



More Precision

Innovative Sensor Technologies

Displacement
Distance
Position

Dimension
Temperature
Colour



Optical Sensors and Systems

optoNCDT - Laser triangulation displacement sensors

- Worldwide largest range of laser triangulation sensors
- Precise measurement of displacement, distance, position & thickness
- From low-cost to high-end sensors
- Detection of smallest targets
- Real-time control enables stable measurements even with changing surfaces
- Laser sensors with red or blue laser



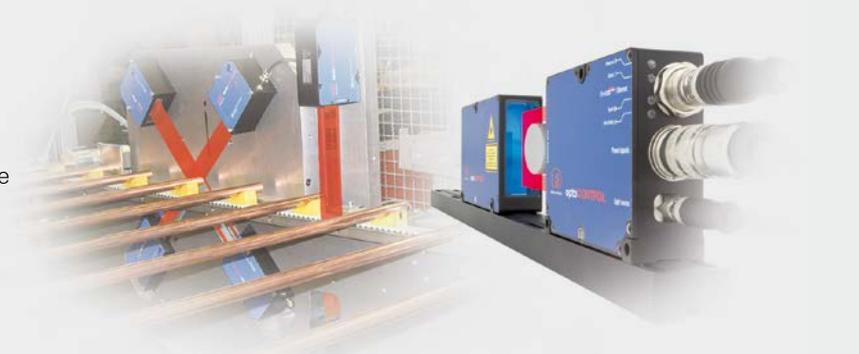
scanCONTROL - 2D/3D Laser profile scanners

- Measuring profile, gap, width, depth, edge, groove and bead, angle, roundness, flatness, deformation
- Integrated processing module for smart functionality
- Real-time measurement data with calibrated coordinates
- Integrated profile filtering and precise trigger functions
- Compact stand-alone solution without PC and external controller
- Comprehensive software for configuration, integration and 3D display
- Laser profile scanners with red or blue laser



optoCONTROL - Compact optical micrometers

- Optical ThruBeam technology for measuring diameter, gap, segment
- Targets from 0.02mm with 0.1µm resolution
- Wear-free measurement - no rotating parts for long service life
- Up to 125mm beam width
- High-speed measuring rates up to 100kHz



optoNCDT ILR - Non-contact laser distance sensors

- Extremely large measuring range from 1m to 3km
- Integrated heating option for outdoor environments
- Robust and compact design
- Outstanding repeatability and response time
- Use with and without reflector



confocalDT - Confocal chromatic displacement sensors

- High-resolution displacement measurement on almost all surfaces
- Thickness measurement of transparent materials
- Measuring rate up to 70kHz
- Miniature sensors (Ø 4mm) and 90° versions for bore hole inspection
- Outputs: analogue, serial, EtherCAT
- Nanometre resolution
- Extremely small and constant spot size from 7µm
- Dual-channel version



Extremely Precise Displacement Sensors

eddyNCDT - Robust eddy current displacement sensors

- Measurement of displacement, distance, position & vibration
- Ideal for high-speed measurements
- Insensitive to oil, pressure, temperature and dirt
- Large selection of different sensors
- Robust, pressure-resistant up to 2,000 bar
- Excellent EMC characteristics, ideal for integration into plant equipment and machines
- Customer-specific sensors
- Sensors with integrated controller



capaNCDT - High-resolution, capacitive displacement sensors

- For industrial measurement tasks: distance measurement and thickness measurement on electrically conductive objects and insulators
- Extreme stability and nanometre resolution
- Most modern product range worldwide
- Worldwide largest sensor range: cylindrical sensors, flat sensors, sensors with integrated cable



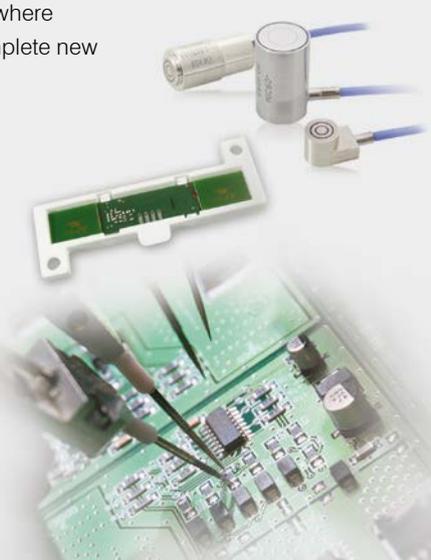
thicknessSENSOR - Compact thickness measurement sensor

- Fully assembled with pre-aligned sensors, ready to use
- Thickness measurement of strip, plate and film materials
- Measurement speed up to 4kHz
- High accuracy up to 10µm



OEM Displacement Sensors

Micro-Epsilon develops and manufactures bespoke sensors for OEM applications for virtually all sectors where precision measurement is required. Whether it's a minor modification to the sensor configuration or a complete new concept - Micro-Epsilon enables the intelligent application of different sensor technologies.



Temperature Sensors

thermoMETER - Non-contact IR temperature sensors

- Infrared temperature sensors for non-contact temperature measurement from -50°C to 2200°C
- Smallest targets from 0.45mm
- Ideal for high-speed measurements
- Temperature resistance of sensors up to 250°C
- Analogue and digital outputs incl. Profibus DP
- Special series for glass production, metal production and ceramics production



thermoIMAGER - USB thermal imaging cameras

- Compact cameras for R&D, test and process monitoring
- Full software analysis package included in price
- Lightweight model (only 350g) incl. camera for flight applications
- Automatic hotspot/coldspot, alarm and event capture
- Cooling jacket for ambient temperatures up to 240°C
- License-free software incl. Software Developer Kit (SDK)
- Temperature range from -20°C to 1800°C



moldCONTROL

- Inline thermography for early detection of defects in injection moulded parts
- Full software analysis package included in price

Measurement and Inspection Systems

Micro-Epsilon turnkey measurement systems are integrated into existing or newly designed production lines to carry out applications such as thickness measurement, surface inspection and parts classification.

Industries:

- Metals (ferrous and non-ferrous)
- Plastics and rubber
- Defect detection on painted surfaces
- Tire production – whole process



Industrial Displacement Sensors

wireSENSOR - Robust draw-wire displacement sensors

- Draw-wire sensors for displacement, distance & position
- Measuring ranges from 50mm to 50,000mm
- High operational safety & long service life
- Ideal for integration in industrial environments
- Easy and fast mounting
- Ideal for customised OEM series



mainSENSOR - Magneto-inductive displacement sensors

- Non-contact measurement against a magnet
- Ideal for low cost OEM applications
- Ideal alternative to inductive sensors / Hall Effect sensors
- Flexible sensor design with various housing shapes and materials
- High resolution and temperature stability
- Suitable for harsh environments



induSENSOR - Linear inductive displacement sensors

- Inductive sensors for displacement and position measurement
- More than 250 different standard & OEM sensors
- Measuring ranges 1 - 630mm
- Ideal for customised OEM series
- Various configuration possibilities, e.g. target design, controller



Colour Sensors & LED Analyzers

colorSENSOR - Colour recognition sensors

- Reliable colour recognition with high accuracy
- High speed inline measurement
- For large distances up to 800mm
- High quality glass fibre optics
- For matt, shiny, inhomogeneous, structured and reflecting surfaces
- Software configuration tool included
- Multiple versions depending upon accuracy required



Fibre Optic Sensors

optoCONTROL CLSK

- Fibre optic sensors for the recognition of presence, diameter as well as counting tasks
- For fast control tasks up to 4kHz
- Analogue outputs / switching outputs / intensity output
- Robust optical fibre with a range up to 2m



Precision Sensor Technologies

More Precision

The fields of application for sensors and measurement devices are ever increasing. Whether it is for quality assurance, applications in maintenance, process and machine monitoring, automation or R&D - sensors make a vital contribution to the improvement of products and processes.

Sensors from Micro-Epsilon are used in different industries. From machine building and automated production lines in the food industry, to integrated OEM solutions for automotive and aerospace customers. All benefit from the extensive and customer-specific range of precision sensors and measurement systems offered by Micro-Epsilon.

With over 10,000 customers worldwide, Micro-Epsilon contributes enormously to the increase of performance, quality and efficiency.

Micro-Epsilon works with many of the leading companies in automotive, aerospace, oil & gas, medical, scientific, semiconductor and process sectors.

Micro-Epsilon

Micro-Epsilon develops and manufactures precision sensors to measure displacement, temperature, colour and dimension, as well as systems for surface inspection.

We understand that our customers are our business partners, which creates a win-win situation for both parties. Our products often provide customers with a genuine competitive advantage.

- Global organisation, headquartered in Germany
- Over 45 years experience in sensor solutions
- Experts in R&D, test, OEM and process control
- 1000+ engineers and sensor experts worldwide
- Measuring from nanometres to kilometres
- More precision in your specific industry

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