

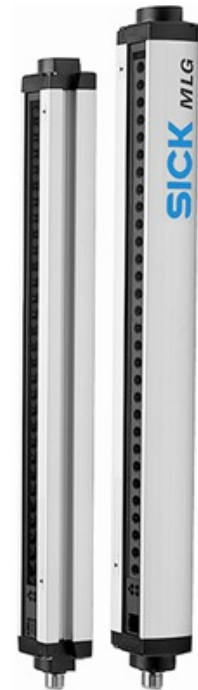


## Advanced automation light grids MLG, MLG Standard

MLG3-0420F511



**Model Name** > [MLG3-0420F511](#)  
**Part No.** > [1022103](#)



**At a glance**

- Up to 3 x PNP or NPN switching outputs
- Resolutions of 10 / 20 / 30 / 50 mm and customer-specific resolutions
- Working range up to 8.5 m
- Detection heights of over 3 m and up to 240 beams possible
- Short response time
- Automatic teach during power on

**Your benefits**

- Easy-to-see status information helps avoid interrupting operation, saves costs
- Different beam separation options, detection heights and output configurations ensure a reliable solution
- Integrated interfaces reduce cabling time and costs
- A fully modular system guarantees the optimal solution for the customer



**Features**

Technology:	Sender/receiver
Task:	Measurement light grid
Minimum detectable object (MDO) <sup>1)</sup> :	Parallel beam: ≥35 mm
Beam separation:	30 mm
Number of beams:	15
Detection height:	420 mm
Configuration:	Standard (switching)

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

**Performance**

Maximum range <sup>1)</sup> :	7 m
Minimum range:	Parallel beam: ≥0 mm
Response time <sup>2)</sup> :	Parallel beam: ≥3.25 ms
Working range <sup>3)</sup> :	5 m

<sup>1)</sup> No reserve for environmental issue and deterioration of the diode <sup>2)</sup> With resistive load <sup>3)</sup> Aperture ± 3°

**Interfaces**

Output type:	1 x PNP
Connection type:	Connector M12, 5-pin

IO-Link: 0

### Mechanics/electronics

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Wave length:	IR 880 nm
Supply voltage Vs <sup>1)</sup> :	DC 18 V ... 30 V
Power consumption sender <sup>2)</sup> :	170 mA
Power consumption receiver <sup>3)</sup> :	145 mA
Ripple:	< 5 Vpp
Output current I <sub>max</sub> :	100 mA
Output load capacitive:	100 nF
Output load inductive:	1 H
Initialization time:	1 s
Dimensions (W x H x D):	34 mm x 514 mm x 29 mm
Housing material:	Aluminum
Indication:	7-segment display, LED
Synchronization:	Cable
Enclosure rating:	IP 65
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Weight:	1.466 kg
Power consumption:	170 mA <sup>4)</sup>
Front screen:	PMMA

<sup>1)</sup> Without load    <sup>2) 3) 4)</sup> Without load with 24 V

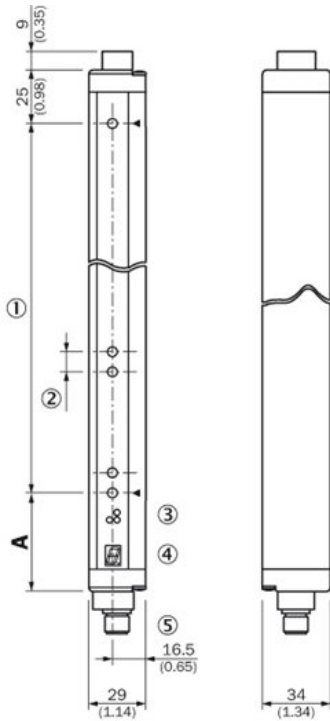
### Ambient data

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

<sup>1) 2)</sup> Sunlight

## Dimensional drawing



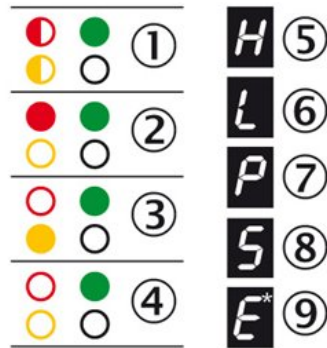
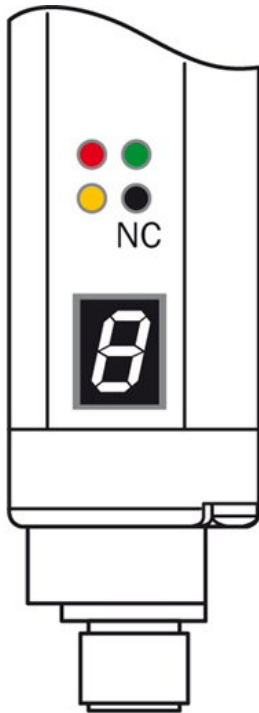
**A**  
Distance: MLG edge - first beam

<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.

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

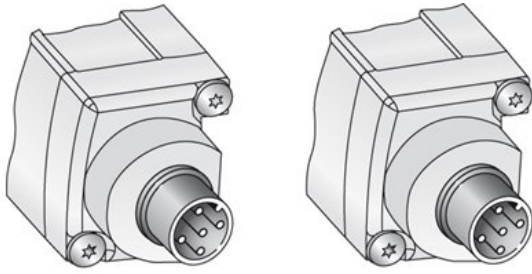
## Adjustments receiver



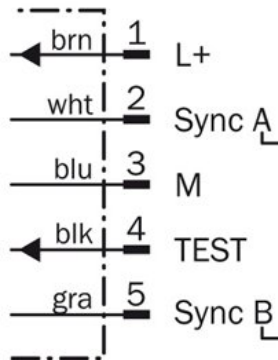
- ☉ blinks with 3 Hz
- on
- out
- ◐ on or out

- |1| Supply voltage
- |2| Device error
- |3| No object in the light path
- |4| Pollution indication
- |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

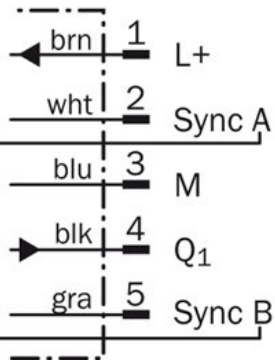
Connection type and diagram



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