

# MLG3-0120F521

MLG

MEASURING AUTOMATION LIGHT GRIDS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
MLG3-0120F521	1023008

Other models and accessories → [www.sick.de/MLG](http://www.sick.de/MLG)



### Detailed technical data

#### Features

<b>Technology</b>	Sender/receiver
<b>Minimum detectable object (MDO)</b>	Parallel beam, 40 mm <sup>1)</sup>
<b>Beam separation</b>	30 mm
<b>Number of beams</b>	≥ 5
<b>Detection height</b>	120 mm
<b>Configuration</b>	Standard (switching)

<sup>1)</sup> MDO min. detectable object.

#### Performance

<b>Maximum range</b>	12 m <sup>1)</sup>
<b>Minimum range</b>	Parallel beam: ≥ 0 mm
<b>Working range</b>	8.5 m
<b>Response time</b>	Parallel beam ≥ 1.75 ms <sup>2)</sup>

<sup>1)</sup> No reserve for environmental issue and deterioration of the diode.

<sup>2)</sup> With resistive load.

#### Interfaces

<b>Switching output</b>	1 x PNP
<b>Connection type</b>	Male connector M12, 5-pin
<b>Fieldbus, industrial network</b>	-
<b>Type of fieldbus integration</b>	-

#### Mechanics/electronics

<b>Wave length</b>	Infrared light, 880 nm
<b>Supply voltage V<sub>s</sub></b>	DC 18 V ... 30 V <sup>1)</sup>

<sup>1)</sup> Without load.

<sup>2)</sup> Without load with 24 V.

<sup>3)</sup> Typical value.

<b>Power consumption sender</b>	≥ 150 mA <sup>2)</sup>
<b>Power consumption receiver</b>	≥ 115 mA <sup>2)</sup>
<b>Ripple</b>	< 5 V <sub>pp</sub>
<b>Output current I<sub>max.</sub></b>	≤ 100 mA <sup>3)</sup>
<b>Output load capacitive</b>	100 nF
<b>Output load inductive</b>	1 H
<b>Initialization time</b>	1 s
<b>Dimensions (W x H x D)</b>	34 mm x 214 mm x 29 mm
<b>Housing material</b>	Aluminum
<b>Indication</b>	7-segment display, 7-segment display
<b>Synchronization</b>	Cable
<b>Enclosure rating</b>	IP 65
<b>Circuit protection</b>	U <sub>V</sub> connections, reverse polarity protected, Output Q short-circuit protected, Interference pulse suppression
<b>Weight</b>	≥ 0.776 kg
<b>Front screen</b>	PMMA

<sup>1)</sup> Without load.

<sup>2)</sup> Without load with 24 V.

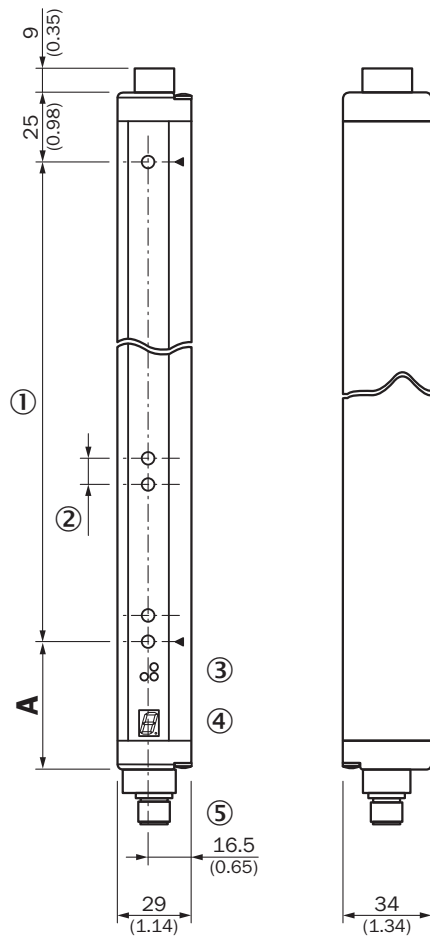
<sup>3)</sup> Typical value.

#### Ambient data

<b>Protection class</b>	III
<b>EMC</b>	EN 60947-5-2
<b>Ambient temperature</b>	Operation: -25 °C ... +55 °C Storage: -40 °C ... +70 °C
<b>Ambient light immunity</b>	Direct: 12,500 lx <sup>1)</sup> Indirect: 50,000 lx <sup>1)</sup>
<b>Vibration resistance</b>	5 g, 10 Hz ... 55 Hz (IEC 68-2-6)
<b>Shock load</b>	10 g / IEC 68-2-29 / 16 ms

<sup>1)</sup> Sunlight.

Dimensional drawing (Dimensions in mm (inch))



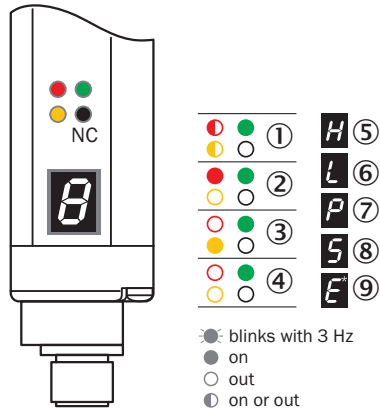
- ① Detection height (see optical performance)
- ② Beam separation (10, 20, 30, 50 mm)
- ③ Status indicator: green, yellow, red LEDs
- ④ Indicator panel, 7-segment display
- ⑤ Male connector M12, 5-pin

	<b>A</b>
	Distance: MLG edge - first beam
<b>Beam separation 10 mm</b>	49 (1.93)
<b>Beam separation 20 mm</b>	49 (1.93) <sup>1)</sup> / 59 (2.32) <sup>2)</sup>
<b>Beam separation 30 mm</b>	69 (2.72)
<b>Beam separation 50 mm</b>	89 (3.50)

<sup>1)</sup> With even number of beams.  
<sup>2)</sup> With odd number of beams.

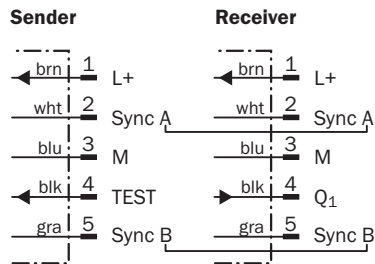
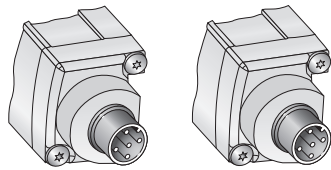
## Adjustments

LED indicator



- ① Supply voltage
- ② Device error
- ③ No object in the light path
- ④ Contamination control
- ⑤ Blocked Beams Hold (BBH)
- ⑥ Activated teach-in procedure
- ⑦ ParamMode is active
- ⑧ Standby
- ⑨ Error: E1 = sync. error; E2 = less receiver signal; E9 = defect

## Connection type and diagram



## 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.”

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