



MLG50N-1750E10801

MLG-2

AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
MLG50N-1750E10801	1217270

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

Illustration may differ



Detailed technical data

Features

Device version	ProNet – extended functionality including fieldbus		
Sensor principle	Sender/receiver		
Minimum detectable object (MDO)	50 mm ¹⁾ 54 mm ²⁾ ³⁾		
Beam separation	50 mm		
Type of synchronization	Cable		
Number of beams	36		
Detection height	1,750 mm		
Software features (default)			
	Q ₁	Presence detection	
	Address	—	
	Baud rate RS-485	—	
Operating mode			
	Standard	✓	
	Transparent	✓	
	Dust- and sunlight-resistant	✓	
Function			
	Cross beam	✓	
	Beam blanking	✓	

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.

High measurement accuracy	✓
Applications	
Switching output	Object detection/object width Object recognition Height classification Hole detection/hole size Outside/inside dimension Object position Hole position Zone definition
Data interface	Object detection Hole detection Object height measurement Measurement of the outside dimension Measurement of the inside dimension Measurement of the object position Measurement of the hole position
Included with delivery	1 x sender 1 x receiver 1 x Fieldbus module 4/6 x QuickFix brackets (6 x QuickFix brackets for monitoring heights above 2 m) 1 x 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 19.2 V ... 28.8 V ¹⁾
Power consumption sender	56.8 mA ²⁾
Power consumption receiver	127.2 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	1 H
Initialization time	< 1 s
Switching output	Push-pull: PNP/NPN
Connection type	Plug, M12, 5-pin, 0.22 m Connector M12, 12-pin, 0.21 m
Housing material	Aluminum
Display	LED
Enclosure rating	IP65, IP67 ³⁾
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression

1) Without load.

2) Without load with 24 V.

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

Protection class	III
Weight	3.849 kg
Front screen	PMMA
Option	None
UL File No.	NRKH.E181493 (Sensor)

¹⁾ Without load.

²⁾ Without load with 24 V.

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

Performance

Maximum range	12 m ¹⁾
Minimum range	≥ 0 m
Operating range	8.5 m
Response time	4.1 ms ²⁾

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

²⁾ Without high speed.

Interfaces

EtherCAT®	✓
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.

²⁾ Light resistance indirect.

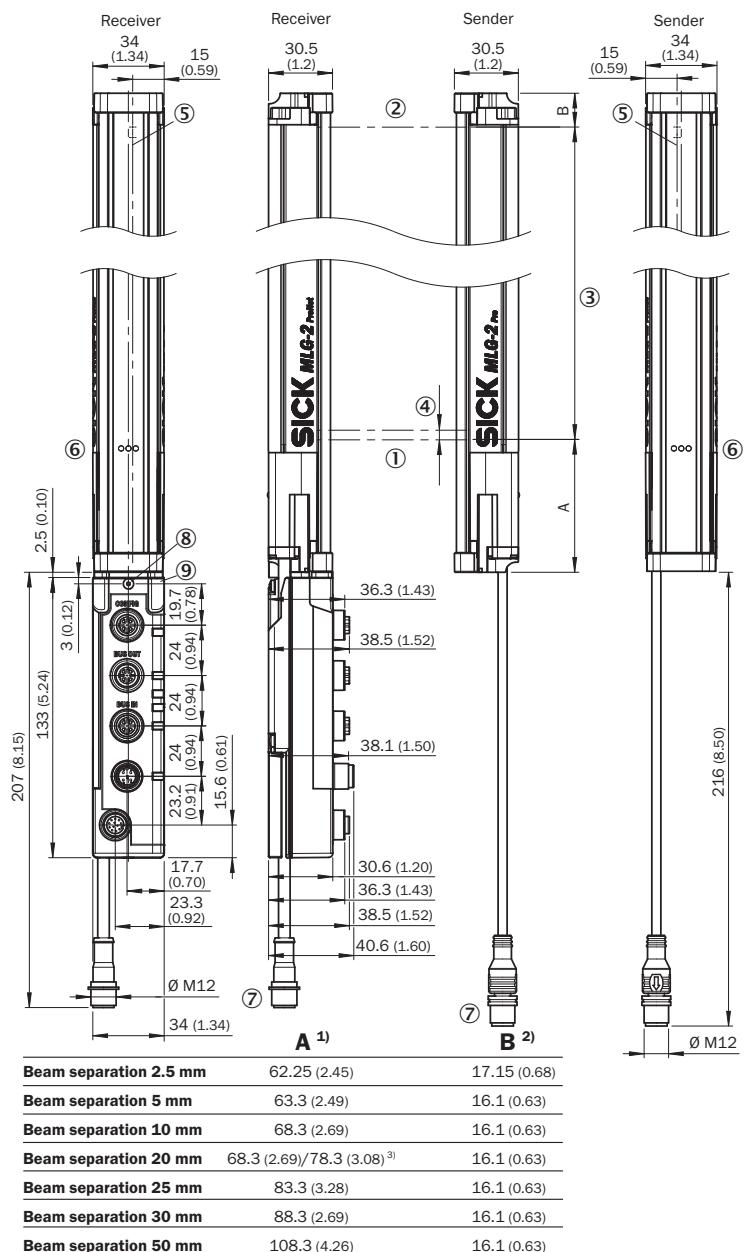
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Profinet certificate	✓
Photobiological safety (IEC EN 62471)	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

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

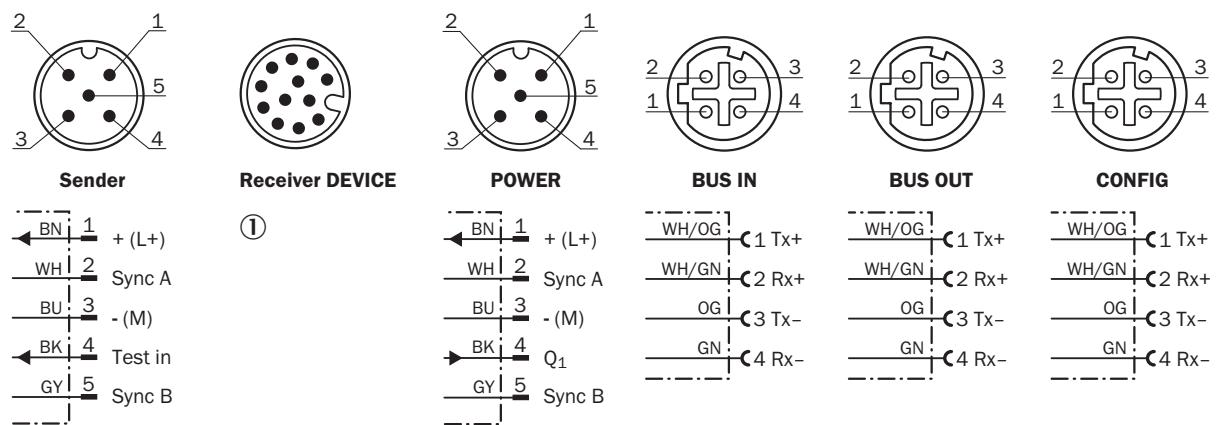
Dimensional drawing

¹⁾ Distance: MLG-2 edge - first beam²⁾ Distance: MLG-2 edge - last beam³⁾ MLG20xx~~xx~~**40**: 68.3 mmMLG20xx~~xx~~**80**: 78.3 mm

Dimensions in mm (inch)

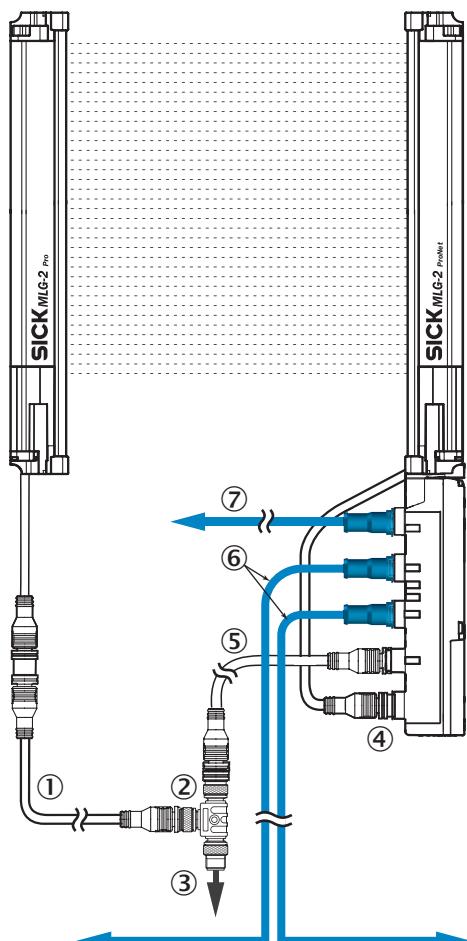
- ① First beam
- ② last beam
- ③ detection height (see technical data)
- ④ Beam separation
- ⑤ Optical axis
- ⑥ status indicator: green, yellow, red LEDs
- ⑦ Connection
- ⑧ safty screw M4; turning moment 0,5 Nm
- ⑨ for thread bold M4; turning moment 0,5 Nm

Connection type and diagram PROFINET, EtherCAT[®], EtherNet/IP



① Connection to fieldbus module

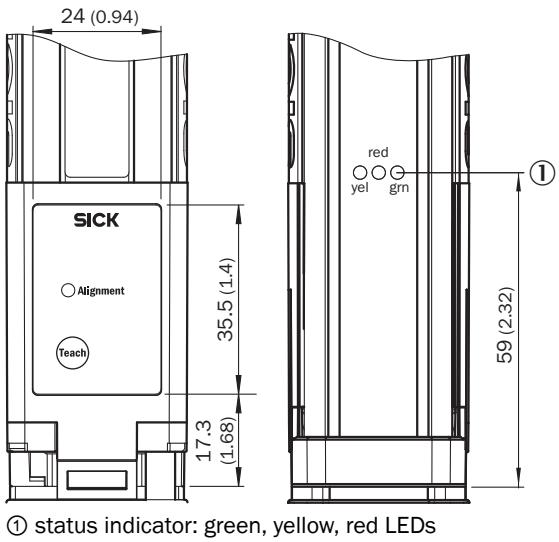
Pinouts Ethernet



- ① Connection cable receiver (2096010)
- ② T-piece
- ③ Connection cable (2096240)
- ④ connection receiver "DEVICE"

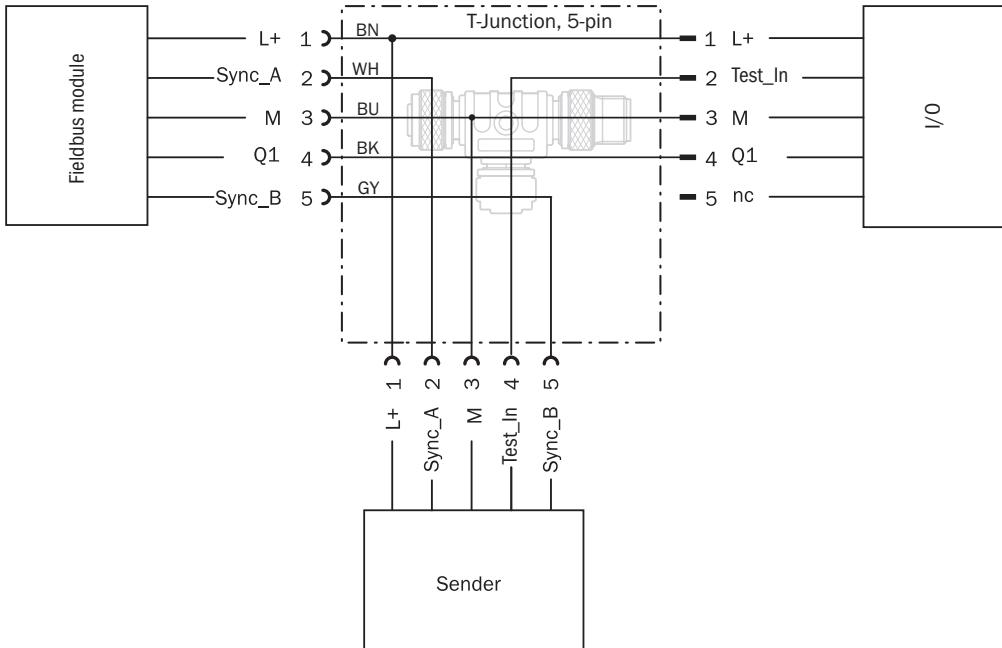
- ⑤ Connection cable "POWER" (2096010)
- ⑥ Ethernet Connection cable "BUS IN, BUS OUT"
- ⑦ Ethernet connection cable "CONFIG"

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	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> 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, 4-pin, A-coded Description: Unshielded 	SBO-02G12-SM	6029305
	<ul style="list-style-type: none"> 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: $\geq 0.25 \text{ mm}^2$ Application: Zones with oils and lubricants 	YM2D24-050EA2M2D24	6034422
	<ul style="list-style-type: none"> 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, Uncontaminated zones 	YF2A15-050VB5XLEAX	2096240
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A15-050UB5M2A15	2096010
	<ul style="list-style-type: none"> 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, shielded, PROFINET Application: Drag chain operation, Zones with oils and lubricants 	YM2D24-050P-N1MRJA4	2106184
Mounting systems			
	<ul style="list-style-type: none"> Description: Mounting bracket for external mounting of the fieldbus module, 1 × mounting bracket and 1 × M5 × 6 screw Material: Stainless steel Details: Stainless steel V2A (1.4301) 	BEF-WN-FBM-SET1	2082322

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