



Linear measurement sensors OLM100

OLM100-1001



Model Name > [OLM100-1001](#)
Part No. > [1047411](#)

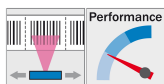


At a glance

- Highly accurate non-contact bar code positioning system
- Travel speed of up to 4 m/s can be achieved
- Wear and maintenance-free thanks to camera technology
- Adjustable resolution as low as 0.1 mm
- Precise positioning up to 10,000 m
- Compact, extremely rugged magnesium housing
- Wide range of interfaces: SSI, RS-422, RS-485, and CANopen
- Large temperature range from -30°C to +60°C

Your benefits

- High travel speed linked to precise positioning increases system efficiency and improves throughput
- Camera-based system with no moving parts increases the sensor's service life, thus reducing lifecycle costs considerably
- Minimal housing dimensions combined with the latest industrial interfaces ensure integration into almost any system design, even where space is limited
- Serial interfaces (RS-422, RS-485, SSI, and CANopen) offer highest flexibility and easiest system integration, hence saving costs for interface converters and protocol adaption
- The large temperature range from -30°C to +60°C offers reliable use in many applications



Performance

Resolution:	0.1 mm, 1 mm
Repeatability ¹⁾ :	1 mm
Light source:	LED, red
Measurement range ²⁾ :	0 m ... 10,000 m
Bar code width:	30 mm
MTTFd:	> 100 years
Sensing distance:	100 mm, ± 20 mm
Max. movement speed:	4 m/s
Output time:	1 ms

¹⁾ Statistical error 1 σ ²⁾ Dependant on the set resolution and transfer protocol

Interfaces

Data interface: SSI

Mechanics/electronics

Supply voltage V_s ¹⁾: DC 10 V ... 30 V
Ripple ²⁾: ≤ 5 Vpp
Power consumption: < 3 W
Initialization time: < 3 s
Housing material: Magnesium zinc
Weight: Ca. 168 g

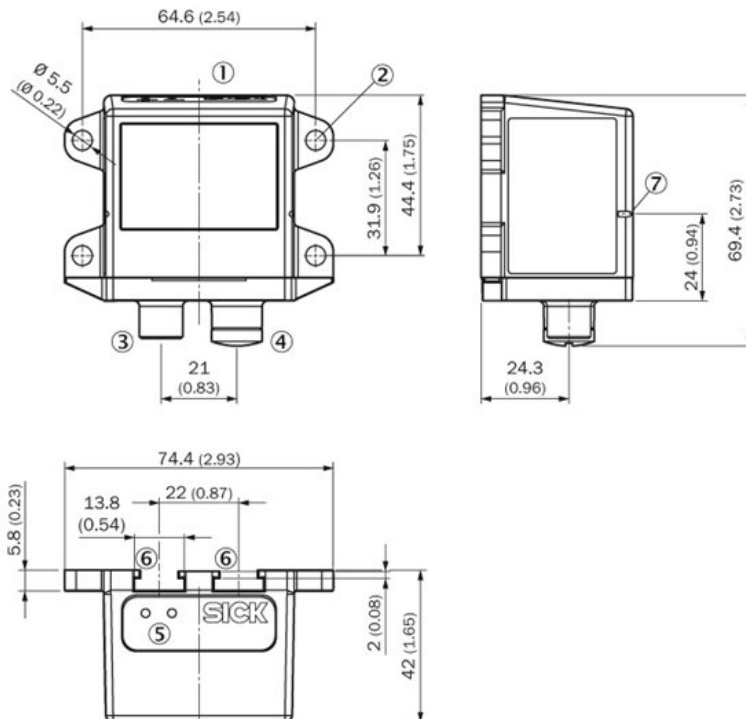
¹⁾ Limit values, reverse-polarity protected ²⁾ May not exceed or fall short of V_s tolerances

Ambient data

Enclosure rating: IP 65 (EN 60 529)
Protection class: III
Ambient temperature ¹⁾, ²⁾: Operation: $-30 \dots +60$ °C, Storage: $-40 \dots +75$ °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: $\leq 30,000$ 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

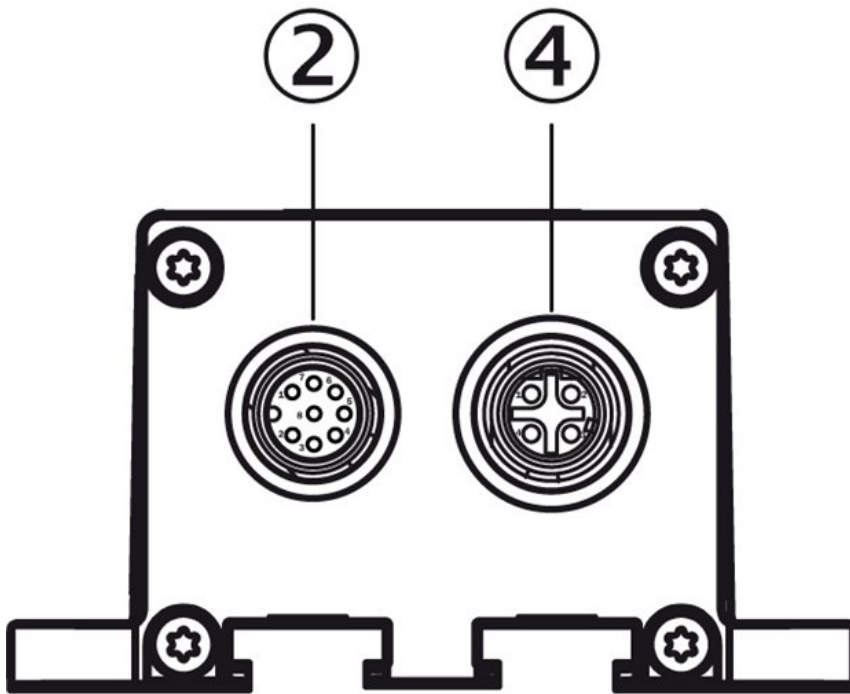
Dimensional drawing



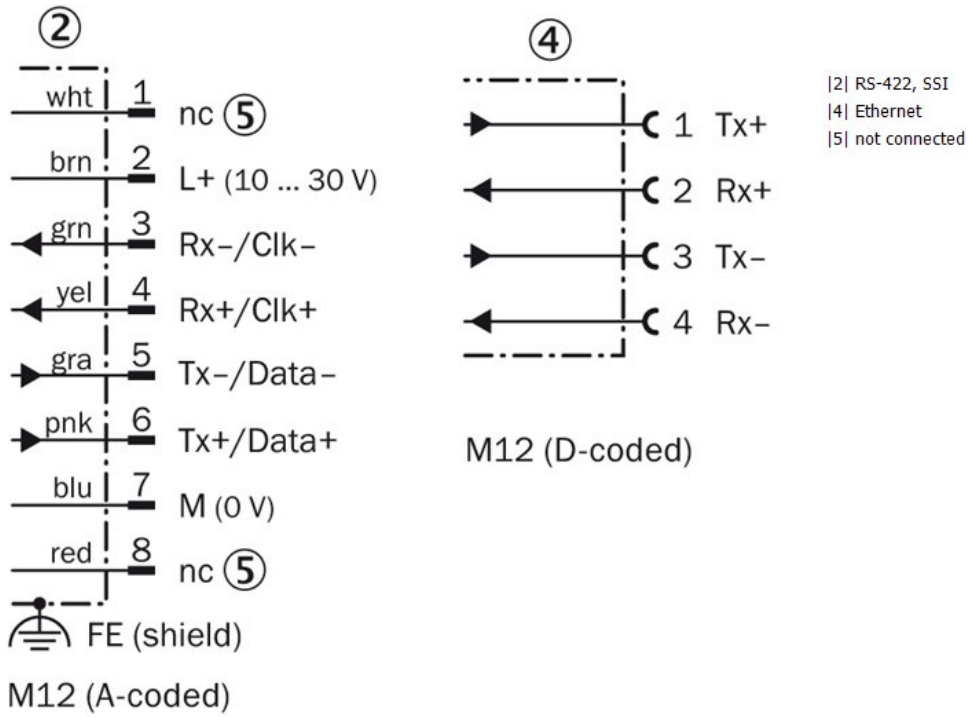
- |1| Reference axis position measurement
- |2| Mounting holes, Ø 5.5 mm
- |3| Connector M12, 5-pin
- |4| Connector socket Ethernet M12, 4-pin
- |5| Status LED [status]
- |6| T-slot
- |7| Adjustment aid (slot)

Connection type

|2| RS-422, SSI
|4| Ethernet



Connection diagram



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