



Linear measurement sensors OLM100, RS-485, binary

OLM100-1005S01



Model Name > OLM100-1005S01
Part No. > 1050976

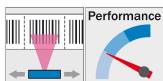


At a glance

- 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:	1 mm
Repeatability ¹⁾ :	1 mm
Output rate:	5 ms
Light source:	LED, red
Measurement range ²⁾ :	0 m ... 10,000 m
Bar code width ³⁾ :	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 ⁴⁾

¹⁾ Statistical error 1σ 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

Data interface: RS-485, binary

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: Aluminum
 zinc
 Weight: Ca. 260 g

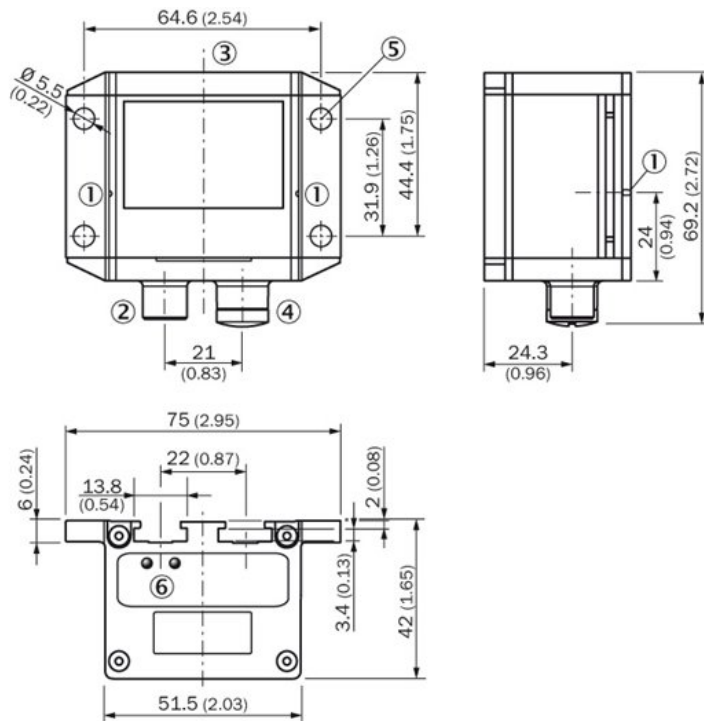
¹⁾ Limit values, reverse-polarity protected ²⁾ May not exceed or fall short of V_s tolerances

Ambient data

Enclosure rating: IP 65 (EN 60 529)
 Protection class: III
 Ambient temperature ^{1), 2)}: Operation: -30 ... 60 °C, Storage: -40 ... 75 °C
 Typ. ambient light safety ³⁾: $\leq 30,000$ 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

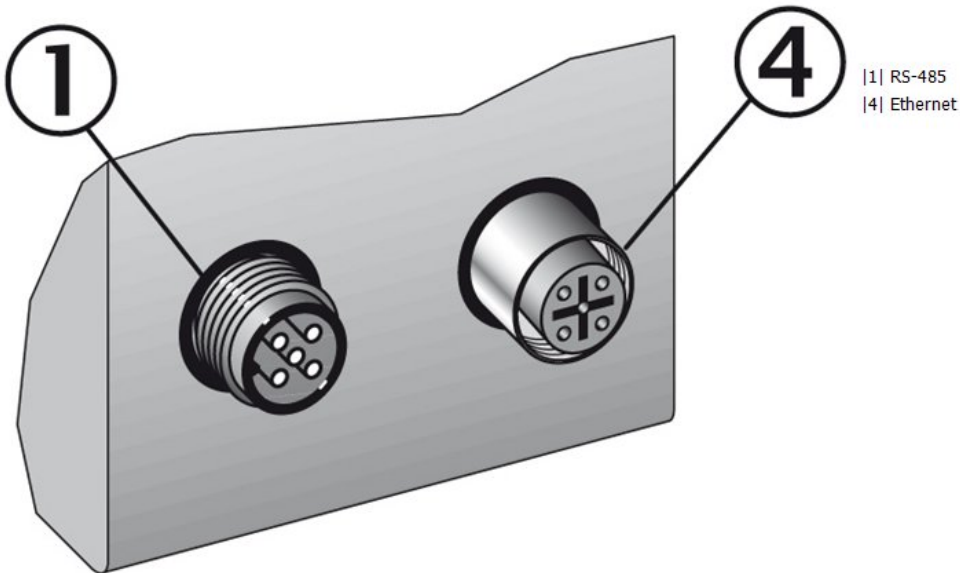
¹⁾ Temperatures < -20 °C with 5 min warm up time ²⁾ Max. 95 % humidity, non-condensing ³⁾ Typ. value at +25 °C ambient temperature

Dimensional drawing

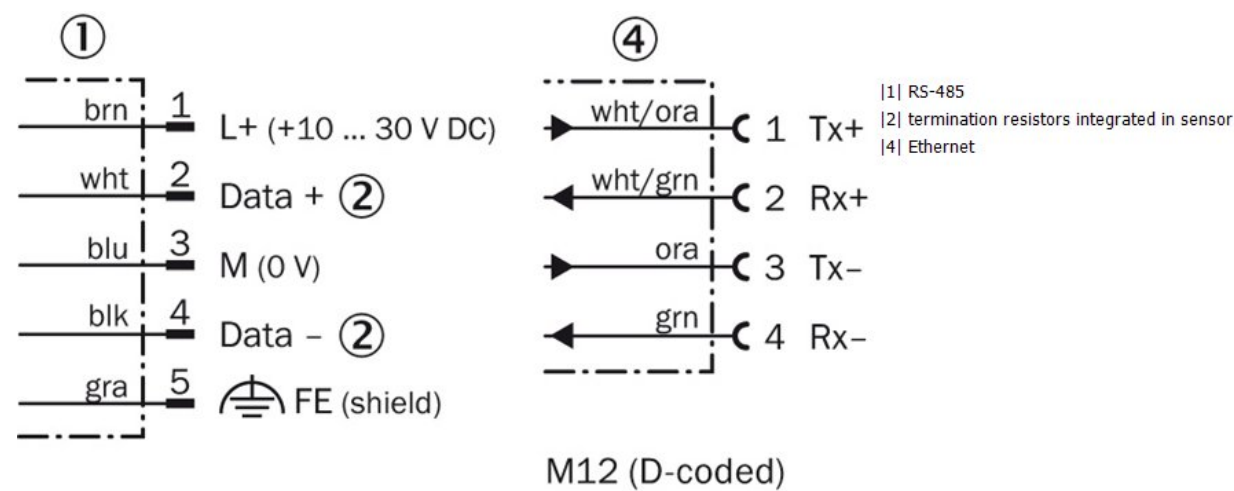


- |1| Adjustment aid (slot)
- |2| Connector M12, 5-pin
- |3| Reference axis position measurement
- |4| Connector socket Ethernet M12, 4-pin
- |5| Mounting holes, Ø 5.5 mm

Connection type



Connection diagram



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