



MLG05S-0145A10501

MLG-2

MEASURING AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
MLG05S-0145A10501	1213504

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



Detailed technical data

Features

Device version	Prime - Standard functionality	
Sensor principle	Sender/receiver	
Minimum detectable object (MDO)	9 mm ¹⁾	
Beam separation	5 mm	
Number of beams	30	
Detection height	145 mm	
Software features (default)	Q _{A1}	Height measurement (first beam)/FBB
	Q _{A2}	Height measurement (last beam)/LBB
	Q ₁	Presence detection
	inverted	—
	Teach	—
Operating mode	Standard	✓
Function	Cross beam	✓
	Beam blanking	✓
Applications	Switching output	Object recognition Object recognition Height classification
	Data interface	Object recognition Object height measurement

¹⁾ Depending on beam separation without cross beam setting.

Included with delivery	1 × sender 1 × receiver 4/6 × QuickFix brackets (6 × QuickFix brackets for monitoring heights above 2 m) 1 × Quick Start Guide
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¹⁾ 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	56.5 mA ²⁾
Power consumption receiver	126 mA ²⁾
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 Male connector M12, 5-pin, 0.22 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	0.549 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	≥ 0.2 m
Operating range	5 m
Response time	6.1 ms

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

Communication interface

IO-Link	✓, IO-Link V1.1
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¹⁾ With an IO-Link master with V1.0, fall back to interleaved mode (consisting of TYPE_1_1 (ProcessData) and TYPE_1_2 (On-request Data)).

Data transmission rate	38,4 kbit/s (COM2)
Maximum cable length	20 m
Cycle time	6 ms
VendorID	26
DeviceID HEX	800067
DeviceID DEC	8388711
Process data length	6 Byte (TYPE_2_V) ¹⁾
Analog	✓, Current
Analog output	Q _{A1} , Q _{A2}
Number	2
Type	Current output
Current	4 mA ... 20 mA
Digital output	Q ₁
Number	1

¹⁾ With an IO-Link master with V1.0, fall back to interleaved mode (consisting of TYPE_1_1 (ProcessData) and TYPE_1_2 (On-request Data)).

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: 12,000 lx ¹⁾ Indirect: 50,000 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
UL File No.	NRKH.E181493

¹⁾ Outdoor mode.

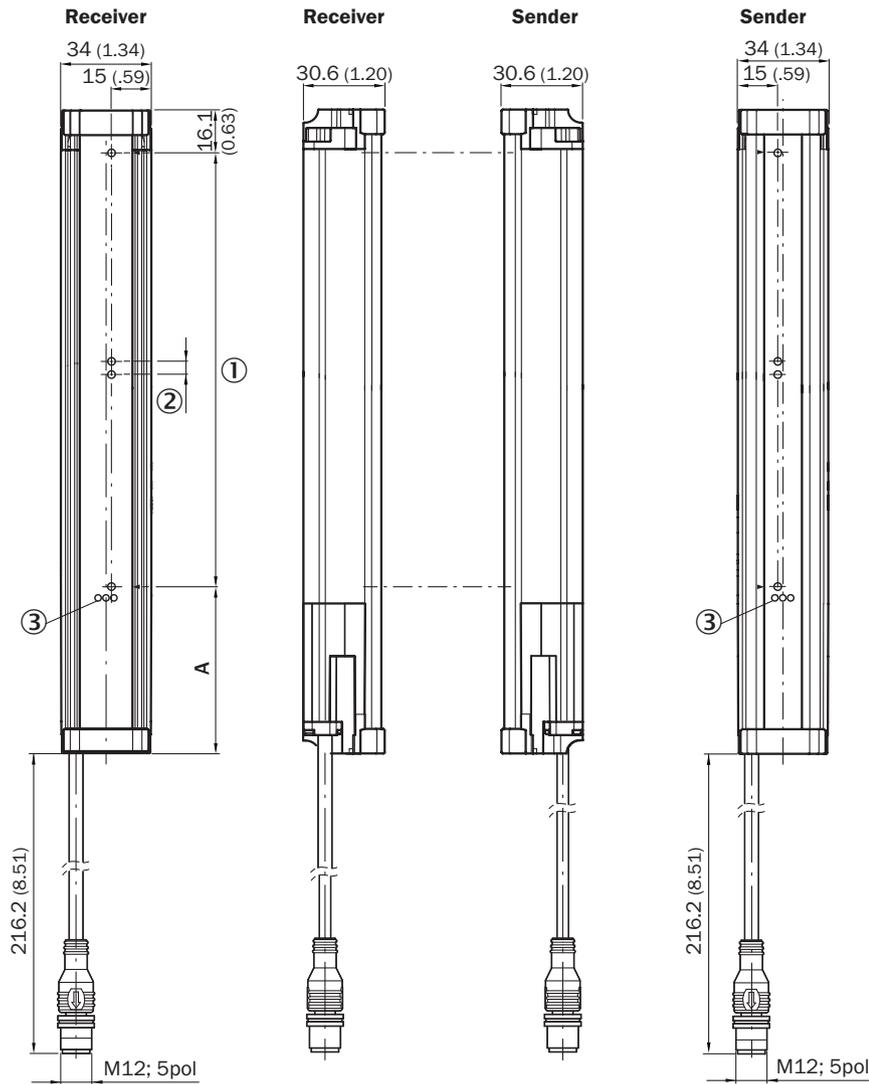
²⁾ Light resistance indirect.

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



A¹⁾

Beam separation 5 mm	63.3 (2.49)
Beam separation 10 mm	68.3 (2.69)
Beam separation 20 mm	68.3 (2.69)/78.3 (3.08) ⁽²⁾
Beam separation 25 mm	83.3 (3.28)
Beam separation 30 mm	88.3 (3.48)
Beam separation 50 mm	108.3 (4.26)

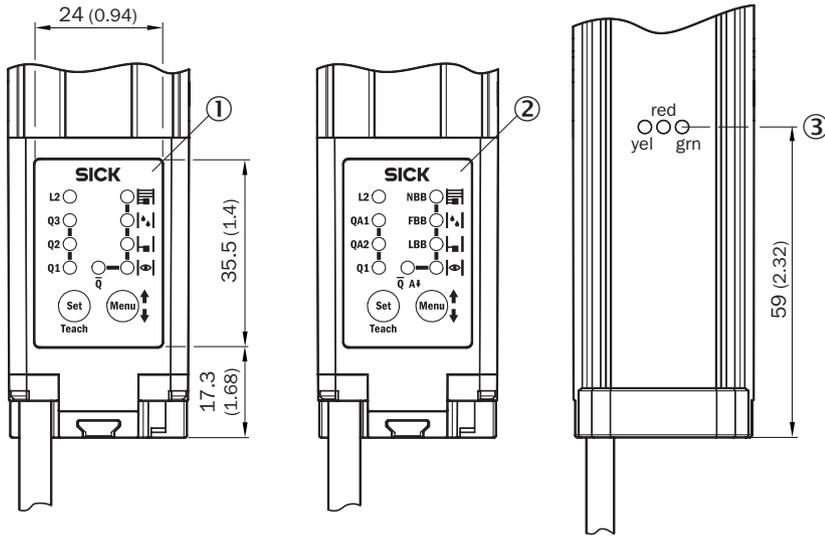
¹⁾ Distance: MLG edge - first beam

²⁾ MLG20x-xx**40**: 68.3 mm
 MLG20x-xx**80**: 78.3 mm

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

Adjustments

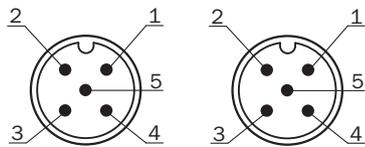
Adjustments



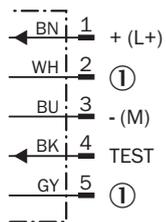
- ① MLG-2 with switching outputs Q
- ② MLG-2 with analog outputs Q_A
- ③ Status indicator: green, yellow, red LEDs

Connection type and diagram

Connector M12, 5-pin, analog outputs Q_A

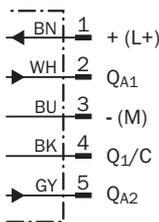


Sender



① Not assigned

Receiver



Recommended accessories

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

	Brief description	Type	Part no.
SIG200			
	SIG200-0A0412200	SIG200-0A0412200	1089794
	SIG200-0A0G12200	SIG200-0A0G12200	1102605
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A15-050VB5XLEAX	2096240

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