

Sensors and Systems



that protect your plant...

About us

What is 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, our products are used globally 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 precision measurements time after time, even under the most demanding conditions.

What can our sensors be used on?

You can easily fit our industrial accelerometers to fans, pumps, motors and other production and process equipment. Data can be captured locally using a datacollector and full analysis online systems or remotely using PLC, BMS or 4-20mA input modules. Our comprehensive range of cables, connectors and accessories make installation and operation quick and simple.

What makes Hansford unique?

Hansford Sensors is committed to providing our customers with services and recognises the importance of constantly striving to exceed expectations.

We focus on building good working relationships with our customers, suppliers and employees, as we believe this is key to the long-term success of the company.

Support

With offices in many different countries we can provide customer support no matter where you may be. All of our staff are trained to assist with any questions you may have.



Our Passion

Our Relationships

Excellence in Vibration Monitoring

www.hansfordsensors.com
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Sensor options

Top entry

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

Side entry

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

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.

Cable/Connector options

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

Mounting threads

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

Various sensitivities

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

Low power

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

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.

Bi/Tri-Axial

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

High temperature

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

Dual output

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

Line drive

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

Intrinsically safe

Our AC and 4-20mA sensors with temperature outputs are ATEX and IEC Ex 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 IEC Ex with local approvals in India and Australia.



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Accelerometer product range

AC

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.



Premium AC Accelerometers

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

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

Temperature Range up to 130°C/266°F.



Other options

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

HS-050/HS-070 - OEM capsules are an option for use in a customised system with the same product specifications as the standard and premium series.

HS-104 - Low power options for use with low voltage portable tablets/phones.



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 90°C/194°F.



Supporting products

Cable Assemblies for online use

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

- Flame Retardant
- Armoured Hose
- Braided
- Silicon
- PUR
- 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 in the world. Within the range is the popular snap on connector, which breaks if the cable were to unfortunately get caught in the machine.



Switch and Junction Enclosures

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



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.



Supporting products

Handheld Vibration Meter

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

- Conforms to ISO 10816-3
- Velocity and bearing condition
- Sensor/cable fault indicator
- Display hold function
- Rechargeable battery
- Complete set with sensor and magnet or spike



Handheld Accelerometer Checker

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.



Magnets

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



Spot Face Tool Kit

Mounting the sensor is important.

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



Studs

Within the product range exists a comprehensive family of HS-AS studs, enabling the sensor to be connected to the mounting face correctly.

