



## Linear measurement sensors OLM100 Hi

OLM100-1201



**Model Name** > [OLM100-1201](#)  
**Part No.** > [1053074](#)

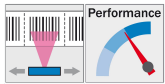


**At a glance**

- 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
- Precise positioning up to 10,000 m
- Compact, extremely rugged magnesium housing
- Wide range of interfaces: SSI, RS-422 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
- Very small housing dimensions combined with the latest industrial interfaces ensure integration into almost any system design, even where space is limited
- Serial interfaces (RS-422, 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 <sup>1)</sup> :	0.15 mm
Response time <sup>2)</sup> :	10 ms
Light source:	LED, red
Measurement range <sup>3)</sup> :	0 m ... 10,000 m
Bar code width:	30 mm
Sensing distance:	100 mm, ± 20 mm
Max. movement speed:	10 m/s
Output time:	1 ms

<sup>1)</sup> Statistical error 3 σ    <sup>2)</sup> Response time of switching output    <sup>3)</sup> Dependant on the set resolution and transfer protocol

## Interfaces

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Data interface:	SSI
Output type <sup>1)</sup> :	MF1: PNP MF1: NPN

<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> :	≤ 5 V <sub>pp</sub>
Power consumption:	< 3 W
Initialization time:	< 3 s
Housing material:	Magnesium zinc
Weight:	Ca. 168 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 below U<sub>v</sub> tolerances

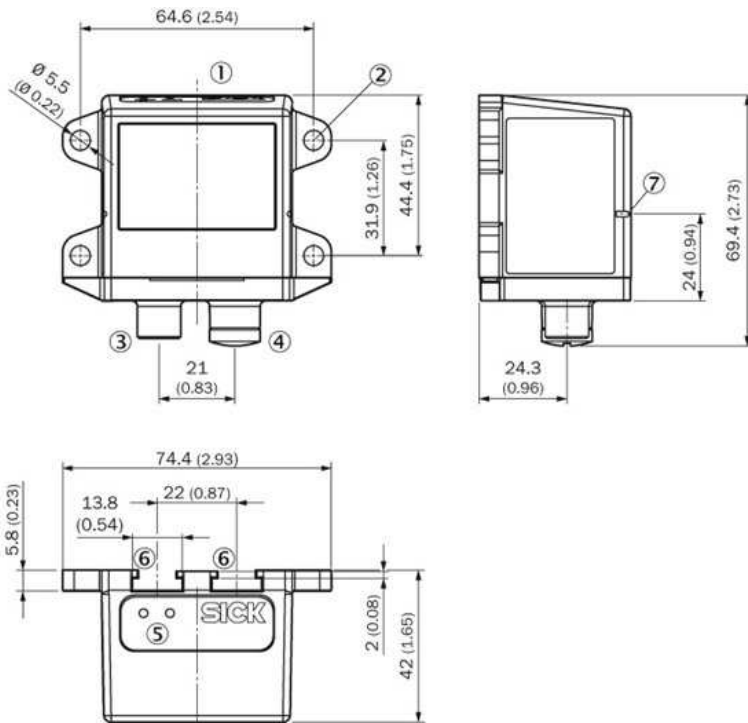
## Ambient data

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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
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 <sup>3)</sup>

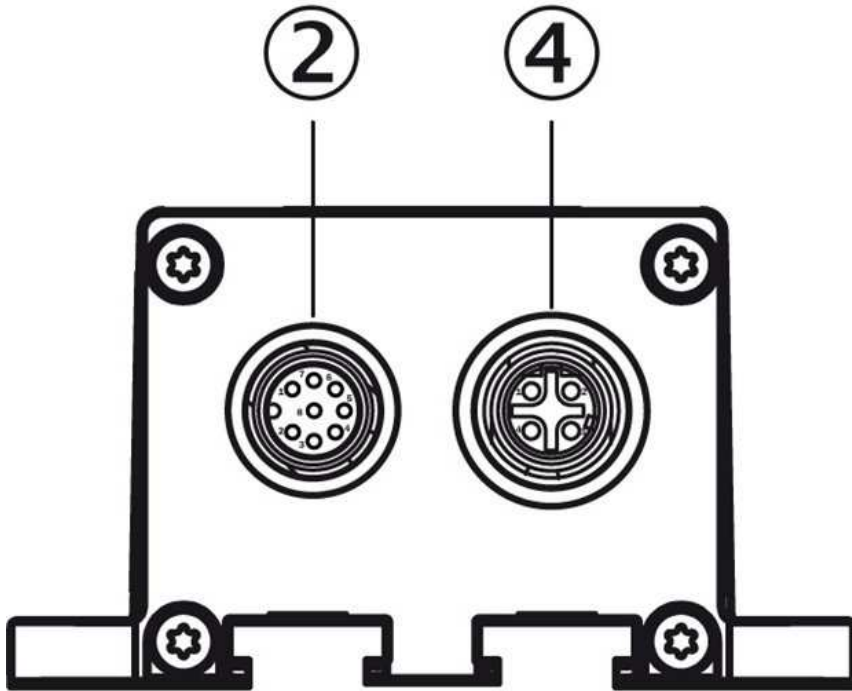
<sup>1)</sup> Temperatures < -20 °C with 5 min warm up time <sup>2)</sup> Max. 95 % humidity, non-condensing <sup>3)</sup> Typ. value at +25 °C ambient temperature

## Dimensional drawing



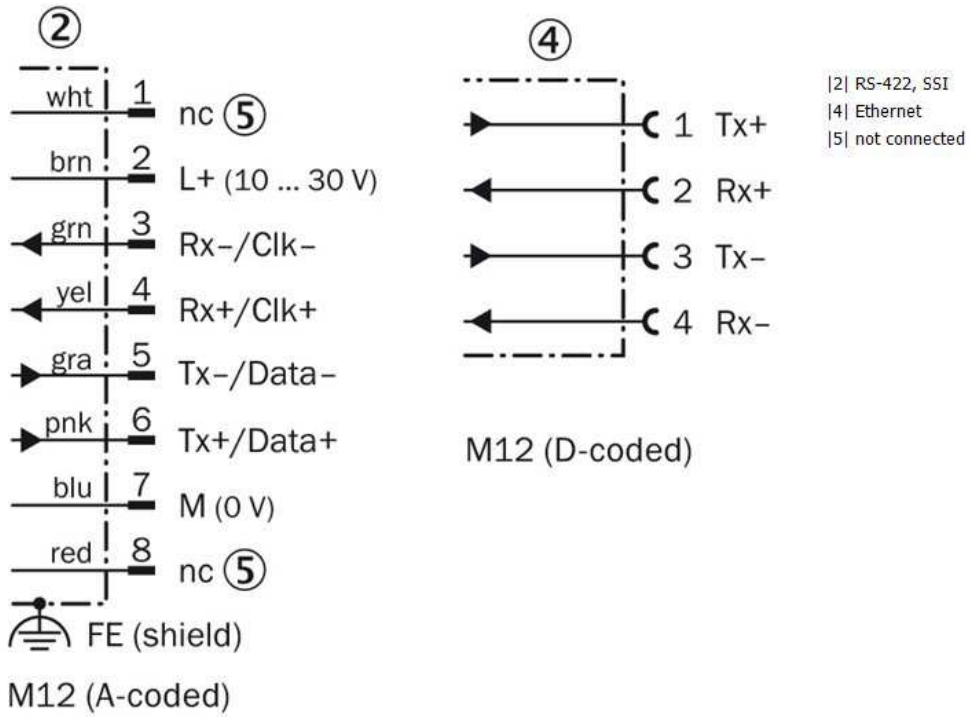
- |1| Reference axis position measurement
- |2| Mounting holes,  $\varnothing$  5.5 mm
- |3| Connector M12, 5-pin
- |4| Connector socket Ethernet M12, 4-pin
- |5| Status LED [status]
- |6| T-slot
- |7| Adjustment aid (slot)

## Connection type



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

Connection diagram



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