



# MLG50A-0850R10501

MLG-2 Pro

MEASURING AUTOMATION LIGHT GRIDS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
MLG50A-0850R10501	1216402

Other models and accessories → [www.sick.de/MLG-2\\_Pro](http://www.sick.de/MLG-2_Pro)



### Detailed technical data

#### Features

<b>Version</b>	Pro
<b>Technology</b>	Sender/receiver
<b>Minimum detectable object (MDO)</b>	50 mm, 54 mm <sup>1) 2) 3)</sup>
<b>Beam separation</b>	50 mm
<b>Number of beams</b>	≥ 18
<b>Detection height</b>	850 mm
<b>Software features</b>	Q1: presence detection Q2 / IN: Teach-in Q3: presence detection Q4 / IN2: presence detection Teach: Standard mode

<sup>1)</sup> MDO min. detectable object at high measurement accuracy.

<sup>2)</sup> MDO min. detectable object for standard measurement accuracy.

<sup>3)</sup> Depending on beam separation without cross beam setting.

#### Performance

<b>Maximum range</b>	7 m <sup>1)</sup>
<b>Minimum range</b>	≥ 0 mm
<b>Working range</b>	5 m
<b>Response time</b>	≥ 3.6 ms <sup>2) 3)</sup>

<sup>1)</sup> No reserve for environmental issue and deterioration of the diode.

<sup>2)</sup> Without high speed.

<sup>3)</sup> With resistive load.

#### Interfaces

<b>Connection type</b>	Male connector M12, 8-pin
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<b>IO-Link</b>	✓
<b>Data interface</b>	4 x Q (IO-Link)
<b>Fieldbus, industrial network</b>	IO-Link
<b>Type of fieldbus integration</b>	Integrated in the device

## Mechanics/electronics

<b>Wave length</b>	850 nm
<b>Supply voltage <math>V_s</math></b>	DC 18 V ... 30 V <sup>1)</sup>
<b>Power consumption sender</b>	$\geq 55.9 \text{ mA}$ <sup>2)</sup>
<b>Power consumption receiver</b>	$\geq 123.6 \text{ mA}$ <sup>2)</sup>
<b>Ripple</b>	$< 5 V_{pp}$
<b>Output current <math>I_{max}</math></b>	$\leq 100 \text{ mA}$
<b>Output load capacitive</b>	100 nF
<b>Output load inductive</b>	1 H
<b>Initialization time</b>	$< 1 \text{ s}$
<b>Dimensions (W x H x D)</b>	34 mm x 973.3 mm x 30.6 mm
<b>Housing material</b>	Aluminum
<b>Indication</b>	LED
<b>Enclosure rating</b>	IP 65, IP 67
<b>Circuit protection</b>	$U_V$ connections, reverse polarity protected, Output Q short-circuit protected, Interference pulse suppression
<b>Weight</b>	$\geq 2.047 \text{ kg}$
<b>Front screen</b>	PMMA
<b>Option</b>	Nonexistent

<sup>1)</sup> Without load.

<sup>2)</sup> Without load with 24 V.

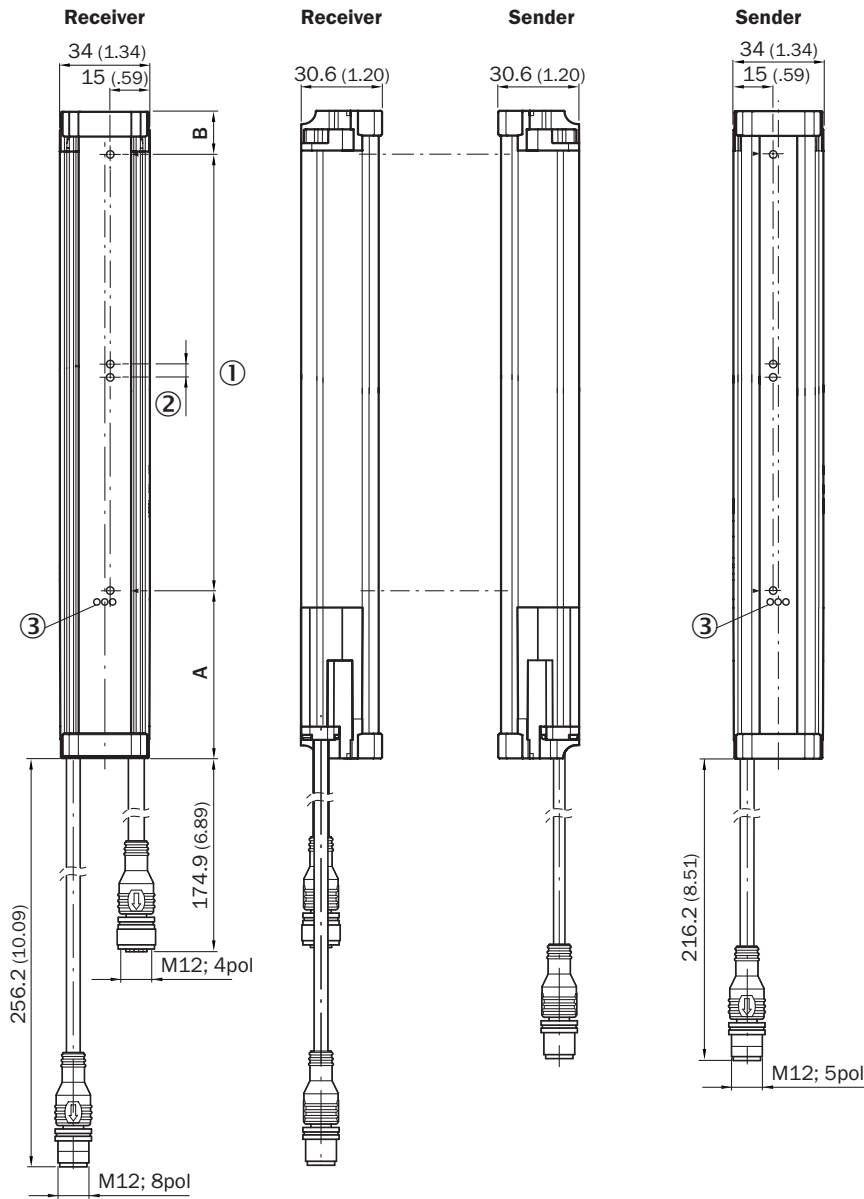
## Ambient data

<b>Protection class</b>	III
<b>EMC</b>	EN 60947-5-2
<b>Ambient temperature</b>	Operation: $-30 \text{ }^\circ\text{C} \dots +55 \text{ }^\circ\text{C}$ Storage: $-40 \text{ }^\circ\text{C} \dots +70 \text{ }^\circ\text{C}$
<b>Ambient light immunity</b>	Direct: $150,000 \text{ lx}$ <sup>1)</sup> Indirect: $150,000 \text{ lx}$ <sup>2)</sup>
<b>Vibration resistance</b>	Sinusoidal oscillation 10-150 Hz 5 g
<b>Shock load</b>	Continuous shocks 10 g, 16 ms, 1000 shocks Single shocks 15 g, 11 ms 3 per axle

<sup>1)</sup> Outdoor mode.

<sup>2)</sup> Light resistance indirect.

Dimensional drawing (Dimensions in mm (inch))



	<b>A</b> <sup>1)</sup>	<b>B</b> <sup>1)</sup>
<b>Beam separation 2.5 mm</b>	62.25 (2.45)	17.25 (2.45)
<b>Beam separation 5 mm</b>	63.3 (2.49)	16.1 (0.63)
<b>Beam separation 10 mm</b>	68.3 (2.69)	16.1 (0.63)
<b>Beam separation 25 mm</b>	83.3 (3.28)	16.1 (0.63)
<b>Beam separation 50 mm</b>	108.3 (4.26)	16.1 (0.63)

<sup>1)</sup> Distance: MLG-2 edge - first beam

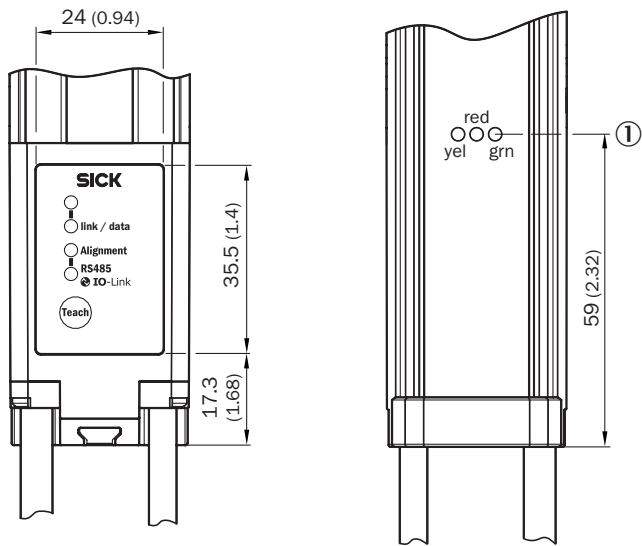
<sup>2)</sup> Distance: MLG-2 edge - last beam

① Detection height (see optical performance)

② Beam separation (RM)

③ Status indicator: green, yellow, red LEDs

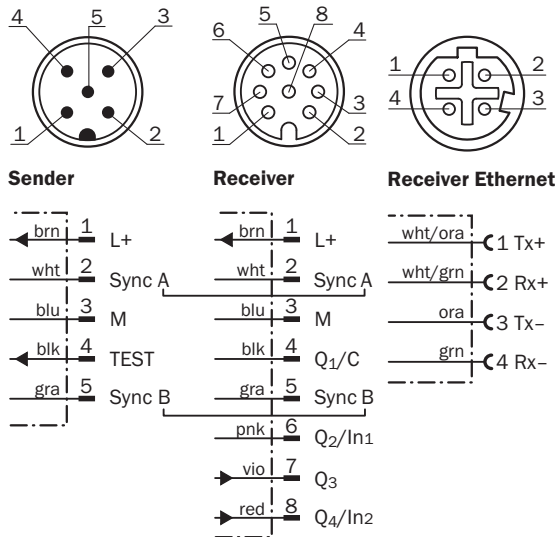
### Adjustments



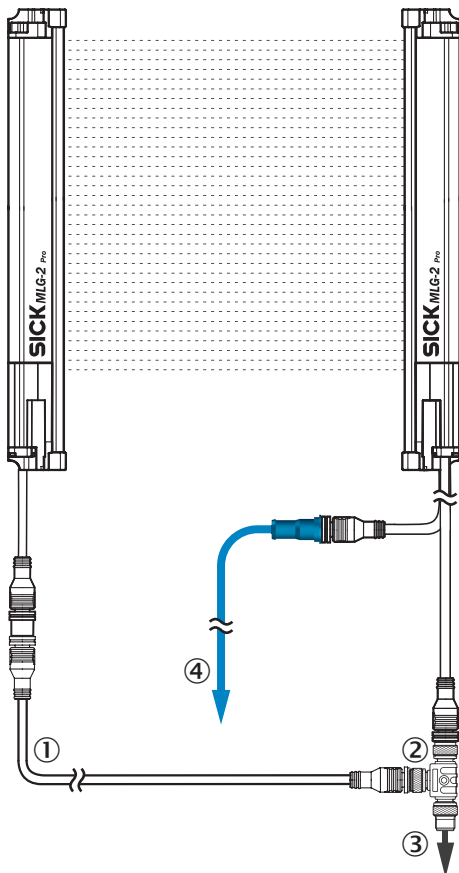
① Status indicator: green, yellow, red LEDs

### Connection type and diagram

Connector M12, 5/8-pin, switching outputs Q






### Connection type








- ① Connection cable receiver (DSL-1205-GxxMC)
- ② T-piece
- ③ Connection cable (DOL-1205-GxxM/DOL-1208-GxxM)
- ④ Ethernet Connection cable

### Recommended accessories

Other models and accessories → [www.sick.de/MLG-2\\_Pro](http://www.sick.de/MLG-2_Pro)

	Brief description	Type	Part no.
<b>Adapters and distributors</b>			
	Male connector M12, 8-pin, to 1 x female connector M12, 8-pin, to 1 x female connector M12, 5-pin, for connecting of a PLC	SBO-02F12-SM1	6053172
	Male connector M12, 5-pin, to 1 x female connector M12, 8-pin, to 1 x female connector M12, 5-pin, for connecting on IO-Link-Master	SBO-02F12-SM2	6053283
<b>Modules and gateways</b>			
	IO-Link version V1.1, Port class 2, PIN 2, 4, 5 galvanically connected, Supply voltage 18 V DC ... 32 V DC (limit values, operation in short-circuit protected network max. 8 A)	IOLP2ZZ-M3201 (SICK Memory Stick)	1064290
	IO-Link V1.1 Class A port, USB2.0 port, optional external power supply 24V / 1A	IOLA2US-01101 (SiLink2 Master)	1061790

	Brief description	Type	Part no.
	EtherCAT IO-Link Master, IO-Link V1.1, power supply via 7/8" cable 24 V / 8 A, fieldbus connection via M12 cable	IOLG2EC-03208R01 (IO-Link Master)	6053254
	EtherNet/IP IO-Link Master, IO-Link V1.1, power supply via 7/8" cable 24 V / 8 A, fieldbus connection via M12-cable	IOLG2EI-03208R01 (IO-Link Master)	6053255
	PROFINET IO-Link Master, IO-Link V1.1, Class A port, power supply via 7/8" cable 24 V / 8 A, fieldbus connection via M12 cable	IOLG2PN-03208R01 (IO-Link Master)	6053253
<b>Plug connectors and cables</b>			
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PVC, unshielded, 5 m	DOL-1205-G05M	6009868
	Head A: female connector, M12, 8-pin, straight Head B: cable Cable: special color code, PVC, shielded, 2 m	DOL-1208-G02MF	6020663
	Head A: female connector, M12, 8-pin, straight Head B: cable Cable: special color code, PVC, shielded, 5 m	DOL-1208-G05MF	6020664
	Head A: female connector, M12, 8-pin, straight Head B: cable Cable: special color code, PVC, shielded, 10 m	DOL-1208-G10MF	6048434
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: male connector, M12, 5-pin, straight, A-coded Cable: digital I/Os, drag chain use, PUR, halogen-free, unshielded, 5 m	DSL-1205-G05MC	6029282
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 8-pin, straight Cable: Ethernet, drag chain use, PUR, shielded, 2 m	SSL-2J04-G02ME	6034414

## 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.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)