



Advanced automation light grids  
MLG, MLG Programmable, RS485

MLG1-2090T812



**Model Name** > [MLG1-2090T812](#)  
**Part No.** > [1026417](#)



**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:	210
Detection height:	2,090 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: ≥32.5 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 ± 3°

## Interfaces

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Output type:	1 x NPN
Inputs:	1 x NPN
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> :	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, LED
Synchronization:	Cable
Enclosure rating:	IP 65
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Weight:	5.307 kg
Power consumption:	560 mA <sup>4)</sup>
Front screen:	PMMA

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

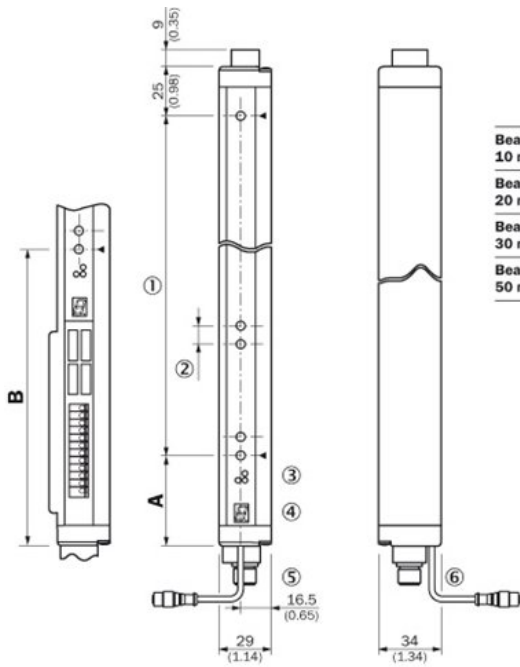
## Ambient data

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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: $\geq 12,500$ lx, Indirect: $\geq 50,000$ 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

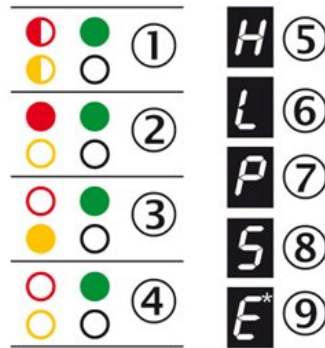
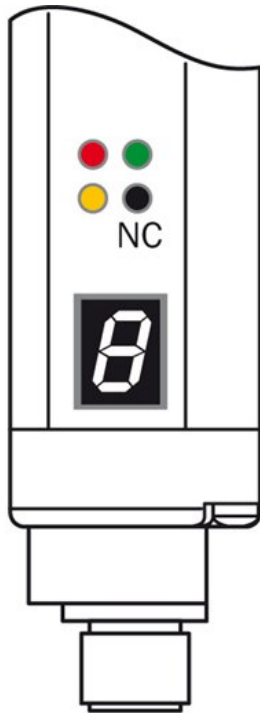


	A	B
	Distance: MLG edge - first beam	
<b>Beam separation MLG1 10 mm</b>	49 (1.93)	160 (6.30)
<b>Beam separation MLG2 20 mm</b>	49 (1.93) <sup>1)</sup>	170 (6.69)
<b>Beam separation MLG3 30 mm</b>	69 (2.72)	180 (7.09)
<b>Beam separation MLG5 50 mm</b>	89 (3.50)	200 (7.87)

<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

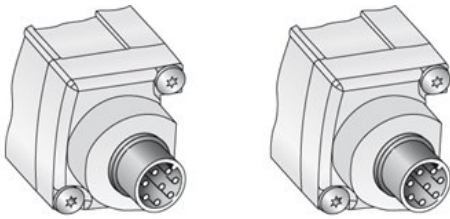
## Adjustments receiver



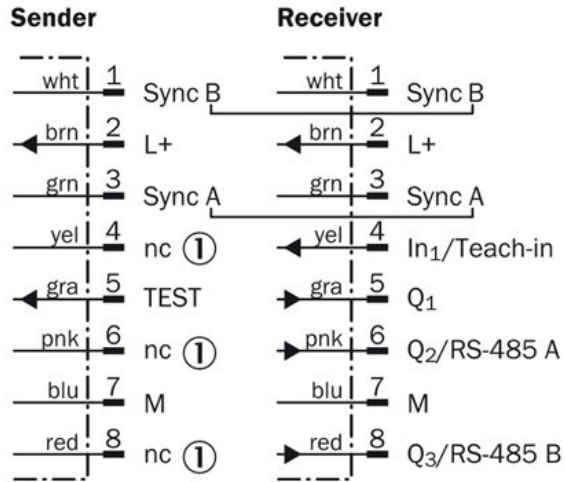
- ☉ blinks with 3 Hz
- on
- out
- ◐ on or out

- |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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