



## Measuring automation light grids MLG, MLG Standard

MLG1-2090F821



**Model Name** > [MLG1-2090F821](#)  
**Part No.** > [1044505](#)



**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, 20 mm
Beam separation:	10 mm
Number of beams:	210
Detection height:	2,090 mm
Configuration:	Standard (switching)

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

**Performance**

Maximum range <sup>1)</sup> :	12 m
Minimum range:	Parallel beam: ≥0 mm
Response time <sup>2)</sup> :	Parallel beam 32.5 ms
Working range:	8.5 m

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

**Interfaces**

Output type:	3 x PNP
Inputs:	1 x PNP

Connection type: Male connector M12, 8-pin  
IO-Link: -

### Mechanics/electronics

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Wave length: Infrared light 880 nm  
Supply voltage  $V_s$  <sup>1)</sup>: DC 18 V ... 30 V  
Power consumption sender <sup>2)</sup>: 560 mA  
Power consumption receiver <sup>3)</sup>: 730 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 2,164 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: 5.307 kg  
Front screen: PMMA  
Synchronization: Cable

<sup>1)</sup> Without load <sup>2) 3)</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:  $\geq 12,500$  lx, Indirect:  $\geq 50,000$  lx <sup>1) 2)</sup>

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

## Dimensional drawing



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

Beam separation 10 mm	49 (1.93)
Beam separation 20 mm	49 (1.93) <sup>1)</sup> / 59 (2.32) <sup>2)</sup>
Beam separation 30 mm	69 (2.72)
Beam separation 50 mm	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

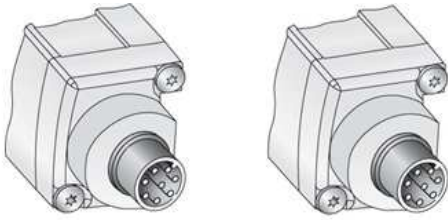
## Adjustments receiver



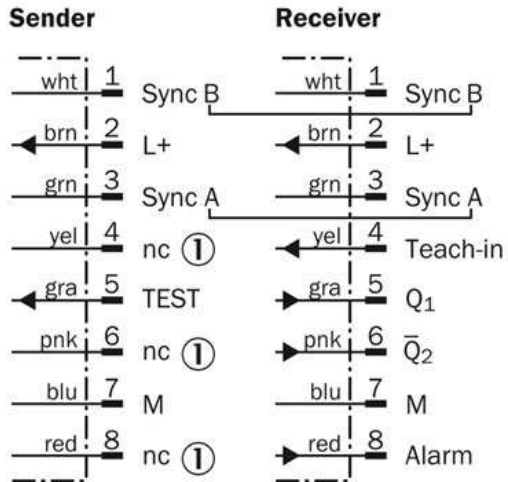
- ☉ blinks with 3 Hz
- on
- out
- ◐ on or out

- |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

**Anschlussart und -schema**



|1| not connected



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