | 1             | 0 | 0                 | X | X                  | X | X                    | X | X                     | X |
| Extra Options (if required)     |                                   | Sensitivity   |   | Range             |   | Resonant Frequency |   | Cable/Connector      |   | Mounting Threads      |   |
| F - Filtered                    |                                   | 010 - 10mV/g  |   | $\pm 800\text{g}$ |   | 34kHz (2,040kcpm)  |   | 01 - PUR             |   | 02 - 1/4-28" UNF Male |   |
| I - Intrinsically Safe          |                                   | 030 - 30mV/g  |   | $\pm 250\text{g}$ |   | 33kHz (1,980kcpm)  |   | 02 - Braided         |   | 06 - M6 x 1mm Male    |   |
| RT - Temperature Output PT102   |                                   | 050 - 50mV/g  |   | $\pm 160\text{g}$ |   | 32kHz (1,920kcpm)  |   | 08 - Flame Retardant |   | 08 - M8 x 1.25mm Male |   |
| T - Temperature Output          |                                   | 100 - 100mV/g |   | $\pm 80\text{g}$  |   | 30kHz (1,800kcpm)  |   | 50 - 2 Pin MS        |   |                       |   |
| Y - 5% tolerance on sensitivity |                                   | 250 - 250mV/g |   | $\pm 32\text{g}$  |   | 28kHz (1,680kcpm)  |   | 54 - M12             |   |                       |   |
|                                 |                                   | 500 - 500mV/g |   | $\pm 16\text{g}$  |   | 26kHz (1,560kcpm)  |   |                      |   |                       |   |