OPTIMESS®
The non-contact measurement system

Laser distance sensor

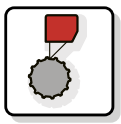
OPTIMESS MR CCD

- Large measuring ranges
- High measuring rate
- High accuracy
- Digital processing of measured values
- Analog output or CAN bus

The opto-electronic sensor OPTIMESS MR is a device for non-contact distance measurement. This sensor distinguishes itself by a great independence of the measurement accuracy on different material surfaces and from the ambient light.

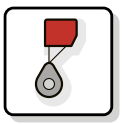
The OPTIMESS MR works according to the triangulation principle. The laser spot projected by a laser diode via an optical system is represented at an angle on a linescan image sensor by a receiving optical system. The processor integrated in the sensor processes the optical distance information and outputs them as an analog value or via the CAN bus.

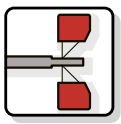

Robotics


Profile measurement

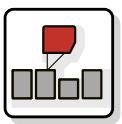

Steel industry, industrial automation


Railroad systems


Dynamic contour measurement

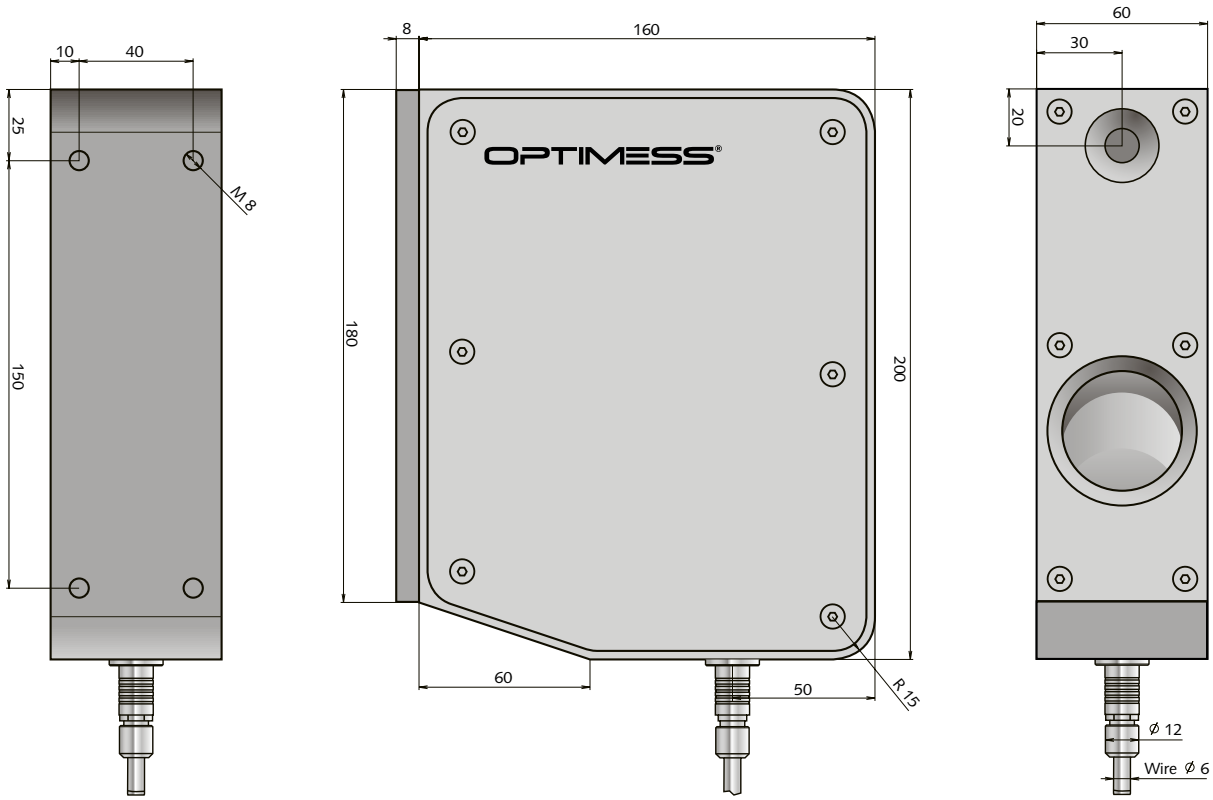

Thickness measurement


Car industry


Distance measurement, position control


Rubber and tire industry

ELAG Elektronik AG | Stegackerstrasse 14 | CH-8409 Winterthur
Tel +41 52 235 15 50 | Fax +41 52 235 15 59 | info@elag.com



Technical data

	OMS 7505	OMS 7510	OMS 7520	OMS 7540	OMS 7560	OMS 7580
Measuring range [mm] [3]	52	100	200	400	600	800
Stand off [mm] [3]	200	300	400	800	1000	1200
Resolution [mm] [1]	0.010	0.025	0.050	0.100	0.150	0.200
Linearity	≤ ± 0.06% FSO					
Reproductibility	≤ ± 0.03% FSO					
Bandwidth [2]	20 kHz max.					
Filter [2]	Digital averaging					
Measuring rate	20 kHz max.					
Light source	Laser diode					
Spot diameter [2]	0.05–5 mm					
Wave-length [2]	660–780 nm					
Laser safety class [2]	2 / 3R / 3B					
Photo detector	CMOS Linear image sensor					
Supply voltage	± 15 V / 120 mA, ± 5% or 12–30 V / 120 mA [4]					
Output [2]	± 5 V / ± 10 V / 0–5 V / 0–10 V / 0–20 mA / 4–20 mA / CAN - Bus					
Operating temperature	-20°C bis 50°C (no condensation)					
Dimensions	200 x 160 x 60 mm					
Weight	approx. 2700 g					
Protection class	IP 65					

[1] Standard settings with filter 200Hz [2] Factory-set depending on the application [3] Other types upon request
[4] only unipolar output and CAN Bus