



More Precision

thicknessSENSOR // The sensor for precise thickness measurements





- 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.

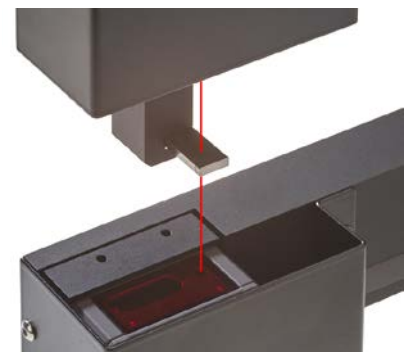
The integrated laser sensors are perfectly adjusted to each other in terms of their mounting conditions, therefore providing high measurement accuracy.



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	10 mm	10 mm	25 mm	25 mm
Working gap	46 mm	46 mm	71 mm	71 mm
Measuring width	200 mm	400 mm	200 mm	400 mm
Linearity (combined)*	± 10 µm	± 10 µm	± 40 µm	± 40 µm
Measuring rate	0.25 kHz / 0.5 kHz / 1 kHz / 2 kHz / 4 kHz			
Light source	semiconductor laser < 1 mW, 670 nm (red)			
Permissible ambient light	10,000 lx			
Light spot diameter max.	140 x 160 µm (± 10%)	140 x 160 µm (± 10%)	390 x 500 µm (± 10%)	390 x 500 µm (± 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 ... 5 V, 0 ... 10 V, ± 5 V, ± 10 V, 4 ... 20 mA			
	Ethernet			
Vibration	2 g / 20 ... 500 Hz (according to IEC 60068-2-6)			
Shock	15 g / 6 ms / 3 axes (according to IEC 60068-2-29)			
Weight	3.3 kg	4.3 kg	3.5 kg	4.5 kg
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 ... 30 VDC, 24 V 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

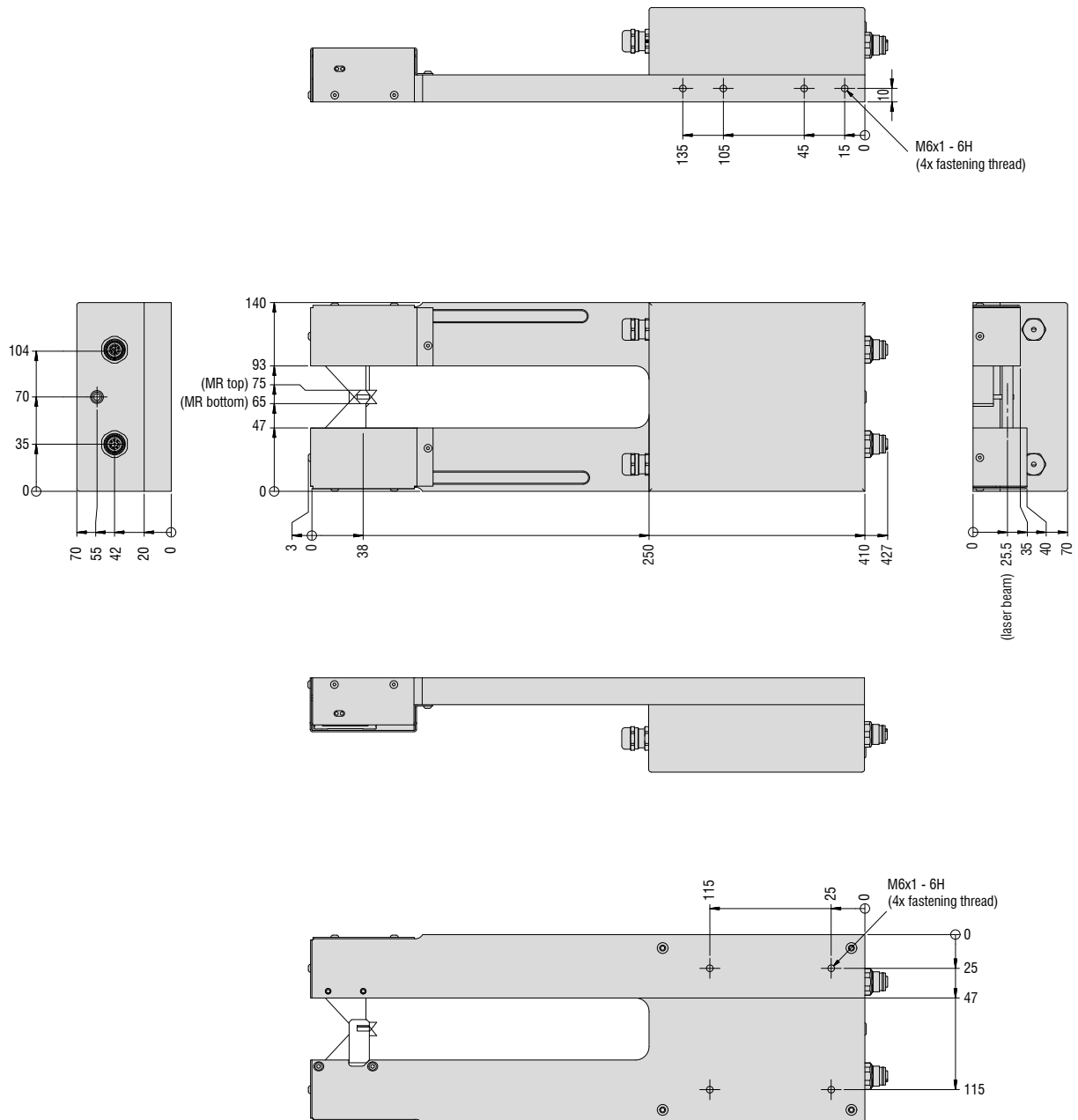
* the specified data apply to a white, diffuse reflecting surface

Accessories:

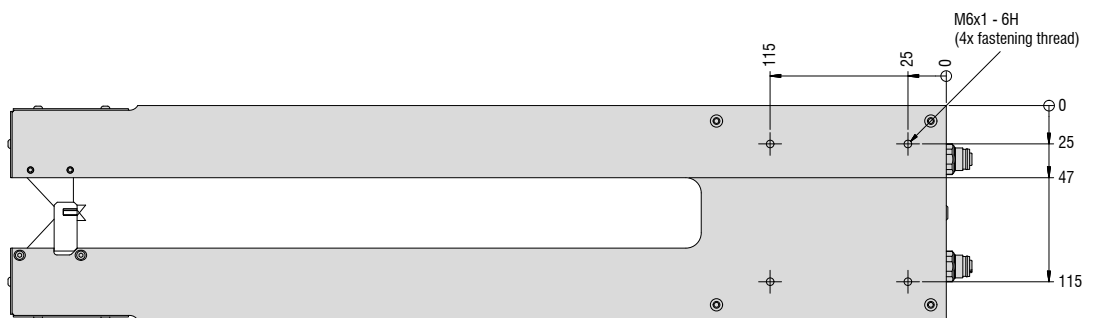
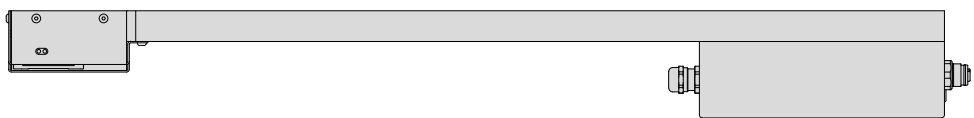
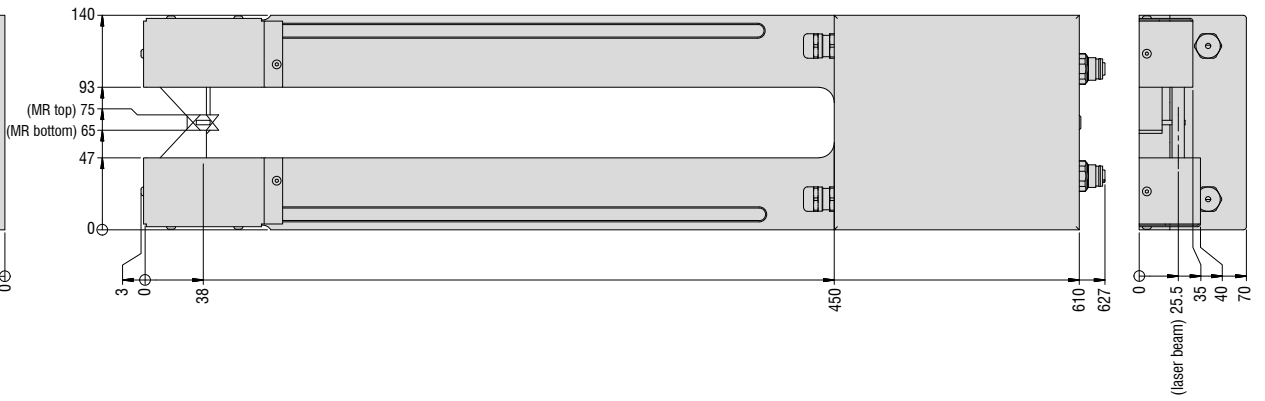
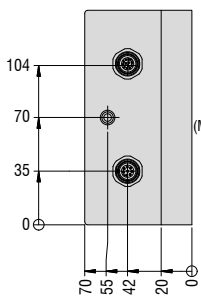
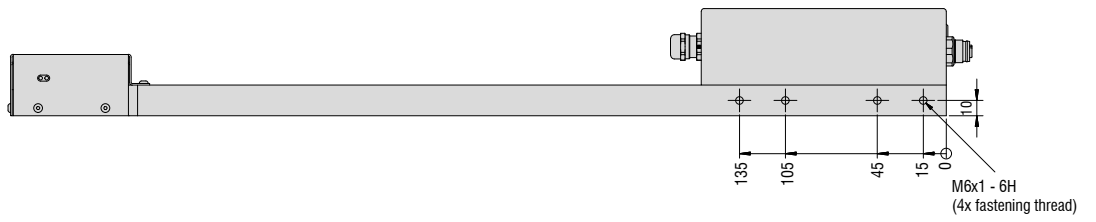
SCD1420-2/THS Ethernet interface cable, 2 m
 SCD1420-5/THS Ethernet interface cable, 5 m
 SCD1420-10/THS Ethernet interface cable, 10 m

PC1420-2/THS multifunction cable, 2 m
 PC1420-5/THS multifunction cable, 5 m
 PC1420-10/THS multifunction cable, 10 m

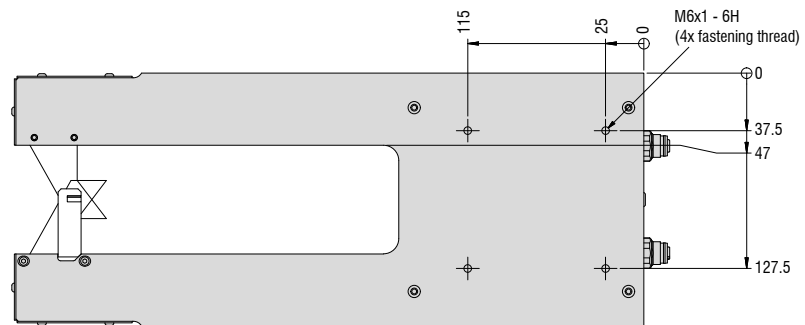
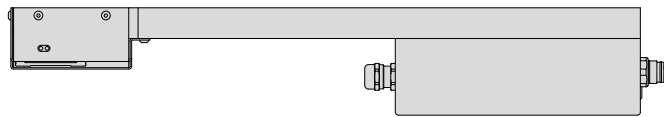
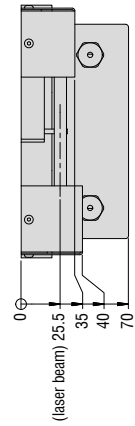
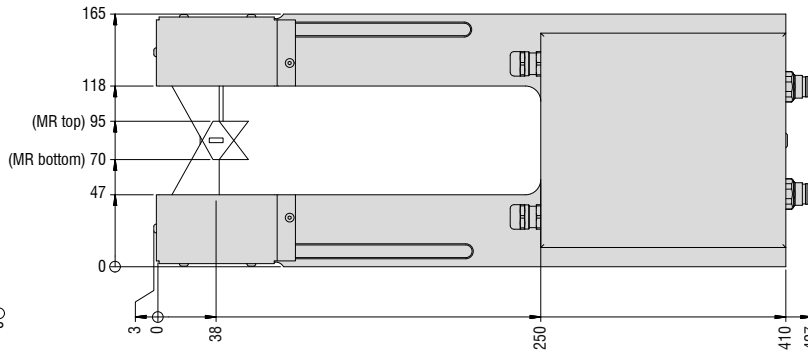
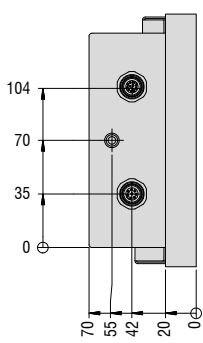
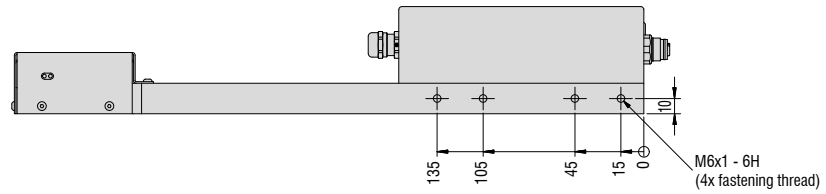
thicknessSENSOR 10/200



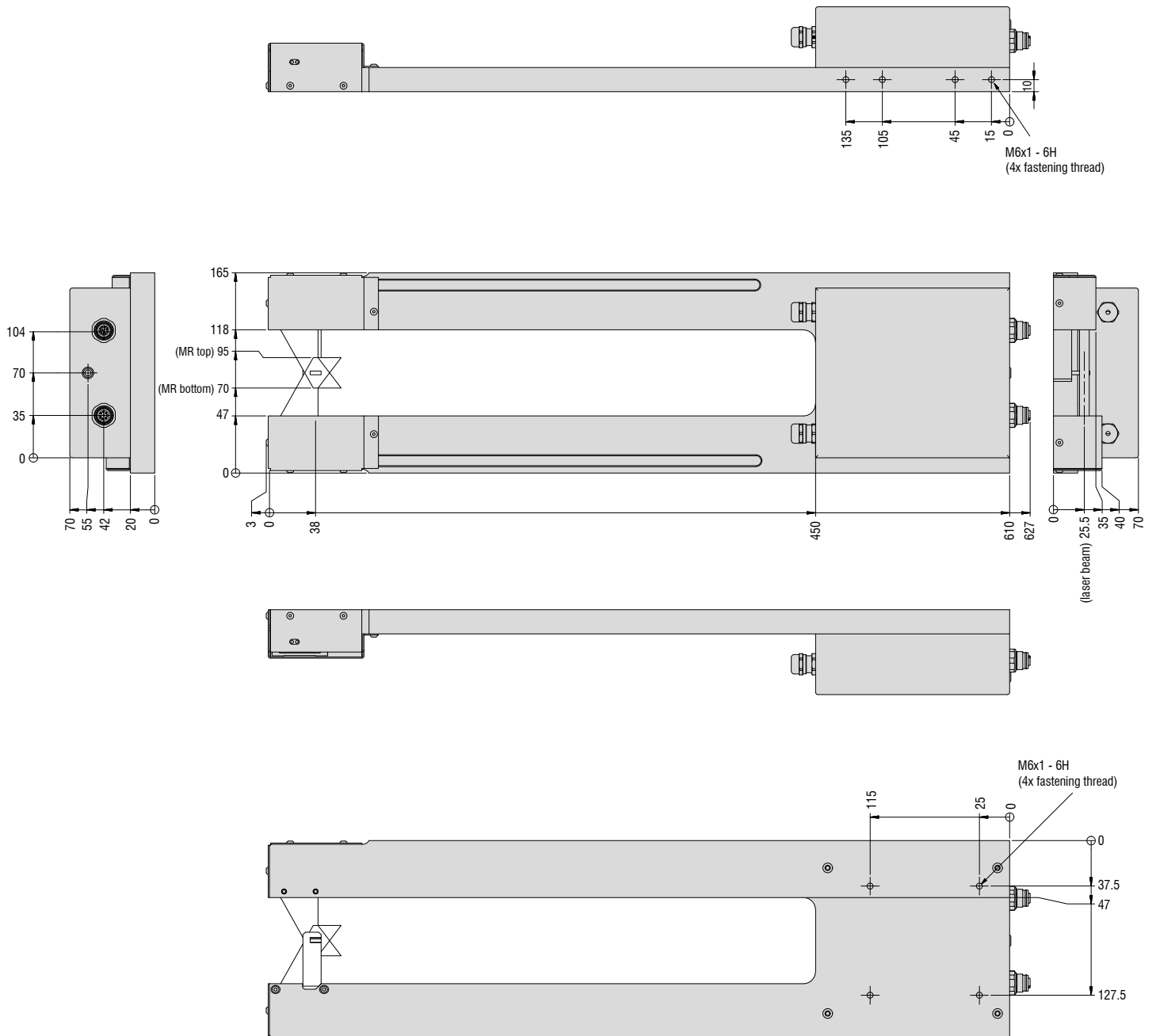
thicknessSENSOR 10/400



thicknessSENSOR 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 inline spectrometer



Measurement and inspection systems