



## Advanced automation light grids MLG, MLG PROFIBUS, Profibus

MLG1-1790P811



**Model Name** > **MLG1-1790P811**  
**Part No.** > **1029195**



#### At a glance

- Integrated PROFIBUS interface
- 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

#### Your benefits

- Integrated PROFIBUS User Organization (PNO) number and GSD file for easy connection to a PLC
- Low cabling requirement reduces installation costs
- Easy-to-see light grid status information via the bus system helps avoid interrupting operation
- Different beam separation options, detection heights and output configurations ensure a reliable solution



#### 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:                                | 180                         |
| Detection height:                               | 1,790 mm                    |
| Configuration:                                  | GSD data file               |

<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: $\geq 28$ 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> :   | 500 mA                                                                                                |
| Power consumption receiver <sup>3)</sup> : | 640 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 1,864 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:                                    | 4.617 kg                                                                                              |
| Power consumption:                         | 500 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), 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



Adjustments DIP switches



## 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



### Sender



### Receiver



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