OLM100-1005

OLM

OPTICAL LINEAR MEASUREMENT SENSORS

SICK
Sensor Intelligence.

OLM100-1005 | OLM
OPTICAL LINEAR MEASUREMENT SENSORS

Ordering information

Type	part no.
OLM100-1005	1046580

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
Repeatability	1 mm [2]
Output time	5 ms
Light source	LED, red
Max. movement speed	4 m/s
Reading distance	100 mm, ± 20 mm
Barcode width	30 mm

[1] Dependent on the set resolution and transfer protocol.
[2] Statistical error 1 σ.

Interfaces

Serial	✔ , RS-485

Electronics

Supply voltage V_s	DC 10 V ... 30 V [1]
Ripple	≤ 5 V_{pp} [2]
Power consumption	< 3 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	≤ 5,000 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

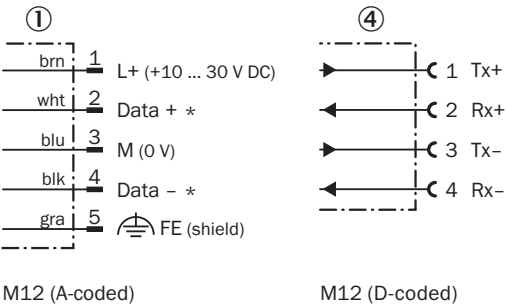|	
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓

Dimensional drawing
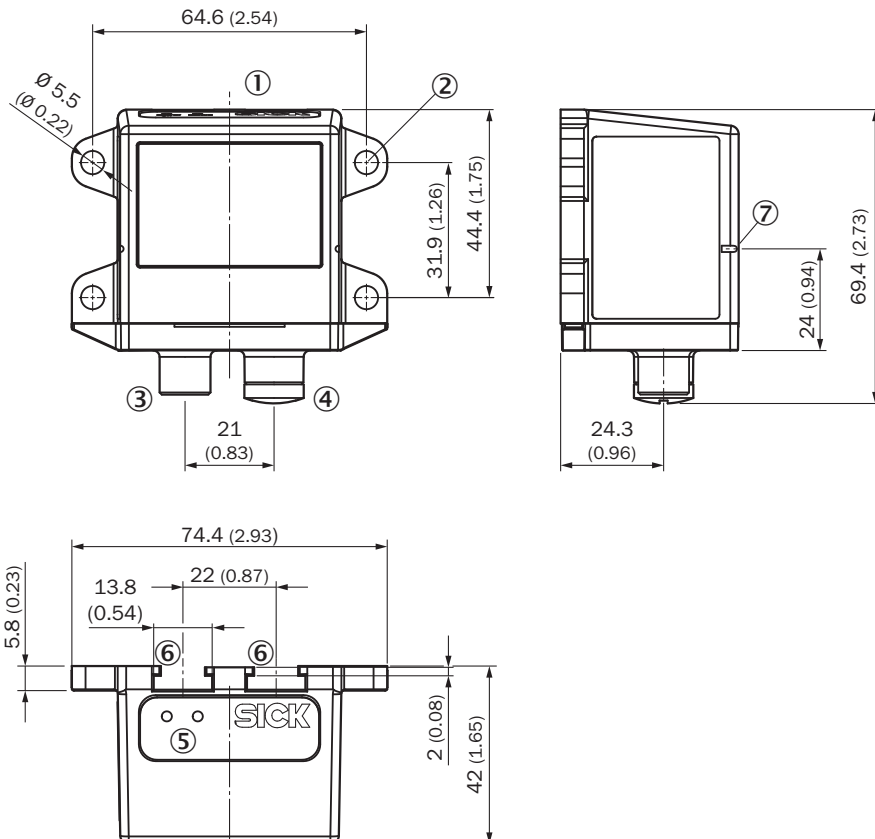
Dimensions in mm (inch)

① Reference axis position measurement
② Mounting holes, Ø 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 OLM100-10x5 1 x socket M12, 4-pin 1 x connector M12, 5-pin
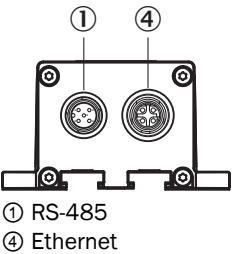
① RS-485
④ Ethernet

Connection diagram OLM100-10x5 1 x socket M12, 4-pin 1 x connector M12, 5-pin

①		
brn	1	L+ (+10 … 30 V DC)
wht	2	Data + *
blu	3	M (0 V)
blk	4	Data − *
gra	5	FE (shield)

④		
1	Tx+
2	Rx+
3	Tx−
4	Rx−

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

* Termination resistors integrated in sensor

① RS-485
④ Ethernet

Recommended accessories

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

	Brief description	Type	part no.
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:** Male connector, M12, 5-pin, straight, A-coded • **Signal type:** CANopen, DeviceNet™ • **Description:** CANopen, shielded, Head A: male connector, M12, 5-pin, straight, A coded, shielded, for cable diameter 4 mm ... 8 mm Head B: -DeviceNet™ • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	STE-1205-GA	6027533
• **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, Head A: male connector, M12, 4-pin, angled, D coded Head B: male connector, RJ45, 8-pin, straight Cable: PUR, halogen-free, shielded, 2 x 2 x 0.14 mm², Ø 6.4 mm	SSL-2J04-H02ME	6047911
• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A25-050UB6XLEAX	2095733
• **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, shieldedPROFINET • **Application:** Drag chain operation, Zones with oils and lubricants	YM2D24-020P-N1MRJA4	2106182
• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A25-020UB6XLEAX	2145583
• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 1 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A25-010UB6XLEAX	2145582
• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 0.6 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A25-C60UB6XLEAX	2145581

	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

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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