



More Precision

thicknessSENSOR // The sensor for precise thickness measurements



The sensor for precise thickness measurements

thickness**SENSOR**



- Immediately ready for use due to perfectly harmonised components
- Easy integration and operation
- Precise measurement results with high dynamic
- Non-contact and wear-free measurement
- Compact system

The new thickness**SENSOR** is a sensor for precise thickness measurement of strip and plate material. This fully assembled system comprises a stable frame on which two laser triangulation sensors are fixed that detect the material thickness according to the difference principle.

The evaluation unit integrated into the frame calculates the thickness values and outputs these via different interfaces.

Compact design and high precision

The thickness**SENSOR** enables turnkey thickness measurement along with an unmatched price/performance ratio. Due to its extremely compact design, this sensor system can also be integrated in a confined installation space.

The two sensors are perfectly adjusted to each other in terms of their mounting conditions, therefore providing high measurement accuracy. Using a calibration target, the sensors can be calibrated at any time.

Unique ease of use

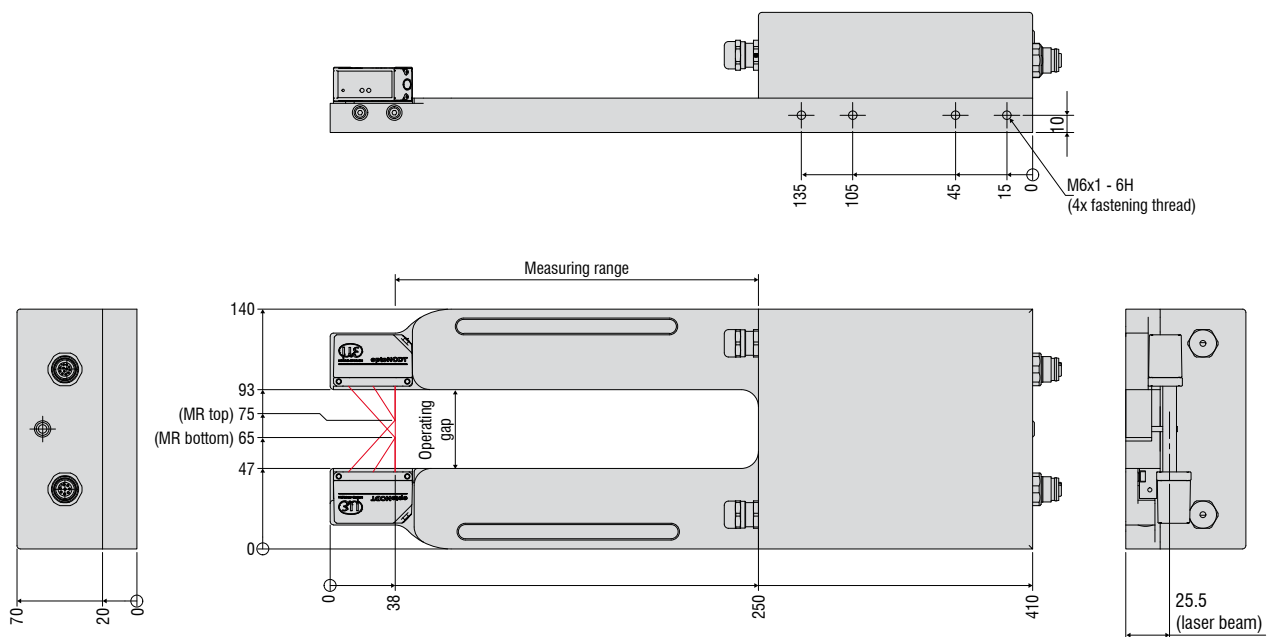
The thickness**SENSOR** is operated using an intuitive web interface. The settings for the measurement task can be quickly selected using predefined presets. Different configuration and set up possibilities enable the user to easily adapt the sensor e.g. to dynamic measurements.

Up to eight user-specific sensor settings can be stored and exported in the setup management. The signal peak selection and a freely adjustable signal averaging enable the experienced user to optimise the measurement task.



| Model | thicknessSENSOR | |
|-------------------------------------|---|---|
| Measuring range | 10mm | |
| Operating gap | 46mm | |
| Measuring width | 200mm | |
| Linearity (combined) | ±10µm | |
| Measuring rate | 0.25kHz / 0.5kHz / 1kHz / 2kHz / 4kHz | |
| Light source | semiconductor laser <1mW, 670nm (red) | |
| Permissible ambient light | 10,000 lx | |
| Light spot diameter max. | 140 x 160µm (±10%) | |
| Protection class | IP65 | |
| Laser safety class | class 2 according to DIN EN 60825-1 : 2008-05 | |
| Temperature stability | ±0.03% FSO / °C | |
| Operating temperature | 0 ... +50°C (non-condensing) | |
| Storage temperature | -20 ... +70°C (non-condensing) | |
| Control inputs/outputs | 1x trigger in / 1x master / 2x switching outputs | |
| Measurement value output | analogue | 0-5V, 0-10V, ±5V, ±10V, 4-20mA |
| | digital | Ethernet |
| Vibration | 2g / 20 ... 500Hz (according to IEC 60068-2-6) | |
| Shock | 15g / 6ms / 3 axes (according to IEC 60068-2-29) | |
| Weight | 2.8kg | |
| Display | sensor | 3x colour LEDs for power and status |
| | controller | power i.o. |
| Operation | web interface | selectable averaging possibilities / data reduction / setup management / limit values |
| Power supply | 11-30V DC, 24V P< 5W | |
| Electronics | integrated signal processor, signal processing unit | |
| Electromagnetic compatibility (EMC) | EN 61 000-6-3 / DIN EN 61326-1 (class B) | |
| | EN 61 000-6-2 / DIN EN 61326-1 | |

FSO = Full scale output



High performance sensors made by Micro-Epsilon



Sensors and systems for displacement and position



Sensors and measurement devices for non-contact temperature measurement



2D/3D profile sensors (laser scanner)



Optical micrometers, fibre optic sensors and fibre optics



Colour recognition sensors, LED analyzers and colour online spectrometer



Measurement and inspection systems