



## Measuring automation light grids MLG, MLG Programmable

MLG5-1900F412



**Model Name** > **MLG5-1900F412**  
**Part No.** > **1063718**



#### 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                        |
| Minimum detectable object (MDO): | Parallel beam: $\geq 55$ mm            |
| Beam separation:                 | 50 mm                                  |
| Number of beams:                 | 39                                     |
| Detection height:                | 1,900 mm                               |
| Configuration:                   | Parameterization interface (measuring) |

#### Performance

|                               |                               |
|-------------------------------|-------------------------------|
| Maximum range <sup>1)</sup> : | 7 m                           |
| Minimum range:                | Parallel beam: $\geq 0$ mm    |
| Response time <sup>2)</sup> : | Parallel beam: $\geq 6.85$ ms |
| Working range:                | 5 m                           |

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

#### Interfaces

|                  |                       |
|------------------|-----------------------|
| Output type:     | 6 x PNP               |
| Inputs:          | 2 x PNP               |
| Connection type: | Connector M12, 12-pin |

## 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> :   | 218 mA                                                                                                |
| Power consumption receiver <sup>2)</sup> : | 217 mA                                                                                                |
| 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 2,014 mm x 29 mm                                                                              |
| Housing material:                          | Aluminum                                                                                              |
| Indication:                                | 7-segment display, LED                                                                                |
| Synchronization:                           | Cable                                                                                                 |
| Circuit protection:                        | Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected |
| Weight:                                    | 4.87 kg                                                                                               |
| Power consumption:                         | 218 mA <sup>3)</sup>                                                                                  |
| Front screen:                              | PMMA                                                                                                  |

<sup>1) 2) 3)</sup> Without load with 24 V

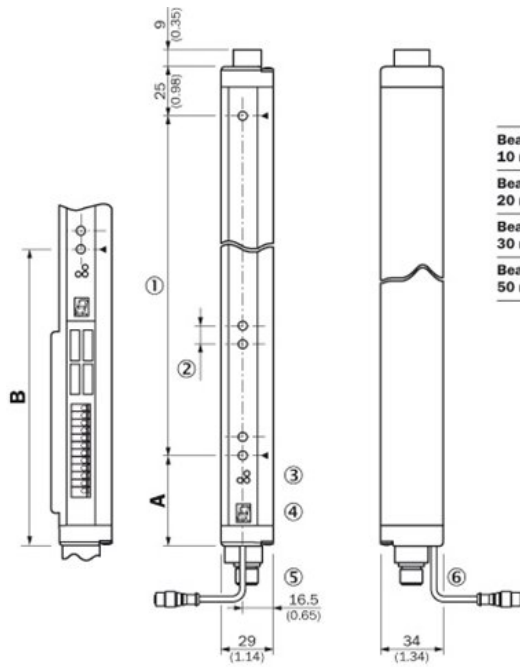
## Ambient data

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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> : | 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                             |

<sup>1)</sup> Sunlight

## Dimensional drawing

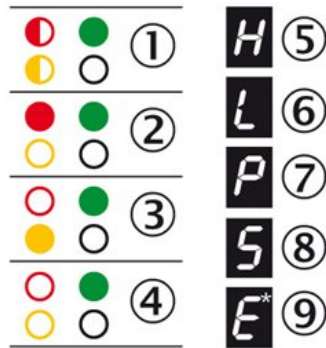
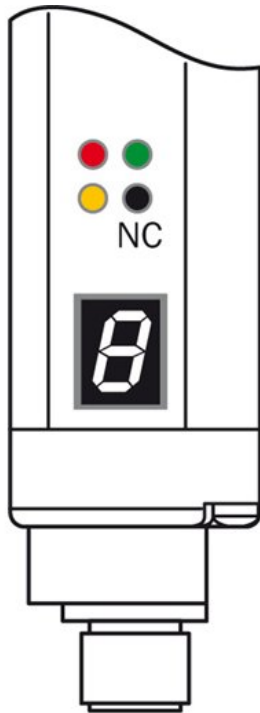


|                               | A                               | B          |
|-------------------------------|---------------------------------|------------|
|                               | Distance: MLG edge - first beam |            |
| Beam separation MLG1<br>10 mm | 49 (1.93)                       | 160 (6.30) |
| Beam separation MLG2<br>20 mm | 49 (1.93) <sup>1)</sup>         | 170 (6.69) |
| Beam separation MLG3<br>30 mm | 59 (2.32) <sup>2)</sup>         | 180 (7.09) |
| Beam separation MLG5<br>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

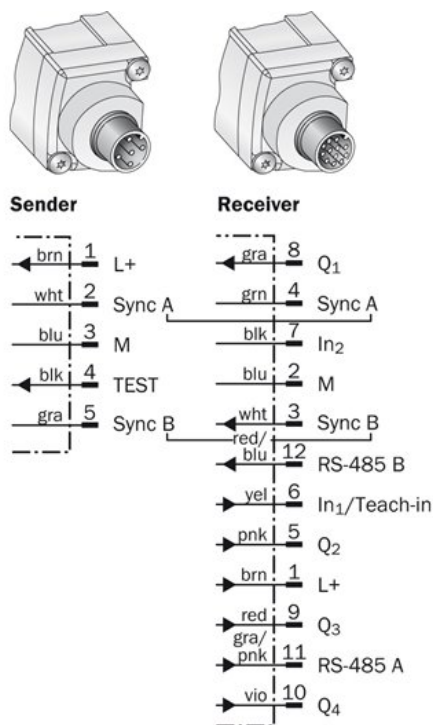
## Adjustments receiver



- ☉ 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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