

MLG50A-1000R10801

MLG-2

MEASURING AUTOMATION LIGHT GRIDS





Ordering information

Туре	Part no.
MLG50A-1000R10801	1219199

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

Illustration may differ



Detailed technical data

Features

reatures	
Device version	Pro - Advanced functionality
Sensor principle	Sender/receiver
Minimum detectable object (MDO)	50 mm, 54 mm ^{1) 2) 3)}
Beam separation	50 mm
Type of synchronization	Cable
Number of beams	21
Detection height	1,000 mm
Software features (default)	
Q_1	Presence detection
Q2 / IN	Teach input
Q ₃	Presence detection
Q4 / IN2	Presence detection
Teach	Standard mode
Operating mode	
Standard	✓
Transparent	✓
Dust- and sunlight-resistant	✓
Function	
Cross beam	
Beam blanking	✓

 $^{^{1)}\,\}mathrm{MDO}$ min. detectable object at high measurement accuracy.

²⁾ MDO min. detectable object for standard measurement accuracy.

 $^{^{\}rm 3)}$ Depending on beam separation without cross beam setting.

High measurement accuracy	✓
Applications Switching output	Object recognition/object width Object recognition Height classification Hole detection/hole size Outside dimension/inside dimension Object position Hole position Zone definition
Data interface	Object detection Hole detection Object height measurement Measurement of external dimension Measurement of inside dimension Measurement of object position Measurement of hole position
Included with delivery	$1\times sender$ $1\times receiver$ $4/6\times QuickFix$ brackets for monitoring heights above 2 m) $1\times Quick$ Start Guide

 $^{^{1)}}$ MDO min. detectable object at high measurement accuracy.

Mechanics/electronics

Light source	LED, Infrared light
Wave length	850 nm
Supply voltage $V_{\rm s}$	DC 19.2 V 28.8 V ¹⁾
Power consumption sender	56.05 mA ²⁾
Power consumption receiver	124.2 mA ²⁾
Ripple	< 5 V _{pp}
Output current I _{max.}	100 mA
Output load, capacitive	100 nF
Output load, Inductive	1H
Initialization time	<1s
Switching output	Push-pull: PNP/NPN
Connection type	Male connector M12, 5-pin, 0.22 m Male connector M12, 8-pin, 0.27 m M12 female connector, 4-pin, D-coded, 0.19 m
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

¹⁾ Without load.

²⁾ MDO min. detectable object for standard measurement accuracy.

³⁾ Depending on beam separation without cross beam setting.

²⁾ Without load with 24 V.

³⁾ Operating in outdoor condition only with a external protection housing.

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Weight	2.349 kg
Front screen	PMMA
Option	None
UL File No.	NRKH.E181493

¹⁾ Without load.

Performance

Maximum range	12 m ¹⁾
Minimum range	≥ 0 m
Operating range	8.5 m
Response time	3.6 ms ²⁾

 $^{^{1)}}$ No reserve for environmental issue and deterioration of the diode.

Communication interface

IO-Link	√ , IO-Link V1.1
Data transmission rate	230,4 kbit/s (COM3)
Maximum cable length	20 m
Cycle time	2.3 ms
VendorID	26
DeviceID HEX	800068
DeviceID DEC	8388712
Process data length	32 Byte (TYPE_2_V) ¹⁾
Inputs/outputs	4 x Q (IO-Link)
Digital output	$Q_1 \dots Q_4$
Number	4
Digital input	ln_1 , ln_2
Number	2

¹⁾ With an IO-Link master with V1.0, fall back to interleaved mode (consisting of TYPE_1_1 (ProcessData) and TYPE_1_2 (On-request Data)).

Ambient data

Shock resistance	Continuous shocks 10 g, 16 ms, 1000 shocks Single shocks 15 g, 11 ms 3 per axle
Vibration resistance	Sinusoidal oscillation 10-150 Hz 5 g
EMC	EN 60947-5-2
Ambient light immunity	Direct: 150,000 lx ¹⁾ Indirect: 200,000 lx ²⁾
Ambient operating temperature	-30 °C +55 °C
Ambient temperature, storage	-40 °C +70 °C

¹⁾ Outdoor mode.

²⁾ Without load with 24 V.

 $^{^{}m 3)}$ Operating in outdoor condition only with a external protection housing.

²⁾ Without high speed.

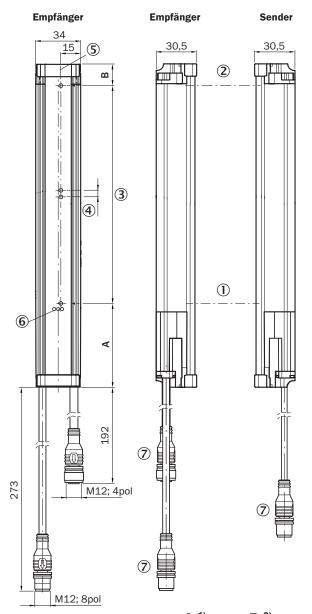
 $^{^{2)}}$ Light resistance indirect.

Smart Task

Smart Task name	Base logics
Classifications	
ECLASS 5.0	27270910
ECLASS 5.1.4	27270910
ECLASS 6.0	27270910
ECLASS 6.2	27270910
ECLASS 7.0	27270910
ECLASS 8.0	27270910
ECLASS 8.1	27270910
ECLASS 9.0	27270910
ECLASS 10.0	27270910
ECLASS 11.0	27270910
ECLASS 12.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
UNSPSC 16.0901	39121528

Dimensional drawing (Dimensions in mm (inch))

Dimensional drawing



Sender			
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	A 1)	$\mathbf{B}^{2)}$
Strahlabstand 2,5 mm	62,25	17,15
Strahlabstand 5 mm	63,3	16,1
Strahlabstand 10 mm	68,3	16,1
Strahlabstand 20 mm	68,3/78,3 ³⁾	16,1
Strahlabstand 25 mm	83,3	16,1
Strahlabstand 30 mm	88,3	16,1
Strahlabstand 50 mm	108,3	16,1

Abstand: MLG-2 Kante - erster Strahl
 Abstand: MLG-2 Kante - letzter Strahl
 MLG20x-xx40: 68,3 mm MLG20x-xx80: 78,3 mm

① First beam

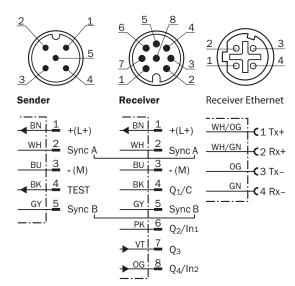
② Last beam

³ Detection height (see technical data)

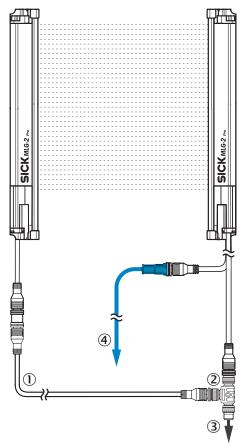
- ④ Beam separation
- ⑤ Optical axis
- Status indicator: green, yellow, red LEDs
- ⑦ Connection

Connection type and diagram

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



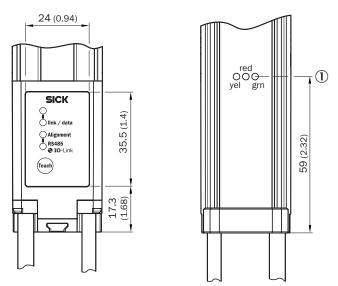
Pinouts



- ① Connection cable receiver (2096010)
- 2 T-piece3 Connection cable (6020664)
- Ethernet Connection cable

Adjustments

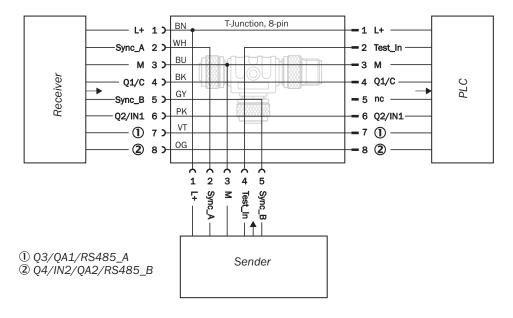
Adjustments



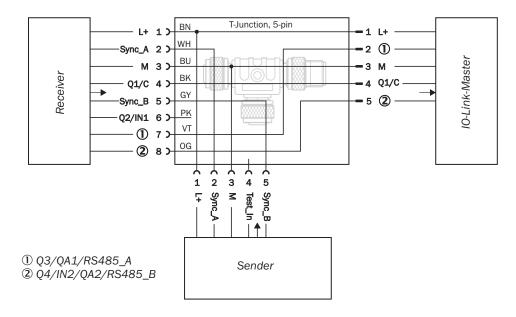
① Status indicator: green, yellow, red LEDs

Connection diagram

T-junction, PLC



T-junction, IO-Link-Master



Recommended accessories

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

	Brief description	Туре	Part no.
Others			
5	 Connection type head A: Female connector, M12, 5-pin, A-coded Connection type head B: Female connector, M12, 8-pin, A-coded Connection type head C: Male connector, M12, 8-pin, A-coded Note: 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 	SB0-02F12-SM1	6053172
	 Connection type head A: Female connector, M12, 8-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 8-wire, PVC Description: Sensor/actuator cable, special color code, shielded Connection systems: Flying leads 	DOL-1208-G05MF	6020664
No to	 Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Male connector, M12, 5-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 5 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot 	YF2A15- 050UB5M2A15	2096010
PE	 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: 5 m, 4-wire, PUR, halogen-free Description: Ethernet, PROFINET, shielded Application: Drag chain operation, Zones with oils and lubricants 	YM2D24- 050PN1MRJA4	2106184

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	Brief description	Туре	Part no.
Sensor Integration Gateway			
CHARLE STREET	 Further functions: Web server integrated, IIoT interface available (dual talk) Logic editor: no Communication interface: IO-Link, Ethernet, PROFINET, REST API, MQTT, OPC UA Product category: IO-Link Master 	SIG350-0004AP100	6076871
	Further functions: Web server integrated, IIoT interface available (dual talk) Logic editor: no Communication interface: IO-Link, Ethernet, EtherNet/IP™, REST API, MQTT, OPC UA Product category: IO-Link Master	SIG350-0005AP100	6076923
	Further functions: Web server integrated, IIoT interface available (dual talk) Logic editor: no Communication interface: IO-Link, Ethernet, EtherCAT®, REST API, MQTT, OPC UA	SIG350-0006AP100	6076924

• Product category: IO-Link Master

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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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