

MLG30N-1020P10502

MLG-2

MEASURING AUTOMATION LIGHT GRIDS



MEASURING AUTOMATION LIGHT GRIDS



Ordering information

Туре	Part no.
MLG30N-1020P10502	1221703

MLG-2 replacement for plug and play of MLG-1 without changes to the PLC

(only MLG-1 functions available)

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

Illustration may differ



Detailed technical data

Features

Device version	ProNet - Advanced functionality incl. fieldbus
Sensor principle	Sender/receiver
Minimum detectable object (MDO)	30 mm, 34 mm ^{1) 2) 3)}
Beam separation	30 mm
Type of synchronization	Cable
Number of beams	35
Detection height	1,020 mm
Software features (default)	
Q_1	Presence detection
Address	126 (SSA)
PROFIBUS DP	DPVO
Operating mode	
Standard	√
Transparent	✓
Dust- and sunlight-resistant	✓
Function	
Cross beam	✓
Beam blanking	✓
High measurement accuracy	✓
Applications	
Switching output	Object recognition/object width Object recognition Height classification Hole detection/hole size Outside dimension/inside dimension

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

 $^{^{\}rm 2)}$ MDO min. detectable object for standard measurement accuracy.

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

Data interface	Object position Hole position Zone definition 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 × sender 1 × receiver 1 x Fieldbus module 4/6 x QuickFix brackets (6 x QuickFix brackets for monitoring heights above 2 m) 1 × Quick Start Guide

 $^{^{1)}\,\}mathrm{MDO}$ 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	56.75 mA ²⁾
Power consumption receiver	127 mA ²⁾
Fieldbus module current consumption	115 mA
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 Connector M12, 12-pin, 0.21 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
Weight	2.349 kg
Front screen	PMMA
Option	None
UL File No.	NRKH.E181493 (Sensor)

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.

Performance

Maximum range	7 m ¹⁾
Minimum range	≥ 0 m
Operating range	5 m
Response time	4 ms ²⁾

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

Communication interface

PROFIBUS DP		√ , DPV0
	Data transmission rate	Autobaud, 9,600 kbit/s12 Mbit/s
Digital output		Q_1
	Number	1

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.

Classifications

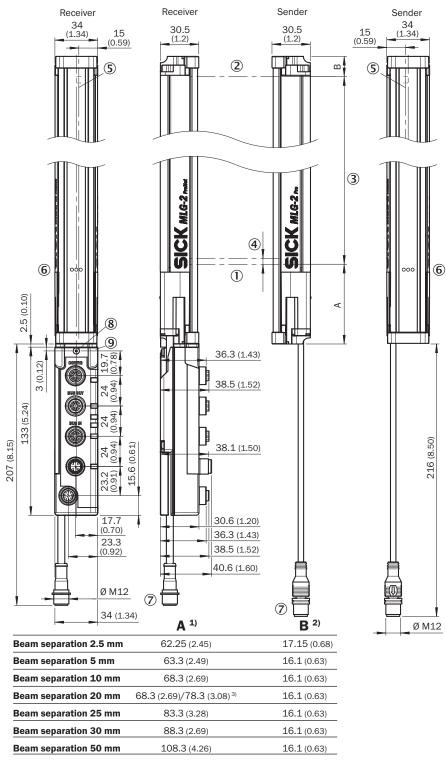
ECLASS 5.0	27270910
ECLASS 5.1.4	27270910
ECLASS 6.0	27270910
ECLASS 6.2	27270910
ECLASS 7.0	27270910
ECLASS 8.0	27270910
ECLASS 8.1	27270910
ECLASS 9.0	27270910
ECLASS 10.0	27270910
ECLASS 11.0	27270910
ECLASS 12.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
UNSPSC 16.0901	39121528

²⁾ Without high speed.

²⁾ Light resistance indirect.

Dimensional drawing (Dimensions in mm (inch))

Dimensional drawing



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 First beam

② Last beam

³ Detection height (see technical data)

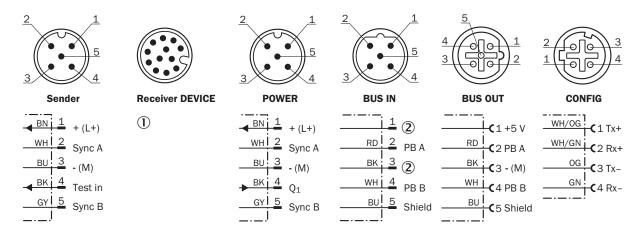
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MEASURING AUTOMATION LIGHT GRIDS

- ④ Beam separation
- ⑤ Optical axis
- Status indicator: green, yellow, red LEDs
- ⑦ Connection
- ® Safty screw M4; turning moment 0,5 Nm
- 9 For thread bold M4; turning moment 0,5 Nm

Connection type and diagram

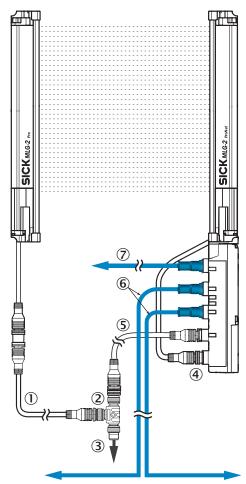
PROFIBUS



- ① Connection to fieldbus module
- 2 Not connected

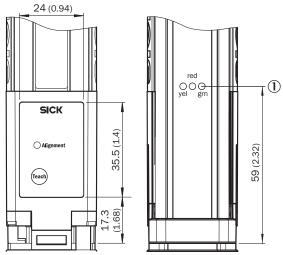
Pinouts

Ethernet



- ① Connection cable receiver (2096010)
- ② T-piece
- 3 Connection cable (2096240)
- Connection receiver "DEVICE"
- ⑤ Connection cable "POWER" (2096010)
- ® Ethernet Connection cable "BUS IN, BUS OUT"
- ① Ethernet connection cable "CONFIG"

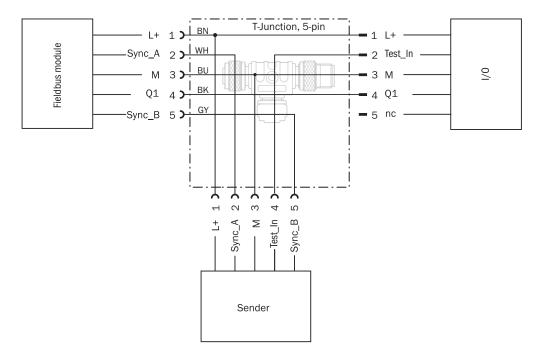
Adjustments



① Status indicator: green, yellow, red LEDs

Connection diagram

T-piece



Recommended accessories

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

	Brief description	Туре	Part no.	
Terminal and	Terminal and alignment brackets			
	Mounting bracket for external mounting of the fieldbus module, 1 × mounting bracket and 1 × M5 × 6 screw, Stainless steel V2A (1.4301)	BEF-WN-FBM-SET1	2082322	
Others				
	 Connection type head A: Female connector, M12, 5-pin, A-coded Connection type head B: Female connector, M12, 5-pin, A-coded Connection type head C: Male connector, M12, 5-pin, A-coded Note: Master Interface - Type, Connector A - Pole Count, Ports - Pole Count 	SB0-02G12-SM	6029305	
N. F.	 Connection type head A: Male connector, M12, 4-pin, D-coded Connection type head B: Male connector, M12, 4-pin, D-coded Signal type: Ethernet Cable: 5 m, 4-wire, PUR, halogen-free Description: Ethernet, twisted pair, shielded Permitted cross-section: ≥ 0.25 mm² Application: Zones with oils and lubricants 	YM2D24- 050EA2M2D24	6034422	
	 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, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals 	YF2A15- 050VB5XLEAX	2096240	
to 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	
88	 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	

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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