



# More Precision

indu**SENSOR** // Linear inductive displacement sensors



## High Modularity & OEM Capability

### From minor adaptations of standard products ...

If the standard models do not meet certain specific requirements, inductive sensors from the standard range can be adapted accordingly by Micro-Epsilon. Cost-effective implementation can already be achieved with medium-sized quantities (depending on the type and number of changes). Standard induSENSOR models form the basis for these modifications.

#### Ambient conditions

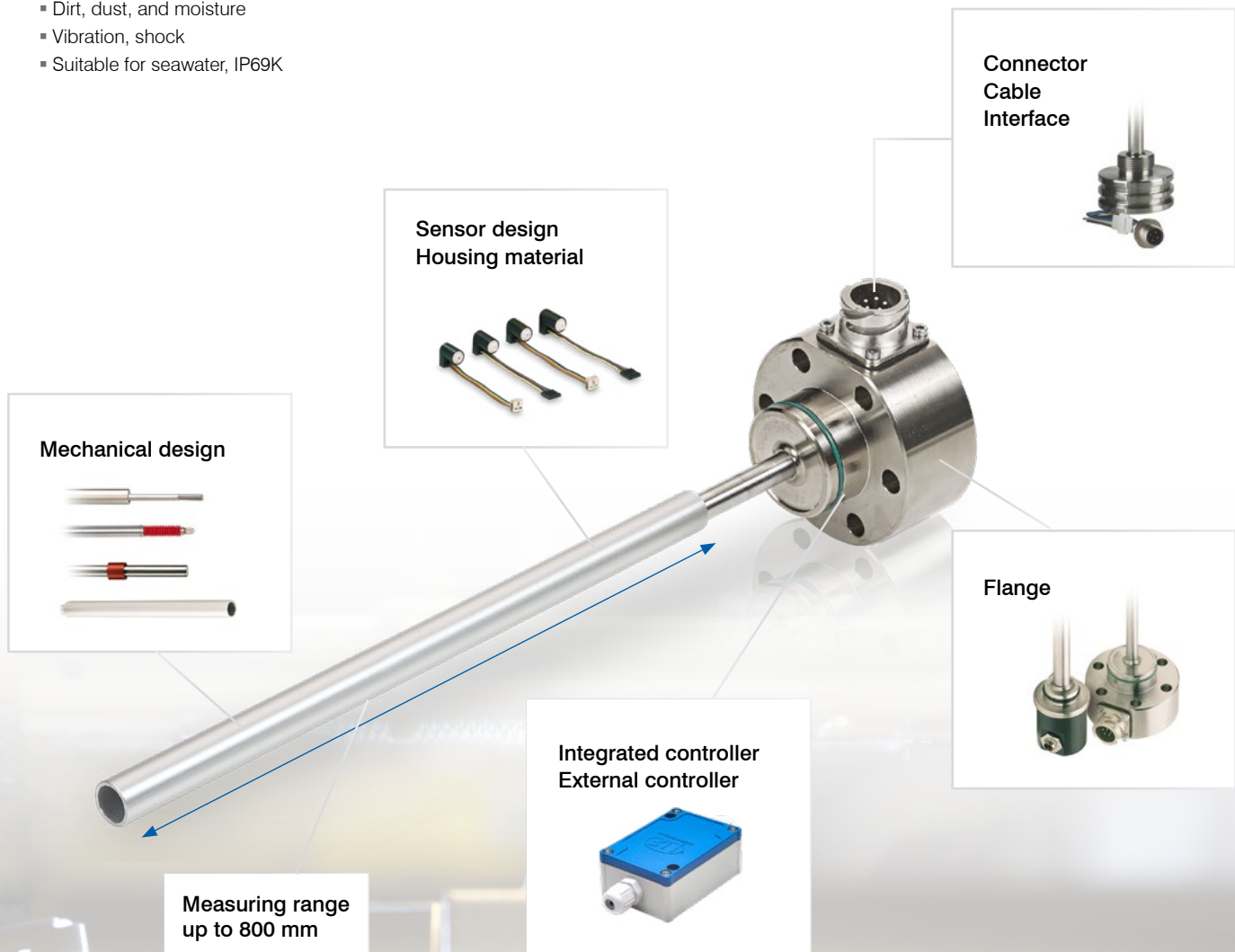
Depending on the location, industry, and application, different environmental conditions occur to which the sensors are adapted:

- Ambient temperature
- Pressure
- Interference fields
- Dirt, dust, and moisture
- Vibration, shock
- Suitable for seawater, IP69K

#### Basic types

Three basic types are available. Based on these technologies, measuring ranges and target versions can be combined with each other.

Technology	Measuring range	Target
① EDS	up to 800 mm	Tube
② LDR	up to 150 mm	Plunger / Probe tip
③ LVDT	up to $\pm 100$ mm	Plunger / Probe tip



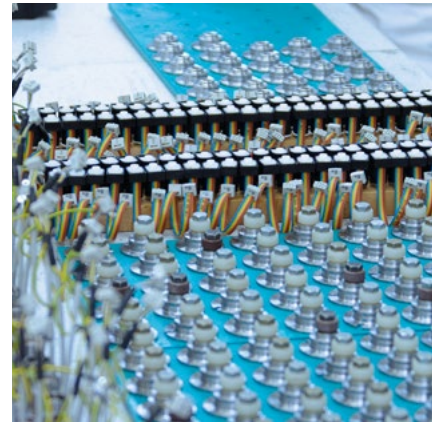
## ... to individual customized solutions

For special applications where large quantities are required, Micro-Epsilon develops sensors that are precisely tailored to the customer's requirements. Geometry, controllers and packaging are custom engineered to suit these specific requirements. Due to the high vertical range of manufacturing at Micro-Epsilon, large quantities can be produced at low cost.

### Fields of application

Customized OEM displacement sensors are often developed for fields of application where the highest standards apply:

- Applications with high ambient pressure
- High temperature environments
- Vacuum
- EX environments
- Contaminated installation and measuring rooms



## Series production

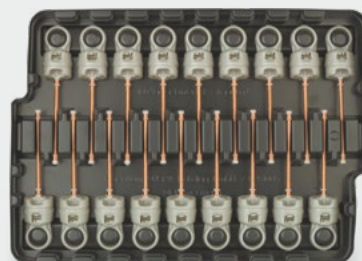
At the Micro-Epsilon headquarters, development projects are initiated and major projects coordinated. The development and sales of specific sensors for OEM customers in large quantities takes place in direct contact with the development and product specialists.

For series production of controllers, modern and automated production systems for screen and silk-screen printing with vision systems, automatic SMD assembly, reflow soldering in computer controlled convection ovens, CFC-free washing in multi-compartment washing systems, automatic die bonding and laser trimming are available.

With production capacities of more than 1 million sensors/year and the use of company-internal resources, the sensors are reasonably priced.

The production equipment for sensors includes the following:

- CNC lathes and milling machines
- Fully automatic four-spindle winding machine
- Arc welding equipment for welding the coil wires
- Varnish dip system for protecting the coil
- Automatic inspection system for testing the coil parameters
- Laser welding and marking systems
- etc.



All production systems are supplied in ergonomic and installation-friendly packaging units. In this respect, environmentally friendly and economical reusable packaging is used. Within the scope of Total Quality Management, a 100% check is integrated for numerous measurement and inspection processes.

### Examples for customer-specific modifications

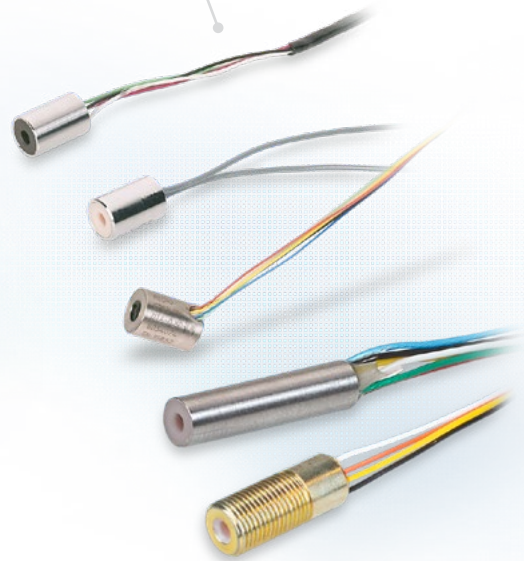
#### Special Systems

- Mechanical adaptations
- ATEX/FM approval
- Additional physical principles



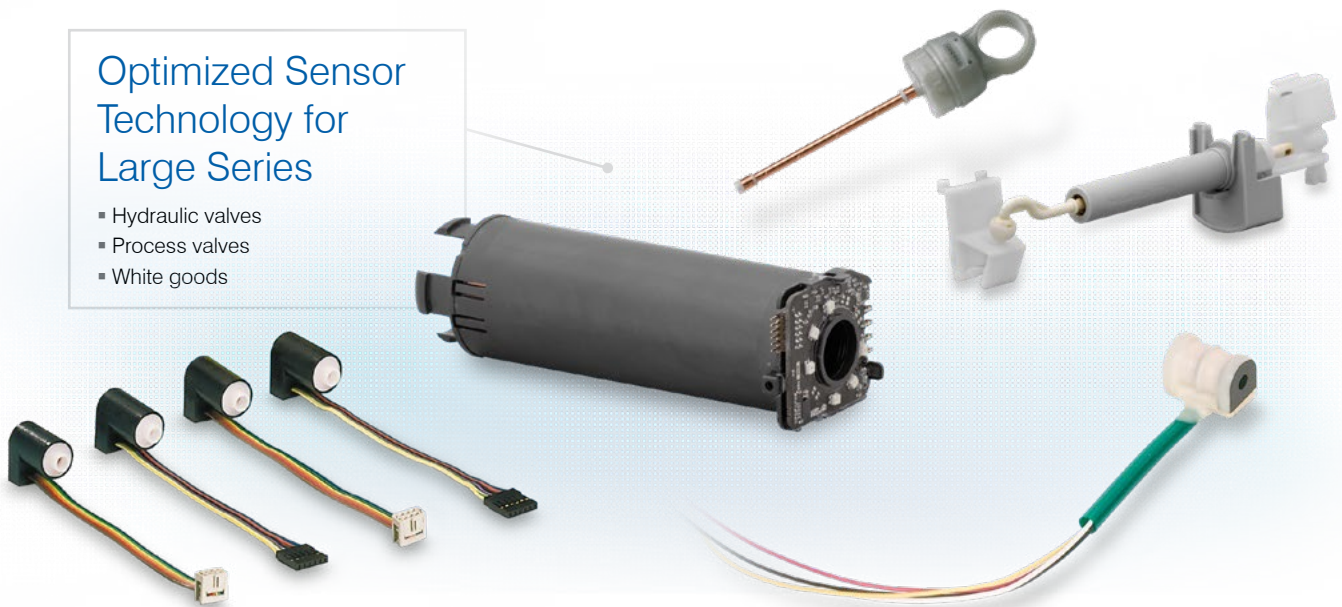
#### Miniature LVDTs

- Small measuring ranges and designs for installation into confined spaces



#### Optimized Sensor Technology for Large Series

- Hydraulic valves
- Process valves
- White goods



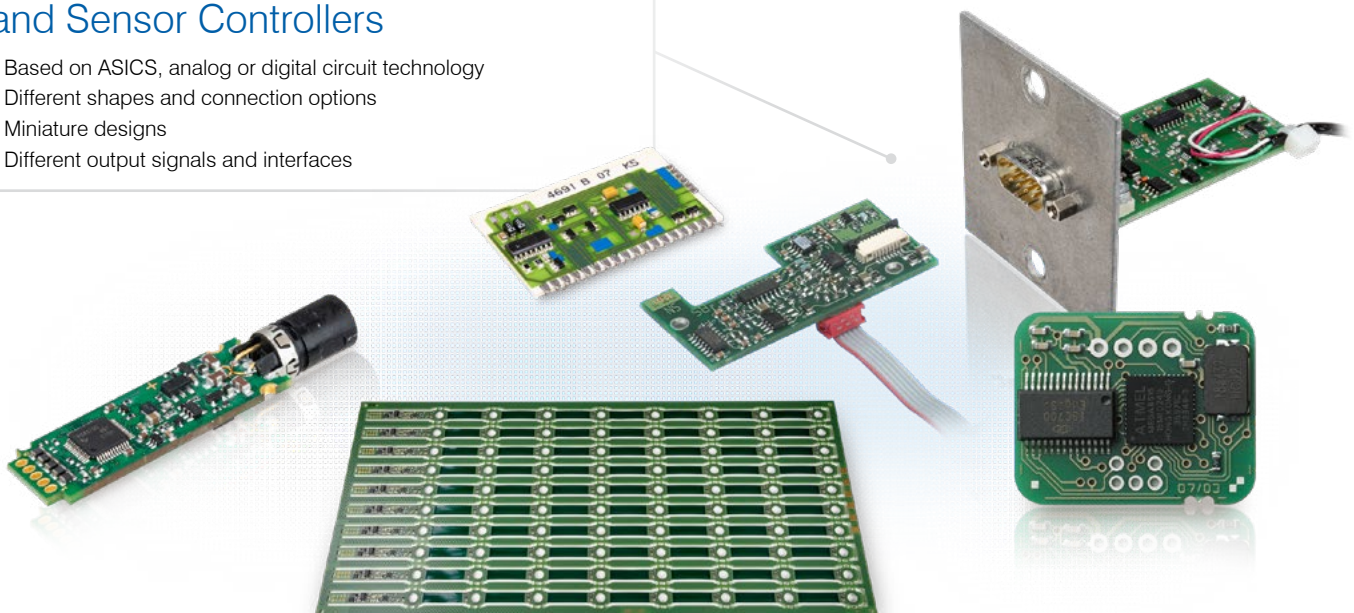
## Eddy Current Long-Stroke Sensors

- High resistance to shocks, vibrations and pressure
- Adapted flanges and connectors for optimal integration
- External controllers for high temperature applications
- Miniature designs for confined installation spaces
- Designs with aluminum tube or plunger

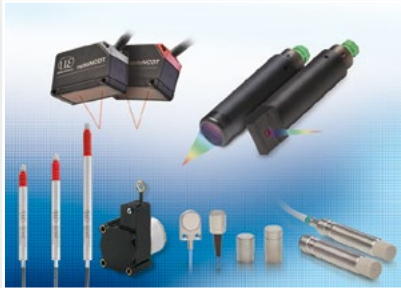


## Adapted Controller Components and Sensor Controllers

- Based on ASICS, analog or digital circuit technology
- Different shapes and connection options
- Miniature designs
- Different output signals and interfaces



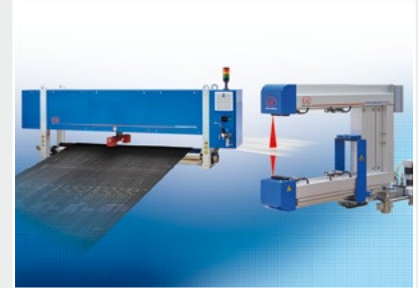
## Sensors and Systems from Micro-Epsilon



Sensors and systems for displacement, distance and position



Sensors and measurement devices for non-contact temperature measurement



Measuring and inspection systems for metal strips, plastics and rubber



Optical micrometers and fiber optics, measuring and test amplifiers



Color recognition sensors, LED analyzers and inline color spectrometers



3D measurement technology for dimensional testing and surface inspection