



MLG20S-1180A10501

MLG-2

AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

| Type | part no. |
|-------------------|----------|
| MLG20S-1180A10501 | 1217853 |

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



Detailed technical data

Features

| | | |
|--|--------------------------------|-------------------------------------|
| Device version | Prime - Standard functionality | |
| Sensor principle | Sender/receiver | |
| Minimum detectable object (MDO) | 24 mm ¹⁾ | |
| Beam separation | 20 mm | |
| Type of synchronization | Optical | |
| Number of beams | 60 | |
| Detection height | 1,180 mm | |
| Software features (default) | Q _{A1} | Height measurement (first beam)/FBB |
| | Q _{A2} | Height measurement (last beam)/LBB |
| | Q ₁ | Presence detection |
| | inverted | – |
| | Teach | – |
| Operating mode | Standard | ✓ |
| Function | Cross beam | ✓ |
| | Beam blanking | ✓ |
| Applications | | |

¹⁾ Depending on beam separation without cross beam setting.

| | |
|-------------------------------|---|
| Switching output | Object detection Object recognition Height classification |
| Data interface | Object detection Object height measurement |
| Included with delivery | 1 × sender 1 × receiver 4/6 × QuickFix brackets (6 × QuickFix brackets for monitoring heights above 2 m) 1 × Quick Start Guide |

¹⁾ 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 | 58 mA ²⁾ |
| Power consumption receiver | 132 mA ²⁾ |
| 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 |
| 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 | 2.649 kg |
| Front screen | PMMA |
| 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 | ≥ 0.2 m |
| Operating range | 5 m |
| Response time | 8.2 ms |

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

Interfaces

| | |
|--------------------------------|-----------------------------------|
| IO-Link | ✓ , IO-Link V1.1 |
| Data transmission rate | 38,4 kbit/s (COM2) |
| Maximum cable length | 20 m |
| Cycle time | 6 ms |
| VendorID | 26 |
| DeviceID HEX | 800067 |
| DeviceID DEC | 8388711 |
| Process data length | 6 Byte (TYPE_2_V) ¹⁾ |
| Analog | ✓ , Current |
| Inputs/outputs | 2 x analog + 1 x Q (IO-Link) |
| Analog output (current) | 4 mA ... 20 mA |
| Analog output | Q _{A1} , Q _{A2} |
| Number | 2 |
| Type | Current output |
| Current | 4 mA ... 20 mA |
| Digital output | Q ₁ |
| Number | 1 |

¹⁾ For an IO-Link master with V1.0, reverts to interleaved mode (consisting of TYPE_1_1 (ProcessData) and TYPE_1_2 (on-request data)).

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: 12,000 lx ¹⁾ Indirect: 50,000 lx ²⁾ |
| Ambient operating temperature | -30 °C ... +55 °C |
| Ambient temperature, storage | -40 °C ... +70 °C |

¹⁾ Outdoor mode.

²⁾ Light resistance indirect.

Smart Task

| | |
|------------------------|-------------|
| Smart Task name | Base logics |
|------------------------|-------------|

Certificates

| | |
|--|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| cULus certificate | ✓ |
| IO-Link certificate | ✓ |
| Photobiological safety (IEC EN 62471) | ✓ |

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 |

Connection type and diagram Connector M12, 5-pin, analog outputs Q_A



Adjustments



- ① MLG-2 with switching outputs Q
- ② MLG-2 with analog outputs Q_A
- ③ status indicator: green, yellow, red LEDs

Functional principle Optical synchronization



The sender and receiver synchronize with each other optically, so no electrical connection is necessary. For this reason, either the first or the last beam of the automation light grid must remain clear. If both beams are interrupted, no measurements can be taken.

- ① Optical synchronization
- ② Beam separation
- ③ scanning range

Recommended accessories

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

| | Brief description | Type | part no. |
|---|---|--------------------|----------|
| connectors and cables | | | |
|  | <ul style="list-style-type: none"> • Description: Sensor/actuator cable, unshielded • Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 5-wire, PVC • Application: Uncontaminated zones, Zones with chemicals | YF2A15-050VB5XLEAX | 2096240 |

| | Brief description | Type | part no. |
|---|-------------------|------------------|----------|
| network devices | | | |
|  | | SIG350-0004AP100 | 6076871 |
|  | | SIG350-0005AP100 | 6076923 |
|  | | SIG350-0006AP100 | 6076924 |

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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.”

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