OLM200-1002

OLM

OPTICAL LINEAR MEASUREMENT SENSORS

SICK
Sensor Intelligence.

OLM200-1002 | OLM
OPTICAL LINEAR MEASUREMENT SENSORS

Illustration may differ
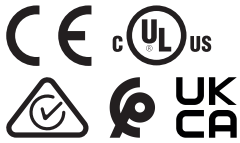
Ordering information

Type	part no.
OLM200-1002	1051658

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

Detailed technical data

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]
	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]

[1] Via multifunctional output MF1.

[2] Outputs MF1 short-circuit protected.

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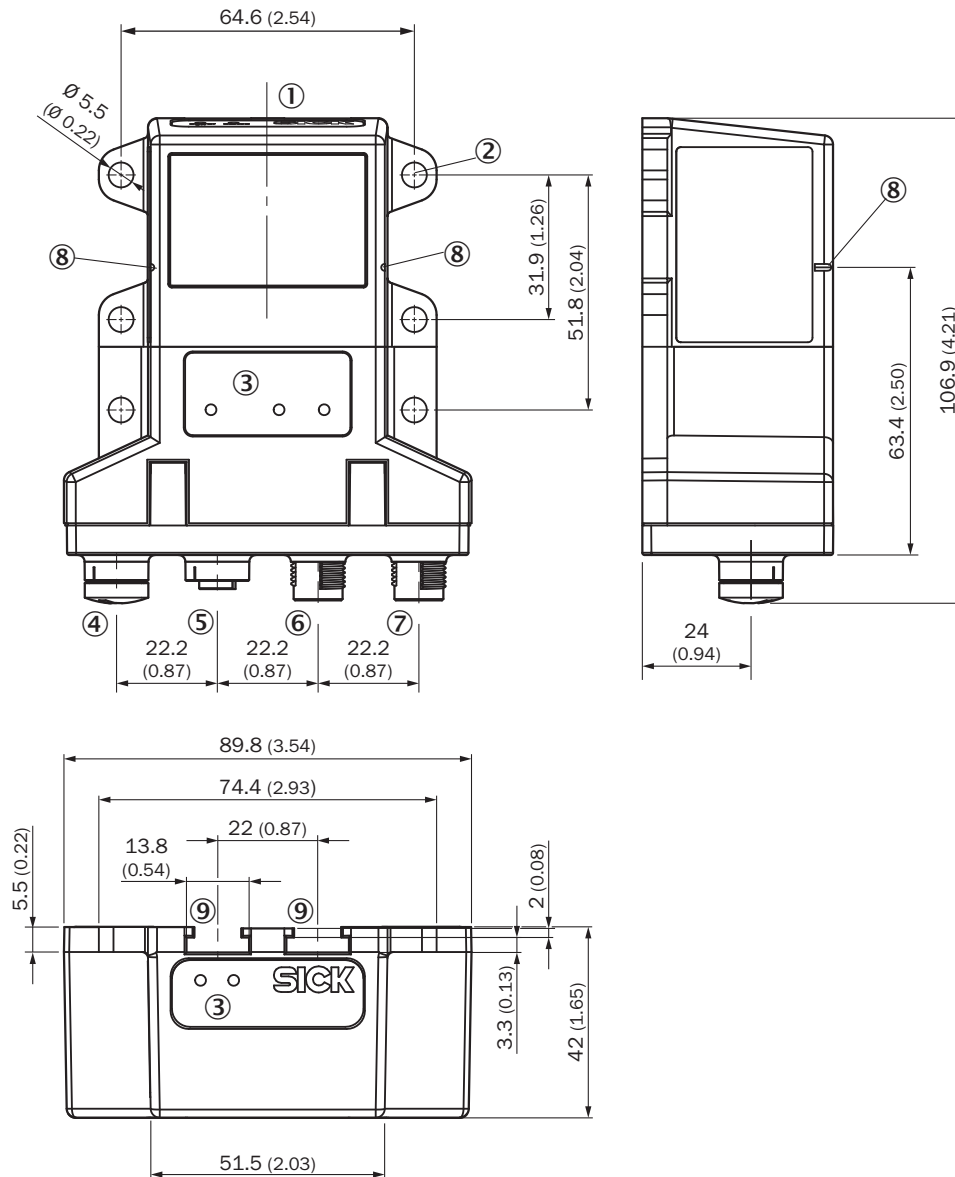
Dimensions in mm (inch)
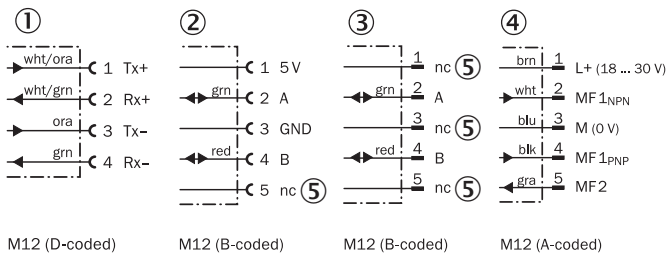
① Reference axis position measurement
② fixing hole
③ status LED [status]
④ Ethernet connection M12, 4-pin
⑤ fieldbus connection M12, 5-pin (e. g., PROFIBUS out)
⑥ Fieldbus connection M12, 5-pin (e.g. PROFIBUS in)
⑦ Connector M12, 5-pin
⑧ Adjustment aid (slot)
⑨ T-slot

Pinouts Socket 1 x M12, 4-pin 1 x M12, 5-pin connector 1 x M12, 5-pin
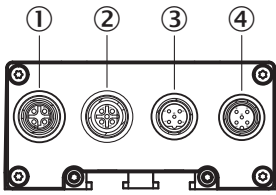
① Ethernet connection M12, 4-pin
② fieldbus connection M12, 5-pin (e. g., PROFIBUS out)
③ Fieldbus connection M12, 5-pin (e.g. PROFIBUS in)
④ Connector M12, 5-pin

Connection diagram

①	②	③	④
wht/ora — 1 Tx+	— 1 5 V	1 nc ⑤	brn — 1 L+ (18 ... 30 V)
wht/grn — 2 Rx+	grn — 2 A	grn — 2 A	wht — 2 MF 1$_{NPN}$
ora — 3 Tx–	— 3 GND	3 nc ⑤	blu — 3 M (0 V)
grn — 4 Rx–	red — 4 B	red — 4 B	blk — 4 MF 1$_{PNP}$
	— 5 nc ⑤	5 nc ⑤	gra — 5 MF 2

M12 (D-coded) M12 (B-coded) M12 (B-coded) M12 (A-coded)

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
⑤ Not assigned

Recommended accessories

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

Brief description	Type	part no.
Codes		
• **Product family:** Positioning codes • **Description:** 30 mm, height: 60 mm, measuring range: customer-specific	Customer-specific bar code tape	5327812
• **Product family:** Positioning codes • **Description:** 30 mm, height: 100 mm, measuring range: customer-specific	Customer-specific bar code tape	5327576
• **Product family:** Positioning codes • **Description:** 30 mm, height: 25 mm, measuring range: customer-specific	Customer-specific bar code tape	5328960
• **Product family:** Positioning codes • **Description:** 30 mm, height: 40 mm, measuring range: customer-specific	Customer-specific bar code tape	5323951
• **Product family:** Positioning codes • **Description:** 30 mm, height: 30 mm, measuring range: customer-specific	Customer-specific bar code tape	5322556
Mounting systems		
• **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			
	• **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
	• **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
	• **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
	• **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
	• **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
	• **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

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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."

WORLDWIDE PRESENCE:

Contacts and other locations –**www.sick.com**

SICK AG | Waldkirch | Germany | www.sick.com