



Linear measurement sensors OLM200, PROFIBUS DP-V0

OLM200-1002



Model Name > OLM200-1002
Part No. > 1051658

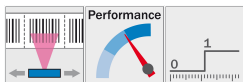


At a glance

- Control marks for special functions and sensor configuration
- Measurement range up to 10 km
- Adjustable resolution as low as 0.1 mm
- Maximum speed of 10 m/s
- Output of position and speed data, as well as service diagnostics via PROFIBUS or Ethernet based fieldbuses
- Compatible to SPEEDCON™ connectors and standard M12 connectors
- 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 and availability
- High ambient light safety due to self-adjusting 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
- Status bit for pre-failure and preventive maintenance information eliminates unpredicted machine downtimes
- Single direction alignment, red lighting and compatibility to SPEEDCON™ connectors enable fast mounting, thus saving installation time and costs
- PROFIBUS interface enables a flexible and high performance system implementation



Performance

Resolution:	0.1 mm, 1 mm, 10 mm, 100 mm
Repeatability ¹⁾ :	0.15 mm
Response time ²⁾ :	10 ms
Output rate:	2.5 ms
Light source:	LED, red
Measurement range ³⁾ :	0 m ... 10,000 m
Bar code width ⁴⁾ :	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
Accuracy of speed output:	± 5 mm/s

Laser service life (MTTF at 25 °C): 100,000 h ⁵⁾

¹⁾ Statistical error 3 σ , no warm-up time required ²⁾ Response time of switching output ³⁾ Dependant on the set resolution and transfer protocol ⁴⁾ 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 ⁵⁾ LED typ. MTTF at 25°C

Interfaces

Data interface: PROFIBUS DP-V0
Maximum baudrate: 12 Baud
Output type ¹⁾: Multifunctional output MF1: PNP
Multifunctional output MF1: NPN
Data transmission rate: 3 Mbit/s

¹⁾ 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_A ¹⁾: 100 mA
Supply voltage V_S ²⁾: DC 18 V ... 30 V
Ripple ³⁾: ≤ 5 Vpp
Power consumption: < 5.5 W
Initialization time: 3 s
Housing material: Aluminum
zinc
Weight: Ca. 510 g

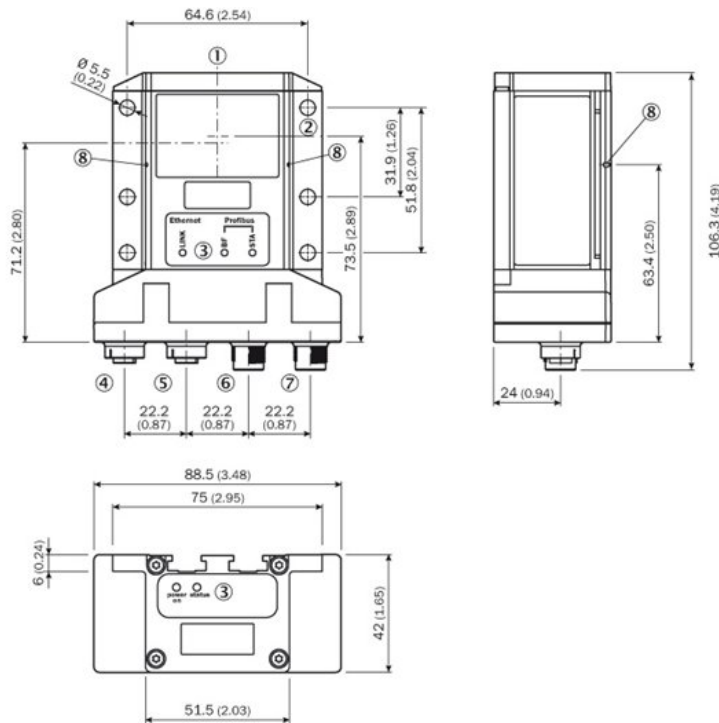
¹⁾ Switching outputs MF1 short-circuit protected ²⁾ Limit values, reverse-polarity protected ³⁾ May not exceed or fall short of V_S tolerances

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⁾: ≤ 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

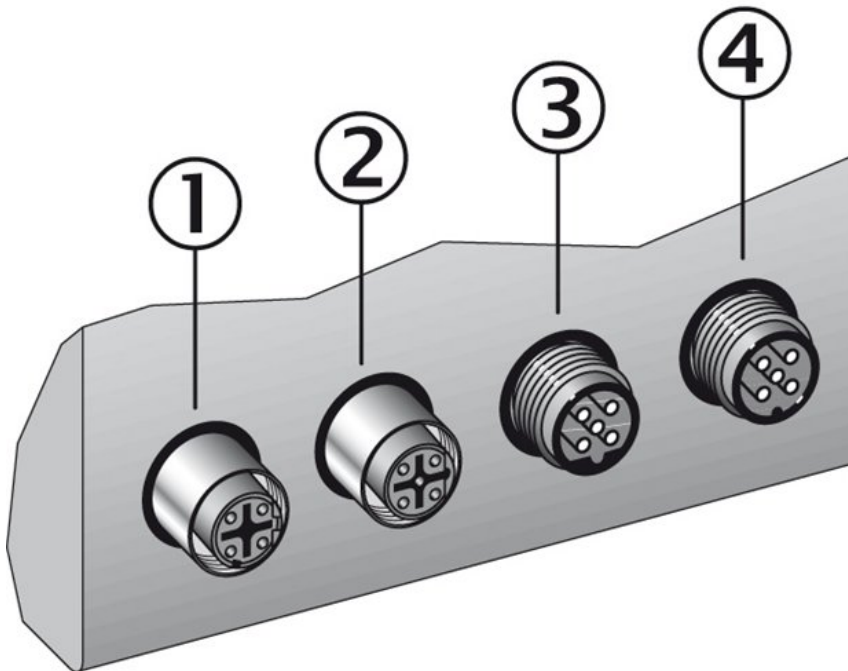
¹⁾ Temperatures < -20 °C with 5 min warm up time ²⁾ Max. 95 % humidity, non-condensing ³⁾ Typ. value at +25 °C ambient temperature

Dimensional drawing



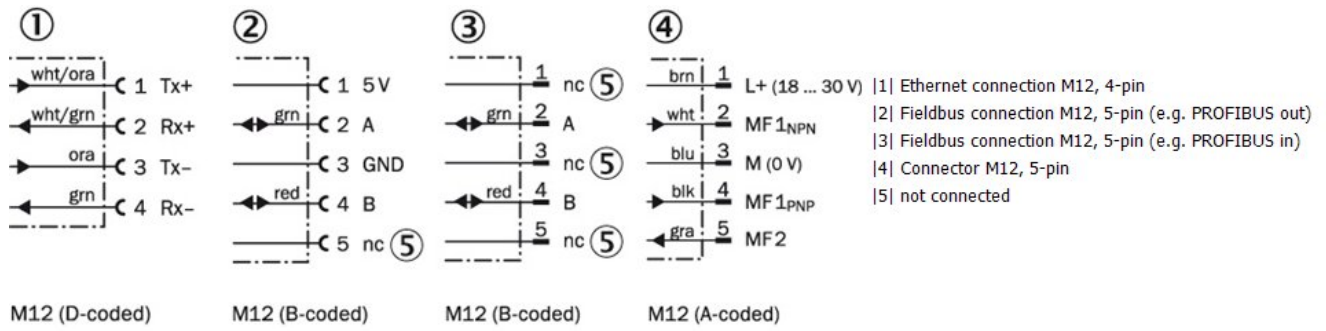
- |1| Reference axis position measurement
- |2| Mounting hole
- |3| Status LED [status]
- |4| Ethernet connection M12, 4-pin
- |5| Fieldbus connection M12, 5-pin (e.g. PROFIBUS out)
- |6| Fieldbus connection M12, 5-pin (e.g. PROFIBUS in)
- |7| Connector M12, 5-pin
- |8| Adjustment aid (slot)

Connection type



- |1| Ethernet connection M12, 4-pin
- |2| Fieldbus connection M12, 5-pin (e.g. PROFIBUS out)
- |3| Fieldbus connection M12, 5-pin (e.g. PROFIBUS in)
- |4| Connector M12, 5-pin

Connection diagram



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