



Linear measurement sensors OLM100 Hi, RS-422

OLM100-1203



Model Name > **OLM100-1203**
Part No. > **1054170**

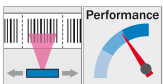


At a glance

- Control marks for special functions and sensor configuration
- Measurement range up to 10 km
- High repeatability of 0.15 mm
- Adjustable resolution as low as 0.1 mm
- Travel speed up to 10 m/s
- 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 10 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
- Very fast SSI interface for direct feedback into drive enables sharply set control loops, hence allowing a more efficient positioning
- 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 ¹⁾ :	0.15 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:	10 m/s
Laser service life (MTTF at 25 °C):	100,000 h ⁴⁾

¹⁾ Statistical error 3σ 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-422

Mechanics/electronics

Supply voltage V_s ¹⁾: DC 18 V ... 30 V
Ripple ²⁾: ≤ 5 Vpp
Power consumption: < 3 W
Housing material: Aluminum
zinc
Weight: Ca. 260 g

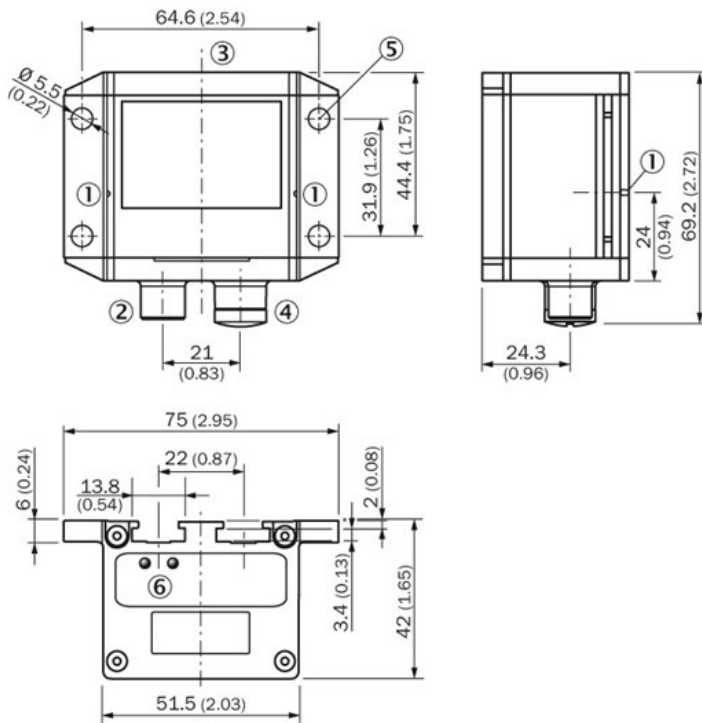
¹⁾ Limit values, reverse-polarity protected ²⁾ May not exceed or fall short of V_s tolerances

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

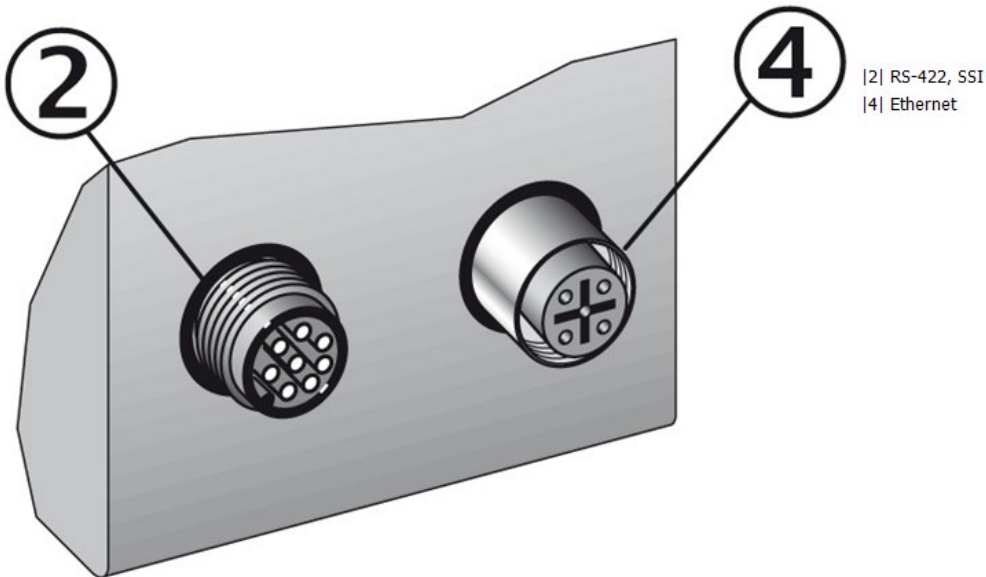
¹⁾ Temperatures < -20 °C with 5 min warm up time ²⁾ Max. 95 % humidity, non-condensing ³⁾ Typ. value at +25 °C ambient temperature

Dimensional drawing

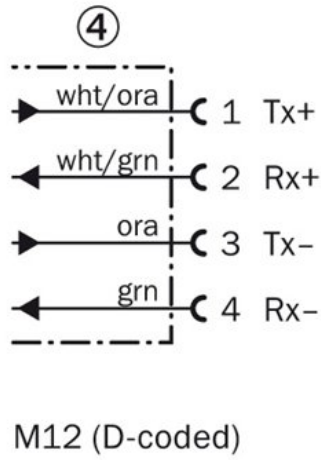
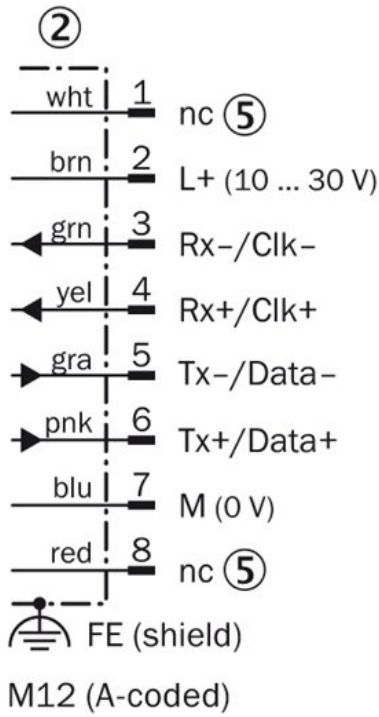


- |1| Adjustment aid (slot)
- |2| Connector M12, 5-pin
- |3| Reference axis position measurement
- |4| Connector socket Ethernet M12, 4-pin
- |5| Mounting holes, $\varnothing 5.5$ mm

Connection type



Connection diagram



- |2| RS-422, SSI
- |4| Ethernet
- |5| not connected

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