



OLM200-1002

OLM

OPTICAL LINEAR MEASUREMENT SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
OLM200-1002	1051658

Other models and accessories → www.sick.com/OLM

Detailed technical data

Safety-related parameters

MTTF_D (mean time to dangerous failure)	> 100 years
DC_{avg} (average diagnostic coverage)	0 %

Features

Measuring range	0 m ... 10,000 m ¹⁾
Resolution	0.1 mm, 1 mm, 10 mm, 100 mm
Repeatability	0.15 mm ²⁾
Response time	10 ms ³⁾
Output time	2.5 ms
Light source	LED, red
Accuracy of speed output	± 5 mm/s
Max. movement speed	7 m/s
Reading distance	100 mm, ± 20 mm
Barcode width	30 mm

¹⁾ Dependent on the set resolution and transfer protocol.

²⁾ Statistical error 3 s, no warm-up time necessary.

³⁾ Response time of digital output.

Interfaces

PROFIBUS DP	✓, DPV0
Digital input	Multifunctional input MF2
Digital output	
Number	1 ¹⁾

¹⁾ Via multifunctional output MF1.

²⁾ Outputs MF1 short-circuit protected.

Type	PNP / NPN
Function	Position, speed, control mark Q00 (off), Q01 (on), illumination on/off, service [failure (dirt/LED service life), no barcode tape, over/under temperature, out of measuring range 0 km > position > 10 km, internal error]
Maximum output current I _A	≤ 100 mA ²⁾

¹⁾ Via multifunctional output MF1.

²⁾ Outputs MF1 short-circuit protected.

Electronics

Supply voltage V _s	DC 18 V ... 30 V ¹⁾
Ripple	≤ 5 V _{pp} ²⁾
Power consumption	< 5.5 W
Initialization time	3 s
Enclosure rating	IP65
Protection class	III

¹⁾ Limit values, reverse-polarity protected.

²⁾ May not fall below or exceed U_y tolerances.

Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-2 / EN 61000-6-4
Ambient temperature, operation	-30 °C ... +60 °C ¹⁾
Ambient temperature, storage	-40 °C ... +75 °C ²⁾
Typ. Ambient light immunity	≤ 9,000 lx ³⁾
Vibration resistance	DIN/EN 60068-2-6, DIN/EN 60068-2-64
Shock resistance	DIN/EN 60068-2-27

¹⁾ Temperatures < -20 °C with 5 min warm-up time.

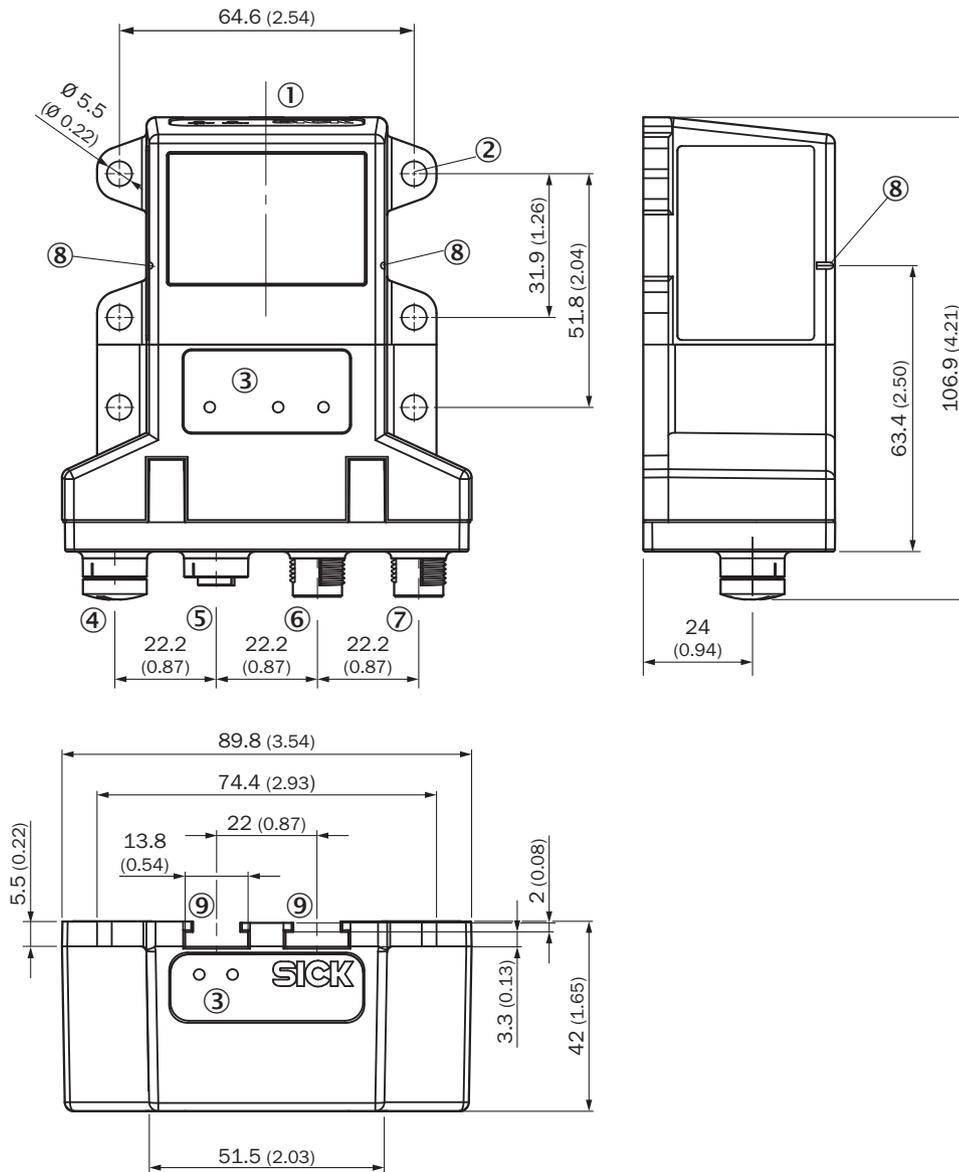
²⁾ Max. 95 % humidity, non-condensing.

³⁾ Typ. value at +25 °C ambient temperature.

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

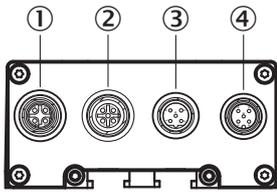
Dimensional drawing OLM200, PROFIBUS



Dimensions in mm (inch)

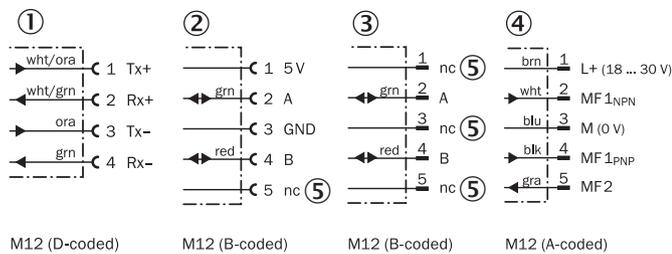
- ① Reference axis position measurement
- ② fixing hole
- ③ status LED [status]
- ④ Ethernet connection M12, 4-pin
- ⑤ fieldbus connection M12, 5-pin (e. g., PROFIBUS out)
- ⑥ Fieldbus connection M12, 5-pin (e.g. PROFIBUS in)
- ⑦ M12 device connector plug, 5-pin
- ⑧ Adjustment aid (slot)
- ⑨ T-slot

Pinouts OLM200-10x2



- ① M12 socket, 4-pin, Ethernet interface
- ② M12 socket, 5-pin, fieldbus connection (e.g. PROFIBUS out)
- ③ M12 plug, 5-pin, fieldbus connection (e.g. PROFIBUS in)
- ④ M12 male connector, 5-pin

Connection diagram



- 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 M12 device connector plug, 5-pin
- ⑤ Not assigned

Recommended accessories

Other models and accessories → www.sick.com/OLM

	Brief description	Type	part no.
Codes			
	<ul style="list-style-type: none"> Description: 30 mm, height: 30 mm, measuring range: 0 m ... 20 m Suitable for: OLM100/OLM200-1x0x 	Customer-specific bar code tape	5327812
	<ul style="list-style-type: none"> Description: 30 mm, height: 30 mm, measuring range: 0 m ... 20 m Suitable for: OLM100/OLM200-1x0x 	Customer-specific bar code tape	5327576
	<ul style="list-style-type: none"> Description: 30 mm, height: 30 mm, measuring range: 0 m ... 20 m Suitable for: OLM100/OLM200-1x0x 	Customer-specific bar code tape	5328960
	<ul style="list-style-type: none"> Description: 30 mm, height: 30 mm, measuring range: 0 m ... 20 m Suitable for: OLM100/OLM200-1x0x 	Customer-specific bar code tape	5323951
	<ul style="list-style-type: none"> Description: 30 mm, height: 30 mm, measuring range: 0 m ... 20 m Suitable for: OLM100/OLM200-1x0x 	Customer-specific bar code tape	5322556
Mounting systems			
	<ul style="list-style-type: none"> Description: Sliding nut set, M5, 4x Packing unit: 4 pieces Items supplied: Included in delivery 	Sliding nuts	2017550

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, B-coded • Connection type head B: Flying leads • Signal type: PROFIBUS DP • Cable: 5 m, 2-wire, PUR, halogen-free • Description: PROFIBUS DP, twisted pair, shielded • Connection systems: Flying leads • Application: Zones with oils and lubricants 	DOL-1205-G05MQ	6026006
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, angled, B-coded • Connection type head B: Flying leads • Signal type: PROFIBUS DP • Cable: 5 m, 2-wire, PUR, halogen-free • Description: PROFIBUS DP, twisted pair, shielded • Application: Zones with oils and lubricants, Drag chain operation 	DOL-1205-W05MQ	6041423
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, straight, B-coded • Signal type: PROFIBUS DP • Description: PROFIBUS DP, terminal resistor 	STE-END-Q	6021156
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 5-pin, angled, B-coded • Connection type head B: Flying leads • Signal type: PROFIBUS DP • Cable: 5 m, 2-wire, PUR, halogen-free • Description: PROFIBUS DP, twisted pair, shielded • Application: Zones with oils and lubricants, Drag chain operation 	STL-1205-W05MQ	6041426
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, angled, D-coded • Connection type head B: Male connector, RJ45, 8-pin, straight • Signal type: Ethernet • Cable: 2 m, 4-wire, CAT5, CAT5e, PUR, halogen-free • Description: Ethernet, shielded 	SSL-2J04-H02ME	6047911
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, straight, D-coded • Connection type head B: Male connector, RJ45, 4-pin, straight • Signal type: Ethernet, PROFINET • Cable: 2 m, 4-wire, PUR, halogen-free • Description: Ethernet, shielded, PROFINET • Application: Drag chain operation, Zones with oils and lubricants 	YM2D24-020P-N1MRJA4	2106182

SICK AT A GLANCE

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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