



MLG20N-2380C10594

MLG-2

AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|-------------------|----------|
| MLG20N-2380C10594 | 1138900 |

Other models and accessories → www.sick.com/MLG-2

Illustration may differ



Detailed technical data

Features

| | |
|--|---|
| Device version | ProNet – extended functionality including fieldbus |
| Sensor principle | Sender/receiver |
| Minimum detectable object (MDO) | 20 mm ¹⁾ 24 mm ²⁾ ³⁾ |
| Beam separation | 20 mm |
| Type of synchronization | Cable |
| Number of beams | 120 |
| Detection height | 2,380 mm |
| Operating mode | |
| Standard | ✓ |
| Transparent | ✓ |
| Dust- and sunlight-resistant | ✓ |
| Function | |
| Cross beam | ✓ |
| Beam blanking | ✓ |
| High-speed scan | ✓ |
| High measurement accuracy | ✓ |
| Applications | |
| Switching output | Object detection/object width |

¹⁾ MDO min. detectable object at high measurement accuracy.

²⁾ MDO min. detectable object for standard measurement accuracy.

³⁾ Depending on beam separation without cross beam setting.

| | |
|-------------------------------|--|
| | Object recognition Height classification Hole detection/hole size Outside/inside dimension Object position Hole position Zone definition |
| Data interface | Object detection Hole detection Object height measurement Measurement of the outside dimension Measurement of the inside dimension Measurement of the object position Measurement of the hole position |
| Included with delivery | 1 × sender 1 × receiver 1 x Fieldbus module 4/6 x QuickFix brackets (6 x QuickFix brackets for monitoring heights above 2 m) 1 × Quick Start Guide |

1) MDO min. detectable object at high measurement accuracy.

2) MDO min. detectable object for standard measurement accuracy.

3) Depending on beam separation without cross beam setting.

Mechanics/electronics

| | |
|--|--|
| Light source | LED, Infrared light |
| Wave length | 850 nm |
| Supply voltage V_s | DC 19.2 V ... 28.8 V ¹⁾ |
| Power consumption sender | 61.95 mA ²⁾ |
| Power consumption receiver | 144.8 mA ²⁾ |
| Fieldbus module current consumption | 115 mA |
| Ripple | < 5 V _{pp} |
| Output current I_{max} | 100 mA |
| Output load, capacitive | 100 nF |
| Output load, Inductive | 1 H |
| Initialization time | < 1 s |
| Switching output | Push-pull: PNP/NPN |
| Connection type | Plug, M12, 5-pin, 0.22 m Connector M12, 12-pin, 0.21 m |
| Housing material | Aluminum |
| Display | LED |
| Enclosure rating | IP65, IP67 ³⁾ |
| Circuit protection | U _v connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression |
| Protection class | III |
| Weight | 5.049 kg |
| Front screen | PMMA |

1) Without load.

2) Without load with 24 V.

3) Operating in outdoor condition only with a external protection housing.

| | |
|--------------------|--------------|
| Option | None |
| UL File No. | NRKH.E181493 |

¹⁾ Without load.

²⁾ Without load with 24 V.

³⁾ Operating in outdoor condition only with a external protection housing.

Performance

| | |
|------------------------|----------------------|
| Maximum range | 7 m ¹⁾ |
| Minimum range | ≥ 0 m |
| Operating range | 5 m |
| Response time | 3.6 ms ²⁾ |

¹⁾ No reserve for environmental issue and deterioration of the diode.

²⁾ Without high speed.

Interfaces

| | |
|------------------------|------------------------|
| CANopen | ✓ |
| Data transmission rate | 10 kbit/s ... 1 Mbit/s |
| Digital output | Q ₁ |
| Number | 1 |

Ambient data

| | |
|--------------------------------------|--|
| Shock resistance | Continuous shocks 10 g, 16 ms, 1000 shocks Single shocks 15 g, 11 ms 3 per axle |
| Vibration resistance | Sinusoidal oscillation 10-150 Hz 5 g |
| EMC | EN 60947-5-2 |
| Ambient light immunity | Direct: 150,000 lx ¹⁾ Indirect: 200,000 lx ²⁾ |
| Ambient operating temperature | -30 °C ... +55 °C |
| Ambient temperature, storage | -40 °C ... +70 °C |

¹⁾ Outdoor mode.

²⁾ Light resistance indirect.

Certificates

| | |
|--|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |
| Profinet certificate | ✓ |
| Photobiological safety (IEC EN 62471) | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |

Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27270910 |
| ECLASS 5.1.4 | 27270910 |

| | |
|-----------------------|----------|
| ECLASS 6.0 | 27270910 |
| ECLASS 6.2 | 27270910 |
| ECLASS 7.0 | 27270910 |
| ECLASS 8.0 | 27270910 |
| ECLASS 8.1 | 27270910 |
| ECLASS 9.0 | 27270910 |
| ECLASS 10.0 | 27270910 |
| ECLASS 11.0 | 27270910 |
| ECLASS 12.0 | 27270910 |
| ETIM 5.0 | EC002549 |
| ETIM 6.0 | EC002549 |
| ETIM 7.0 | EC002549 |
| ETIM 8.0 | EC002549 |
| UNSPSC 16.0901 | 39121528 |

Dimensional drawing



| | | |
|-------------------------------|---------------------------------------|--------------|
| Beam separation 2.5 mm | 62.25 (2.45) | 17.15 (0.68) |
| Beam separation 5 mm | 63.3 (2.49) | 16.1 (0.63) |
| Beam separation 10 mm | 68.3 (2.69) | 16.1 (0.63) |
| Beam separation 20 mm | 68.3 (2.69)/78.3 (3.08) ³⁾ | 16.1 (0.63) |
| Beam separation 25 mm | 83.3 (3.28) | 16.1 (0.63) |
| Beam separation 30 mm | 88.3 (2.69) | 16.1 (0.63) |
| Beam separation 50 mm | 108.3 (4.26) | 16.1 (0.63) |

¹⁾ Distance: MLG-2 edge - first beam

²⁾ Distance: MLG-2 edge - last beam

³⁾ MLG20x-xx40: 68.3 mm
MLG20x-xx80: 78.3 mm

Dimensions in mm (inch)

- ① First beam
- ② last beam
- ③ detection height (see technical data)
- ④ Beam separation
- ⑤ Optical axis
- ⑥ status indicator: green, yellow, red LEDs
- ⑦ Connection
- ⑧ safety screw M4; turning moment 0,5 Nm
- ⑨ for thread bold M4; turning moment 0,5 Nm

Connection type and diagram CANopen



- ① Connection to fieldbus module
- ② Not connected

Pinouts Ethernet



- ① Connection cable receiver (2096010)
- ② T-piece
- ③ Connection cable (2096240)

- ④ connection receiver "DEVICE"
- ⑤ Connection cable "POWER" (2096010)
- ⑥ Ethernet Connection cable "BUS IN, BUS OUT"
- ⑦ Ethernet connection cable "CONFIG"

Adjustments



① status indicator: green, yellow, red LEDs

Connection diagram T-piece



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