



Linear measurement sensors OLM200

OLM200-1009



Model Name > [OLM200-1009](#)
Part No. > [1058126](#)

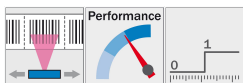


At a glance

- Integrated 2-port switch PROFINET interface
- 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 PROFINET
- Compatible to SPEEDCON™ connectors and standard M12 connectors
- Large temperature range from -30 °C to +60 °C

Your benefits

- High travel speed linked to precise positioning increases system efficiency and improves throughput
- Camera-based system with no moving parts increases the sensor's service life, thus reducing lifecycle costs considerably
- Fieldbus interfaces (PROFIBUS, PROFINET, and EtherNet/IP) offer highest flexibility and easiest system integration, hence saving costs for interface converters and protocol adaption
- Status bit for pre-failure notification and preventive maintenance eliminates unpredicted machine downtimes
- The large temperature range from -30°C to +60°C offers reliable use in many applications



Performance

Resolution:	0.1 mm, 1 mm, 10 mm, 100 mm
Repeatability ¹⁾ :	0.15 mm
Response time ²⁾ :	10 ms
Light source:	LED, red
Measurement range ³⁾ :	0 m ... 10,000 m
Bar code width:	30 mm
Sensing distance:	100 mm, ± 20 mm
Max. movement speed:	10 m/s
Accuracy of speed output:	± 5 mm/s
Output time:	2.5 ms

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

Interfaces

Data interface:	PROFINET IO/RT ¹⁾
Output type ²⁾ :	Multifunctional output MF1: PNP Multifunctional output MF1: NPN
Data transmission rate:	100 Mbit/s
Switching input:	Multifunctional input MF2

¹⁾ Conformance Class B, PN specification V2.25 ²⁾ 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 V _{pp}
Power consumption:	< 5.5 W
Initialization time:	10 s
Housing material:	Magnesium zinc
Weight:	Ca. 291 g

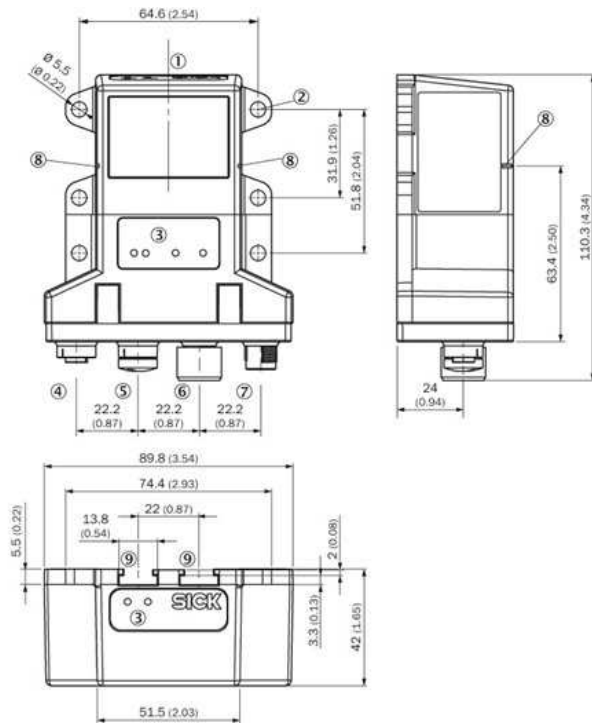
¹⁾ Switching outputs MF1 short-circuit protected ²⁾ Limit values, reverse-polarity protected ³⁾ May not exceed or fall below U_v tolerances

Ambient data

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

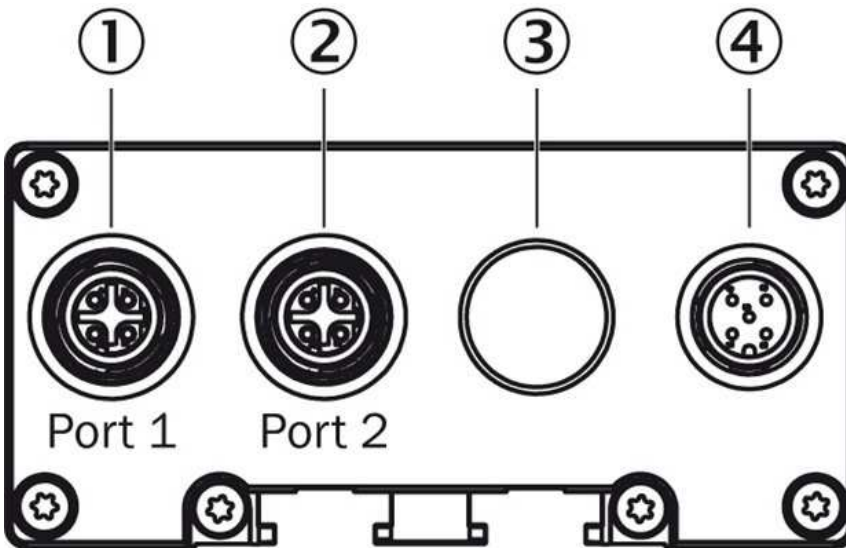
¹⁾ Temperatures < -20 °C with 5 min warm up time ²⁾ Max. 95 % humidity, non-condensing ³⁾ Typ. value at +25 °C ambient temperature

Dimensional drawing



- |1| Reference axis position measurement
- |2| Mounting holes
- |3| Status LED [status]
- |4| EtherNet port 1, socket M12, 4-pin
- |5| EtherNet port 2, socket M12, 4-pin
- |6| not connected
- |7| Connector M12, 5-pin
- |8| Adjustment aid (slot)
- |9| T-slot

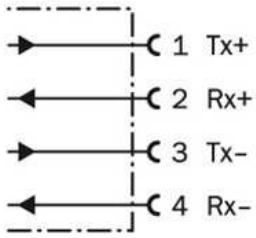
Connection type



- |1| EtherNet port 1, socket M12, 4-pin
- |2| EtherNet port 2, socket M12, 4-pin
- |3| not connected
- |4| Connector M12, 5-pin

Connection diagram

①/②

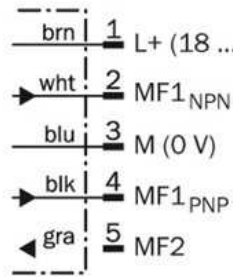


M12 (D-coded)

③

not connected

④



M12 (A-coded)

- |1| EtherNet, socket M12, 4-pin
- |2| EtherNet, socket M12, 4-pin
- |3| not connected
- |4| Connector M12, 5-pin

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