



Measuring automation light grids MLG, MLG Standard

MLG5-2050F51L



Model Name > [MLG5-2050F51L](#)
Part No. > [1023630](#)



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⁾ : | Cross beam, 30 mm |
| Beam separation: | 50 mm |
| Number of beams: | 42 |
| Detection height: | 2,050 mm |
| Configuration: | 3-times cross beam and Q inv. |

¹⁾ MDO min. detectable object

Performance

| | |
|-------------------------------|---------------------|
| Maximum range ¹⁾ : | 7 m |
| Minimum range: | Cross beam: ≥840 mm |
| Response time ²⁾ : | Cross beam 21.9 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 |
| 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⁾ : | 224 mA |
| Power consumption receiver ³⁾ : | 226 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: | 5.215 kg |
| Front screen: | PMMA |
| Synchronization: | Cable |

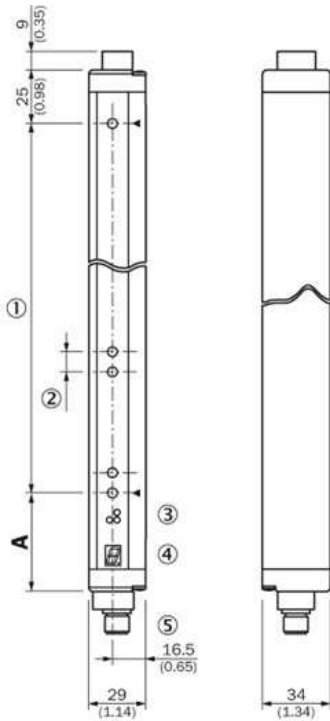
1) Without load 2) 3) Without load with 24 V

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

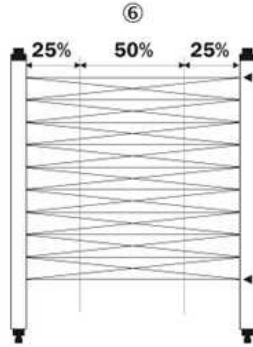
Dimensional drawing



A
Distance: MLG edge - first beam

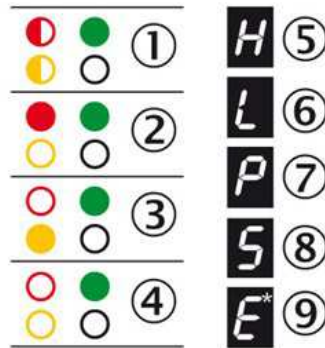
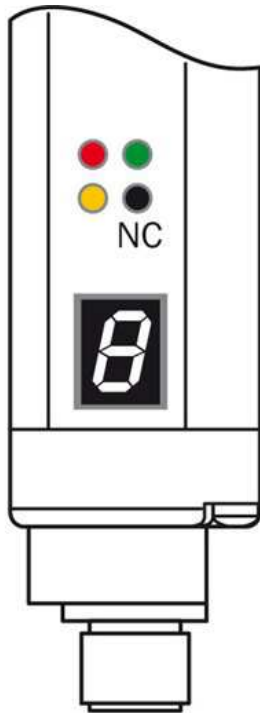
| | |
|-----------------------|---|
| Beam separation 10 mm | 49 (1.93) |
| Beam separation 20 mm | 49 (1.93) ¹⁾ / 59 (2.32) ²⁾ |
| Beam separation 30 mm | 69 (2.72) |
| Beam separation 50 mm | 89 (3.50) |

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
- |6| Kreuzstrahl*

Adjustments receiver



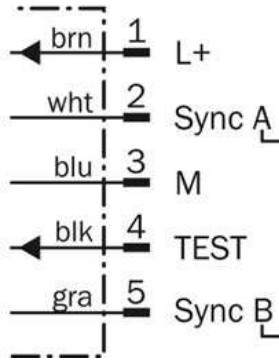
- blinks with 3 Hz
- on
- out
- ◐ on or out

- |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

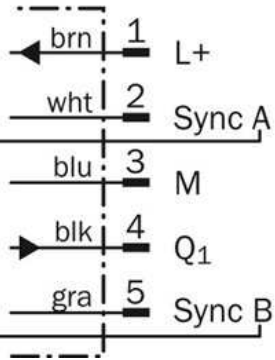
Connection type and diagram



Sender



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