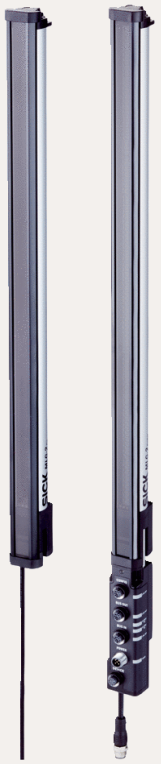
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DATA SHEET

MLG10N-2090N11401

MLG-2
Automation light grids

SICK Sensor Intelligence



Illustration may differ

AUTOMATION LIGHT GRIDS

MLG10N-2090N11401

ORDERING INFORMATION

Type	part no.
MLG10N-2090N11401	1158098

Further device versions and accessories at www.sick.com/MLG-2

DETAILED TECHNICAL DATA

FEATURES

Device version	ProNet – extended functionality including fieldbus
Sensor principle	Sender/receiver
Minimum detectable object (MDO)	10 mm [1] 14 mm [2] [3]
Beam separation	10 mm
Type of synchronization	Cable
Number of beams	210
Detection height	2,090 mm
Software features (default)	
Q_t	Presence detection
Operating mode	
Standard	✓
Transparent	✓
Dust- and sunlight-resistant	✓
Function	
Cross beam	✓
Beam blanking	✓
High-speed scan	✓
High measurement accuracy	✓
Applications	
Switching output	Object detection/object width Object recognition Height classification

[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.

Data interface	Hole detection/hole size Outside/inside dimension Object position Hole position Zone definition 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 × sender 1 × receiver 1 x Fieldbus module
Part number of individual components	2087755 MLGR10N-2090F10201, 2154929 MLGT10A-2090F10401

[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	65.5 mA [2]
Power consumption receiver	162 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
Protection class	III
Weight	4.449 kg
Front screen	PMMA
Option	None
UL File No.	NRKH.E181493

[1] Without load.

[2] Without load with 24 V.

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

PERFORMANCE

Maximum range	20 m [1]
Minimum range	≥ 0 m
Operating range	14.5 m
Response time	17.5 ms [2]

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

[2] Without high speed.

INTERFACES

PROFINET	✓
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

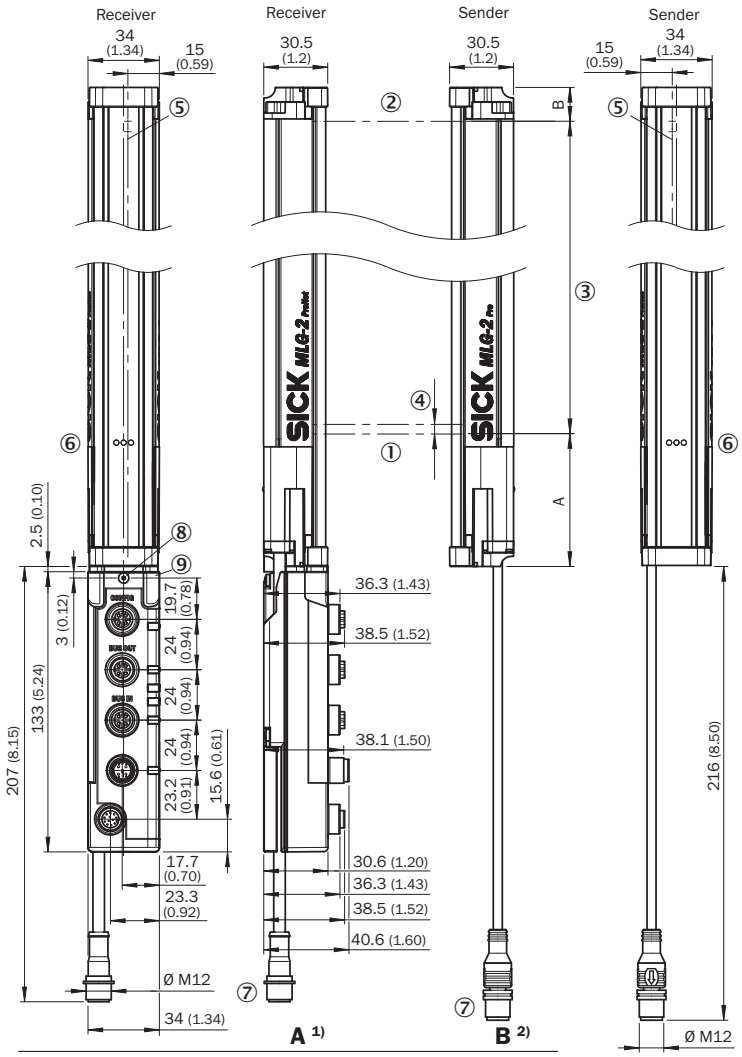
[1] Outdoor mode.

[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)	✓

DIMENSIONAL DRAWING

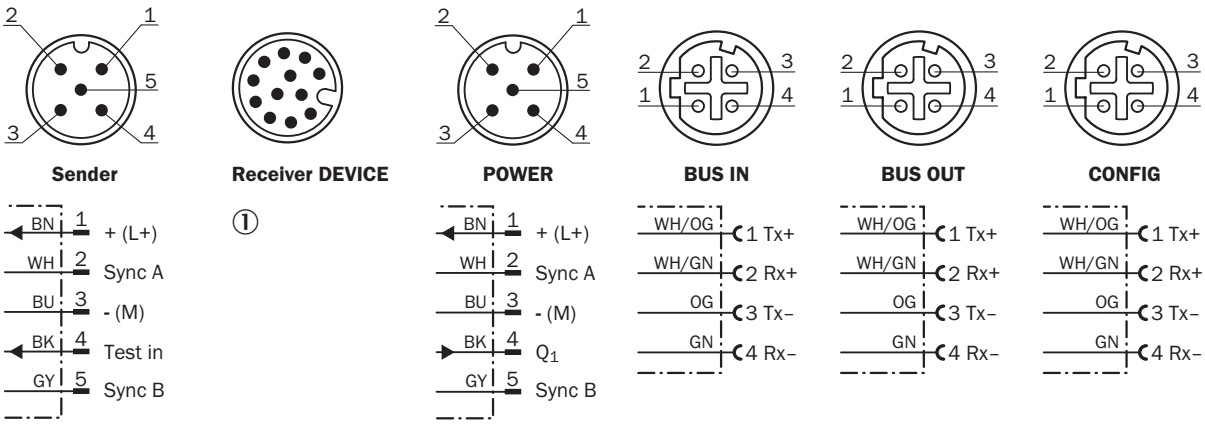


Beam separation 2.5 mm	62.25 (2.45)	17.15 (0.68)
Beam separation 5 mm	63.3 (2.49)	16.1 (0.63)
Beam separation 10 mm	68.3 (2.69)	16.1 (0.63)
Beam separation 20 mm	68.3 (2.69)/78.3 (3.08) [3]	16.1 (0.63)
Beam separation 25 mm	83.3 (3.28)	16.1 (0.63)
Beam separation 30 mm	88.3 (2.69)	16.1 (0.63)
Beam separation 50 mm	108.3 (4.26)	16.1 (0.63)

[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

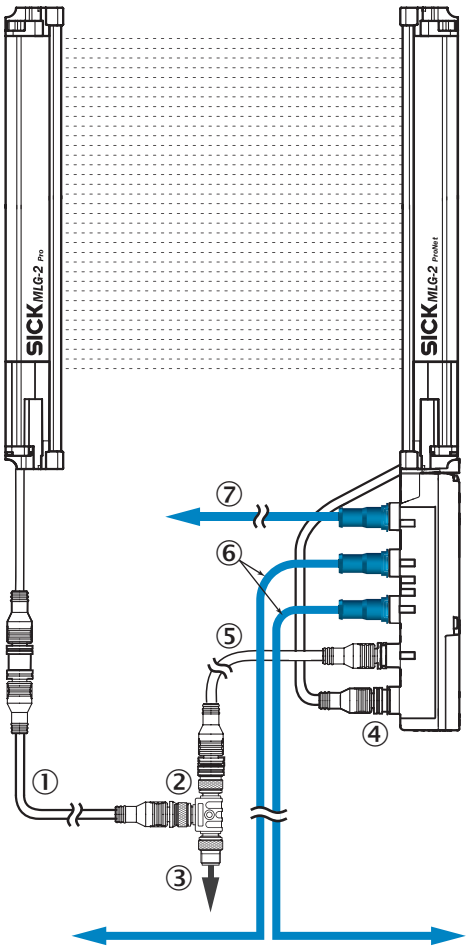
Dimensions in mm (inch)
① First beam
② last beam
③ detection height (see technical data)
④ Beam separation
⑤ Optical axis
⑥ status indicator: green, yellow, red LEDs
⑦ Connection
⑧ safty screw M4; turning moment 0,5 Nm
⑨ for thread bold M4; turning moment 0,5 Nm

CONNECTION TYPE AND DIAGRAM PROFINET, ETHERCAT®, ETHERNET/IP



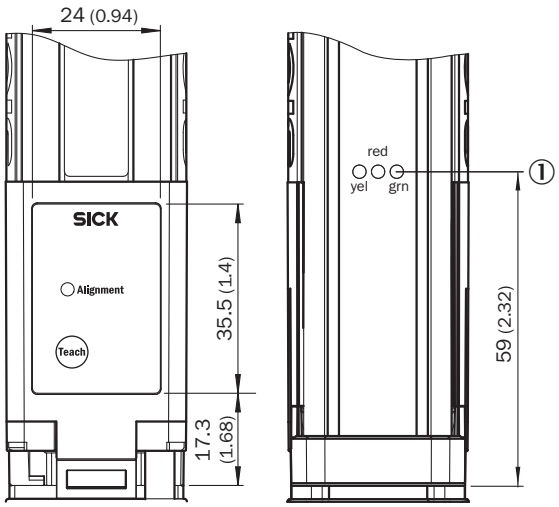
① *Connection to fieldbus module*

PINOUTS ETHERNET



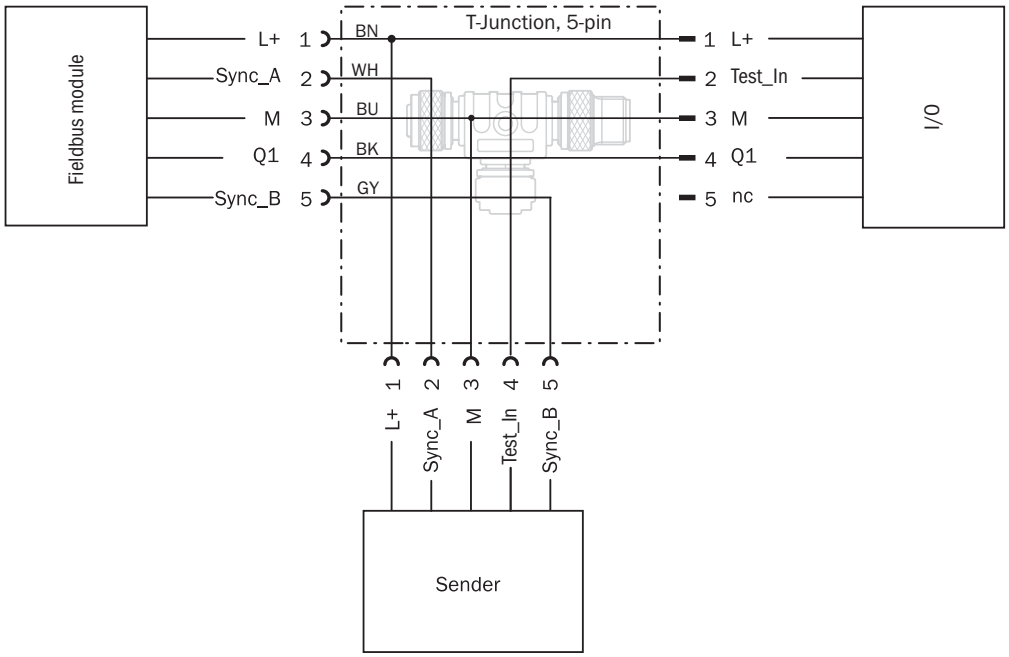
① Connection cable receiver (2096010)
② T-piece
③ Connection cable (2096240)
④ connection receiver “DEVICE”
⑤ Connection cable “POWER” (2096010)
⑥ Ethernet Connection cable “BUS IN, BUS OUT”
⑦ Ethernet connection cable “CONFIG”

ADJUSTMENTS



① status indicator: green, yellow, red LEDs

CONNECTION DIAGRAM T-PIECE



Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1158098

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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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