



Swiss Quality
ISO 9001
ISO 13485

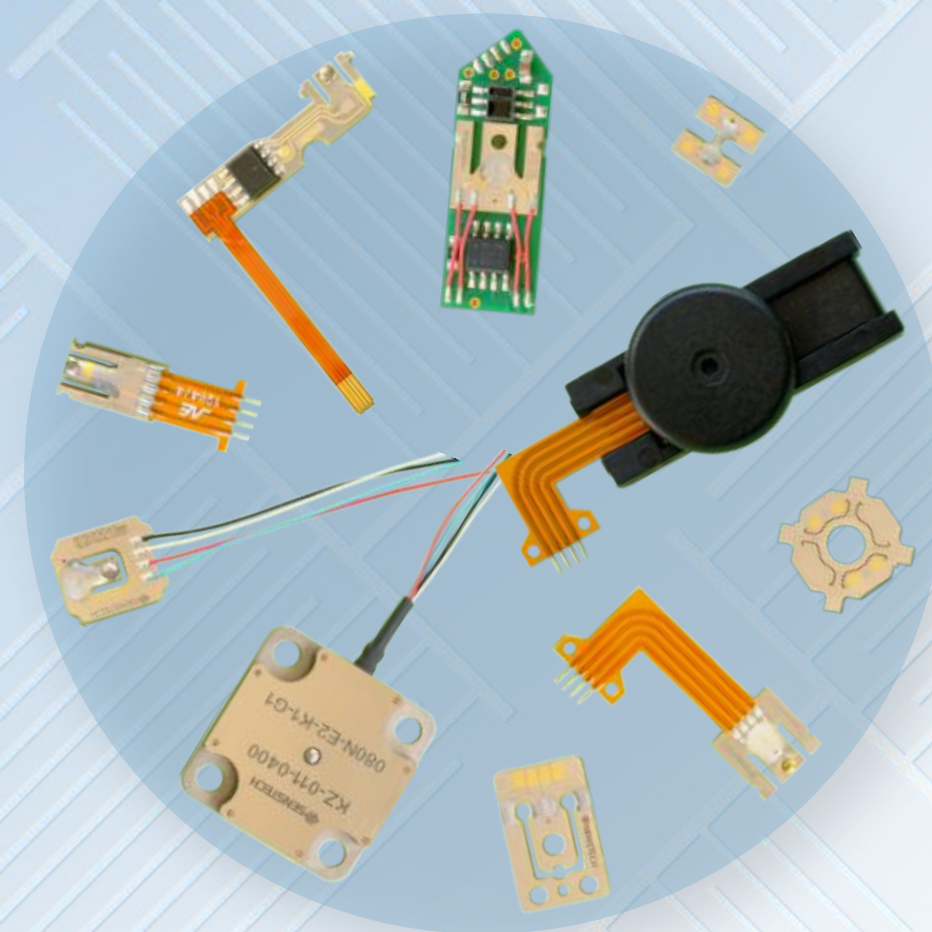
The OEM Sensor Specialist

Senstech is a leading manufacturer and development partner for customized sensors. These thin-film OEM sensors have a variety of applications in industrial and medical devices.

Compact sensors for measuring
Force • Pressure • Displacement • Torque • Surface strain

The Innovative Partner for the Development and Production of Your Sensor Solution

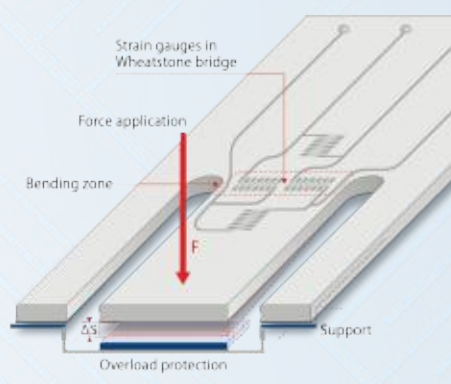
Based on Thin-Film Strain Gauges



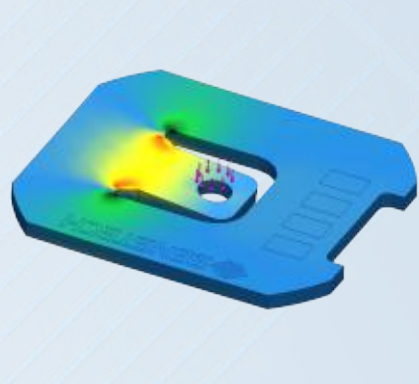
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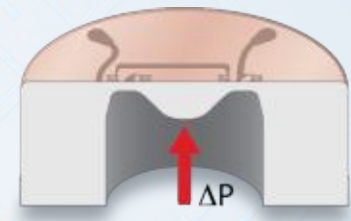
Force sensor with planar substrate: The measuring resistors are arranged along a bending zone



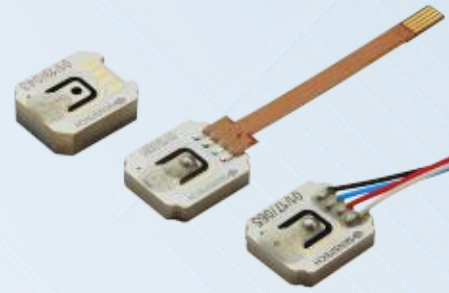
FEM analysis of strain and compression to optimize the design of a sensor



Prototype setup for a customized tension sensor consisting of standard measuring elements



Pressure sensor based on a diaphragm body: The measuring resistors are arranged radially



Different contacting variants of a sensor: Uncontacted, flex ribbon or stranded wires



Series product for pressure monitoring and fault detection in peristaltic infusion pumps

Innovative Sensor Technology for Your Measuring Task

Senstech gives you fast and low-risk access to innovative OEM sensor solutions based on thin-film technology.

Senstech sensors are mainly used for condition and process monitoring in medical devices, textile machinery and industrial equipment.

Our technology can be used to produce sensors for all parameters that can be derived from the deformation of a spring steel measuring body. These include force, pressure, displacement, torque and surface strain.

Individual Solutions Based on Thin Films

We are one of the pioneers of thin-film-based sensor technology. We use the resulting broad knowledge and extensive experience to develop optimal sensor solutions in dialog with our customers. Particularities such as multi-dimensional measurement tasks, widely varying force ranges or tight spaces are taken into account. Mechanical and electrical interfaces are adapted.

Wherever possible, we use miniature measuring elements from our standard range in customer-specific sensor designs. This keeps the costs for prototypes and small series within reasonable limits.

From Proof of Concept to Tried-And-Tested Series Product

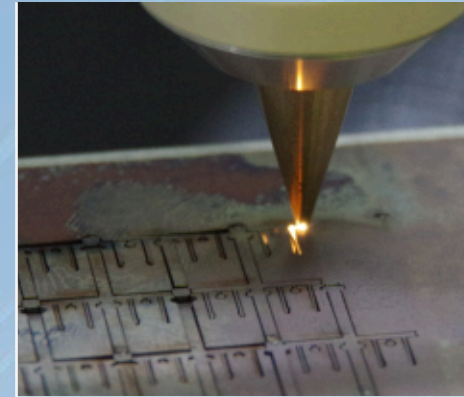
Senstech accompanies you through the entire life cycle of your end product. We supply sensors for initial test measurements and then develop a series product according to your requirements.

We create the necessary documentation for the validation of the developed product and produce the pilot series using the manufacturing processes defined therein. As soon as production approval has been granted, nothing stands in the way of scaling up: depending on workload, a production capacity of 100,000 units per year or more can be provided within a few weeks.

innovative

flexible

scalable



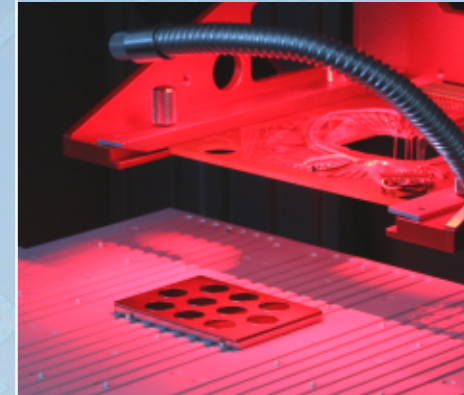
Cutting sensor substrates out of a hardened spring steel sheet with the fiber laser



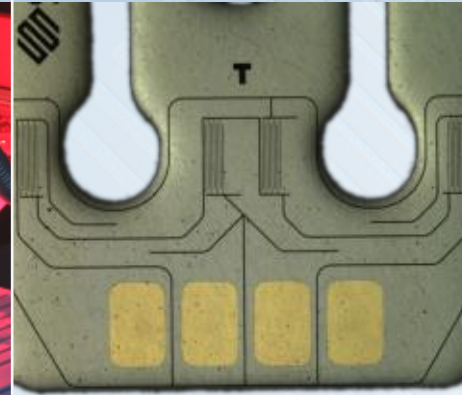
View into a sputtering system: application of thin insulation and metal layers in argon plasma



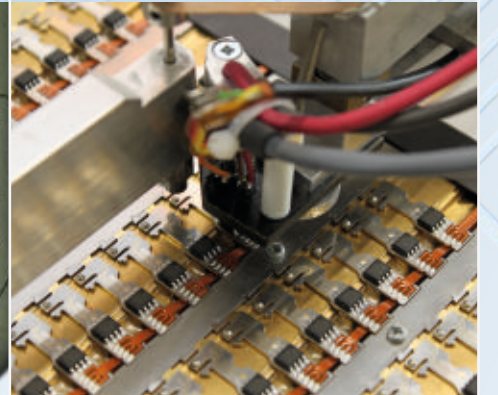
Measuring projector for efficient inspection of the geometry of sensor substrates in series production



Structuring and trimming of measuring resistors on coated membrane bodies using laser ablation



Meander-shaped measuring resistors and gold solder pads on a compact force sensor



System for automatic measurement of signal offset and sensitivity in series production

Modern Manufacturing Processes With Laser Technology

Both the sensor substrates and the measuring resistors are manufactured using laser processes, which are characterized by low setup and tooling costs. The coating steps (RF sputtering) can be pooled. This means that we can also manufacture prototypes and small series economically.

Our specialized laser processes are available as a service:

- Laser cutting up to approx. 5 mm sheet thickness
- Laser drilling from 50 μm diameter
- Laser welding (various materials)
- Laser ablation and structuring
- Laser trimming

economic

Superior Sensor Properties Thanks to Thin-Film Technology

Our mature technology typically allows for the following sensor specs:

- Long-term stable, drift < 0.03 %/yr
- Temperature stable, drift < 0.01 %/K
- Miniaturizable, thickness ≥ 0.3 mm, measuring zone size ≈ 1x1 mm, solderable sensor from 5x5 mm
- No systematic creeping effects between strain gauge and substrate
- Very good linearity with correctly constructed measuring bodies
- Simple signal processing

Thanks to their high stability and reliability, Senstech sensors are particularly suitable for medical devices.

durable

A Reliable Partner With Long-Term Thinking

Senstech has proven itself as a reliable manufacturer of thin-film-based sensors since 1984. The well-trained and motivated staff, the well-developed quality assurance system and the ISO 9001 and ISO 13485-certified processes ensure good quality and delivery capability in the long term. Thanks to a high level of vertical integration and automation, Senstech is able to offer competitive prices even for small batch sizes.

Since 2022, Senstech has been part of the Endress+Hauser Group, a family business focused on sustainability and long-term success.

reliable