



MLG50N-1600U10501

MLG-2

MEASURING AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
MLG50N-1600U10501	1221756

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



Detailed technical data

Features

Device version	ProNet - Replacement product (for MLG-1 with terminals)																				
Sensor principle	Sender/receiver																				
Minimum detectable object (MDO)	50 mm, 54 mm ^{1) 2) 3)}																				
Beam separation	50 mm																				
Number of beams	33																				
Detection height	1,600 mm																				
Software features (default)	<table> <tr> <td>Interface RS-485</td><td>Beam status</td></tr> <tr> <td>Baud rate RS-485</td><td>9.6 kbit/s</td></tr> <tr> <td>Q₁</td><td>Presence detection</td></tr> <tr> <td>Q₂</td><td>Presence detection inverted</td></tr> <tr> <td>Q₃</td><td>Contamination warning</td></tr> <tr> <td>Q₄</td><td>Presence detection</td></tr> <tr> <td>Q₅</td><td>off</td></tr> <tr> <td>Q₆</td><td>off</td></tr> <tr> <td>In₁</td><td>Teach input</td></tr> <tr> <td>In₂</td><td>off</td></tr> </table>	Interface RS-485	Beam status	Baud rate RS-485	9.6 kbit/s	Q ₁	Presence detection	Q ₂	Presence detection inverted	Q ₃	Contamination warning	Q ₄	Presence detection	Q ₅	off	Q ₆	off	In ₁	Teach input	In ₂	off
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Operating mode	<table> <tr> <td>Standard</td><td>✓</td></tr> <tr> <td>Transparent</td><td>✓</td></tr> <tr> <td>Dust- and sunlight-resistant</td><td>✓</td></tr> </table>	Standard	✓	Transparent	✓	Dust- and sunlight-resistant	✓														
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Function	<table> <tr> <td>Cross beam</td><td>✓</td></tr> </table>	Cross beam	✓																		
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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.

	Beam blanking	✓
	High-speed scan	✓
	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 recognition Object height measurement 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 × Fieldbus module 4/6 x QuickFix brackets (6 x QuickFix brackets for monitoring heights above 2 m) 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
Wave length	850 nm
Supply voltage V_s	DC 18 V ... 30 V ¹⁾
Power consumption sender	56.65 mA ²⁾
Power consumption receiver	126.6 mA ²⁾
Power consumption fieldbus module	115 mA
Ripple	< 5 V _{pp}
Output current I_{max}	100 mA
Output load capacitive	100 nF
Output load inductive	1 H
Initialization time	< 1 s
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⁾

1) Without load.

2) , Without load with 24 V.

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

Circuit protection	U _V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Protection class	III
Weight	3.549 kg
Front screen	PMMA
Option	None

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	3.9 ms ²⁾

¹⁾ No reserve for environmental issue and deterioration of the diode.

²⁾ Without high speed.

Communication interface

Serial	✓, RS-485
Data transmission rate	1.2 kbit/s ...921.6 kbit/s
Digital output	Q ₁ ... Q ₆
Number	6
Digital input	In ₁ , In ₂
Number	2

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⁾ Indirect: 200,000 lx ²⁾
Vibration resistance	Sinusoidal oscillation 10-150 Hz 5 g
Shock load	Continuous shocks 10 g, 16 ms, 1000 shocks Single shocks 15 g, 11 ms 3 per axle

¹⁾ Outdoor mode.

²⁾ Light resistance indirect.

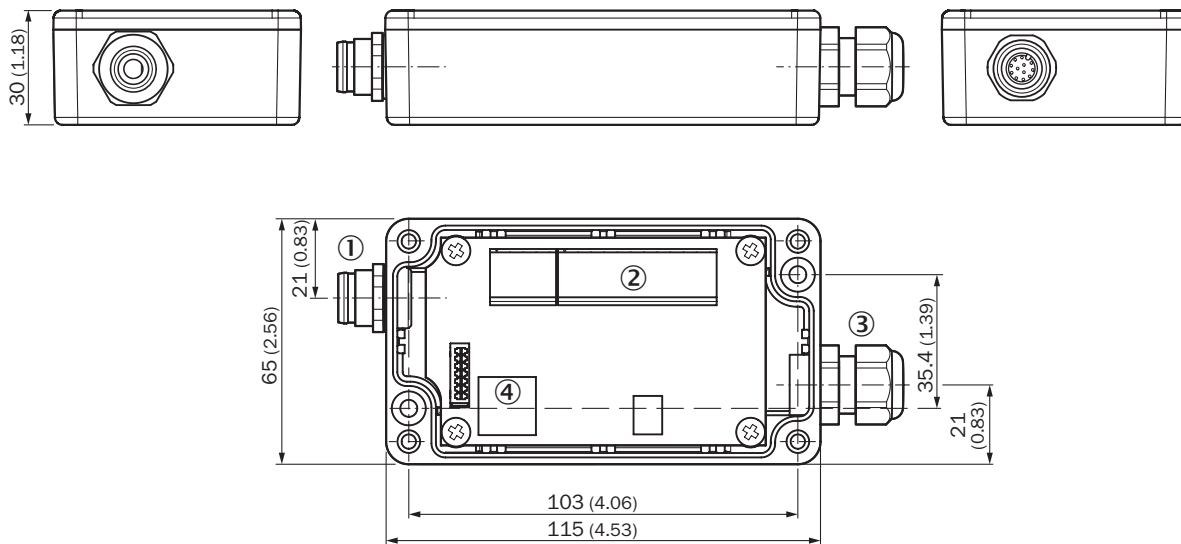
Classifications

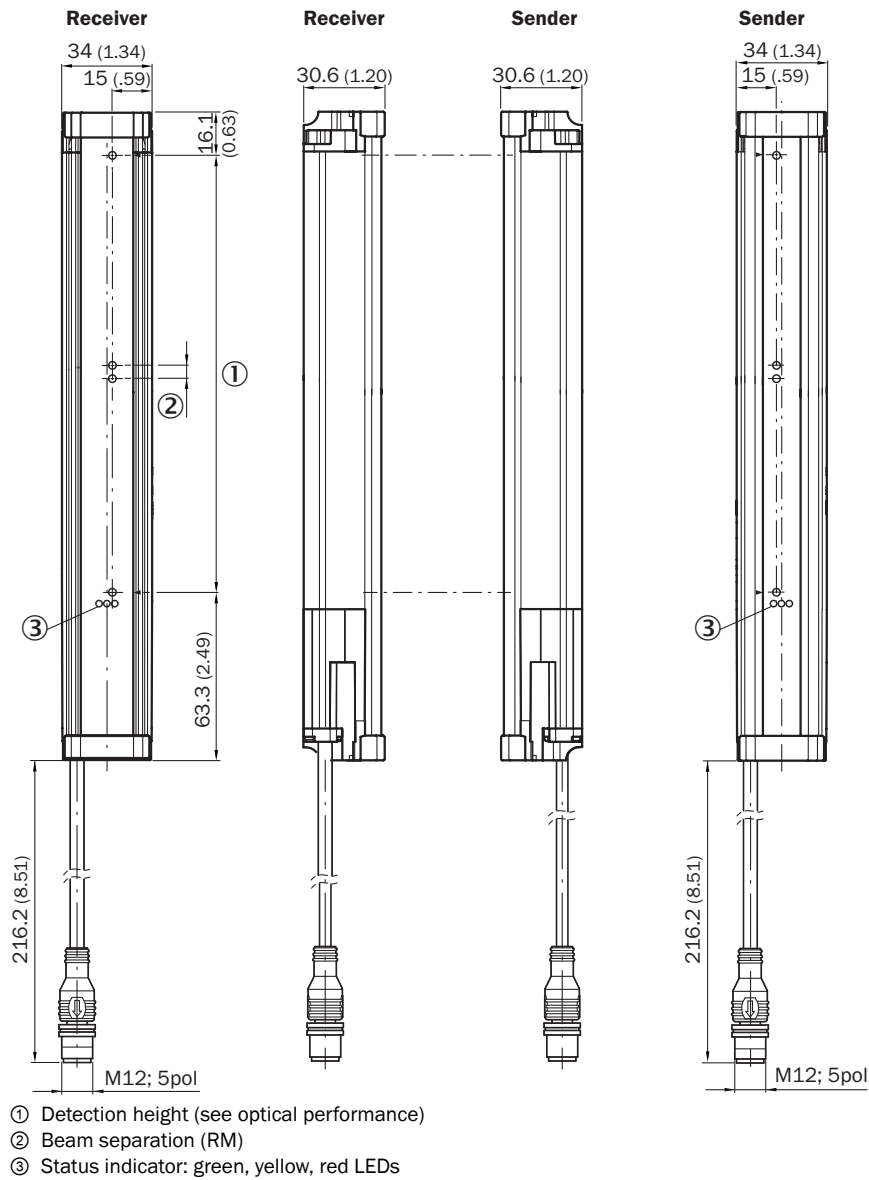
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ECl@ss 6.2	27270910
ECl@ss 7.0	27270910
ECl@ss 8.0	27270910

ECI@ss 8.1	27270910
ECI@ss 9.0	27270910
ECI@ss 10.0	27270910
ECI@ss 11.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
UNSPSC 16.0901	39121528

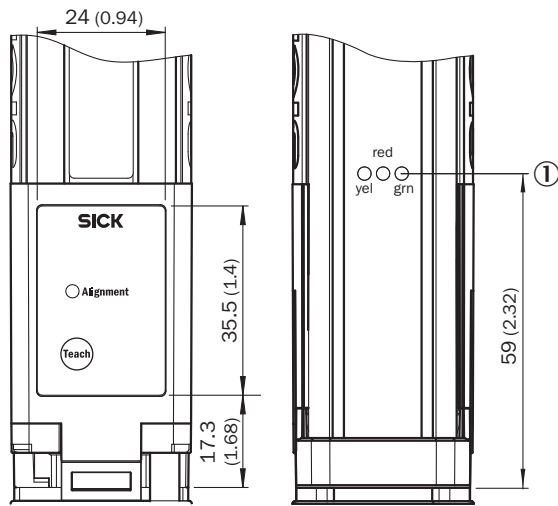
Dimensional drawing (Dimensions in mm (inch))

Dimensional drawing: terminal connection box (AFB)



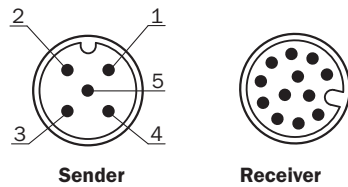


Adjustments



① Status indicator: green, yellow, red LEDs

Connection type and diagram



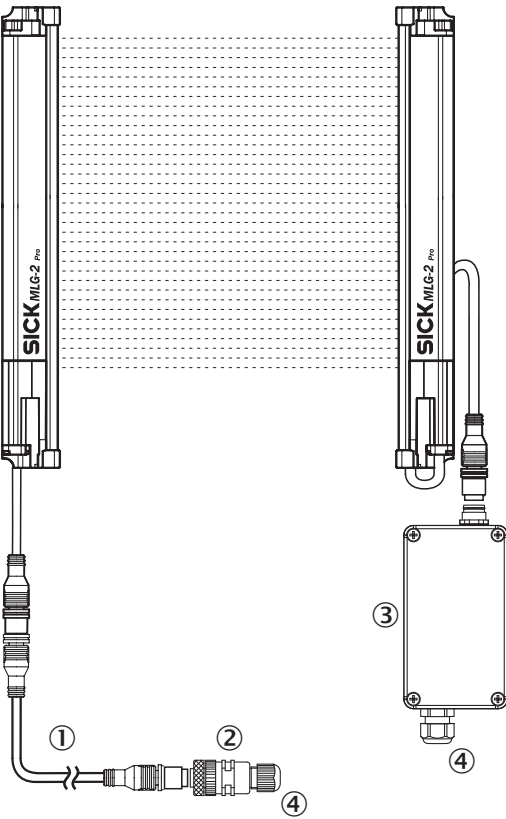
brn	1	+(L+)
wht	2	Sync A
blu	3	-(M)
blk	4	Test in
gra	5	Sync B

①

① Connection to terminal connection box (AFB)

Connection type

Terminal connection box (AFB)



- ① Connection cable (6057015)
- ② Female connector M12, 5-pin (6009719)
- ③ Terminal connection box (AFB)
- ④ Connecting to PLC / pin assignment see Technical Information (the MLG-2 as a replacement product for the MLG-1 and XLG)

Recommended accessories

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

	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
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight Head B: male connector, M12, 8-pin, straight Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 0.1 m	DSL-1258-G0M1C	6057015
	Head A: male connector, RJ45 Head B: male connector, RJ45 Cable: Ethernet, unshielded, 3 m	Ethernet crossover cable	6026084

	Brief description	Type	Part no.
	Head A: female connector, M12, 5-pin, straight Cable: unshielded	DOS-1205-G	6009719

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