

Laser distance sensor






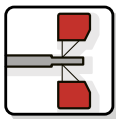



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| OPTIMESS M CCD | | | | | | |
|----------------|--|--|--|--|--|--|

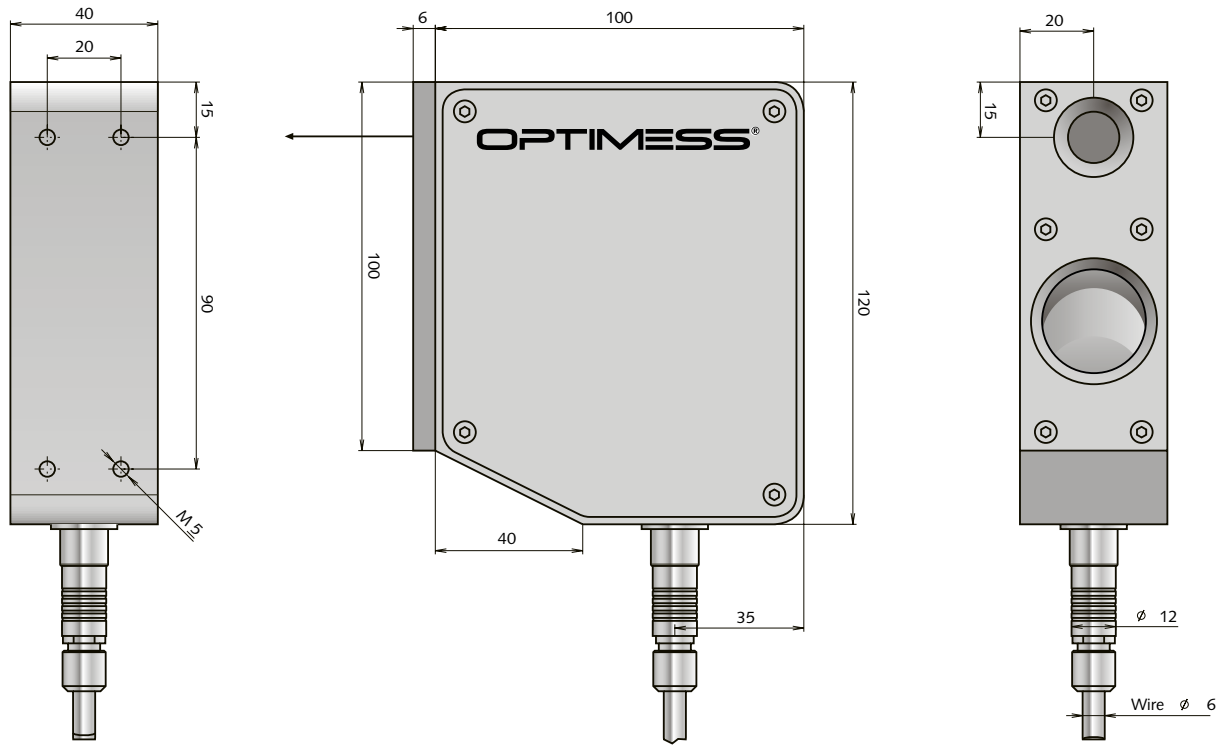


- High measuring rate
- High accuracy
- Digital processing of measured values
- Analog output or CAN bus

The opto-electronic sensor OPTIMESS M 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 M 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.

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|--|---|---|--|
|  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 8008 | OMS 8020 | OMS 8040 | OMS 8080 | OMS 8120 | OMS 8200 |
|--------------------------|---|----------|----------|----------|----------|----------|
| 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% 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 | 120 x 100 x 40 mm | | | | | |
| Weight | approx. 820 g | | | | | |
| Protection class | IP 65 | | | | | |

[1] Standard settings with filter 200Hz
 [4] only unipolar output and CAN Bus

[2] Factory-set depending on the application [3] Other types upon request