

Laser distance sensor

OPTImessS1 CCD



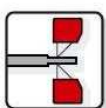
- High measuring rate
- High accuracy
- Digital processing of measured values
- Analog output or CAN bus

The opto-electronic sensor OPTIMESS S1 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.

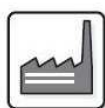
The OPTIMESS S1 CCD works according to the triangulation principle. The laser spot projected by a laser diode via an optical system is represented at an angle on a CCD line by a receiving optical system. The processor integrated in the sensor processes the optical distance information and outputs them as an analog value or via the CAN bus.



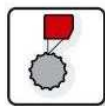
Dynamic contour measurement



Thickness measurement



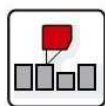
Steel industry, industrial automation



Profile measurement

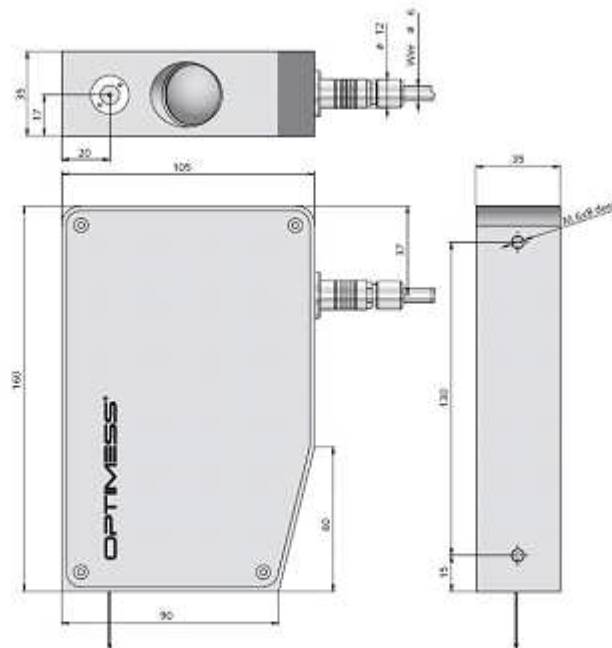


Rubber and tire industry



Distance measurement, position control





| Type | OMS 5008 | OMS 5020 | OMS 5040 | OMS 5080 | OMS 5120 | OMS 5200 |
|--------------------------|---|----------|----------|----------|----------|----------|
| Measuring range [mm] [3] | 8 | 20 | 40 | 80 | 120 | 200 |
| Stand off [mm] [3] | 50 | 100 | 150 | 200 | 300 | 400 |
| Resolution [mm] [1] | 0,002 | 0,005 | 0,010 | 0,020 | 0,030 | 0,050 |
| 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 | 105 x 160 x 35mm | | | | | |
| Weight | ca. 750g | | | | | |
| Protection class | IP 54 | | | | | |

[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

