Online data sheet



# MLG10N-0290E10501

## MLG-2 ProNet

**MEASURING AUTOMATION LIGHT GRIDS**

SICK
Sensor Intelligence.



## Ordering information

| Type | Part no. |
|---|---|
| MLG10N-0290E10501 | 1217124 |

Other models and accessories ➜ www.sick.com/MLG-2_ProNet

## Detailed technical data

### Features

| | |
|---|---|
| **Version** | ProNet |
| **Technology** | Sender/receiver |
| **Minimum detectable object (MDO)** | 10 mm, 14 mm [1) 2) 3)] |
| **Beam separation** | 10 mm |
| **Number of beams** | 30 |
| **Detection height** | 290 mm |
| **Software features** | |
| Q1 | Presence detection |
| Address | – |
| Baud rate RS-485 | – |
| **Included with delivery** | 1 × sender<br>1 × receiver<br>4/6 x QuickFix brackets (6 x QuickFix brackets for monitoring heights above 2 m)<br>1 x mounting bracket for the fieldbus module<br>1 x Fieldbus module<br>1 × Quick Start Guide |

1) MDO min. detectable object at high measurement accuracy.
2) MDO min. detectable object for standard measurement accuracy.
3) Depending on beam separation without cross beam setting.

### Mechanics/electronics

| | |
|---|---|
| **Light source** | LED, Infrared light |
| **Housing design (light emission)** | Robust |
| **Wave length** | 850 nm |
| **Supply voltage $V_S$** | DC 18 V ... 30 V [1)] |
| **Power consumption sender** | 56.5 mA [2)] |

1) Without load.
2) , Without load with 24 V.
3) Operating in outdoor condition only with a external protection housing.

| | |
|---|---|
| **Power consumption receiver** | 126 mA [2] |
| **Ripple** | < 5 $V_{pp}$ |
| **Output current $I_{max.}$** | 100 mA |
| **Output load capacitive** | 100 nF |
| **Output load inductive** | 1 H |
| **Initialization time** | < 1 s |
| **Dimensions (W x H x D)** | 34 mm x 373.3 mm x 30.6 mm |
| **Housing material** | Aluminum |
| **Indication** | LED |
| **Enclosure rating** | IP65, IP67 [3] |
| **Circuit protection** | $U_V$ connections, reverse polarity protected, Output Q short-circuit protected, Interference pulse suppression |
| **Protection class** | III |
| **Weight** | 0.847 kg |
| **Front screen** | PMMA |
| **Option** | Nonexistent |

[1] Without load.
[2] , Without load with 24 V.
[3] Operating in outdoor condition only with a external protection housing.

## Performance

| | |
|---|---|
| **Maximum range** | 7 m [1] |
| **Minimum range** | ≥ 0 m |
| **Operating range** | 5 m |
| **Response time** | 3.6 ms [2] [3] |

[1] No reserve for environmental issue and deterioration of the diode.
[2] Without high speed.
[3] With resistive load.

## Interfaces

| | |
|---|---|
| **Interface** | EtherCAT® |

## Ambient data

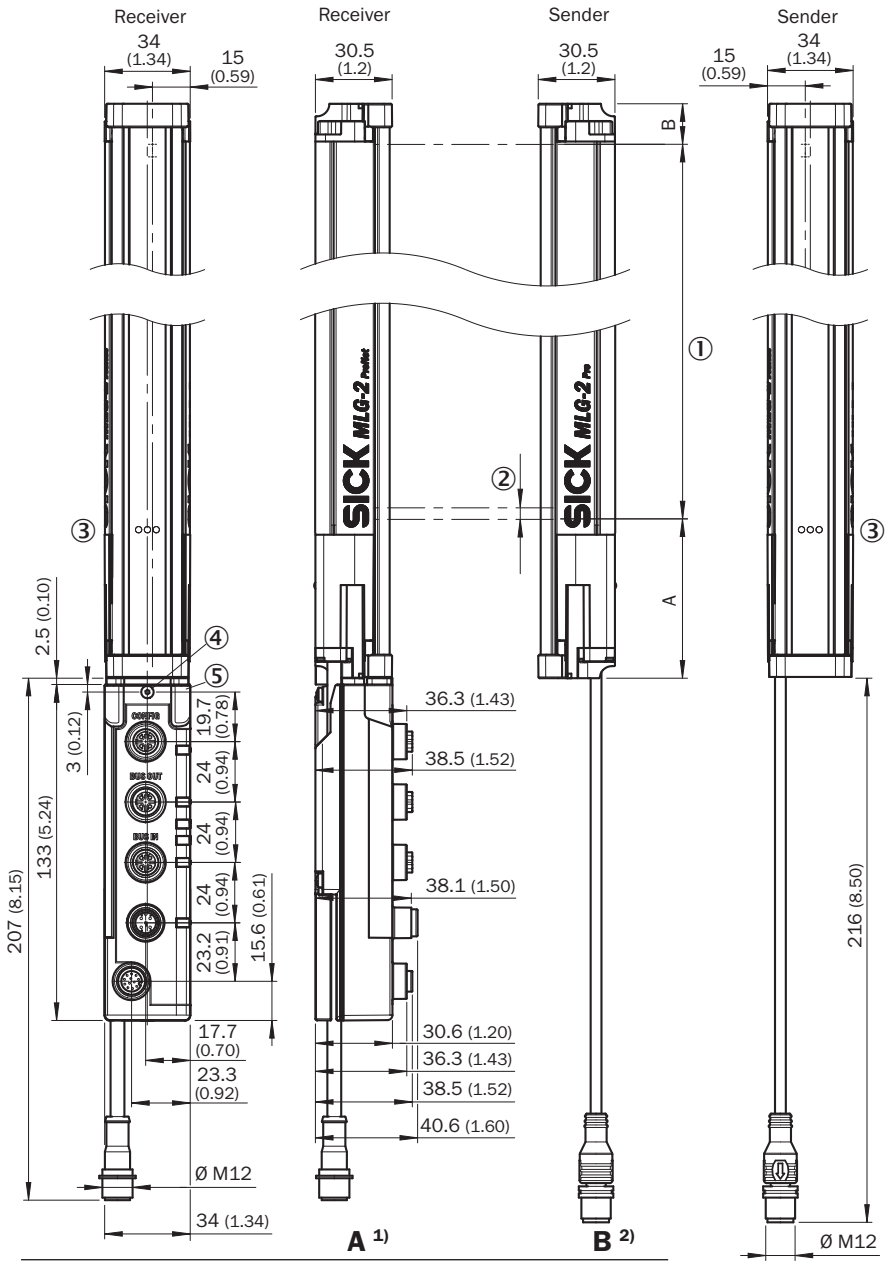
| | |
|---|---|
| **EMC** | EN 60947-5-2 |
| **Ambient operating temperature** | –30 °C +55 °C |
| **Ambient storage temperature** | –40 °C +70 °C |
| **Ambient light immunity** | Direct: 150,000 lx [1]<br>Indirect: 200,000 lx [2] |
| **Vibration resistance** | Sinusoidal oscillation 10-150 Hz 5 g |
| **Shock load** | Continuous shocks 10 g, 16 ms, 1000 shocks<br>Single shocks 15 g, 11 ms 3 per axle |
| **UL File No.** | NRKH.E181493 (Sensor)<br>NRAQ.E238799 (Fieldbus module) |

[1] Outdoor mode.
[2] Light resistance indirect.

## Classifications

| | |
|---|---|
| **ECl@ss 5.0** | 27270910 |
| **ECl@ss 5.1.4** | 27270910 |
| **ECl@ss 6.0** | 27270910 |
| **ECl@ss 6.2** | 27270910 |
| **ECl@ss 7.0** | 27270910 |
| **ECl@ss 8.0** | 27270910 |
| **ECl@ss 8.1** | 27270910 |
| **ECl@ss 9.0** | 27270910 |
| **ETIM 5.0** | EC002549 |
| **ETIM 6.0** | EC002549 |
| **UNSPSC 16.0901** | 39121528 |

## Dimensional drawing (Dimensions in mm (inch))



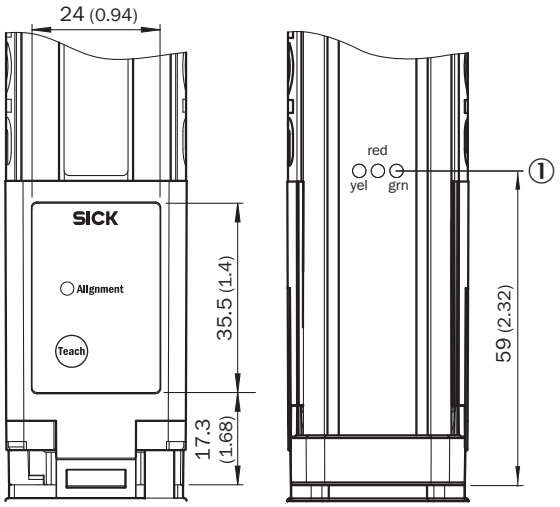

| | | |
|---|---|---|
| **Beam separation 2.5 mm** | 62.25 (2.45) | 17.15 (0.68) |
| **Beam separation 5 mm** | 63.3 (2.49) | 16.1 (0.63) |
| **Beam separation 10 mm** | 68.3 (2.69) | 16.1 (0.63) |
| **Beam separation 20 mm** | 68.3 (2.69)/78.3 (3.08) [3] | 16.1 (0.63) |
| **Beam separation 25 mm** | 83.3 (3.28) | 16.1 (0.63) |
| **Beam separation 30 mm** | 88.3 (2.69) | 16.1 (0.63) |
| **Beam separation 50 mm** | 108.3 (4.26) | 16.1 (0.63) |

[1] Distance: MLG-2 edge - first beam
[2] Distance: MLG-2 edge - last beam
[3] MLG20x-xx**40**: 68.3 mm
MLG20x-xx**80**: 78.3 mm

① Detection height (see optical performance)
② Beam separation (RM)
③ Status indicator: green, yellow, red LEDs
④ Safty screw M4; turning moment 0,5 Nm

⑤ For thread bold M4; turning moment 0,5 Nm

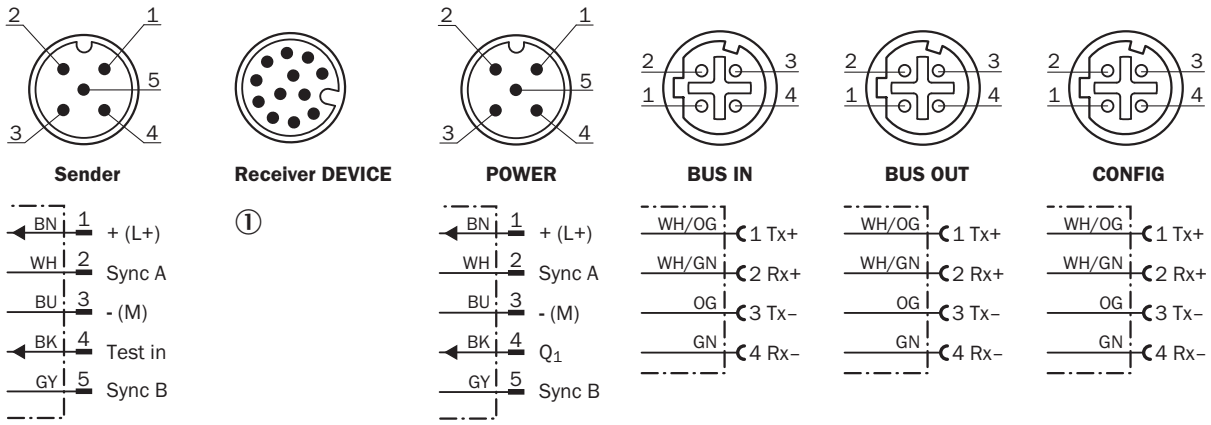
## Adjustments




① Status indicator: green, yellow, red LEDs

## Connection type and diagram

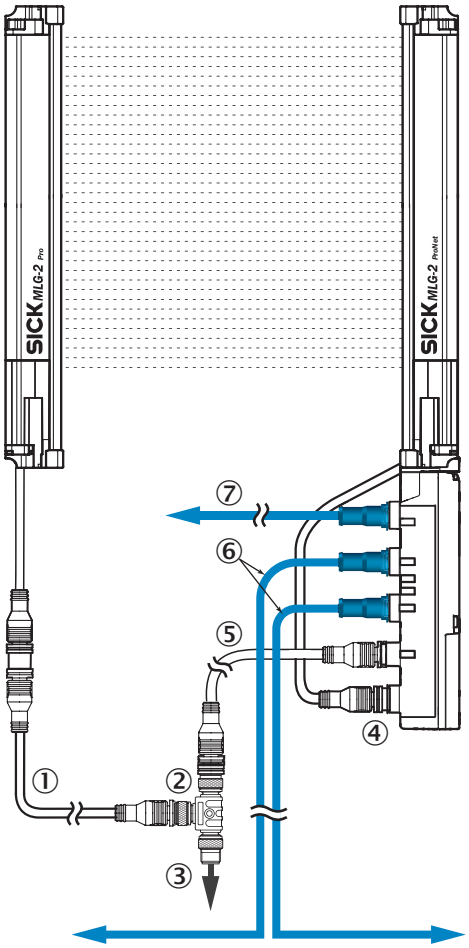
PROFINET, EtherCAT®, EtherNet/IP




① *Connection to fieldbus module*

## Connection type

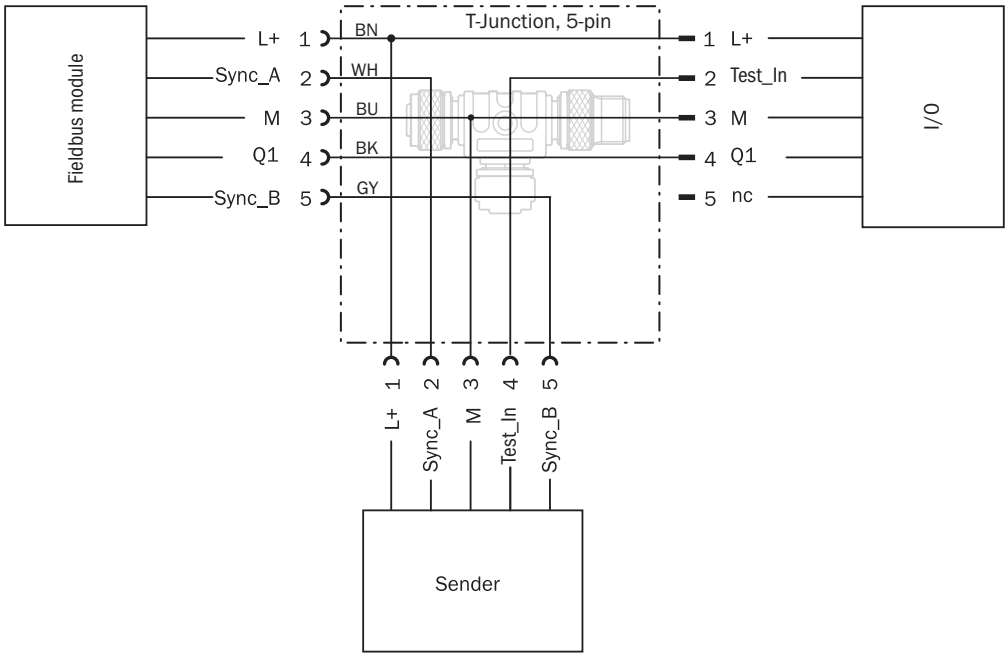
Ethernet




① Connection cable receiver (DSL-1205-GxxMC)
② T-piece
③ Connection cable (DOL-1205-GxxM)
④ Connection receiver “DEVICE”
⑤ Connection cable “POWER” (DSL-1205-GxxMC)
⑥ Ethernet Connection cable “BUS IN, BUS OUT”
⑦ Ethernet connection cable “CONFIG”

## Connection diagram

T-piece




## Recommended accessories

Other models and accessories ➜ www.sick.com/MLG-2_ProNet

| | Brief description | Type | Part no. |
|---|---|---|---|
| Terminal and alignment brackets | | | |
|  | Bracket for external mounting of the fieldbus module, 1 x angle holder and 1 x screw M5 x 6-8.8, Stainless steel V2A (1.4301) | BEF-WN-FBM-SET1 | 2082322 |
| Adapters and distributors | | | |
|  | | SBO-02G12-SM | 6029305 |
| Plug connectors and cables | | | |
|  | Head A: male connector, M12, 4-pin, straight, D-coded<br>Head B: male connector, RJ45, 8-pin, straight<br>Cable: Ethernet, twisted pair, PUR, halogen-free, shielded, 5 m | YM2D24-050EA1MRJA4 | 6034415 |
|  | Head A: male connector, M12, 4-pin, D-coded<br>Head B: male connector, M12, 4-pin, D-coded<br>Cable: Ethernet, twisted pair, PUR, halogen-free, shielded, 5 m | YM2D24-050EA2M2D24 | 6034422 |

# 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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