



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

MLG1-1940P821



**Model Name** > [MLG1-1940P821](#)  
**Part No.** > [1053527](#)



**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, 20 mm
Beam separation:	10 mm
Number of beams:	195
Detection height:	1,940 mm
Configuration:	GSD data file

<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 30.25 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

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Data interface:	Profibus
Output type:	1 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> :	530 mA
Power consumption receiver <sup>3)</sup> :	685 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 2,014 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:	4.962 kg
Front screen:	PMMA
Synchronization:	Cable

1) Without load    2) 3) 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>

1) 2) Sunlight

## Dimensional drawing

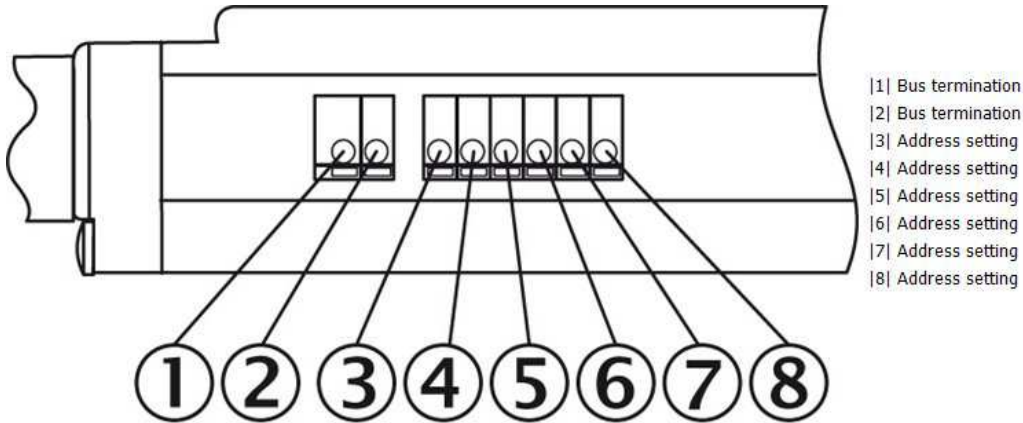


	<b>A</b>
	Distance: MLG edge - first beam
<b>Beam separation 10 mm</b>	49 (1.93)
<b>Beam separation 20 mm</b>	49 (1.93) <sup>1)</sup> / 59 (2.32) <sup>2)</sup>
<b>Beam separation 30 mm</b>	69 (2.72)
<b>Beam separation 50 mm</b>	89 (3.50)

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

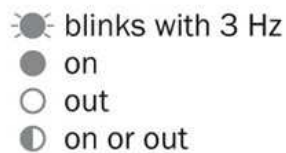
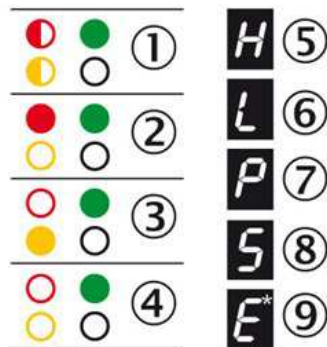
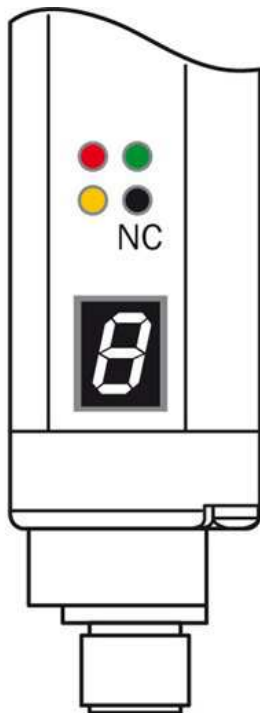
- |1| Detection height (see optical performance)
- |2| Beam separation (10, 20, 30, 50 mm)
- |3| Status indicator: LEDs green, yellow, red
- |4| Indicator panel, 7-segment display
- |5| M12 plug, 8-pin/ M12 plug 5-pin
- |6| Address setting
- |7| Bus termination

## Adjustments DIP switches



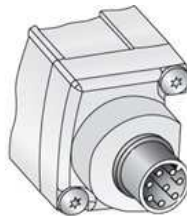
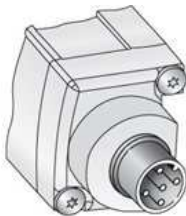
- |1| Bus termination
- |2| Bus termination
- |3| Address setting
- |4| Address setting
- |5| Address setting
- |6| Address setting
- |7| Address setting
- |8| Address setting

## Adjustments receiver



- |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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