



Advanced automation light grids  
MLG, MLG Programmable, RS485

MLG1-1040I212



**Model Name** > [MLG1-1040I212](#)  
**Part No.** > [1023584](#)



**At a glance**

- 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
- External teach-in for optimal sensitivity settings
- Easy-to-use setup software for customized application

**Your benefits**

- Intelligent evaluation software saves costs by quickly and easily turning a standard sensor into a custom problem solver, reducing the number of sensors, PLCs and programming required
- Easy-to-see status information helps avoid interrupting operation
- Different beam separation options, detection heights and output configurations ensure a reliable solution
- 6 discrete outputs for custom solutions
- Robust metal housing stands up to tough environments and reduces downtime



**Features**

|   |  |
|---|--|
| Technology:                                     | Sender/receiver                        |
| Task:   | Measurement light grid                 |
| Minimum detectable object (MDO) <sup>1)</sup> : | Parallel beam: ≥15 mm                  |
| Beam separation:                                | 10 mm                                  |
| Number of beams:                                | 105                                    |
| Detection height:                               | 1,040 mm                               |
| Configuration:                                  | Parameterization interface (measuring) |

<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: ≥16.75 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

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|                  |           |
|------------------|-----------|
| Output type:     | 4 x PNP   |
| Inputs:          | 2 x PNP   |
| Connection type: | Terminals |
| IO-Link:         | 0         |

## Mechanics/electronics

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|  |   |
|--|---|
| Wave length:                               | IR 880 nm   |
| Supply voltage $V_s$ <sup>1)</sup> :       | DC 18 V ... 30 V  |
| Power consumption sender <sup>2)</sup> :   | 350 mA  |
| Power consumption receiver <sup>3)</sup> : | 415 mA  |
| Ripple:                                    | < 5 Vpp   |
| Output current $I_{max.}$ :                | 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 1,225 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:                                    | 2.892 kg  |
| Power consumption:                         | 350 mA <sup>4)</sup>  |
| Front screen:                              | PMMA  |

1) Without load    2) 3) 4) Without load with 24 V

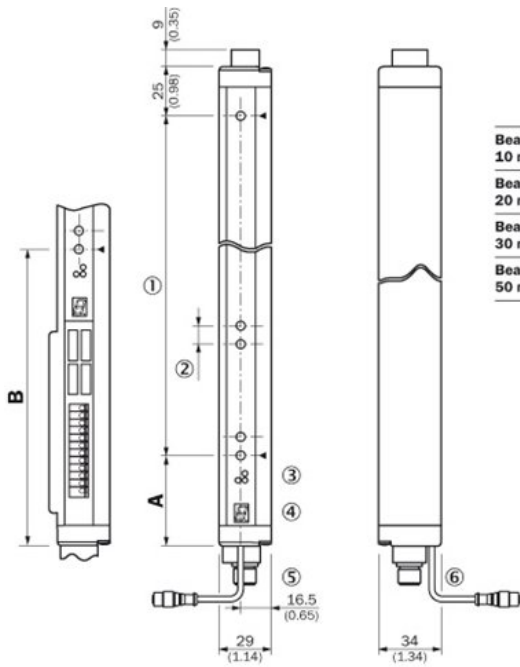
## Ambient data

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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), 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                           |

1) 2) Sunlight

## Dimensional drawing

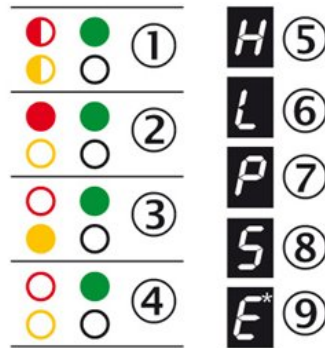
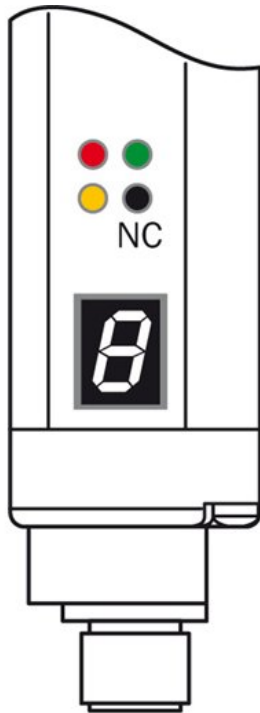


|                                       | A                               | B                        |
|---------------------------------------|---------------------------------|--------------------------|
|                                       | Distance: MLG edge - first beam |                          |
| <b>Beam separation MLG1<br/>10 mm</b> | 49 (1.93)                       | 160 (6.30)               |
| <b>Beam separation MLG2<br/>20 mm</b> | 49 (1.93) <sup>1)</sup>         | 170 (6.69) <sup>2)</sup> |
| <b>Beam separation MLG3<br/>30 mm</b> | 69 (2.72)                       | 180 (7.09)               |
| <b>Beam separation MLG5<br/>50 mm</b> | 89 (3.50)                       | 200 (7.87)               |

<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| Terminals: M16 cable entry/connector M12, 12-pin
- |6| Configuration connector M8, 4-pin

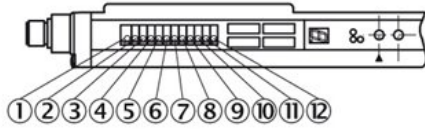
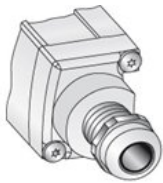
## Adjustments receiver



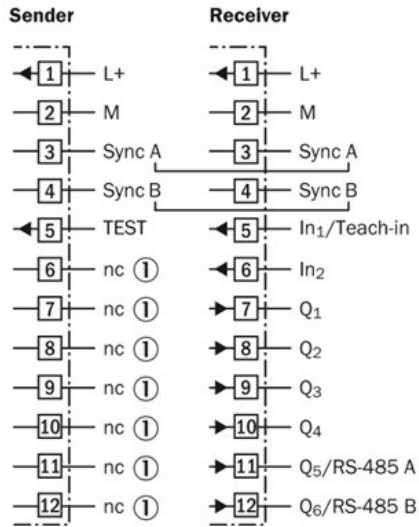
- ☉ blinks with 3 Hz
- on
- out
- ◐ on or out

- |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



[1] not connected



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