



Linear measurement sensors OLM200

OLM200-1052



Model Name > [OLM200-1052](#)
Part No. > [1051659](#)

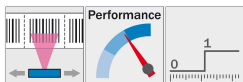


At a glance

- 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:	40 mm
Sensing distance:	130 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⁾ :	MF1: PNP 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

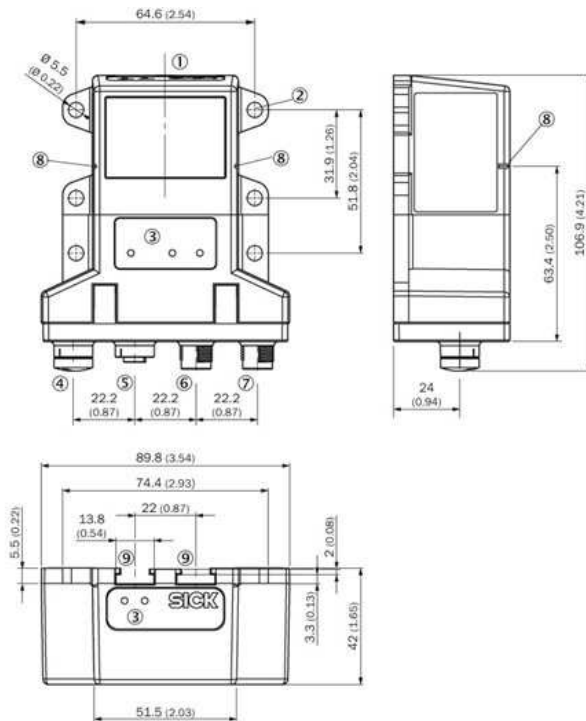
¹⁾ Switching outputs MF1 short-circuit protected ²⁾ Limit values, reverse-polarity protected ³⁾ May not exceed or fall below U_v tolerances

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⁾

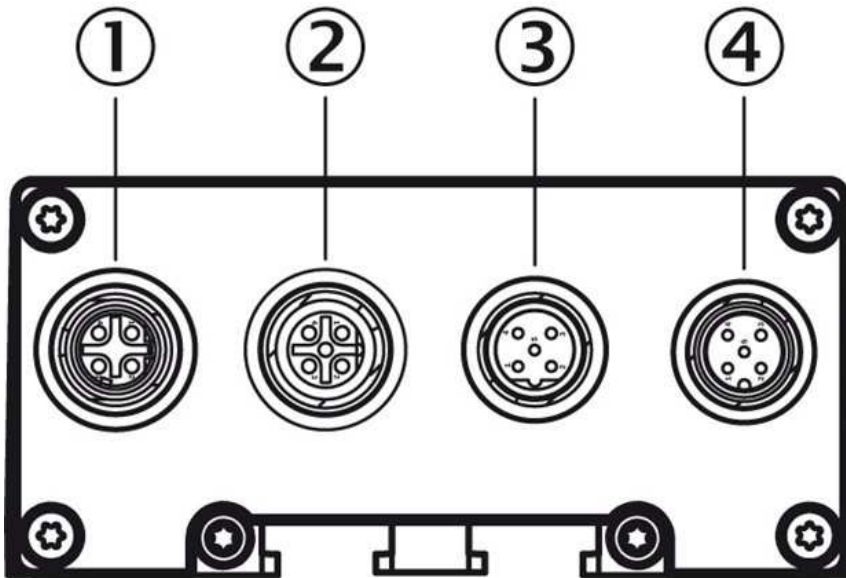
¹⁾ Temperatures < -20 °C with 5 min warm up time ²⁾ Max. 95 % humidity, non-condensing ³⁾ Typ. value at +25 °C ambient temperature

Dimensional drawing



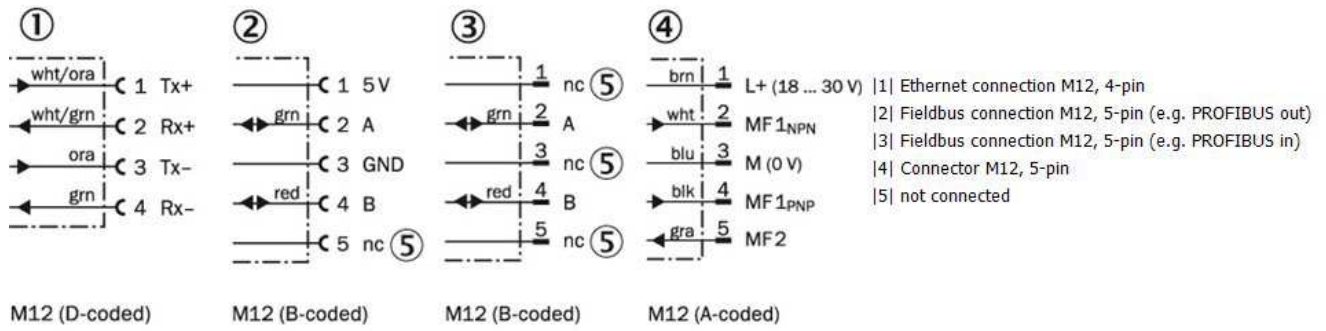
- |1| Reference axis position measurement
- |2| Mounting hole
- |3| Status LED [status]
- |4| Ethernet connection M12, 4-pin
- |5| Fieldbus connection M12, 5-pin (e.g. PROFIBUS out)
- |6| Fieldbus connection M12, 5-pin (e.g. PROFIBUS in)
- |7| Connector M12, 5-pin
- |8| Adjustment aid (slot)
- |9| T-slot

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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