



## Linear measurement sensors OLM100, SSI

OLM100-1001



**Model Name** > OLM100-1001  
**Part No.** > 1047411

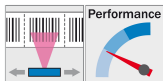


#### At a glance

- Control marks for special functions and sensor configuration
- Measurement range up to 10 km
- High repeatability of 1 mm
- Adjustable resolution as low as 0.1 mm
- Multiple interfaces: SSI, RS-422, RS-485 and CANopen
- Self-adjusting quadruple redundant red LED lighting
- Integrated skew and bank angle for fast parallel mounting, therefore alignment only in one axis is necessary
- Large temperature range from -30 °C to +60 °C

#### Your benefits

- Precise positioning with speeds of up to 4 m/s significantly increases throughput
- Camera-based system with no moving parts in combination with tough metal housing ensure increased lifetime, thus reducing replacement costs
- High ambient light safety due to selfadjusting 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
- Various interfaces (RS-422, RS-485, SSI and CANopen) offer highest flexibility and easiest system integration, hence saving costs for interface converters and protocol adaption
- Smallest available housing for common industrial serial interfaces offers easy integration in confined spaces, therefore allowing the customer to save room on his machine design



#### Performance

|                                     |                                                          |
|-------------------------------------|----------------------------------------------------------|
| Resolution:                         | 0.1 mm, 1 mm                                             |
| Repeatability <sup>1)</sup> :       | 1 mm                                                     |
| Output rate:                        | 1 ms                                                     |
| Light source:                       | LED, red                                                 |
| Measurement range <sup>2)</sup> :   | 0 m ... 10,000 m                                         |
| Bar code width <sup>3)</sup> :      | 30 mm                                                    |
| MTTFd:                              | > 100 years                                              |
| Working distance:                   | 100 mm, ± 20 mm (to bar code tape, 30 mm bar code width) |
| Max. movement speed:                | 4 m/s                                                    |
| Laser service life (MTTF at 25 °C): | 100,000 h <sup>4)</sup>                                  |

<sup>1)</sup> Statistical error 1  $\sigma$  <sup>2)</sup> Dependant on the set resolution and transfer protocol <sup>3)</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>4)</sup> LED typ. MTTF at 25°C

## Interfaces

Data interface: SSI

## Mechanics/electronics

Supply voltage  $V_s$  <sup>1)</sup>: DC 10 V ... 30 V  
Ripple <sup>2)</sup>:  $\leq 5$  Vpp  
Power consumption:  $< 3$  W  
Initialization time:  $< 3$  s  
Housing material: Aluminum  
zinc  
Weight: Ca. 260 g

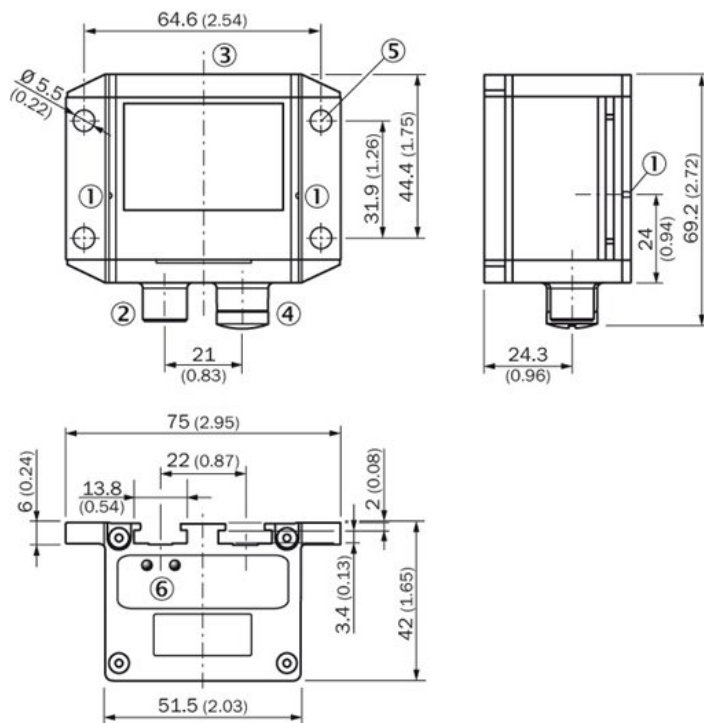
<sup>1)</sup> Limit values, reverse-polarity protected <sup>2)</sup> May not exceed or fall short of  $V_s$  tolerances

## Ambient data

Enclosure rating: IP 65 (EN 60 529)  
Protection class: III  
Ambient temperature <sup>1), 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

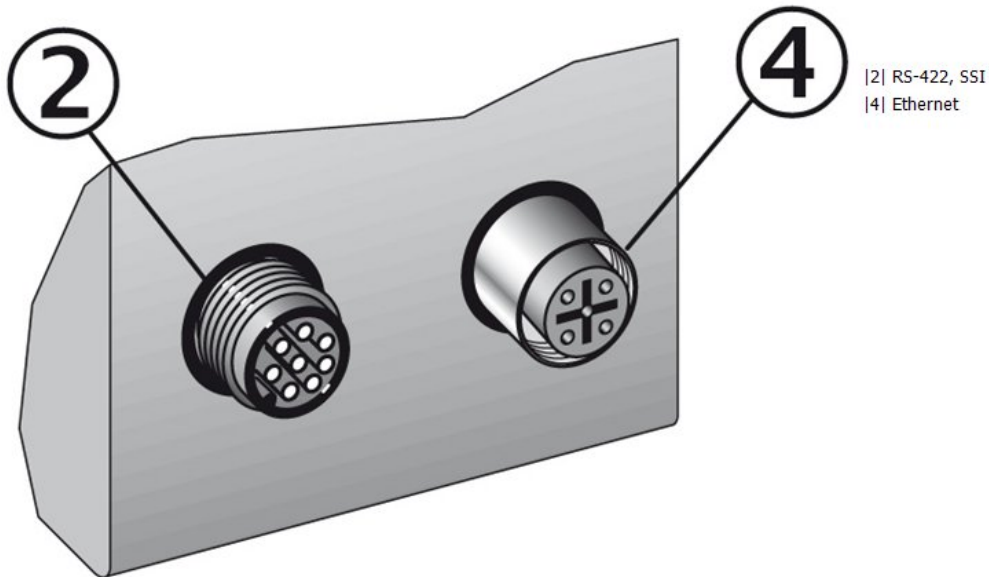
<sup>1)</sup> Temperatures  $< -20$  °C with 5 min warm up time <sup>2)</sup> Max. 95 % humidity, non-condensing <sup>3)</sup> Typ. value at +25 °C ambient temperature

## Dimensional drawing

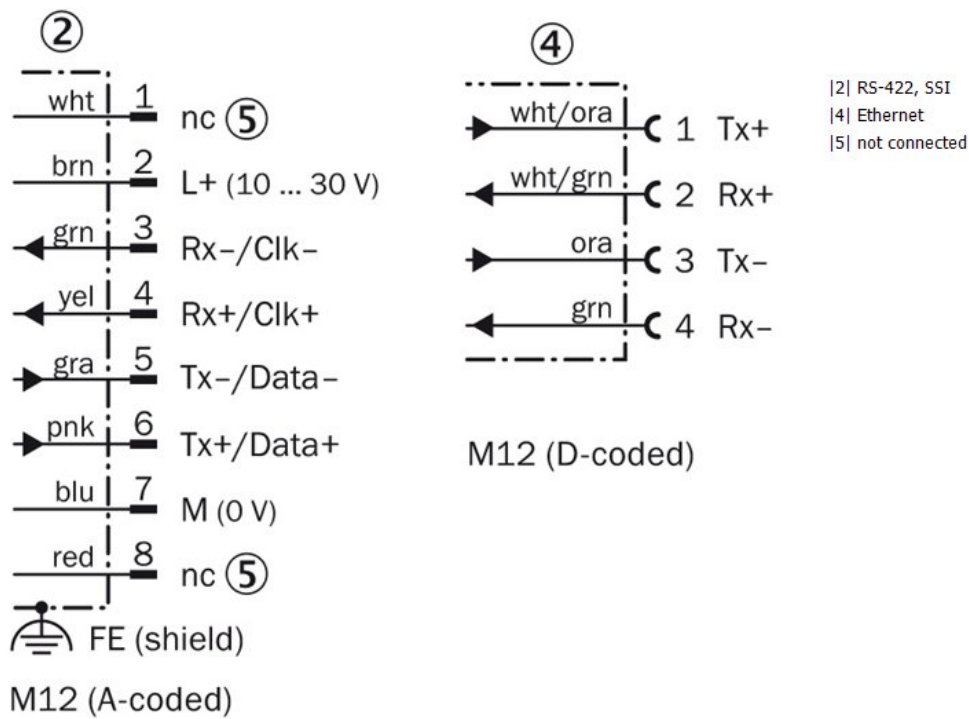


- [1] Adjustment aid (slot)
- [2] Connector M12, 5-pin
- [3] Reference axis position measurement
- [4] Connector socket Ethernet M12, 4-pin
- [5] Mounting holes,  $\varnothing$  5.5 mm

## Connection type



Connection diagram



#### **Australia**

Phone +61 3 9457 0600  
1800 334 802 – 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 sac@sick.com.br

#### **Canada**

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

#### **Ceská 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 kundenservice@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 +972-4-6801000  
E-Mail info@sick-sensors.com

#### **Italia**

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

#### **Japan**

Phone +81 (0)3 3358 1341  
E-Mail support@sick.jp

#### **Magyarország**

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

#### **Nederlands**

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

#### **Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@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 admin@sicksgp.com.sg

#### **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 8865 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)