



## Measuring automation light grids MLG, MLG Standard

MLG3-1020F511



**Model Name** > [MLG3-1020F511](#)  
**Part No.** > [1059883](#)



**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): | Parallel beam, 35 mm   |
| Beam separation:                 | 30 mm                  |
| Number of beams:                 | 35                     |
| Detection height:                | 1,020 mm               |
| Configuration:                   | Standard (switching)   |

**Performance**

|                               |                       |
|-------------------------------|-----------------------|
| Maximum range <sup>1)</sup> : | 7 m                   |
| Minimum range:                | Parallel beam: ≥0 mm  |
| Response time <sup>2)</sup> : | Parallel beam 6.25 ms |
| Working range:                | 5 m                   |

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

**Interfaces**

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

## Mechanics/electronics

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|  |   |
|--|---|
| Wave length:                               | Infrared light 880 nm   |
| Supply voltage Vs:                         | DC 18 V ... 30 V  |
| Power consumption sender <sup>1)</sup> :   | 210 mA  |
| Power consumption receiver <sup>2)</sup> : | 205 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 1,114 mm x 29 mm  |
| Housing material:                          | Aluminum  |
| Indication:                                | 7-segment display   |
| Enclosure rating:                          | IP 65   |
| Circuit protection:                        | Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected |
| Weight:                                    | 2.846 kg  |
| Front screen:                              | PMMA  |
| Synchronization:                           | Cable   |

<sup>1) 2)</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     |
| Vibration resistance:   | 5 g, 10 Hz ... 55 Hz (IEC 68-2-6)                      |
| Shock load:             | 10 g/IEC 68-2-29/16 ms                                 |
| Ambient light immunity: | Direct: ≥12,500 lx, Indirect: ≥50,000 lx <sup>1)</sup> |

<sup>1)</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



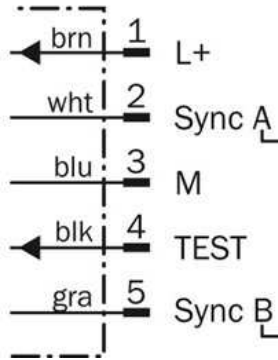
- ◐ blinks with 3 Hz
- on
- out
- ◐ on or out

- |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

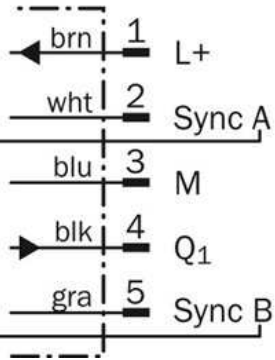
Connection type and diagram



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