



OLM100-1201S03

OLM

OPTICAL LINEAR MEASUREMENT SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
OLM100-1201S03	1071962

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
Repeatability	0.15 mm ²⁾
Response time	10 ms ³⁾
Light source	LED, red
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 σ.

³⁾ Response time of digital output.

Interfaces

SSI	✓	
Digital input	Multifunctional input MF1	
Digital output	Number	1 ¹⁾
	Type	Push-pull: 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 MF2.

²⁾ Outputs MF2 short-circuit protected.

Maximum output current I_A	$\leq 100 \text{ mA}^{2)}$
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1) Via multifunctional output MF2.

2) Outputs MF2 short-circuit protected.

Electronics

Supply voltage V_s	DC 10 V ... 30 V ¹⁾
Ripple	$\leq 5 V_{pp}^{2)}$
Power consumption	$< 5.5 \text{ W}$
Initialization time	$< 3 \text{ s}$
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	$-30 \text{ °C} \dots +60 \text{ °C}^{1)}$
Ambient temperature, storage	$-40 \text{ °C} \dots +75 \text{ °C}^{2)}$
Typ. Ambient light immunity	$\leq 9,000 \text{ lx}^{3)}$
Vibration resistance	DIN/EN 60068-2-6, DIN/EN 60068-2-64
Shock resistance	DIN/EN 60068-2-27

1) Temperatures $< -20 \text{ °C}$ with 5 min warm-up time.

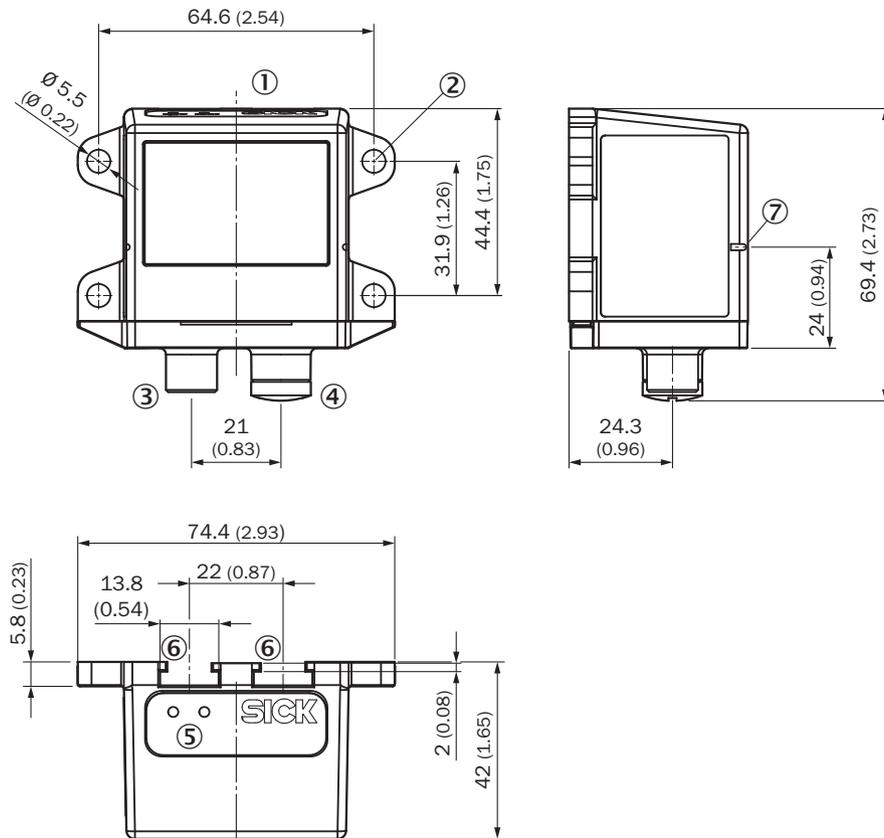
2) Max. 95 % humidity, non-condensing.

3) Typ. value at $+25 \text{ °C}$ 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)	✓

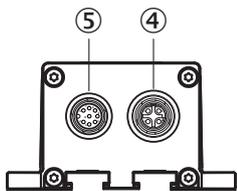
Dimensional drawing



Dimensions in mm (inch)

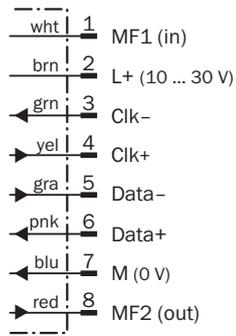
- ① Reference axis position measurement
- ② Mounting holes, \varnothing 5.5 mm
- ③ M12 device connector plug, 5-pin
- ④ Ethernet M12 female connector, 4-pin
- ⑤ status LED [status]
- ⑥ T-slot
- ⑦ Adjustment aid (slot)

Pinouts OLM100-12x1S03



- ④ M12 socket, 4-pin, Ethernet interface
- ⑤ M12 plug, 8-pin, SSI interface

Connection diagram



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	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	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	5322556
	<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
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: Male connector, M12, 8-pin, straight, A-coded • Description: Shielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.5 mm² 	STE-1208-GA	6028370
	<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: Female connector, M12, 8-pin, straight, A-coded • Signal type: Incremental, SSI • Cable: CAT5, CAT5e • Description: Incremental, shielded, SSI • Connection systems: IDC quick connection • Permitted cross-section: 0.14 mm² ... 0.34 mm² 	DOS-1208-GA01	6045001
	<ul style="list-style-type: none"> • Connection type head A: Flying leads • Connection type head B: Flying leads • Signal type: HIPERFACE[®] • Items supplied: By the meter • Cable: 8-wire, twisted pair, PUR, halogen-free • Description: HIPERFACE[®], shielded • Note: For DME with HIPERFACE[®] Interface 	LTG-3108-MW	6032456
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 8-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 8-wire, PVC • Description: Sensor/actuator cable, shielded • Application: Uncontaminated zones, Zones with chemicals 	YG2A28-050VA6XLEAX	2096219
	<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

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.”

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