



## Linear measurement sensors OLM200, PROFIBUS DP-V0

OLM200-1052



**Model Name** > OLM200-1052  
**Part No.** > 1051659

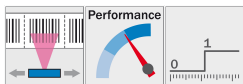


**At a glance**

- Control marks for special functions and sensor configuration
- Measurement range up to 10 km
- Adjustable resolution as low as 0.1 mm
- Maximum speed of 10 m/s
- Output of position and speed data, as well as service diagnostics via PROFIBUS or Ethernet based fieldbuses
- Compatible to SPEEDCON™ connectors and standard M12 connectors
- 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 <sup>1)</sup> :	0.15 mm
Response time <sup>2)</sup> :	10 ms
Output rate:	2.5 ms
Light source:	LED, red
Measurement range <sup>3)</sup> :	0 m ... 10,000 m
Bar code width <sup>4)</sup> :	40 mm
MTTFd:	> 100 years
Working distance:	130 mm, ± 20 mm (to bar code tape, 40 mm bar code width)
Max. movement speed:	10 m/s
Accuracy of speed output:	± 5 mm/s

Laser service life (MTTF at 25 °C): 100,000 h<sup>5)</sup>

<sup>1)</sup> Statistical error 3  $\sigma$ , no warm-up time required <sup>2)</sup> Response time of switching output <sup>3)</sup> Dependant on the set resolution and transfer protocol <sup>4)</sup> The bar code tape available from SICK always has a width of 30 mm. The bar code tape is available in two heights: 30 mm or 40 mm <sup>5)</sup> LED typ. MTTF at 25°C

## Interfaces

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Data interface: PROFIBUS DP-V0  
Maximum baudrate: 12 Baud  
Output type<sup>1)</sup>: MF1: PNP  
MF1: NPN  
Data transmission rate: 3 Mbit/s

<sup>1)</sup> 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

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Output current I<sub>A</sub><sup>1)</sup>: 100 mA  
Supply voltage V<sub>S</sub><sup>2)</sup>: DC 18 V ... 30 V  
Ripple<sup>3)</sup>:  $\leq 5$  Vpp  
Power consumption: < 5.5 W  
Initialization time: 3 s  
Housing material: Aluminum  
zinc  
Weight: Ca. 510 g

<sup>1)</sup> Switching outputs MF1 short-circuit protected <sup>2)</sup> Limit values, reverse-polarity protected <sup>3)</sup> May not exceed or fall short of V<sub>S</sub> tolerances

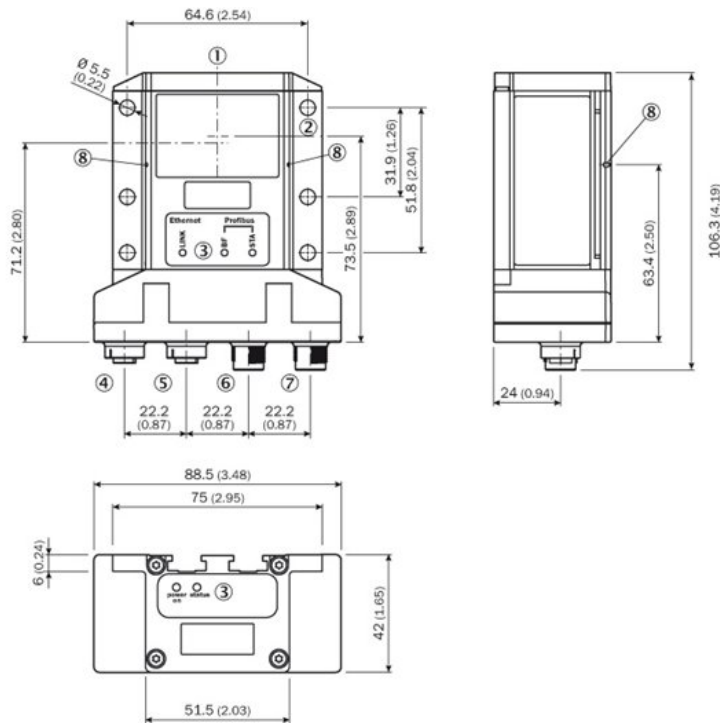
## Ambient data

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Enclosure rating: IP 65 (EN 60 529)  
Protection class: III  
Ambient temperature<sup>1)</sup>:<sup>2)</sup> Operation: -30 ... 60 °C, Storage: -40 ... 75 °C  
Typ. ambient light safety<sup>3)</sup>:  $\leq 30,000$  lx  
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

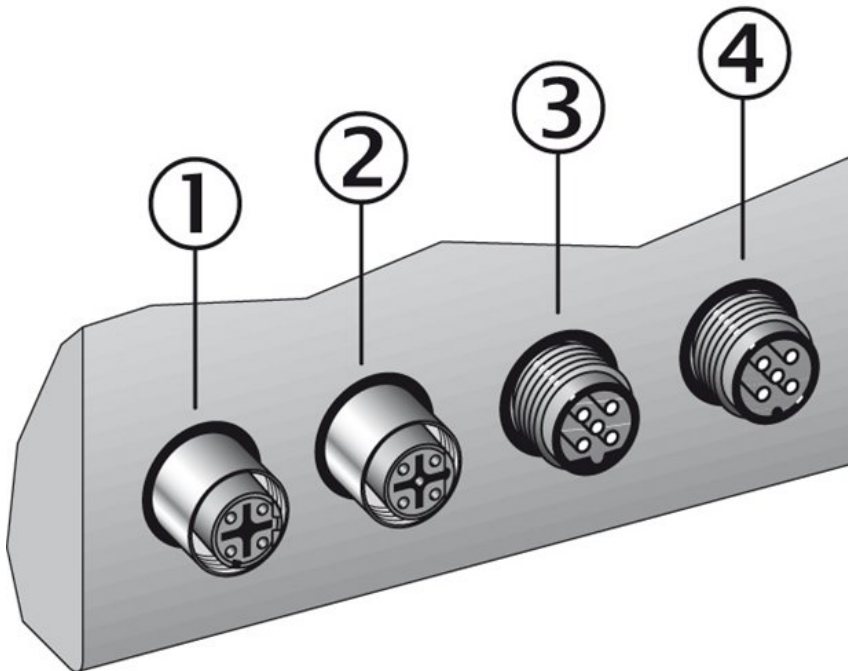
<sup>1)</sup> Temperatures < -20 °C with 5 min warm up time <sup>2)</sup> Max. 95 % humidity, non-condensing <sup>3)</sup> Typ. value at +25 °C ambient temperature

## Dimensional drawing



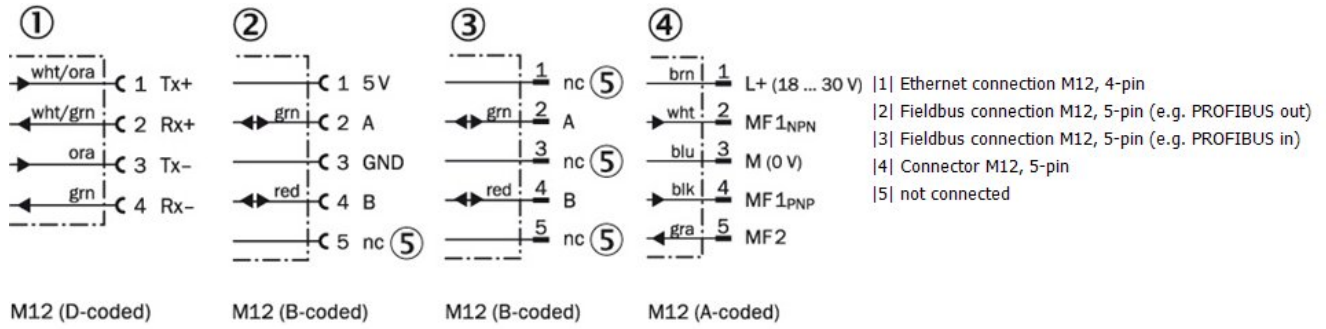
- |1| Reference axis position measurement
- |2| Mounting hole
- |3| Status LED [status]
- |4| Ethernet connection M12, 4-pin
- |5| Fieldbus connection M12, 5-pin (e.g. PROFIBUS out)
- |6| Fieldbus connection M12, 5-pin (e.g. PROFIBUS in)
- |7| Connector M12, 5-pin
- |8| Adjustment aid (slot)

## 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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