



Linear measurement sensors OLM200

OLM200-1002



Model Name > [OLM200-1002](#)
Part No. > [1051658](#)

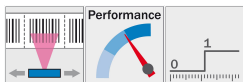


At a glance

- Highly accurate non-contact bar code positioning system
- Travel speed of up to 10 m/s can be achieved
- Wear and maintenance-free thanks to camera technology
- Adjustable resolution as low as 0.1 mm
- Compatible with standard and SPEEDCON™ M12 plug connectors
- Output of position and speed data, as well as pre-failure notifications via fieldbus interfaces
- Large temperature range from -30°C to +60°C

Your benefits

- Precise positioning with speeds of up to 10 m/s significantly increases throughput
- Camera-based system with no moving parts in combination with tough metal housing ensure increased lifetime and availability
- High ambient light safety due to self-adjusting LED illumination ensures reliable operation, thus increasing machine availability
- Large temperature range from -30 °C to +60 °C offers flexible and reliable use in many applications
- Status bit for pre-failure and preventive maintenance information eliminates unpredicted machine downtimes
- Single direction alignment, red lighting and compatibility to SPEEDCON™ connectors enable fast mounting, thus saving installation time and costs
- PROFIBUS interface enables a flexible and high performance system implementation



Performance

| | |
|-----------------------------------|-----------------------------|
| Resolution: | 0.1 mm, 1 mm, 10 mm, 100 mm |
| Repeatability ¹⁾ : | 0.15 mm |
| Response time ²⁾ : | 10 ms |
| Light source: | LED, red |
| Measurement range ³⁾ : | 0 m ... 10,000 m |
| Bar code width: | 30 mm |
| Sensing distance: | 100 mm, ± 20 mm |
| Max. movement speed: | 10 m/s |
| Accuracy of speed output: | ± 5 mm/s |
| Output time: | 2.5 ms |

1) Statistical error 3 σ , no warm-up time required 2) Response time of switching output 3) Dependant on the set resolution and transfer protocol

Interfaces

| | |
|-----------------------------|--|
| Data interface: | PROFIBUS DP-V0 |
| Maximum baudrate: | 12 MBaud |
| Output type ¹⁾ : | Multifunctional output MF1: PNP Multifunctional output MF1: NPN |
| Data transmission rate: | 3 Mbit/s |

1) Functions of switching output MF1 PNP/MF1 NPN: position, speed, control mark Q00 (off), Q01 (on), illumination on/off, service [prefailure (dirt/LED life time), no bar code tape, over/under temperature, out of range 0 km > position > 10 km, internal error]

Mechanics/electronics

| | |
|---|-------------------|
| Output current I _A ¹⁾ : | 100 mA |
| Supply voltage V _s ²⁾ : | DC 18 V ... 30 V |
| Ripple ³⁾ : | ≤ 5 Vpp |
| Power consumption: | < 5.5 W |
| Initialization time: | 3 s |
| Housing material: | Magnesium zinc |
| Weight: | Ca. 291 g |

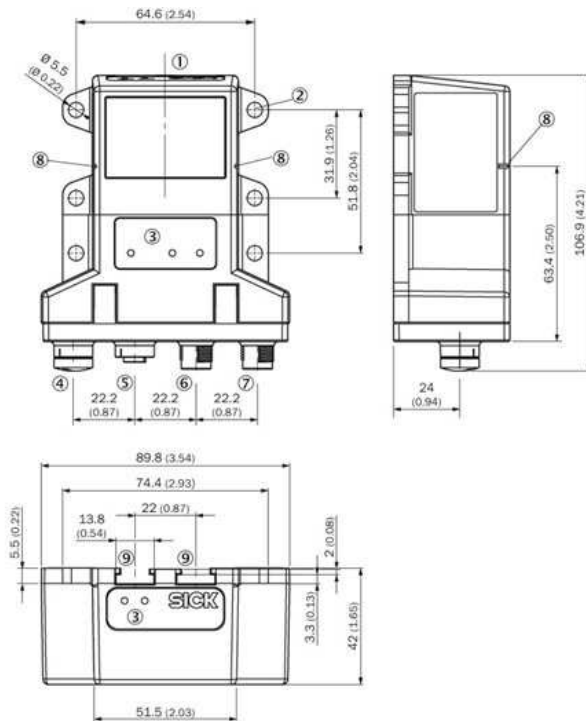
1) Switching outputs MF1 short-circuit protected 2) Limit values, reverse-polarity protected 3) May not exceed or fall below U_v tolerances

Ambient data

| | |
|---|--|
| Enclosure rating: | IP 65 (EN 60 529) |
| Protection class: | III |
| Ambient temperature ¹⁾ , ²⁾ : | Operation: -30 ... +60 °C, Storage: -40 ... +75 °C |
| Vibration resistance: | DIN/EN 60068-2-6, DIN/EN 60068-2-64 |
| Shock resistance: | DIN/EN 60068-2-27 |
| Electromagnetic compatibility (EMC): | EN 61000-6-2/EN 61000-6-4 |
| Typ. ambient light safety: | ≤ 30,000 lx ³⁾ |

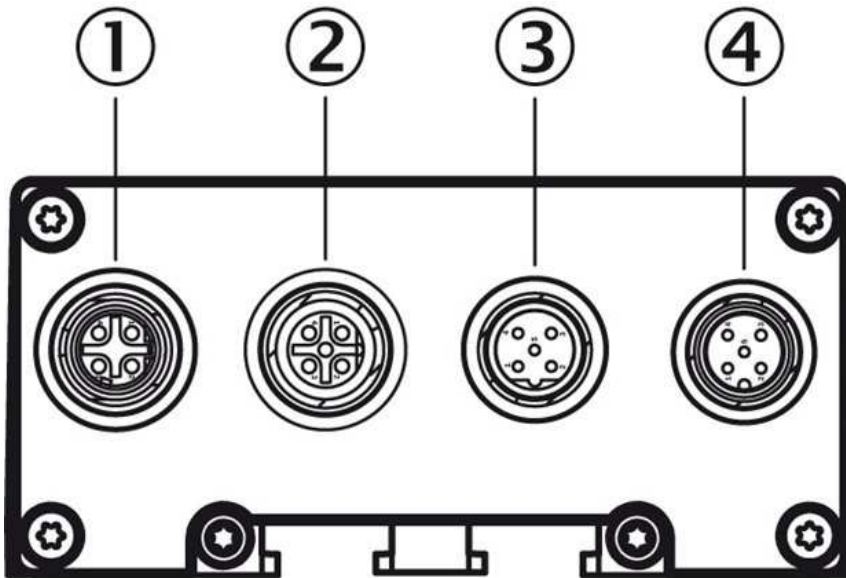
1) Temperatures < -20 °C with 5 min warm up time 2) Max. 95 % humidity, non-condensing 3) Typ. value at +25 °C ambient temperature

Dimensional drawing



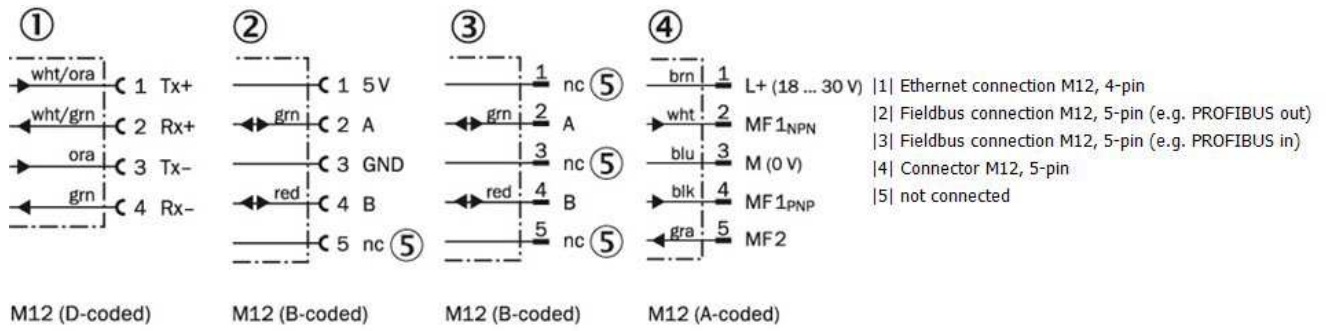
- |1| Reference axis position measurement
- |2| Mounting hole
- |3| Status LED [status]
- |4| Ethernet connection M12, 4-pin
- |5| Fieldbus connection M12, 5-pin (e.g. PROFIBUS out)
- |6| Fieldbus connection M12, 5-pin (e.g. PROFIBUS in)
- |7| Connector M12, 5-pin
- |8| Adjustment aid (slot)
- |9| T-slot

Connection type



- |1| Ethernet connection M12, 4-pin
- |2| Fieldbus connection M12, 5-pin (e.g. PROFIBUS out)
- |3| Fieldbus connection M12, 5-pin (e.g. PROFIBUS in)
- |4| Connector M12, 5-pin

Connection diagram



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