



Advanced automation light grids  
MLG, MLG Analog Output

MLG1-0140A412



**Model Name** > [MLG1-0140A412](#)  
**Part No.** > [1056060](#)



**At a glance**

- Two analog outputs: voltage to current
- 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 of
- Teach algorithm for optimal sensitivity settings in difficult applications, such as measuring translucent objects
- Easy-to-use setup software for customized applications with new features
- Software tools, such as height measurement, zoning, hole detection, and presence control make implementation of complex solutions achievable

**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
- Integrated analog outputs reduce integration costs for measuring applications, because no additional software is necessary
- Discrete outputs for custom solutions without a PLC
- Tough metal housing stands up to harsh environments and reduces downtime



**Features**

Technology:	Sender/receiver
Task:	Measurement light grid
Minimum detectable object (MDO):	Parallel beam: ≥15 mm
Beam separation:	10 mm
Number of beams:	15
Detection height:	140 mm
Configuration:	Parameterization interface (measuring)

**Performance**

Maximum range <sup>1)</sup> :	7 m
Minimum range:	Parallel beam: ≥0 mm
Response time <sup>2)</sup> :	Parallel beam: ≥3.25 ms
Working range:	5 m

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

## Interfaces

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Output type: 2 x Analog, 4 x PNP  
Inputs: 2 x PNP  
Connection type: Connector M12, 12-pin  
IO-Link: 0

## Mechanics/electronics

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Wave length: IR 880 nm  
Supply voltage Vs: DC 18 V ... 30 V  
Power consumption sender <sup>1)</sup>: 170 mA  
Power consumption receiver <sup>2)</sup>: 145 mA  
Ripple: < 5 Vpp  
Output current I<sub>max</sub>.: 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 214 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: 0.822 kg  
Power consumption: 170 mA <sup>3)</sup>  
Front screen: PMMA

1) 2) 3) Without load with 24 V

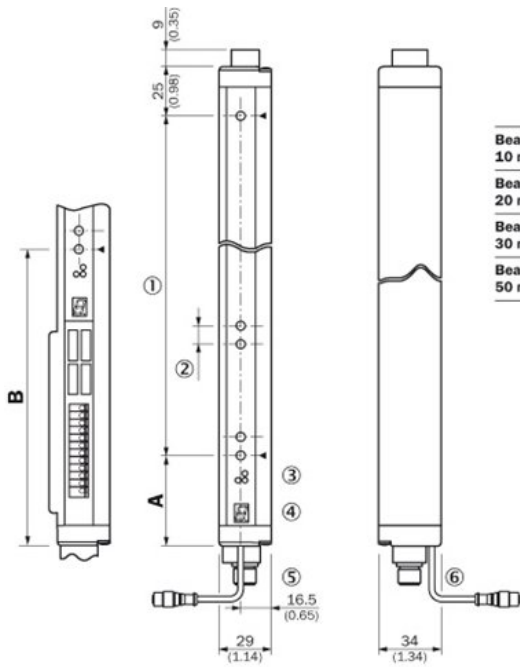
## Ambient data

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Protection class: III  
EMC: EN 60947-5-2  
Ambient temperature: Operation: -25 ... 55 °C, Storage: -40 ... 70 °C  
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

1) 2) Sunlight

## Dimensional drawing

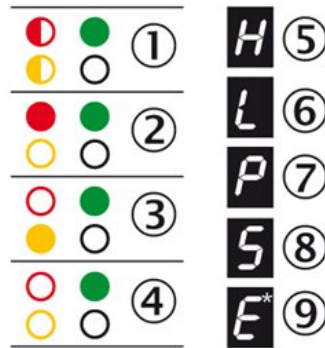
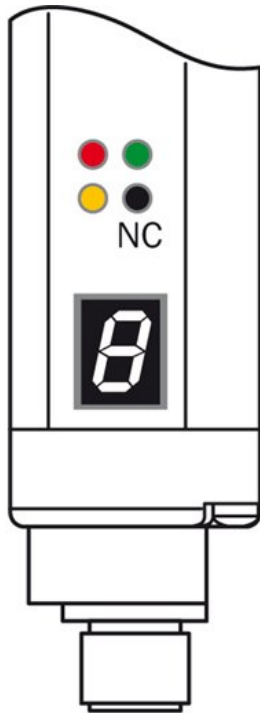


	A	B
	Distance: MLG edge - first beam	
<b>Beam separation MLG1</b> 10 mm	49 (1.93)	160 (6.30)
<b>Beam separation MLG2</b> 20 mm	49 (1.93) <sup>1)</sup>	170 (6.69)
<b>Beam separation MLG3</b> 30 mm	69 (2.72)	180 (7.09)
<b>Beam separation MLG5</b> 50 mm	89 (3.50)	200 (7.87)

<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

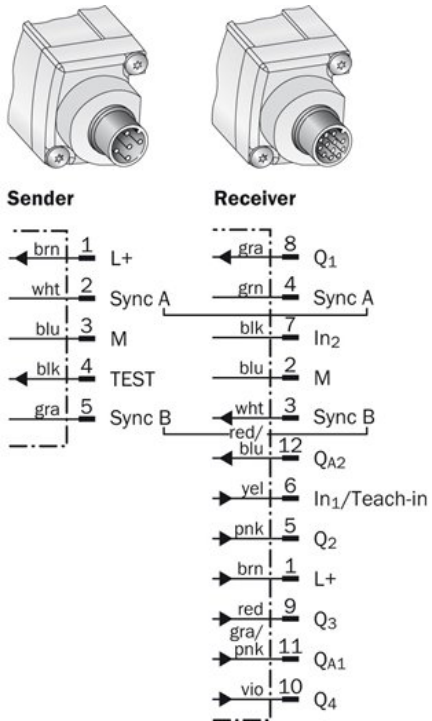
## Adjustments receiver



- ☉ 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

Connection type and diagram



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