



## Advanced automation light grids MLG, MLG Programmable, RS485

MLG1-0290I812



**Model Name** > [MLG1-0290I812](#)  
**Part No.** > [1025943](#)



#### 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: $\geq 15$ mm            |
| Beam separation:                                | 10 mm                                  |
| Number of beams:                                | 30                                     |
| Detection height:                               | 290 mm                                 |
| Configuration:                                  | Parameterization interface (measuring) |

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

#### Performance

|                               |                              |
|-------------------------------|------------------------------|
| Maximum range <sup>1)</sup> : | 7 m                          |
| Minimum range:                | Parallel beam: $\geq 0$ mm   |
| Response time <sup>2)</sup> : | Parallel beam: $\geq 5.5$ 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  $\pm 3^\circ$

## Interfaces

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|                  |                      |
|------------------|----------------------|
| Output type:     | 1 x PNP              |
| Inputs:          | 1 x PNP              |
| Connection type: | Connector M12, 8-pin |
| 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> :   | 200 mA                                                                                                |
| Power consumption receiver <sup>3)</sup> : | 190 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 364 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:                                    | 1.167 kg                                                                                              |
| Power consumption:                         | 200 mA <sup>4)</sup>                                                                                  |
| Front screen:                              | PMMA                                                                                                  |

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

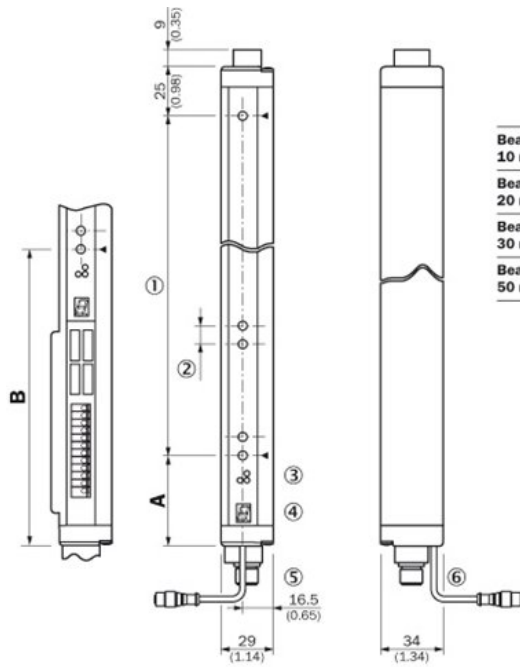
## Ambient data

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

## Dimensional drawing

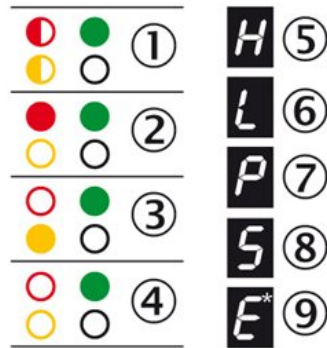
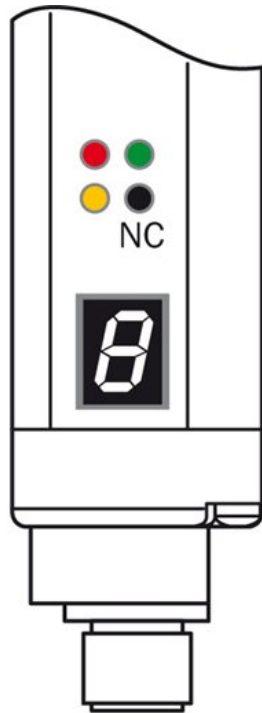


|                               | A                               | B          |
|-------------------------------|---------------------------------|------------|
|                               | Distance: MLG edge - first beam |            |
| Beam separation MLG1<br>10 mm | 49 (1.93)                       | 160 (6.30) |
| Beam separation MLG2<br>20 mm | 49 (1.93) <sup>1)</sup>         | 170 (6.69) |
| Beam separation MLG3<br>30 mm | 59 (2.32) <sup>2)</sup>         | 180 (7.09) |
| Beam separation MLG5<br>50 mm | 89 (3.50)                       | 200 (7.87) |

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

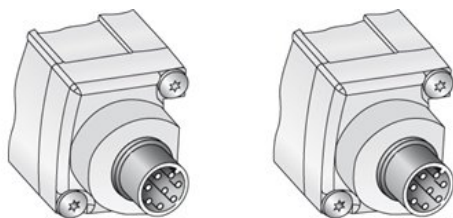
- [1] Detection height (see optical performance)
- [2] Beam separation (10, 20, 30, 50 mm)
- [3] Status indicator: LEDs green, yellow, red
- [4] Indicator panel, 7-segment display
- [5] Terminals: M16 cable entry/connector M12, 12-pin
- [6] Configuration connector M8, 4-pin

## Adjustments receiver

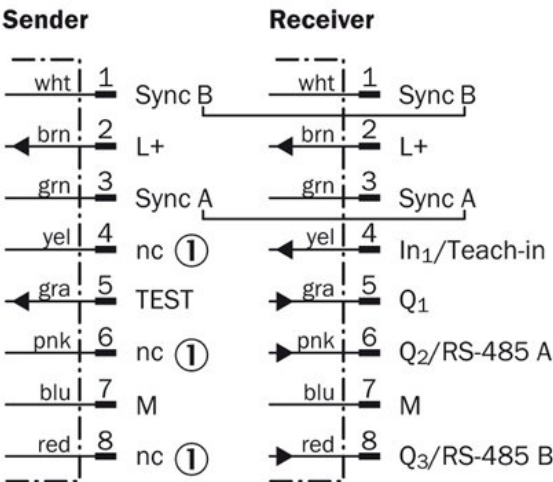


- ☼ blinks with 3 Hz
- on
- out
- ◐ on or out

- [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



[1] not connected



**Australia**

Phone +61 3 9457 0600  
1800 334 802 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail sac@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Ceská Republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail kundenservice@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6801000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 3358 1341  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederlands**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail admin@sicksgp.com.sg

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886-2-2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 8865 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 800-325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)