



## Linear measurement sensors OLM200, PROFINET IO/RT

OLM200-1009



**Model Name** > [OLM200-1009](#)  
**Part No.** > [1058126](#)

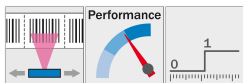


**At a glance**

- Integrated 2-port switch PROFINET interface
- Measurement range up to 10 km
- Adjustable resolution as low as 0.1 mm
- Maximum speed of 10 m/s
- Output of position and speed data, as well as service diagnostics via PROFINET
- Compatible to SPEEDCON™ connectors and standard M12 connectors
- Large temperature range from -30 °C to +60 °C

**Your benefits**

- Precise positioning with speeds of up to 10 m/s significantly increases throughput
- Camera-based system with no moving parts in combination with tough metal housing ensure increased lifetime and availability
- High ambient light safety due to selfadjusting LED illumination ensures reliable operation, thus increasing machine availability
- Large temperature range from -30 °C to +60 °C offers flexible and reliable use in many applications
- Status bit for pre-failure and preventive maintenance information eliminates unpredicted machine downtimes
- Single direction alignment, red lighting and compatibility to SPEEDCON™ connectors enable fast mounting, thus saving installation time and costs



**Performance**

Resolution:	0.1 mm, 1 mm, 10 mm, 100 mm
Repeatability <sup>1)</sup> :	0.15 mm
Response time <sup>2)</sup> :	10 ms
Output rate:	2.5 ms
Light source:	LED, red
Measurement range <sup>3)</sup> :	0 m ... 10,000 m
Bar code width <sup>4)</sup> :	30 mm
MTTFd:	> 100 years
Working distance:	100 mm, ± 20 mm (to bar code tape, 30 mm bar code width)
Max. movement speed:	10 m/s
Accuracy of speed output:	± 5 mm/s
Laser service life (MTTF at 25 °C):	100,000 h <sup>5)</sup>

<sup>1)</sup> Statistical error 3  $\sigma$ , no warm-up time required <sup>2)</sup> Response time of switching output <sup>3)</sup> Dependant on the set resolution and transfer protocol <sup>4)</sup> The bar code tape available from SICK always has a width of 30 mm. The bar code tape is available in two heights: 30 mm or 40 mm <sup>5)</sup> LED typ. MTTF at 25°C

## Interfaces

---

Data interface: PROFINET IO/RT <sup>1)</sup>  
Output type <sup>2)</sup>: Multifunctional output MF1: PNP  
Multifunctional output MF1: NPN  
Data transmission rate: 100 Mbit/s  
Switching input: Multifunctional input MF2

<sup>1)</sup> Conformance Class B, PN specification V2.25 <sup>2)</sup> Functions of switching output MF1 PNP/MF1 NPN: position, speed, control mark Q00 (off), Q01 (on), illumination on/off, service [prefailure (dirt/LED life time), no bar code tape, over/under temperature, out of range 0 km > position > 10 km, internal error]

## Mechanics/electronics

---

Output current I<sub>A</sub> <sup>1)</sup>: ≤ 100 mA  
Supply voltage V<sub>S</sub> <sup>2)</sup>: DC 18 V ... 30 V  
Ripple <sup>3)</sup>: ≤ 5 V<sub>pp</sub>  
Power consumption: < 5.5 W  
Initialization time: 10 s  
Housing material: Aluminum  
zinc  
Weight: Ca. 510 g

<sup>1)</sup> Switching outputs MF1 short-circuit protected <sup>2)</sup> Limit values, reverse-polarity protected <sup>3)</sup> May not exceed or fall short of V<sub>S</sub> tolerances

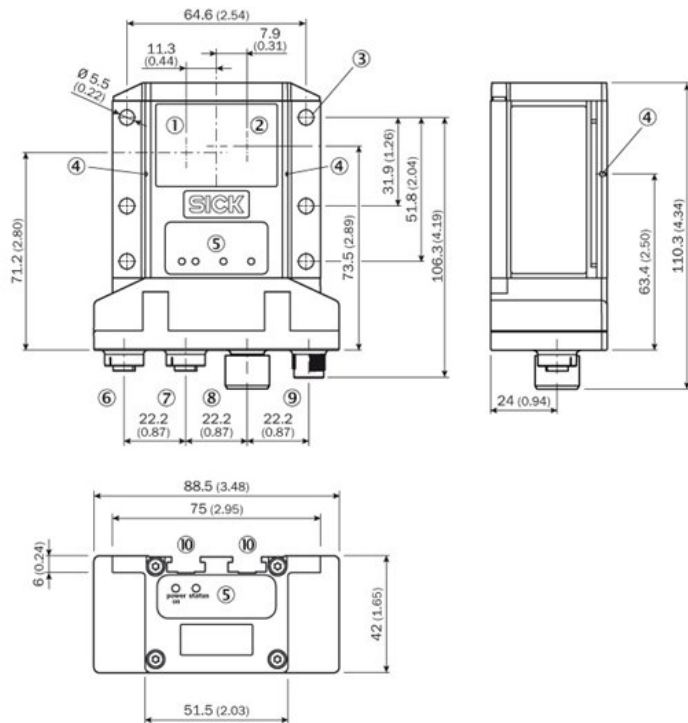
## Ambient data

---

Enclosure rating: IP 65 (EN 60 529)  
Protection class: III  
Ambient temperature <sup>1), 2)</sup>: Operation: -30 ... 60 °C, Storage: -40 ... 75 °C  
Typ. ambient light safety <sup>3)</sup>: ≤ 30,000 lx  
Vibration resistance: DIN/EN 60068-2-6, DIN/EN 60068-2-64  
Shock resistance: DIN/EN 60068-2-27  
Electromagnetic compatibility (EMC): EN 61000-6-2/EN 61000-6-4

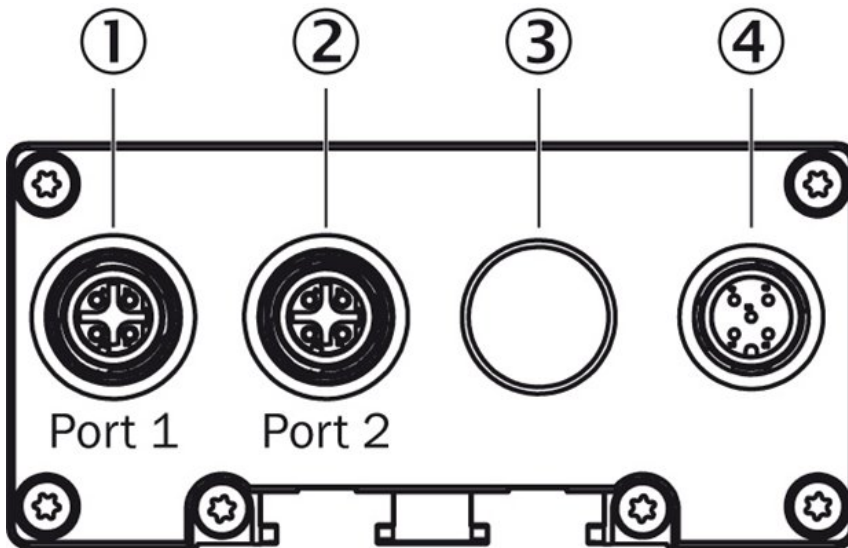
<sup>1)</sup> Temperatures < -20 °C with 5 min warm up time <sup>2)</sup> Max. 95 % humidity, non-condensing <sup>3)</sup> Typ. value at +25 °C ambient temperature

## Dimensional drawing



- |1| Center of optical axis, sender
- |2| Center of optical axis, receiver
- |3| Mounting holes
- |4| Adjustment aid (slot)
- |5| Status LED [status]
- |6| EtherNet port 1, socket M12, 4-pin
- |7| EtherNet port 2, socket M12, 4-pin
- |8| not connected
- |9| Connector M12, 5-pin
- |10| T-slot

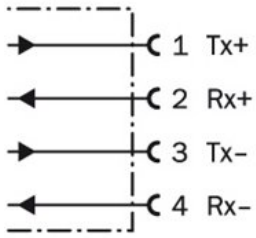
## Connection type



- |1| EtherNet port 1, socket M12, 4-pin
- |2| EtherNet port 2, socket M12, 4-pin
- |3| not connected
- |4| Connector M12, 5-pin

Connection diagram

①/②

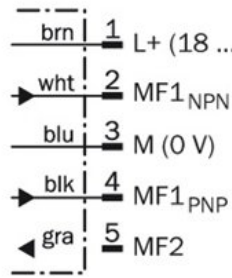


M12 (D-coded)

③

not connected

④



M12 (A-coded)

- |1| EtherNet, socket M12, 4-pin
- |2| EtherNet, socket M12, 4-pin
- |3| not connected
- |4| Connector M12, 5-pin

**Australia**

Phone +61 3 9457 0600  
1800 334 802 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail sac@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Ceská Republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail kundenservice@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6801000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 3358 1341  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederlands**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail admin@sicksgp.com.sg

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886-2-2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 8865 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 800-325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)