

Laser distance sensor

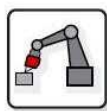
OPTImess MR CCD



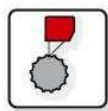
- Large measuring ranges
- High measuring rate
- High accuracy
- Digital processing of measured values
- Analog output or CAN bus

The opto-electronic sensor OPTIMESS MR CCD is a device for no-contact distance measurement. This sensor distinguishes itself by a great independence of the measurement accuracy on different material surfaces and from the ambient light.

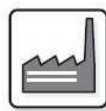
The OPTIMESS MR CCD works according to the triangulation principle. The laser spot projected by a laser diode via an optical system is represented at an angle on a CCD line by a receiving optical system. The processor integrated in the sensor processes the optical distance information and outputs them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



Robotics



Profile measurement



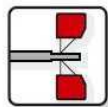
Steel industry, industrial automation



Railroad systems



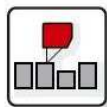
Dynamic contour measurement



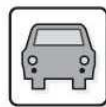
Thickness measurement



Rubber and tire industry

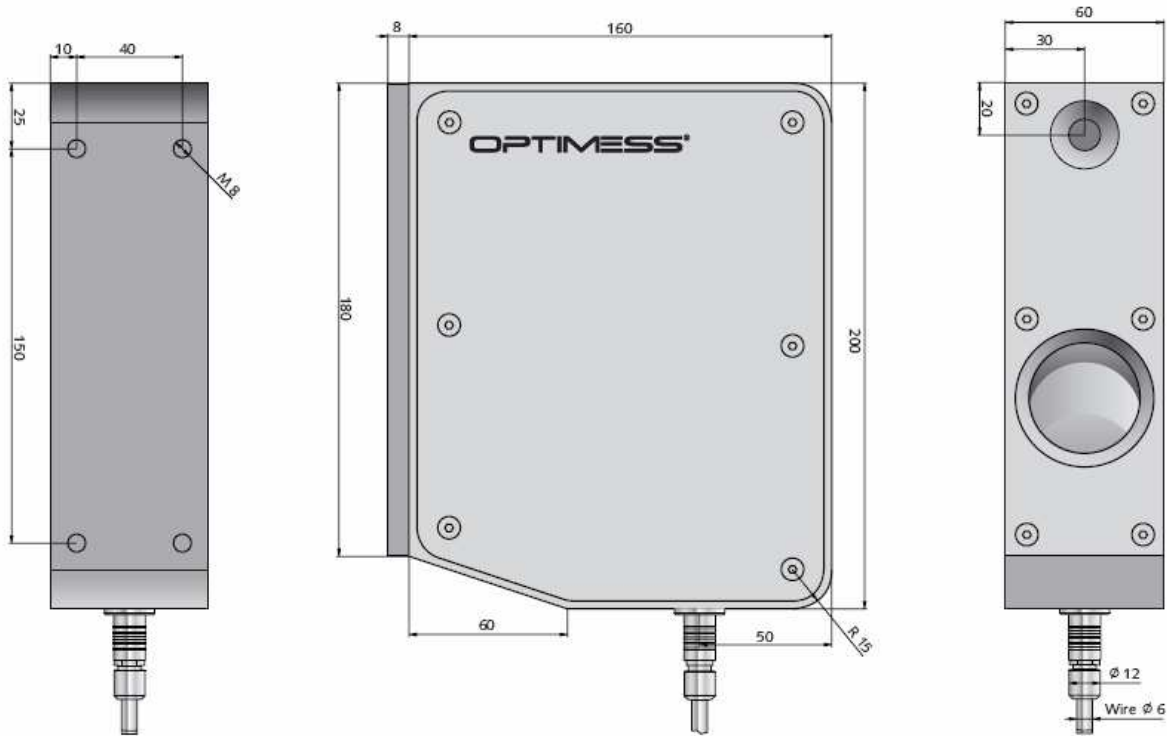


Distance measurement, position control



Car industry





| Type | OMS 7505 | OMS 7510 | OMS 7520 | OMS 7540 | OMS 7560 | OMS 7580 |
|--------------------------|---|----------|----------|----------|----------|----------|
| Measuring range [mm] [3] | 50 | 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% of range | | | | | |
| Reproducibility | ≤ ± 0.03% of range | | | | | |
| Bandwidth [2] | 20 kHz max. | | | | | |
| Filter [2] | Digital averaging | | | | | |
| Measuring rate [2] | 20 kHz max. | | | | | |
| Light source | Laser diode | | | | | |
| Spot diameter [2] | 0.05 - 5mm | | | | | |
| Wave length [2] | 660 - 780nm | | | | | |
| Laser safety class [2] | 2 / 3R / 3B | | | | | |
| Photo detector | CMOS linear image sensor | | | | | |
| Supply voltage | ± 15V / 120mA, ± 5% or 12 - 30V / 120mA [4] | | | | | |
| Output [2] | ± 5V / ± 10V / 0 - 5V / 0 - 10V / 0 - 20mA / 4 - 20mA / CAN - Bus | | | | | |
| Operating temperature | -20°C up to 50°C – no condensation | | | | | |
| Dimensions | 200 x 160 x 60mm | | | | | |
| Weight | ca. 2700g | | | | | |
| Protection class | IP 65 | | | | | |

[1] Standard settings with filter 200Hz

[3] Other types upon request

[2] Factory-set depending on the application

[4] only unipolar output and CAN Bus