

SICK.COM



DATA SHEET

# MLG05W-0521R12503

MLG-2 WebChecker  
Automation light grids

**SICK** Sensor Intelligence

## AUTOMATION LIGHT GRIDS

# ML- G05W-0521R12503

### ORDERING INFORMATION

| Type              | part no. |
|-------------------|----------|
| MLG05W-0521R12503 | 1136051  |

Further device versions and accessories at [www.sick.com/MLG-2\\_WebChecker](http://www.sick.com/MLG-2_WebChecker)



Illustration may differ

## DETAILED TECHNICAL DATA

### FEATURES

|   |                        |
|---|------------------------|
| Device version                          | Web guiding            |
| Sensor principle                        | Sender/receiver        |
| Minimum object length                   | 4 mm <sup>1)</sup>     |
| Beam separation                         | 5 mm                   |
| Resolution                              | 0.1 mm                 |
| Cycle time                              | 32 µs per beam         |
| Repeatability                           | 6 µm <sup>2)</sup>     |
| Accuracy                                | ± 0.3 mm <sup>3)</sup> |
| Type of synchronization                 | Cable                  |
| Number of beams                         | 180                    |
| Total measuring field width             | 1,195 mm               |
| Measuring field width detailed          |                        |
| Measuring field width (connection side) | 745 mm                 |
| Blind zone (medium range)               | 305 mm                 |

<sup>1)</sup> See graphic: product definition.

<sup>2)</sup> 1 Sigma, 0% object transmission (internal sensor value).

<sup>3)</sup> Typically 0.1 mm. For opaque objects and exact alignment of sender/receiver.

|                                   |   |
|-----------------------------------|---|
| Measuring field width (head side) | 145 mm  |
| Software features (default)       | <p>Q<sub>1</sub>/C Alarm, general</p> <p>Q<sub>2</sub> Standard teach-in</p> <p>Q<sub>3</sub> Edge position 1</p> <p>Q<sub>4</sub> Edge position 10</p> <p>Application High resolution mode</p> |
| Included with delivery            | <p>1 × sender</p> <p>1 × receiver</p> <p>4/6 × QuickFix brackets (6 × QuickFix brackets for monitoring heights above 2 m)</p> <p>1 × Quick Start Guide</p>                                      |

<sup>1)</sup> See graphic: product definition.

<sup>2)</sup> 1 Sigma, 0% object transmission (internal sensor value).

<sup>3)</sup> Typically 0.1 mm. For opaque objects and exact alignment of sender/receiver.

## MECHANICS/ELECTRONICS

|                                 |  |
|---------------------------------|--|
| Light source                    | LED, Infrared light  |
| Wave length                     | 850 nm   |
| Supply voltage V <sub>s</sub>   | DC 19.2 V ... 28.8 V <sup>1)</sup>   |
| Power consumption sender        | 64 mA <sup>2)</sup>  |
| Power consumption receiver      | 156 mA <sup>2)</sup>   |
| Ripple                          | < 5 V <sub>pp</sub>  |
| Output current I <sub>max</sub> | 100 mA   |
| Output load, capacitive         | 100 nF   |
| Output load, Inductive          | 1 H  |
| Initialization time             | < 1 s  |
| Switching output                | Push-pull: PNP/NPN   |
| Dimensions (W x H x D)          | 34 mm x 1,279.4 mm x 30.6 mm   |
| Connection type                 | <p>Plug, M12, 5-pin, 0.22 m</p> <p>Male connector M12, 8-pin, 0.27 m</p> <p>M12 female connector, 4-pin, D-coded, 0.19 m</p>               |
| Housing material                | Aluminum   |
| Display                         | LED  |
| Enclosure rating                | IP65, IP67 <sup>3)</sup>   |
| Circuit protection              | <p>U<sub>v</sub> connections, reverse polarity protected</p> <p>Output Q short-circuit protected</p> <p>Interference pulse suppression</p> |
| Protection class                | III  |
| Weight                          | 2.659 kg   |
| Front screen                    | PMMA   |
| Option                          | None   |
| UL File No.                     | NRKH.E181493   |

<sup>1)</sup> Without load.

<sup>2)</sup> Without load with 24 V.

<sup>3)</sup> Operating in outdoor condition only with a external protection housing.

## PERFORMANCE

|               |                     |
|---------------|---------------------|
| Maximum range | 3.5 m <sup>1)</sup> |
|---------------|---------------------|

<sup>1)</sup> No reserve for environmental issue and deterioration of the diode.

<sup>2)</sup> With resistive load.

# AUTOMATION LIGHT GRIDS - MLG05W-0521R12503

|                 |                       |
|-----------------|-----------------------|
| Minimum range   | ≥ 0.2 m               |
| Operating range | 2.5 m                 |
| Response time   | 36.7 ms <sup>2)</sup> |

<sup>1)</sup> No reserve for environmental issue and deterioration of the diode.

<sup>2)</sup> With resistive load.

## INTERFACES

|                        |  |
|------------------------|--|
| IO-Link                | ✓, IO-Link V1.1                                  |
| Data transmission rate | 230,4 kbit/s (COM3)                              |
| Maximum cable length   | 20 m   |
| Cycle time             | 3 ms   |
| VendorID               | 26   |
| DeviceID HEX           | 80022F   |
| DeviceID DEC           | 8389167  |
| Process data length    | 32 Byte (TYPE_2_V) <sup>1)</sup>                 |
| Inputs/outputs         | 4 x Q (IO-Link)                                  |
| Digital output         | Q <sub>1</sub> ... Q <sub>4</sub>                |
| Number                 | 4  |
| Digital input          | Q <sub>2</sub> , Q <sub>3</sub> , Q <sub>4</sub> |
| Number                 | 3  |

<sup>1)</sup> 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)).

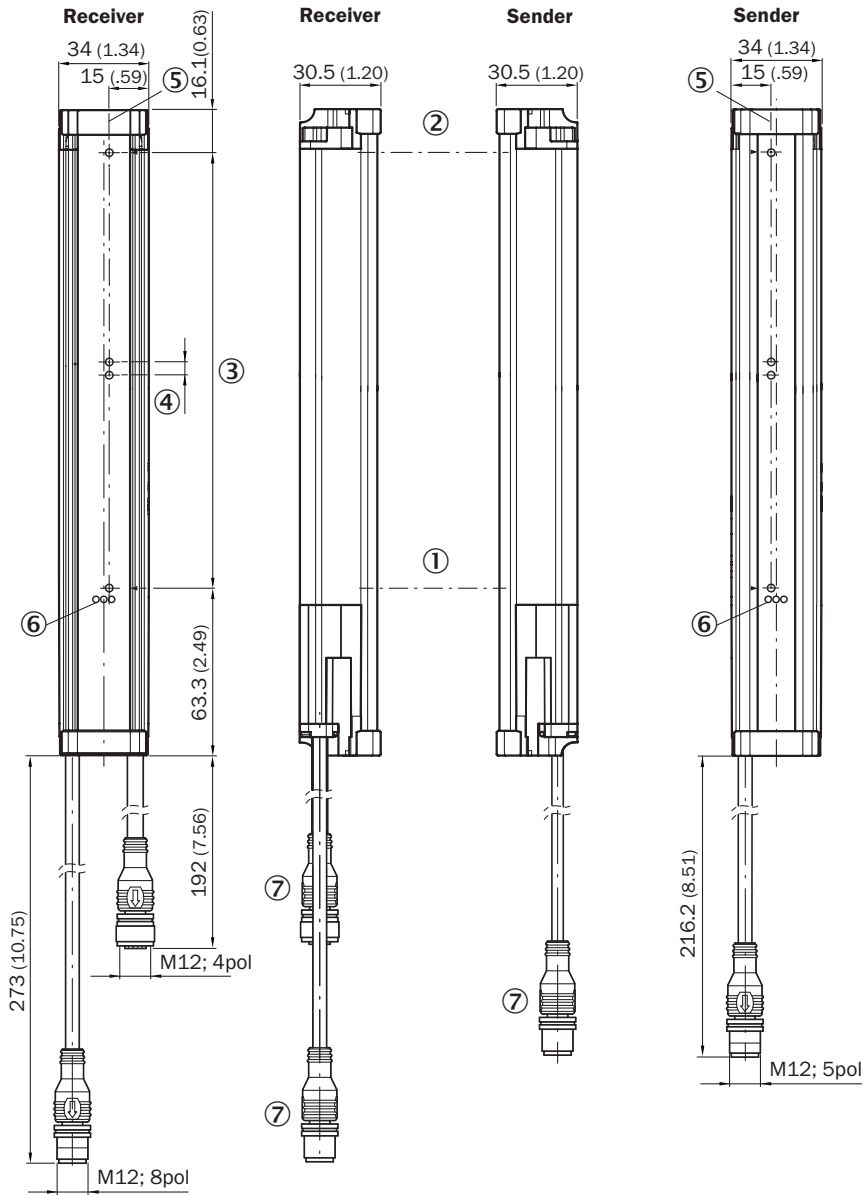
## AMBIENT DATA

|                               |  |
|-------------------------------|--|
| Shock resistance              | Continuous shocks 10 g, 16 ms, 1000 shocks<br>Single shocks 15 g, 11 ms 3 per axle |
| Vibration resistance          | Sinusoidal oscillation 10-150 Hz 5 g   |
| Ambient light immunity        | 100,000 lx   |
| Ambient operating temperature | -30 °C ... +55 °C  |
| Ambient temperature, storage  | -40 °C ... +70 °C  |

## CERTIFICATES

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

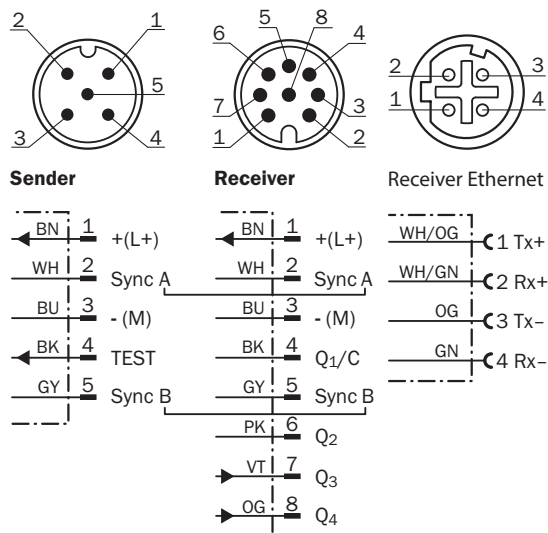
**DIMENSIONAL DRAWING**



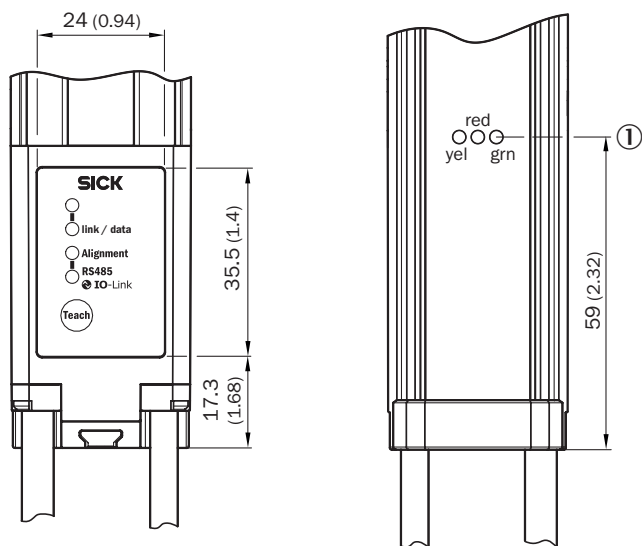
Dimensions in mm (inch)

- ① First beam
- ② last beam
- ③ total measuring field width (see technical data)
- ④ Beam separation
- ⑤ Optical axis
- ⑥ status indicator: green, yellow, red LEDs
- ⑦ Connection

**CONNECTION TYPE AND DIAGRAM MLG-2 WEBCHECKER**



**ADJUSTMENTS**



① status indicator: green, yellow, red LEDs

**CONNECTION DIAGRAM T-PIECE**



**PRODUCT DEFINITION**



- ① operating range
- ② total measuring field width
- ③ measuring field width (head side)
- ④ Blind zone (medium range)
- ⑤ measuring field width (connection side)
- ⑥ sender
- ⑦ receiver
- ⑧ Beam separation
- ⑨ minimum object length

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at [www.sick.com/1136051](http://www.sick.com/1136051)



SICK AG  
WALDKIRCH  
GERMANY  
SICK.COM

# SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

**SICK**  
Sensor Intelligence