Product data sheet

MLG50N-1150U10501

MLG-2

MEASURING AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.

Ordering information

Type	Part no.
MLG50N-1150U10501	1221735

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	24
Detection height	1,150 mm
Software features (default)	
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
Q5	off
Q6	off
In_1	Teach input
In_2	off
Operating mode	
Standard	✓
Transparent	✓
Dust- and sunlight-resistant	✓
Function	
Cross beam	✓

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 x 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	56.2 mA [2]
Power consumption receiver	124.8 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	2.649 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	3.6 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.

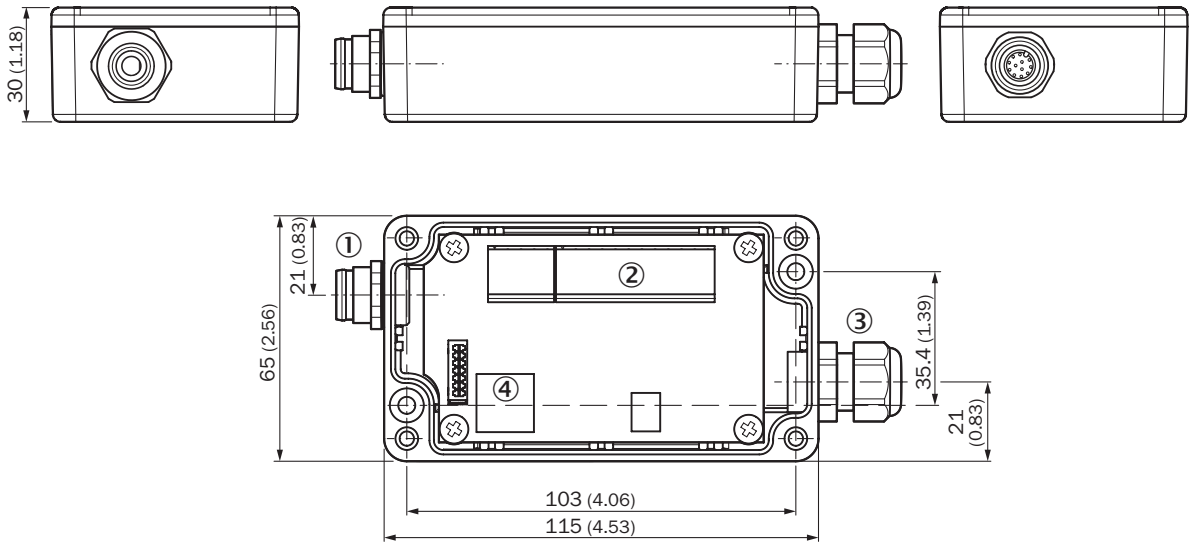
Classifications

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

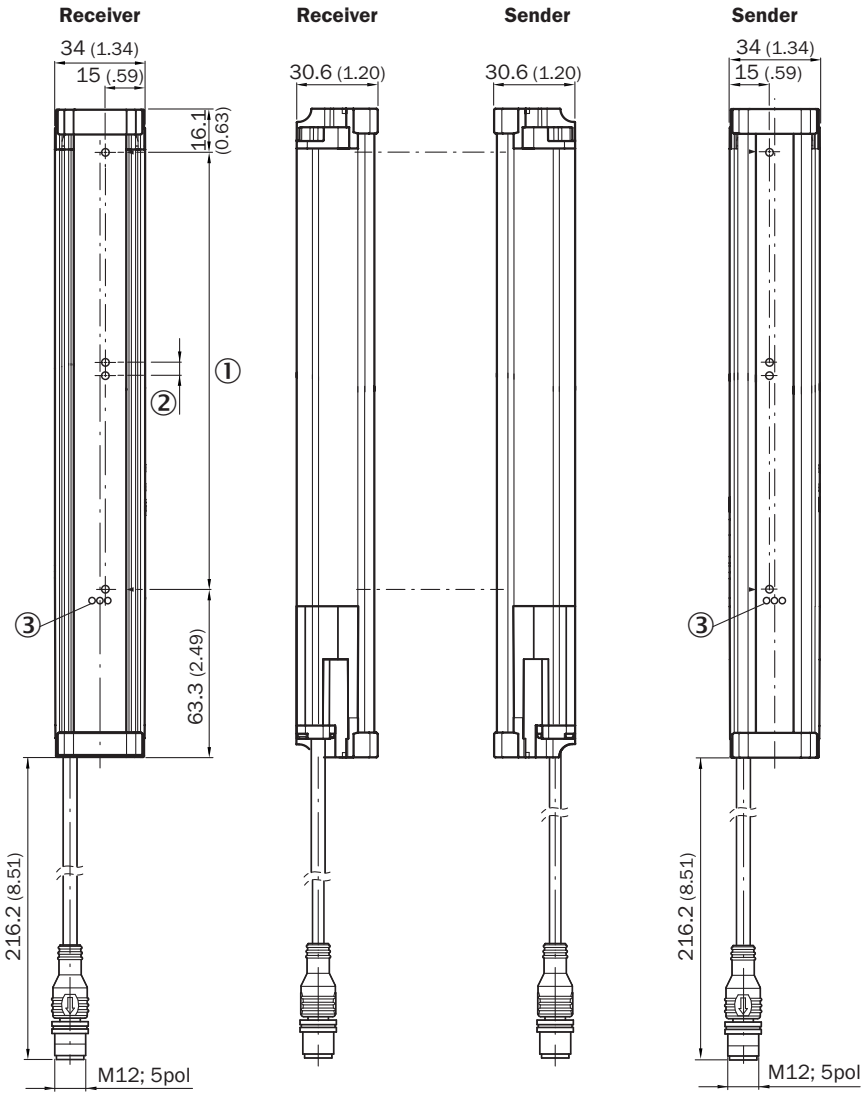
ECl@ss 8.1	27270910
ECl@ss 9.0	27270910
ECl@ss 10.0	27270910
ECl@ss 11.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
UNSPSC 16.0901	39121528

Dimensional drawing (Dimensions in mm (inch))

Dimensional drawing: terminal connection box (AFB)

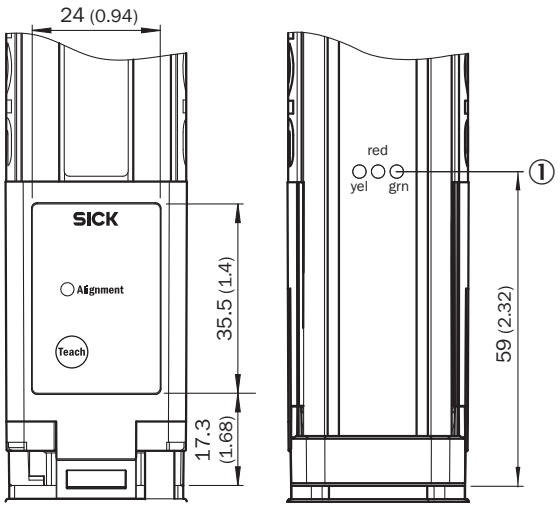


① Female connector M12, 12-pin
② Cable gland
③ PG gland
④ RJ45 (Ethernet)



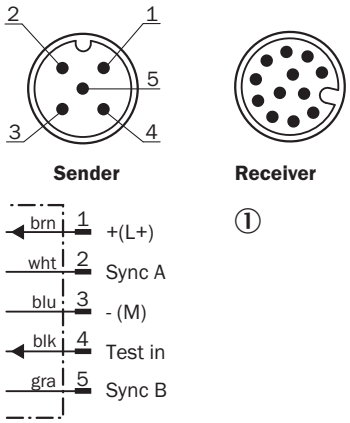
① Detection height (see optical performance)
② Beam separation (RM)
③ Status indicator: green, yellow, red LEDs

Adjustments



① Status indicator: green, yellow, red LEDs

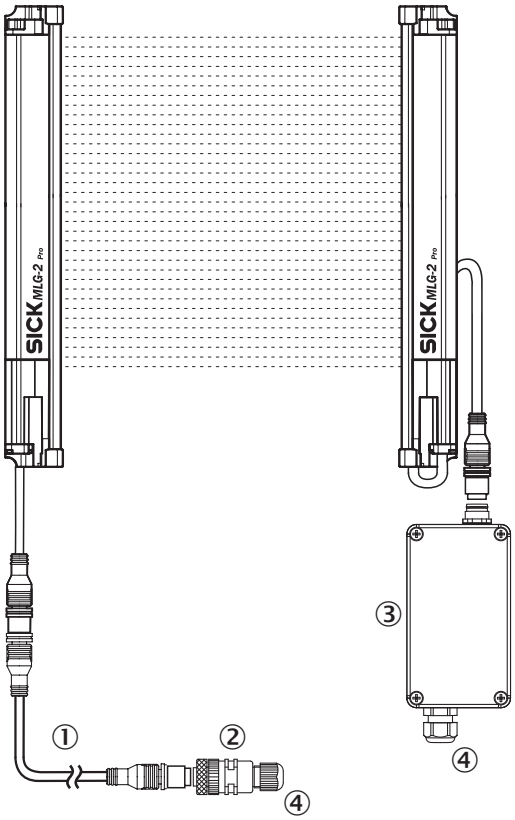
Connection type and diagram



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

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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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