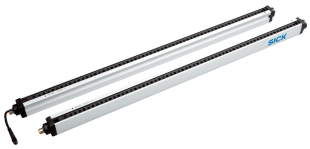
Online data sheet

# MLG3-2070F812

MLG

MEASURING AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.



## Ordering information

| Type | Part no. |
|---|---|
| MLG3-2070F812 | 1022292 |

Other models and accessories → www.sick.de/MLG

## Detailed technical data

### Features

| | |
|---|---|
| **Technology** | Sender/receiver |
| **Minimum detectable object (MDO)** | Parallel beam, 35 mm [1] |
| **Beam separation** | 30 mm |
| **Number of beams** | ≥ 70 |
| **Detection height** | 2,070 mm |
| **Configuration** | Parameterization interface (measuring) |

[1] MDO min. detectable object.

### Performance

| | |
|---|---|
| **Maximum range** | 7 m [1] |
| **Minimum range** | Parallel beam: ≥ 0 mm |
| **Working range** | 5 m |
| **Response time** | Parallel beam ≥ 11.5 ms [2] |

[1] No reserve for environmental issue and deterioration of the diode.
[2] With resistive load.

### Interfaces

| | |
|---|---|
| **Switching output** | 3 x PNP |
| **Inputs** | 1 x PNP |
| **Connection type** | Male connector M12, 8-pin |
| **Fieldbus, industrial network** | - |
| **Type of fieldbus integration** | - |

### Mechanics/electronics

| | |
|---|---|
| **Wave length** | Infrared light, 880 nm |
| **Supply voltage $V_s$** | DC 18 V ... 30 V [1] |
| **Power consumption sender** | ≥ 280 mA [2] |
| **Power consumption receiver** | ≥ 310 mA [2] |
| **Ripple** | < 5 $V_{pp}$ |
| **Output current $I_{max.}$** | ≤ 100 mA [3] |

[1] Without load.
[2] Without load with 24 V.
[3] Typical value.

| | |
|---|---|
| **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, 7-segment display |
| **Synchronization** | Cable |
| **Enclosure rating** | IP 65 |
| **Circuit protection** | $U_V$ connections, reverse polarity protected, Output Q short-circuit protected, Interference pulse suppression |
| **Weight** | ≥ 5.261 kg |
| **Front screen** | PMMA |

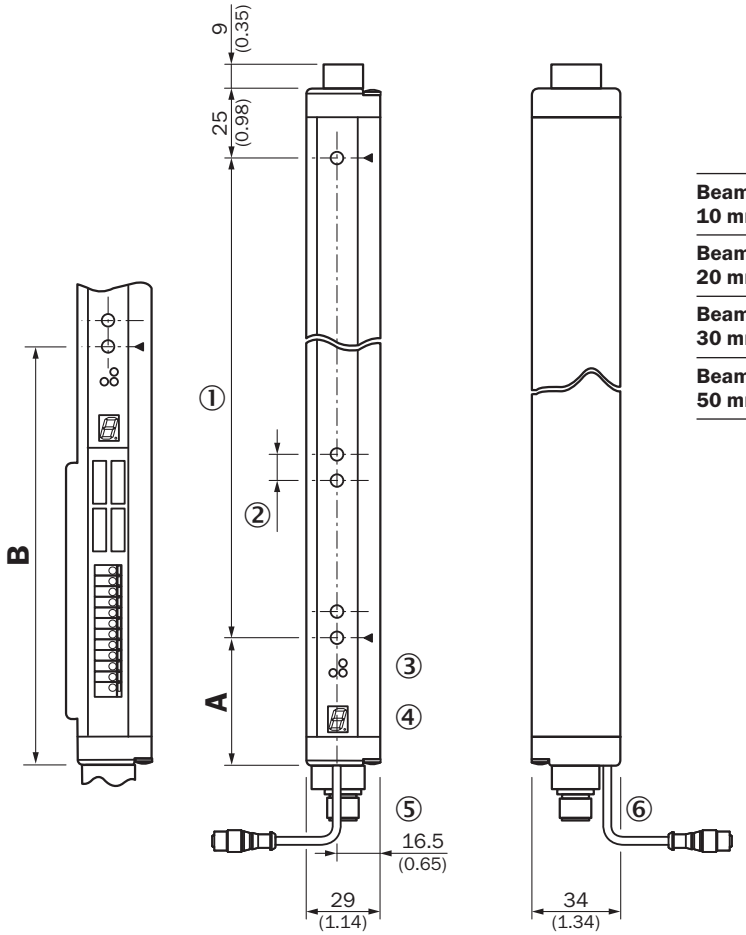
[1] Without load.
[2] Without load with 24 V.
[3] Typical value.

## Ambient data

| | |
|---|---|
| **Protection class** | III |
| **EMC** | EN 60947-5-2 |
| **Ambient temperature** | Operation: –25 °C ... +55 °C<br>Storage: –40 °C ... +70 °C |
| **Ambient light immunity** | Direct: 12,500 lx [1]<br>Indirect: 50,000 lx [1] |
| **Vibration resistance** | 5 g, 10 Hz ... 55 Hz (IEC 68-2-6) |
| **Shock load** | 10 g / IEC 68-2-29 / 16 ms |

[1] Sunlight.

## Dimensional drawing (Dimensions in mm (inch))



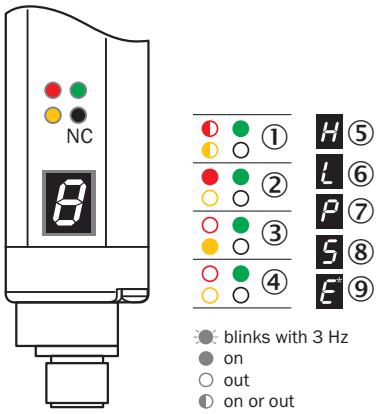

| | A | B |
|---|---|---|
| | Distance: MLG edge – first beam | |
| **Beam separation MLG1**<br>**10 mm** | 49 (1.93) | 160 (6.30) |
| **Beam separation MLG2**<br>**20 mm** | 49 (1.93) [1]<br>59 (2.32) [2] | 170 (6.69) |
| **Beam separation MLG3**<br>**30 mm** | 69 (2.72) | 180 (7.09) |
| **Beam separation MLG5**<br>**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: green, yellow, red LEDs
④ Indicator panel, 7-segment display
⑤ Terminals: M16 cable entry/connector M12, 12-pin
⑥ Configuration connector M8, 4-pin

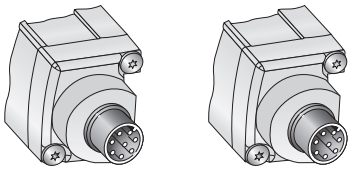
## Adjustments

LED indicator

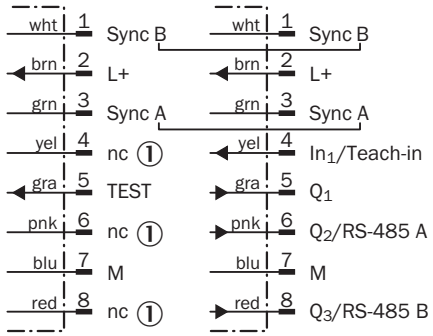



① Supply voltage
② Device error
③ No object in the light path
④ Contamination control
⑤ Blocked Beams Hold (BBH)
⑥ Activated teach-in procedure
⑦ ParamMode is active
⑧ Standby
⑨ Error: E1 = sync. error; E2 = less receiver signal; E9 = defect

## Connection type and diagram



**Sender** **Receiver**




① Not assigned

## Recommended accessories

Other models and accessories ➜ www.sick.de/MLG

| | Brief description | Type | Part no. |
|---|---|---|---|
| **Mounting brackets and mounting plates** | | | |
| | Side mounting with T-nuts, 4 pieces, mounting hardware included | BEF-NUT-MLG | 2023696 |
| | Metal mounting bracket, compact, steel, zinc coated, Set, consisting of 4 pieces, without mounting hardware | BEF-WK-XLG | 2029100 |
| **Terminal and alignment brackets** | | | |
| | 4 pieces, Mounting kit 1, rotatable, swivel mount, plastic | BEF-2SMKEAKU4 | 2019649 |
| **Adapters and distributors** | | | |
| | Male connector M12, 8-pin, straight, to 1 x female connector M12, 8-pin, straight and 1 x female connector M12, 8-pin, straight | SBO-02F12-SM | 6029306 |
| **Plug connectors and cables** | | | |
| | Head A: female connector, M12, 8-pin, straight<br>Head B: cable<br>Cable: PVC, shielded, 2 m | DOL-1208-G02MA | 6020633 |
| | Head A: female connector, M12, 8-pin, straight<br>Head B: cable<br>Cable: PVC, shielded, 5 m | DOL-1208-G05MA | 6020993 |
| | Head A: female connector, M12, 8-pin, straight<br>Head B: cable<br>Cable: PVC, shielded, 10 m | DOL-1208-G10MA | 6022152 |
| | Head A: female connector, M12, 8-pin, angled<br>Head B: cable<br>Cable: PVC, shielded, 2 m | DOL-1208-W02MA | 6020992 |
| | Head A: female connector, M12, 8-pin, angled<br>Head B: cable<br>Cable: PVC, shielded, 5 m | DOL-1208-W05MA | 6021033 |
| | Head A: female connector, M8, 4-pin, straight<br>Head B: female connector, D-Sub, 9-pin, straight<br>Cable: unshielded, 2 m<br>Rectangular plug-in system, parameterization cable | DSL-8D04-G02M | 2023695 |
| | Head A: female connector, M12, 8-pin, straight<br>Head B: male connector, M12, 8-pin, straight<br>Cable: drag chain use, PUR, halogen-free, shielded, 2 m | DSL-1208-G02MAC | 6030121 |
| | Head A: female connector, M12, 8-pin, straight<br>Head B: male connector, M12, 8-pin, straight<br>Cable: drag chain use, PUR, halogen-free, shielded, 5 m | DSL-1208-G05MAC | 6032325 |
| | Head A: female connector, M12, 8-pin, straight<br>Head B: male connector, M12, 8-pin, straight<br>Cable: drag chain use, PUR, halogen-free, shielded, 10 m | DSL-1208-G10MAC | 6034901 |

# SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is “Sensor Intelligence.”**

# WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com