

## Laser distance sensor

OPTIMESS LR CCD



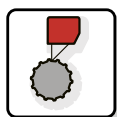
- Very large measuring ranges
- High measuring rate
- High accuracy
- Digital processing of measured values
- Analog output or CAN bus

The opto-electronic sensor OPTIMESS LR 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 LR 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



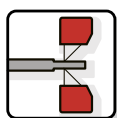
Steel industry, industrial automation



Railroad systems



Dynamic contour measurement



Thickness measurement



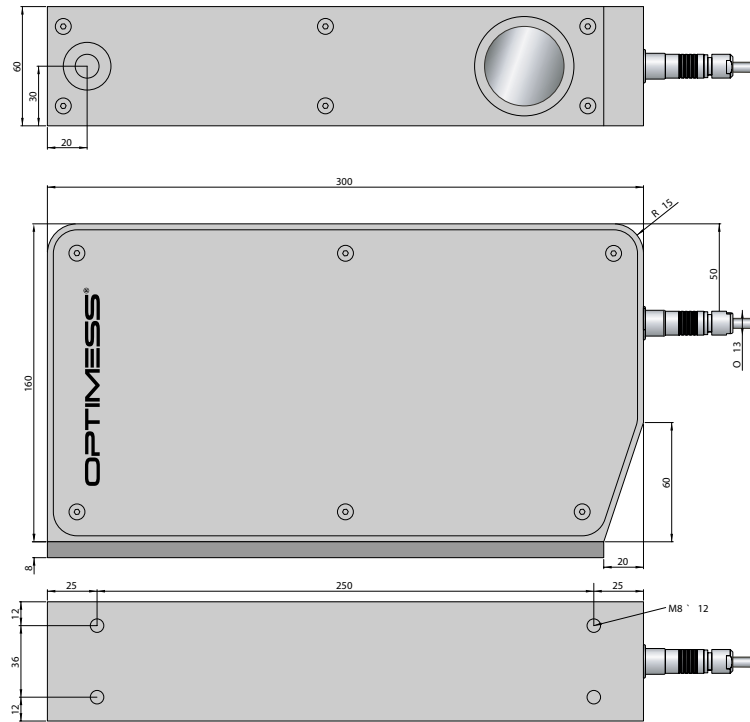
Car industry



Distance measurement, position control



Rubber and tire industry



### Technical data

	OMS 7740	OMS 7780	OMS 7860	OMS 7940
Measuring range [mm] [3]	400	800	1600	2400
Stand off [mm] [3]	800	1000	2000	2400
Resolution [mm] [1]	0.100	0.200	0.400	0.600
Linearity	$\leq \pm 0.06\%$ FSO			
Reproductibility	$\leq \pm 0.03\%$ 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	$\pm 15\text{ V} / 120\text{ mA}, \pm 5\%$ or $12\text{--}30\text{ V} / 120\text{ mA}$ [4]			
Output [2]	$\pm 5\text{ V} / \pm 10\text{ V} / 0\text{--}5\text{ V} / 0\text{--}10\text{ V} / 0\text{--}20\text{ mA} / 4\text{--}20\text{ mA} / \text{CAN - Bus}$			
Operating temperature	$-20^\circ\text{C}$ bis $50^\circ\text{C}$ (no condensation)			
Dimensions	300 x 160 x 60mm			
Weight	approx. 5000g			
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