



# OLM100-1201S03

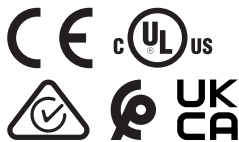
OLM

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](http://www.sick.com/OLM)

Detailed technical data

Features

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

<sup>1)</sup> Dependent on the set resolution and transfer protocol.

<sup>2)</sup> Statistical error 3  $\sigma$ .

<sup>3)</sup> Response time of digital output.

Interfaces

SSI	✓
Digital input	Multifunctional input MF1
Digital output	
Number	1 <sup>1)</sup>
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]
Maximum output current I <sub>A</sub>	≤ 100 mA <sup>2)</sup>

<sup>1)</sup> Via multifunctional output MF2.

<sup>2)</sup> Outputs MF2 short-circuit protected.

## Electronics

<b>Supply voltage <math>V_s</math></b>	DC 10 V ... 30 V <sup>1)</sup>
<b>Ripple</b>	$\leq 5 V_{pp}$ <sup>2)</sup>
<b>Power consumption</b>	< 5.5 W
<b>Initialization time</b>	< 3 s
<b>Enclosure rating</b>	IP65
<b>Protection class</b>	III

<sup>1)</sup> Limit values, reverse-polarity protected.

<sup>2)</sup> May not fall below or exceed  $U_V$  tolerances.

## Ambient data

<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-2 / EN 61000-6-4
<b>Ambient temperature, operation</b>	-30 °C ... +60 °C <sup>1)</sup>
<b>Ambient temperature, storage</b>	-40 °C ... +75 °C <sup>2)</sup>
<b>Typ. Ambient light immunity</b>	$\leq 9,000 \text{ lx}$ <sup>3)</sup>
<b>Vibration resistance</b>	DIN/EN 60068-2-6, DIN/EN 60068-2-64
<b>Shock resistance</b>	DIN/EN 60068-2-27

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

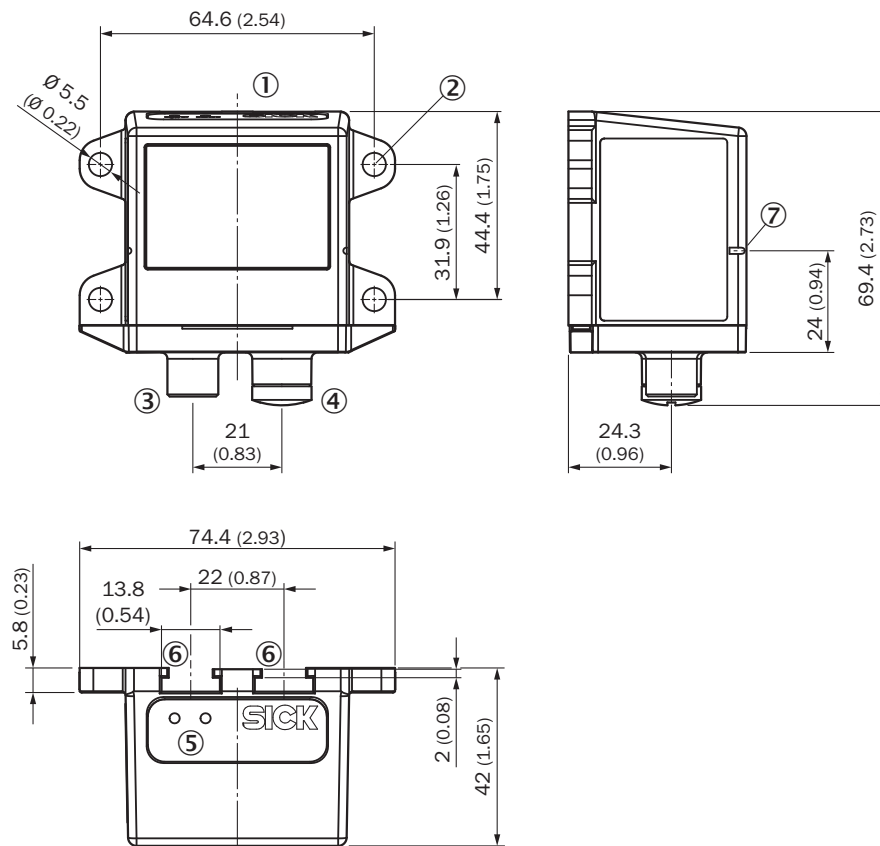
<sup>2)</sup> Max. 95 % humidity, non-condensing.

<sup>3)</sup> Typ. value at +25 °C ambient temperature.

## Certificates

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

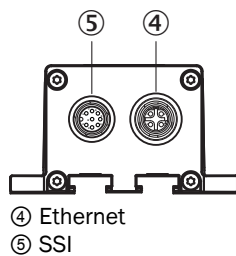
### Dimensional drawing



Dimensions in mm (inch)

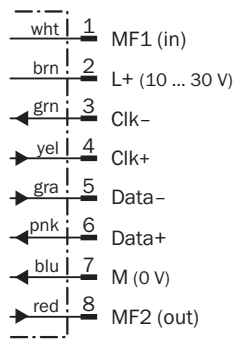
- ① Reference axis position measurement
- ② Mounting holes,  $\varnothing 5.5$  mm
- ③ Connector M12, 5-pin
- ④ Ethernet M12 female connector, 4-pin
- ⑤ status LED [status]
- ⑥ T-slot
- ⑦ Adjustment aid (slot)

### Pinouts



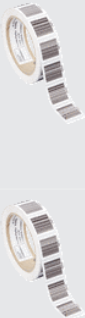

- ④ Ethernet
- ⑤ SSI


## Connection diagram



## Recommended accessories

Other models and accessories → [www.sick.com/OLM](http://www.sick.com/OLM)

	Brief description	Type	part no.
Codes			
	<ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> 30 mm, height: 25 mm, measuring range: customer-specific</li> </ul>	Customer-specific bar code tape	5328960
	<ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> 30 mm, height: 60 mm, measuring range: customer-specific</li> </ul>	Customer-specific bar code tape	5327812
	<ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> 30 mm, height: 100 mm, measuring range: customer-specific</li> </ul>	Customer-specific bar code tape	5327576
	<ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> 30 mm, height: 30 mm, measuring range: customer-specific</li> </ul>	Customer-specific bar code tape	5322556
	<ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> 30 mm, height: 40 mm, measuring range: customer-specific</li> </ul>	Customer-specific bar code tape	5323951
Mounting systems			
	<ul style="list-style-type: none"> <li><b>Description:</b> Sliding nut set, M5, 4x</li> <li><b>Packing unit:</b> 4 pieces</li> <li><b>Items supplied:</b> Included in delivery</li> </ul>	Sliding nuts	2017550

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Description:</b> Shielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> ≤ 0.5 mm²</li> </ul>	STE-1208-GA	6028370
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li>• <b>Connection type head B:</b> Male connector, RJ45, 8-pin, straight</li> <li>• <b>Signal type:</b> Ethernet</li> <li>• <b>Cable:</b> 2 m, 4-wire, CAT5, CAT5e, PUR, halogen-free</li> <li>• <b>Description:</b> Ethernet, shielded</li> </ul>	SSL-2J04-H02ME	6047911
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Signal type:</b> Incremental, SSI</li> <li>• <b>Cable:</b> CAT5, CAT5e</li> <li>• <b>Description:</b> Incremental, shieldedSSI</li> <li>• <b>Connection systems:</b> IDC quick connection</li> <li>• <b>Permitted cross-section:</b> 0.14 mm² ... 0.34 mm²</li> </ul>	DOS-1208-GA01	6045001
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Flying leads</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> HIPERFACE®</li> <li>• <b>Items supplied:</b> By the meter</li> <li>• <b>Cable:</b> 8-wire, twisted pair, PUR, halogen-free</li> <li>• <b>Description:</b> HIPERFACE®, shielded</li> <li>• <b>Note:</b> For DME with HIPERFACE® Interface</li> </ul>	LTG-3108-MW	6032456
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, angled, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 8-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YG2A28-050VA6XLEAX	2096219
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li> <li>• <b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li>• <b>Signal type:</b> Ethernet, PROFINET</li> <li>• <b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Ethernet, shielded, PROFINET</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>	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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