



## Linear measurement sensors OLM100 Hi

OLM100-1203



**Model Name** > [OLM100-1203](#)  
**Part No.** > [1054170](#)

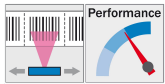


**At a glance**

- 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:	5 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

---

Data interface:	RS-422
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

---

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

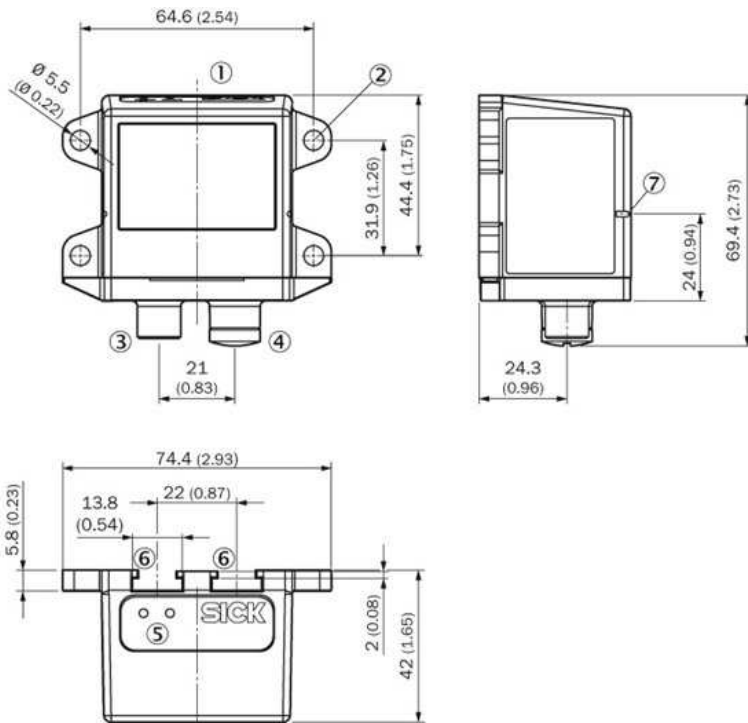
## Ambient data

---

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>

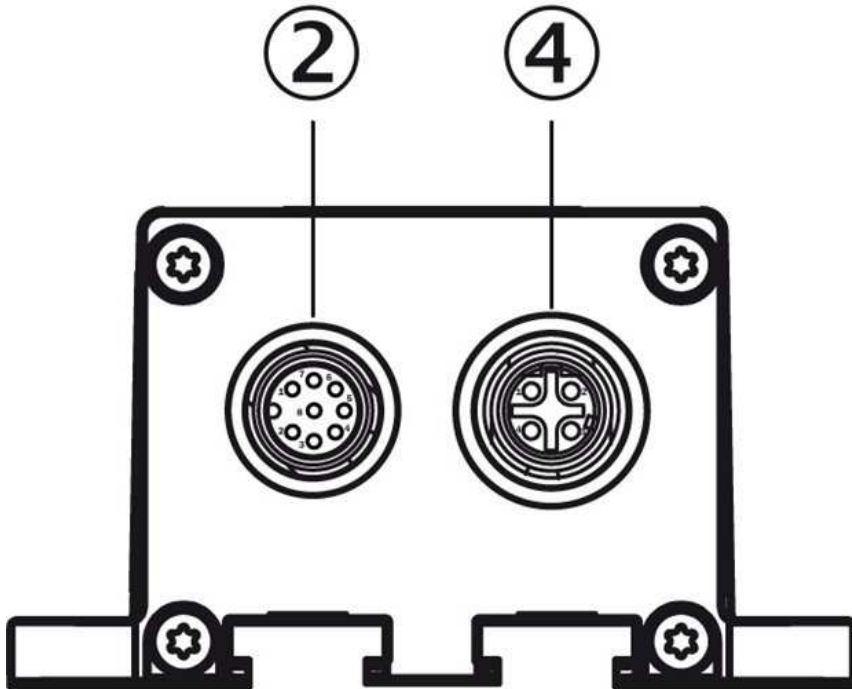
<sup>1)</sup> Temperatures < -20 °C with 5 min warm up time <sup>2)</sup> Max. 95 % humidity, non-condensing <sup>3)</sup> Typ. value at +25 °C ambient temperature

## Dimensional drawing



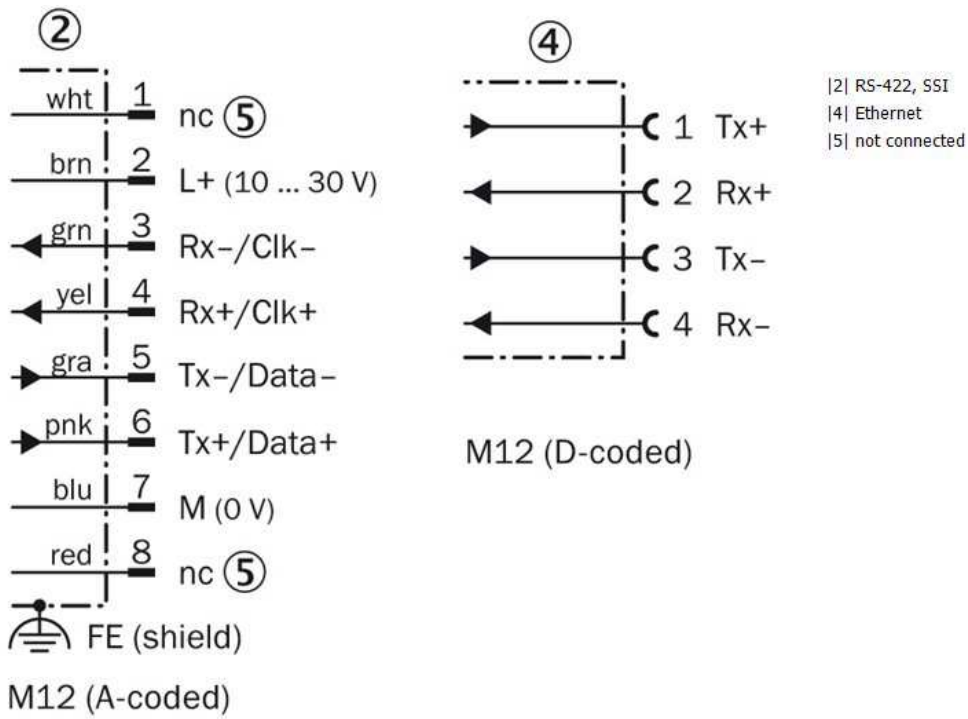
- |1| Reference axis position measurement
- |2| Mounting holes,  $\varnothing$  5.5 mm
- |3| Connector M12, 5-pin
- |4| Connector socket Ethernet M12, 4-pin
- |5| Status LED [status]
- |6| T-slot
- |7| Adjustment aid (slot)

## Connection type



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

Connection diagram



**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)