



More Precision

thicknessSENSOR // The sensor for precise thickness measurements



The sensor for precise thickness measurements

thickness**SENSOR**



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

The new thicknessSENSOR is a sensor system 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 thickness of various materials 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 thicknessSENSOR 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. Several models with different measuring ranges and widths enable the detection of various object geometries.

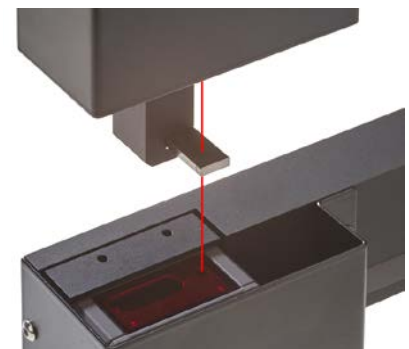
The integrated laser sensors are perfectly adjusted to each other in terms of their mounting conditions, therefore providing high measurement accuracy.



Unique ease of use

The thicknessSENSOR 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 and different materials.

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 optimize the measurement task.



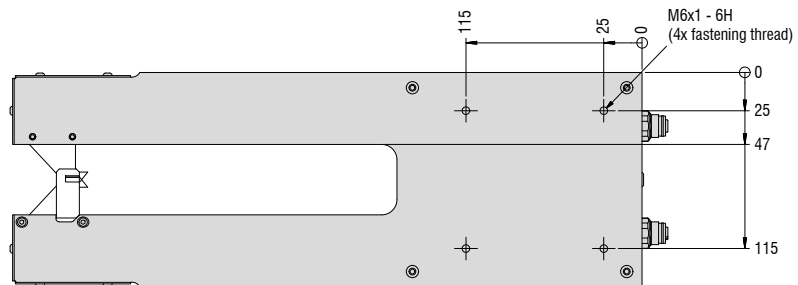
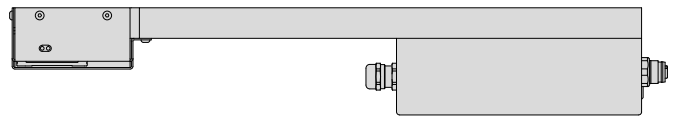
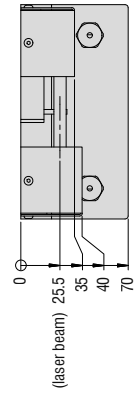
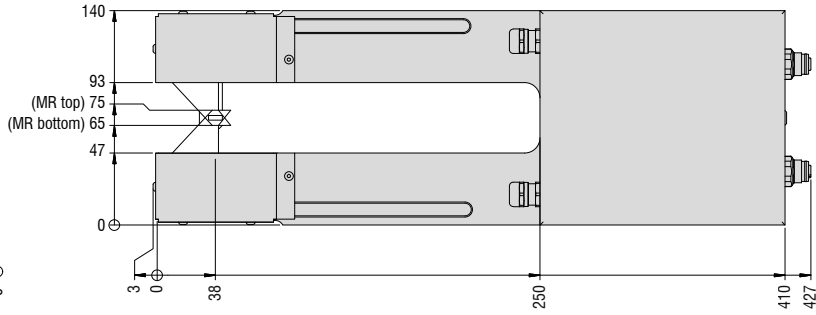
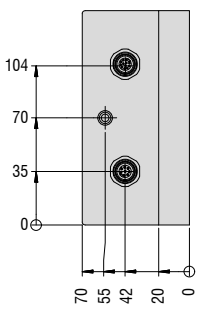
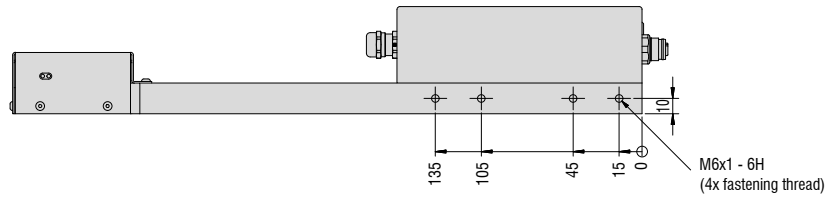
Fast calibration on site

For calibration purposes, each measurement system includes a reference target which is fixed in the measuring gap using a magnet. This enables the user to quickly teach in the reference value.

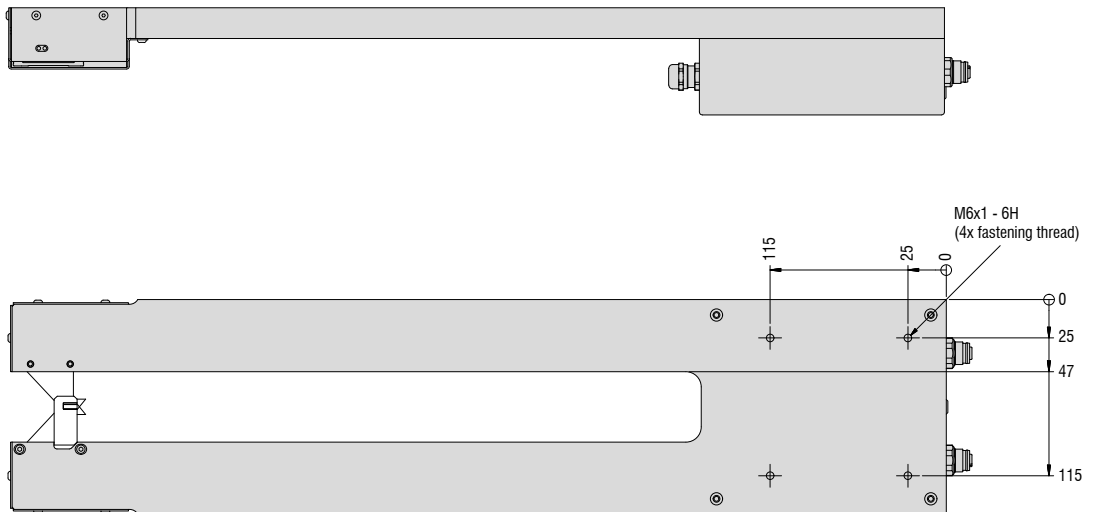
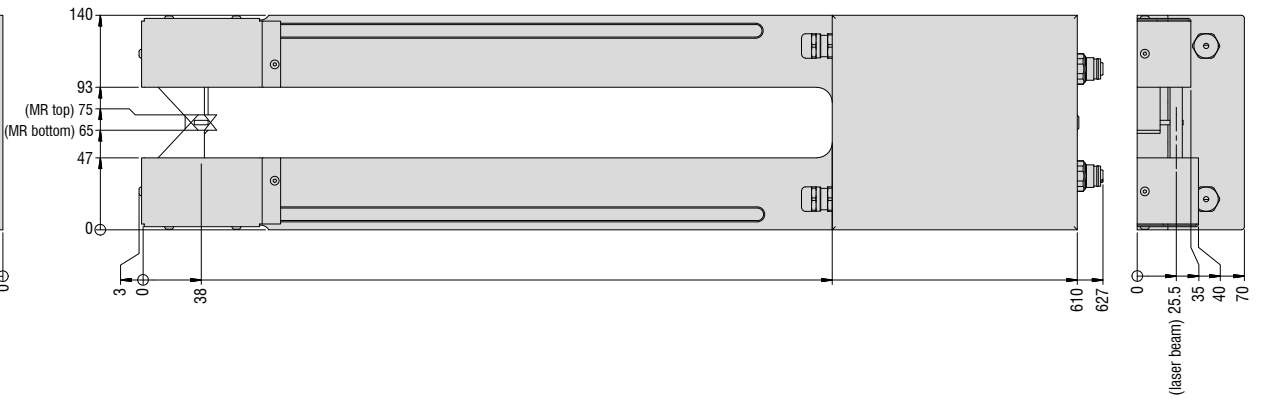
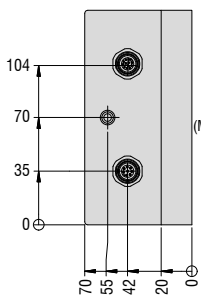
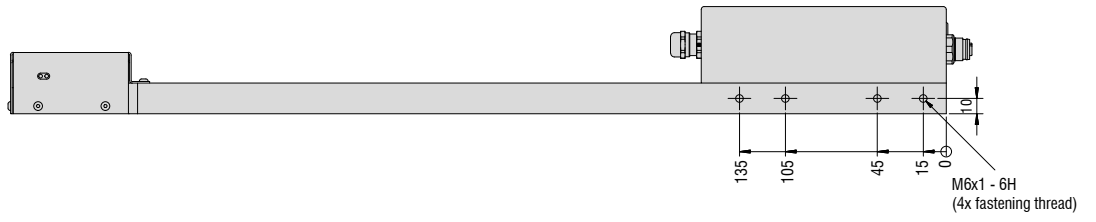
Model	thicknessSENSOR 10/200	thicknessSENSOR 10/400	thicknessSENSOR 25/200	thicknessSENSOR 25/400
Measuring range	10mm	10mm	25mm	25mm
Working gap	46mm	46mm	71mm	71mm
Measuring width	200mm	400mm	200mm	400mm
Linearity (combined)	± 10µm	± 10µm	± 40µm	± 40µm
Measuring rate	0.25kHz / 0.5kHz / 1kHz / 2kHz / 4kHz			
Light source	semiconductor laser <1 mW, 670nm (red)			
Permissible ambient light	10,000lx			
Light spot diameter max.	140 x 160µm (±10%)	140 x 160µm (±10%)	390 x 500µm (±10%)	390 x 500µm (±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°C... +50°C (non-condensing)			
Storage temperature	-20°C ... +70°C (non-condensing)			
Control inputs/outputs	1 x trigger in / 1 x master / 2 x switching outputs			
Measurement value output	0 ... 5V, 0 ... 10V, ±5V, ±10V, 4 ... 20mA			
	Ethernet			
Vibration	2g / 20 ... 500Hz (according to IEC 60068-2-6)			
Shock	15g / 6ms / 3 axes (according to IEC 60068-2-29)			
Weight	3.3kg	4.3kg	3.5kg	4.5kg
Displays	Sensor	3x color LEDs for power and status		
	Controller	Power i.o.		
Operation	Web interface	Selectable averages / 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

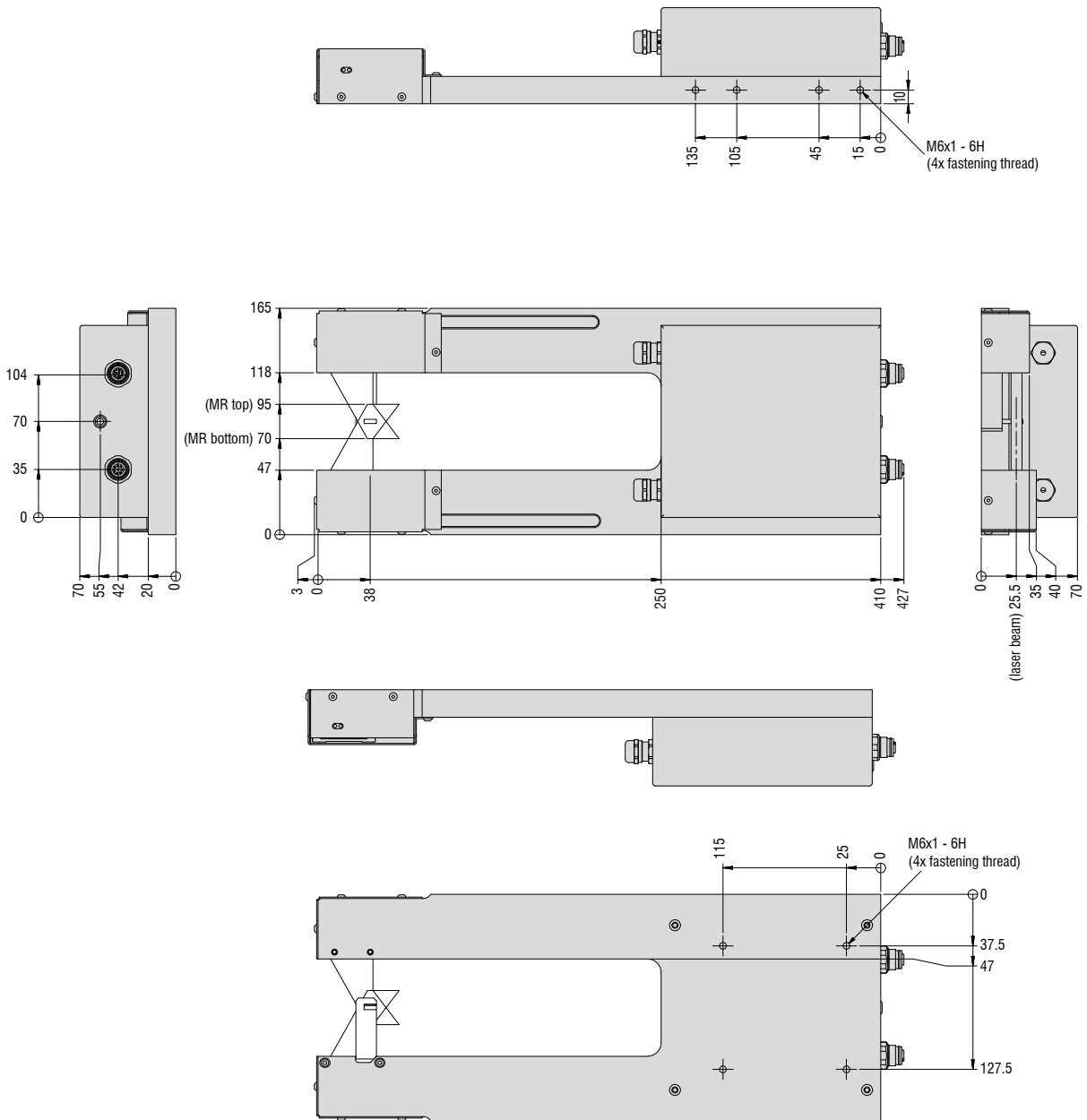
thickness**SENSOR** 10/200



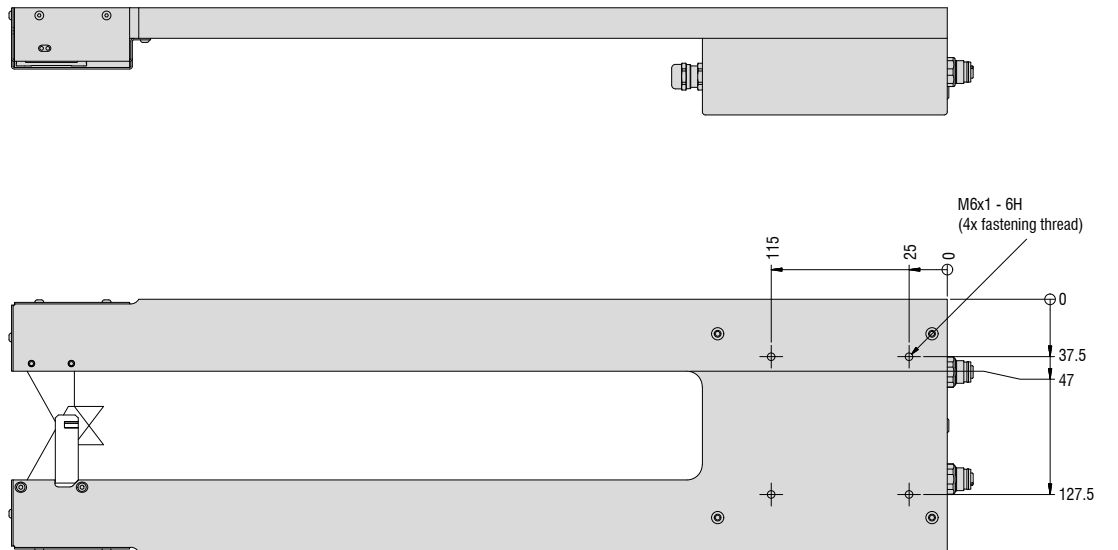
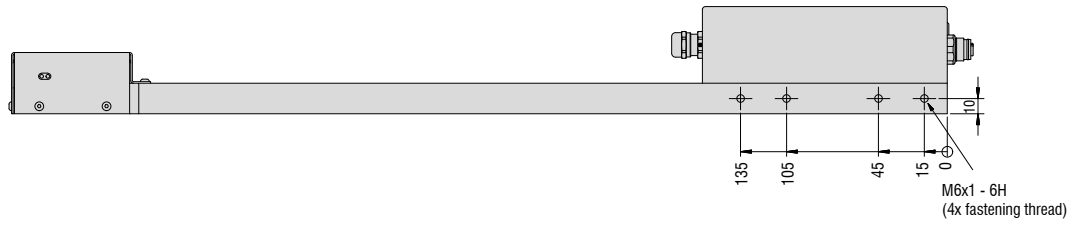
thicknessSENSOR 10/400



thickness**SENSOR** 25/200



thicknessSENSOR 25/400



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, fiber optic sensors and fiber optics



Color recognition sensors, LED analyzers and color online spectrometer



Measurement and inspection systems