



# Hansford Sensors

*Excellence in Vibration Monitoring*

## Product Short Form



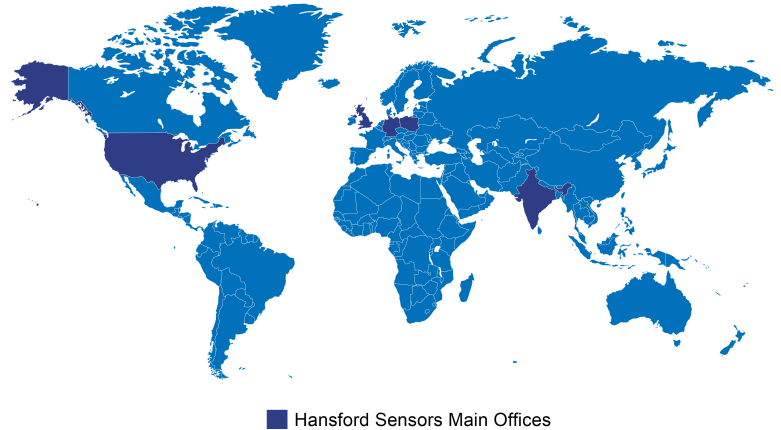
# About Us

## Who are Hansford Sensors?

At Hansford Sensors, we design, develop and manufacture a wide range of high performance industrial accelerometers, vibration transmitters (loop powered sensors) and ancillary equipment.

## Where are we?

Manufactured in the UK with offices globally, our products are used internationally by the world's leading companies. In each case, we deliver an unrivalled combination of product quality and reliability, prompt delivery, competitive prices and outstanding customer and technical support.



## What do our sensors do?

Industrial accelerometers and vibration transmitters, or loop powered sensors (LPS) play a vital role in predictive and preventative maintenance routines. Tough and built to last, they deliver precise measurements time after time even under the most demanding conditions.

## What can our sensors be used on?

Our industrial accelerometers fit to fans, pumps, motors and other production and process equipment. Data can be captured locally using a data collector. Trend monitoring can be performed using 4-20mA sensors/input modules, with PLC or BNC systems. Our comprehensive range of cables, connectors and accessories make installation and operation quick and simple.

## What makes Hansford Sensors unique?

Hansford Sensors is committed to consistently providing top levels of service to customers - we exceed expectations. Key to our long-term success as a business is the positive working relationships we have with our customers, partners, suppliers and employees. We care about your business.

## Support

With offices worldwide, we can provide customer support no matter where you may be. Our fully trained staff are on hand to assist with any questions you may have.



## Excellence in Vibration Monitoring



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# Sensor Options

## Top entry

Popular and cost-effective, top entry sensors can be supplied with either cable or connector output. The connection direction is on the same axis as the sensitivity.

## Cable/connector options

There are a variety of options to take the readings from sensors. A connector (such as M12 or 2 Pin MS) can be used in conjunction with a cable assembly or an integral cable can be fitted directly onto the sensor.

## Low power

Low power options are available for applications used with low voltage and batteries, such as tablet or smartphones.

## High temperature

Sensors are available with an external charge amplifier to suit applications up to 250°C/480°F.

## Intrinsically safe

Our AC (up to 250°C/480°F) and 4-20mA sensors with temperature outputs are ATEX and IECEx certified, for use in Group I and Group II potentially explosive environments. We also have Class I, II, III, Division 1, 2 certification. In addition we have high temperature sensors certified for ATEX and IECEx with local approvals in India and Australia.

## Side entry

A sensor with a lower profile than its top entry equivalent, side entry sensors can be manufactured with cable or connector. The connection direction is at a 90° degree angle to the axis of sensitivity.

## Mounting threads

Applications require different mounting options. We provide a wide range of metric and imperial mounting threads, along with the popular quick fit to suit your requirements.

## Temperature output

If required, a temperature output can be provided from a sensor in addition to the vibration output. Temperature can be provided with voltage or PT100 signal.

## Dual output

We can provide dual output sensors with AC and temperature. 4-20mA with vibration, temperature and AC outputs.

## Frequency range

Frequency ranges are 0.8Hz to 15kHz  $\pm$  3dB as standard. Options are available to suit high or low speed applications using filters to ensure that the range required by the customer can be monitored.

## Various sensitivities

All of our AC sensors have a standard 100 mV/g output. Other options can be supplied to suit the application.

## Bi/Tri-axial

Sensors that allow readings to be taken from multiple axes simultaneously, providing a more comprehensive picture of the machine condition.

## Line drive

Our line drive sensors provide a current signal to work with specific data collectors and monitoring systems.



# Accelerometer Product Range

## AC Standard

### General purpose AC accelerometers

**HS-100** - Providing an AC acceleration output for use with a data collector. The sensors are produced on demand with a wide range of features that can be customised.

Operating temperature range up to 150°C/300°F, with our HS-105 family rated up to 250°C/480°F.



## AC Premium

### Premium AC accelerometers

**HS-150** - Our premium range is manufactured using a shear method giving fast settling time and stability in many applications.

**HS-170** - A more compact accelerometer designed using the premium shear method, ideal for use with a data-collector.

Operating temperature range up to 150°C/300°F.



## AC Low Power

### Low Power/Wireless (IOT)

**HS-050/HS-070/HS-004** - OEM capsules are an option for use in a customised system, with the same product specifications as the standard and premium series. Operating temperature range up to 130°C/266°F.

**HS-104** - Low power options for use with low voltage portable tablets/phones. Typically connect to traditional portable battery powered devices. Operating temperature range up to 125°C/257°F.



## AC Multi-Axial

### Premium Biaxial & Triaxial

**HS-172/HS-173** - Our premium biaxial and triaxial sensors allow readings to be taken from multiple axes simultaneously.

Operating temperature range up to 130°C/266°F.



# Accelerometer Product Range

## 4-20mA

The HS-400 Series provides a 4-20mA output that interfaces into any loop powered system (PLC/DCS/BMS). The ranges can be customised to suit the application and there are a variety of different outputs including dual AC and temperature.

- HS-420** - 4-20mA velocity only
- HS-421** - 4-20mA velocity and AC acceleration
- HS-422** - 4-20mA acceleration only
- HS-423** - 4-20mA acceleration and AC acceleration

Temperature range up to 120°C/248°F.



## Supporting Products

### Cable assemblies for online use

A comprehensive range of cable assemblies exist providing direct connection to M12 or MS style connectors. They are available with silicon boots and are sealed to IP68/NEMA 6P, with a selection of different cable types including:

- Flame retardant PUR
- Armoured hose
- Braided
- Silicon
- FEP



### Cable assemblies for data-collectors

Hansford Sensors offers a complete range of data collector cable assemblies, directly compatible with the commercially available instruments that can be purchased around the world. Within the range is the popular snap on connector, which disconnects if the cable were to get caught in the machine.



### Switch and junction enclosures

A wide range of enclosures are available, providing a secure connection point to take readings from a data-collector. Offering either a switching connection point or many unswitched points, the enclosures are available in a variety of sizes and shapes and materials including; stainless steel, mild steel and GRP.



# Supporting Products

## Vibration modules/trip switch and charge amplifiers

A cost-effective DIN rail mounted range of modules capable of interfacing AC and 4-20mA accelerometers to provide alarming and protection for pumps and fan applications.

The HS-429 has integral 4-20mA and trip sensor with variable alarm and delay settings.

There is also a selection of charge amplifiers and direct velocity output units that can take the charge output and provide acceleration and velocity outputs for high temperature accelerometers.



## Handheld vibration meter and Handheld accelerometer checker

The HS-620 and HS-630 provide a portable means of measuring vibration and temperature.

- Conforms to ISO 2954
- Velocity and bearing condition
- Sensor/cable fault indicator
- Display hold function
- Rechargeable battery
- Complete set with sensor and magnet or spike

The HS-660 is a handheld device used to verify the functionality of an accelerometer.

The HS-661 is a handheld device used to simulate vibration velocity signals, allowing verification of vibration monitor and alarm circuits.



## Spot face toolkit and Crimping Kit

Mounting the sensor is important.

The HS-AA031 spot facing toolkit is used to ensure that the mounting face is perpendicular to the bearing housing. Available for 1/4-28" UNF, M6 and M8 mountings.



The HS-AA122 Crimping Kit is used for 2 and 3 Pin MS Plastic Rubber Boot Connector Kits.



## Studs and Magnets

The product range offers comprehensive family of HS-AS studs. These enable the sensor to be connected to the mounting face correctly.



HS-AM Series of magnets provides a high pull strength, providing a cost effective coupling method of connecting the sensor to the mounting face for portable data-collection.

