



Measuring automation light grids MLG, MLG Standard

MLG1-0590D511



Model Name > [MLG1-0590D511](#)
Part No. > [1041659](#)



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) ¹⁾ :	Parallel beam, 15 mm
Beam separation:	10 mm
Number of beams:	60
Detection height:	590 mm
Configuration:	Standard (switching)

¹⁾ MDO min. detectable object

Performance

Maximum range ¹⁾ :	7 m
Minimum range:	Parallel beam: ≥0 mm
Response time ²⁾ :	Parallel beam 10 ms
Working range:	5 m

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

Interfaces

Output type:	1 x PNP, switching
Connection type:	Connector M12, 5-pin

IO-Link: ✓

Mechanics/electronics

Wave length:	Infrared light 880 nm
Supply voltage Vs ¹⁾ :	DC 18 V ... 30 V
Power consumption sender ²⁾ :	260 mA
Power consumption receiver ³⁾ :	280 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 664 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:	1.857 kg
Front screen:	PMMA
Synchronization:	Cable

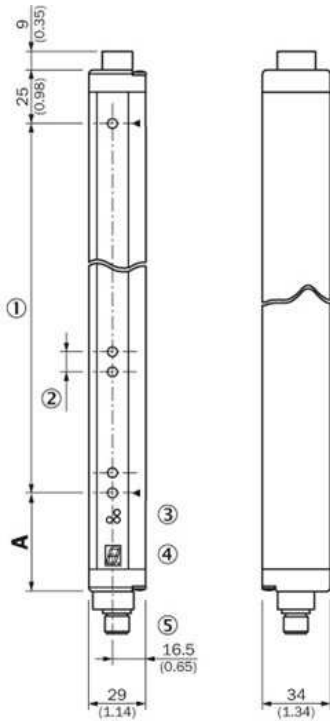
1) Without load 2) 3) Without load with 24 V

Ambient data

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: ≥12,500 lx, Indirect: ≥50,000 lx ^{1) 2)}

1) 2) Sunlight

Dimensional drawing



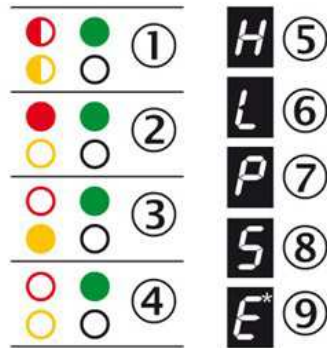
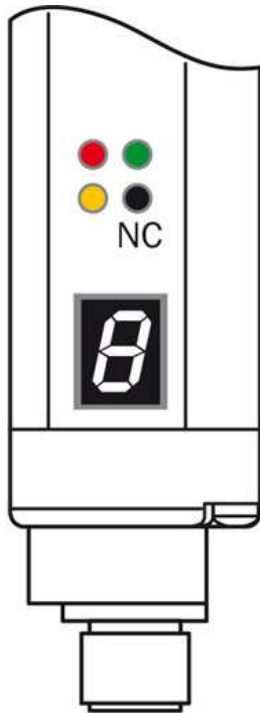
A
Distance: MLG edge - first beam

Beam separation 10 mm	49 (1.93)
Beam separation 20 mm	49 (1.93) ¹⁾ / 59 (2.32) ²⁾
Beam separation 30 mm	69 (2.72)
Beam separation 50 mm	89 (3.50)

¹⁾ With even number of beams.
²⁾ 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

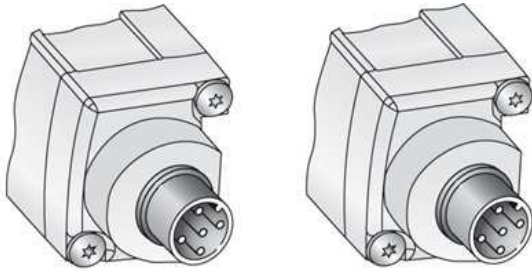
Adjustments receiver



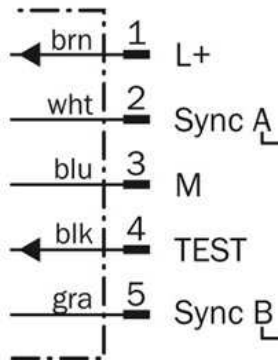
- ◐ blinks with 3 Hz
- on
- out
- ◐ on or out

- |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

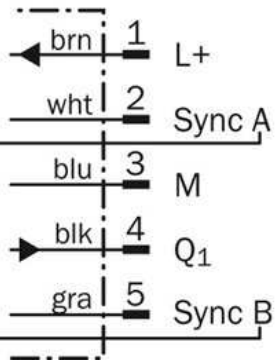
Connection type and diagram



Sender



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