



Measuring automation light grids MLG, MLG Programmable

MLG5-3100F812



Model Name > [MLG5-3100F812](#)
Part No. > [1023803](#)



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) ¹⁾ : | Parallel beam: ≥55 mm |
| Beam separation: | 50 mm |
| Number of beams: | 63 |
| Detection height: | 3,100 mm |
| Configuration: | Parameterization interface (measuring) |

¹⁾ MDO min. detectable object

Performance

| | |
|-------------------------------|--------------------------|
| Maximum range ¹⁾ : | 7 m |
| Minimum range: | Parallel beam: ≥0 mm |
| Response time ²⁾ : | Parallel beam: ≥10.45 ms |
| Working range ³⁾ : | 5 m |

¹⁾ No reserve for environmental issue and deterioration of the diode ²⁾ With resistive load ³⁾ Aperture ± 3°

Interfaces

| | |
|------------------|---------------------------|
| Output type: | 3 x PNP |
| Inputs: | 1 x PNP |
| Connection type: | Male connector M12, 8-pin |

Mechanics/electronics

| | |
|--|---|
| Wave length: | IR 880 nm |
| Supply voltage V_s ¹⁾ : | DC 18 V ... 30 V |
| Power consumption sender ²⁾ : | 266 mA |
| Power consumption receiver ³⁾ : | 289 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 3,214 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: | 7.63 kg |
| Power consumption: | 266 mA ⁴⁾ |
| Front screen: | PMMA |

1) Without load ^{2) 3) 4)} 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 |
| Ambient light safety ^{1), 2)} : | 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 | |
| Beam separation MLG1 10 mm | 49 (1.93) | 160 (6.30) |
| Beam separation MLG2 20 mm | 49 (1.93) ¹⁾ | 170 (6.69) |
| Beam separation MLG3 30 mm | 69 (2.72) | 180 (7.09) |
| Beam separation MLG5 50 mm | 89 (3.50) | 200 (7.87) |

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| 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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