



## Linear measurement sensors OLM100, RS-422

OLM100-1003



**Model Name** > [OLM100-1003](#)  
**Part No.** > [1047412](#)

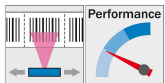


**At a glance**

- 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:                        | 5 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>                                  |

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

## Interfaces

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Data interface: RS-422

## Mechanics/electronics

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

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

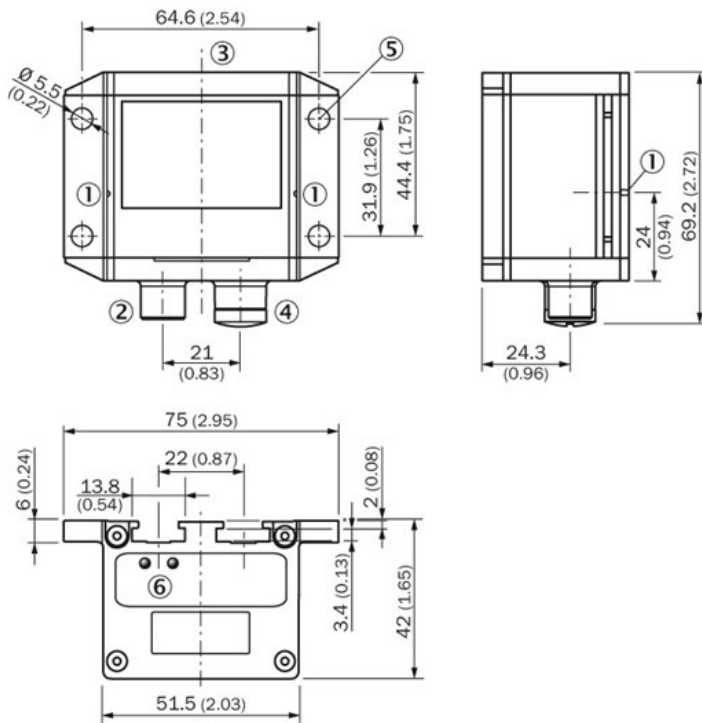
## Ambient data

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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

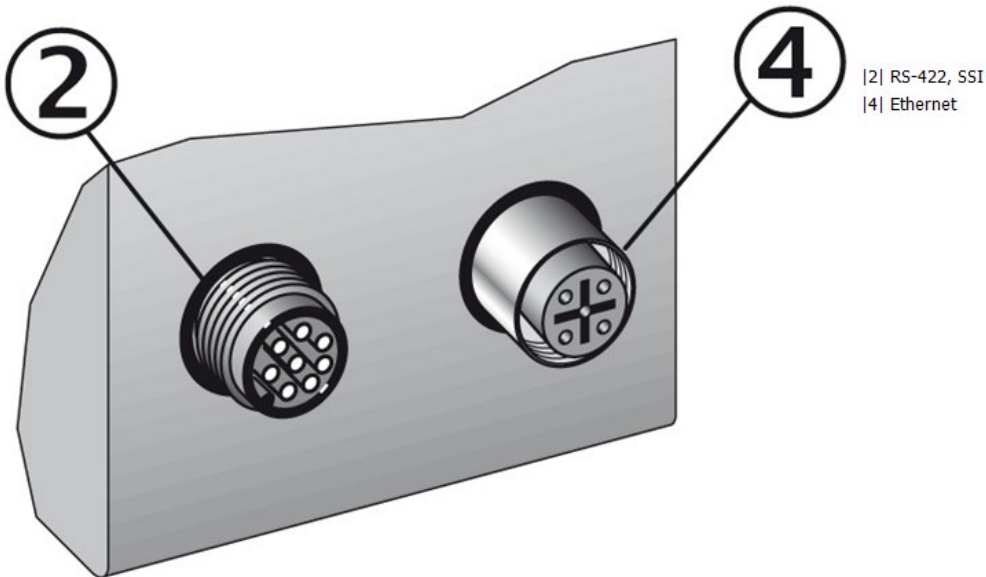
1) Temperatures  $< -20^\circ C$  with 5 min warm up time 2) Max. 95 % humidity, non-condensing 3) Typ. value at  $+25^\circ C$  ambient temperature

## Dimensional drawing



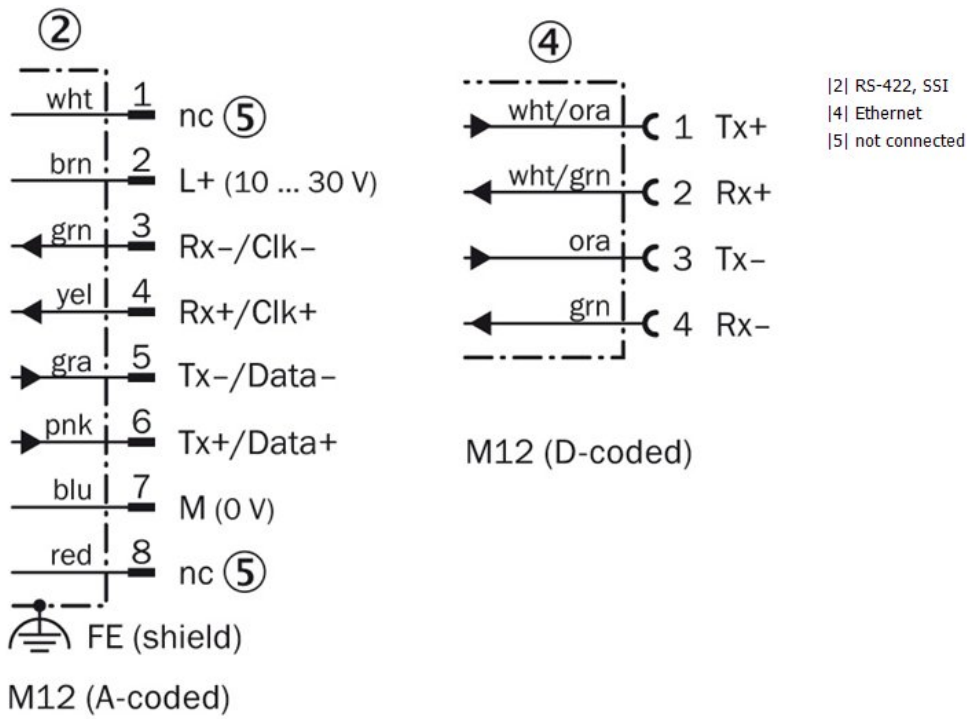
- |1| Adjustment aid (slot)
- |2| Connector M12, 5-pin
- |3| Reference axis position measurement
- |4| Connector socket Ethernet M12, 4-pin
- |5| Mounting holes,  $\varnothing 5.5$  mm

## Connection type



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

Connection diagram



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