



# ELG1-0100P533

ELG

SWITCHING AUTOMATION LIGHT GRIDS

**SICK**  
Sensor Intelligence.

### Ordering information



| Type          | Part no. |
|---------------|----------|
| ELG1-0100P533 | 1026808  |

**Included in delivery:** BEF-WK-XLG (1)

Other models and accessories → [www.sick.com/ELG](http://www.sick.com/ELG)

Illustration may differ



### Detailed technical data

#### Features

|                                        |                     |
|----------------------------------------|---------------------|
| <b>Sensor principle</b>                | Sender/receiver     |
| <b>Minimum detectable object (MDO)</b> | 10 mm <sup>1)</sup> |
| <b>Beam separation</b>                 | 10 mm               |
| <b>Number of beams</b>                 | 11                  |
| <b>Detection height</b>                | 100 mm              |
| <b>Evaluation beams</b>                | Cross beam          |

<sup>1)</sup> Cross beam.

#### Mechanics/electronics

|                                       |                                |
|---------------------------------------|--------------------------------|
| <b>Wave length</b>                    | 880 nm                         |
| <b>Supply voltage V<sub>s</sub></b>   | DC 15 V ... 30 V <sup>1)</sup> |
| <b>Power consumption sender</b>       | < 100 mA <sup>2)</sup>         |
| <b>Power consumption receiver</b>     | < 100 mA <sup>2)</sup>         |
| <b>Ripple</b>                         | < 5 V <sub>pp</sub>            |
| <b>Output current I<sub>max</sub></b> | ≤ 100 mA                       |
| <b>Output load, capacitive</b>        | 100 nF                         |
| <b>Output load, inductive</b>         | 1 H                            |
| <b>Initialization time</b>            | 1 s                            |
| <b>Switching output</b>               | 2 x PNP <sup>3)</sup>          |
| <b>Output mode</b>                    | Q dark switching <sup>4)</sup> |
| <b>Dimensions (W x H x D)</b>         | 34 mm x 187 mm x 29 mm         |

<sup>1)</sup> Typical value.

<sup>2)</sup> , Typical value.

<sup>3)</sup> Q / Q̄.

<sup>4)</sup> Q = active, if at least one beam is interrupted, /Q = active, if all of the beams are free.

<sup>5)</sup> Operating in outdoor condition only with a external protection housing.

|                           |                                                                                                                              |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Connection type</b>    | Male connector M12, 4-pin                                                                                                    |
| <b>Housing material</b>   | Aluminum                                                                                                                     |
| <b>Indication</b>         | LED                                                                                                                          |
| <b>Synchronization</b>    | Optical                                                                                                                      |
| <b>Enclosure rating</b>   | IP65<br>5)                                                                                                                   |
| <b>Circuit protection</b> | U <sub>V</sub> connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| <b>Protection class</b>   | III                                                                                                                          |
| <b>Weight</b>             | 700 g                                                                                                                        |
| <b>Pulse frequency</b>    | 500 kHz                                                                                                                      |
| <b>Front screen</b>       | PMMA                                                                                                                         |

1) Typical value.

2) , Typical value.

3) Q /  $\bar{Q}$ .

4) Q = active, if at least one beam is interrupted, /Q = active, if all of the beams are free.

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

## Performance

|                        |                     |
|------------------------|---------------------|
| <b>Maximum range</b>   | 4 m                 |
| <b>Minimum range</b>   | ≥ 0 mm              |
| <b>Operating range</b> | 3 m                 |
| <b>Response time</b>   | 14 ms <sup>1)</sup> |

1) With resistive load.

## Ambient data

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| <b>Shock resistance</b>              | 10 g / DIN EN 60068-2-29 / 16 ms     |
| <b>Vibration resistance</b>          | 5 g, 10 Hz ... 55 Hz (IEC 68-2-6)    |
| <b>EMC</b>                           | EN 60947-5-2                         |
| <b>Ambient light immunity</b>        | Indirect: ≤ 150,000 lx <sup>1)</sup> |
| <b>Ambient operating temperature</b> | -25 °C ... +55 °C                    |
| <b>Ambient temperature, storage</b>  | -40 °C ... +70 °C                    |

1) Sunlight.

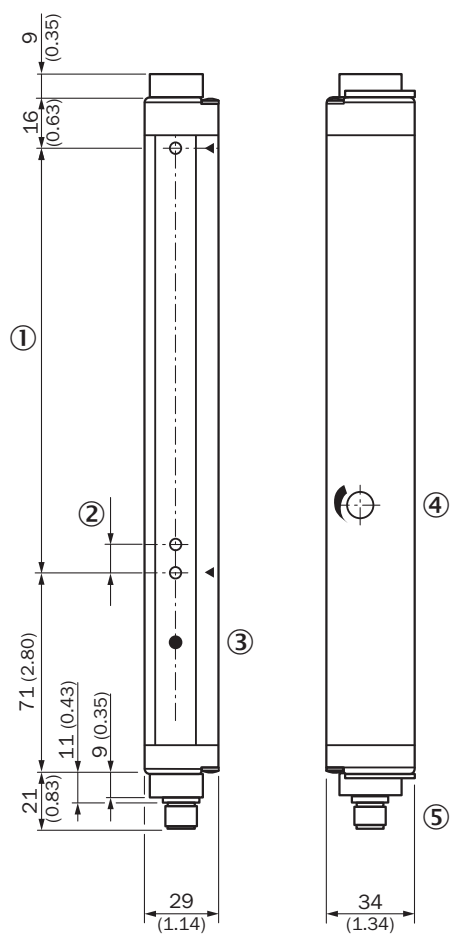
## Classifications

|                     |          |
|---------------------|----------|
| <b>eCl@ss 5.0</b>   | 27270910 |
| <b>eCl@ss 5.1.4</b> | 27270910 |
| <b>eCl@ss 6.0</b>   | 27270910 |
| <b>eCl@ss 6.2</b>   | 27270910 |
| <b>eCl@ss 7.0</b>   | 27270910 |
| <b>eCl@ss 8.0</b>   | 27270910 |
| <b>eCl@ss 8.1</b>   | 27270910 |
| <b>eCl@ss 9.0</b>   | 27270910 |
| <b>eCl@ss 10.0</b>  | 27270910 |

|                       |          |
|-----------------------|----------|
| <b>eCl@ss 11.0</b>    | 27270910 |
| <b>eCl@ss 12.0</b>    | 27270910 |
| <b>ETIM 5.0</b>       | EC002549 |
| <b>ETIM 6.0</b>       | EC002549 |
| <b>ETIM 7.0</b>       | EC002549 |
| <b>ETIM 8.0</b>       | EC002549 |
| <b>UNSPSC 16.0901</b> | 39121528 |

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

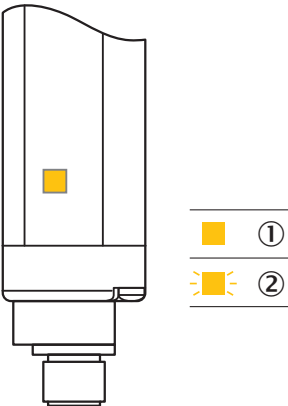
#### ELG1



- ① Detection height
- ② Beam spacing ELG1: 10 mm
- ③ Status indicator (ELGE)/Power on (ELGS)
- ④ Sensitivity control
- ⑤ Connection

Adjustments

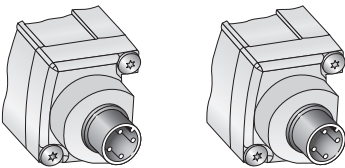
LED display receiver



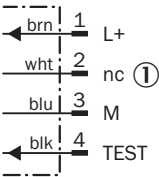
- ① No object in the light path (alignment OK)
- ② Contamination control

Connection type and diagram

Connection type and diagram



Sender



- ① Not assigned

Receiver

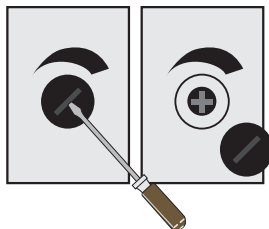


## Concept of operation

Specific features

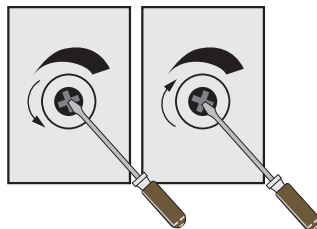
### Sensitivity adjustment

#### 1. Remove cap



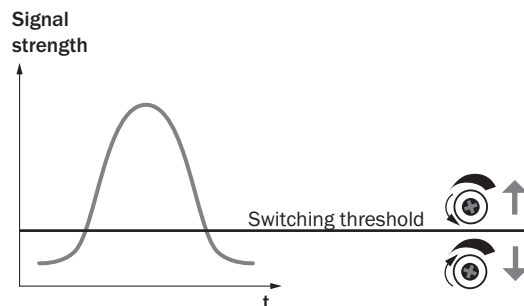
Remove cap with screw driver.

#### 2. Potentiometer adjustment

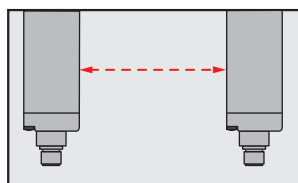


Turn left = for a lower range.  
Turn right = for a higher range.

#### Sensitivity adjustment



### Optical synchronisation



The light grid communicates via the light beams. A cable is not necessary for the optical synchronisation.

## Recommended accessories

Other models and accessories → [www.sick.com/ELG](http://www.sick.com/ELG)

|                                                                                     | Brief description                                                                                                                     | Type               | Part no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| Plug connectors and cables                                                          |                                                                                                                                       |                    |          |
|  | Head A: female connector, M12, 4-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YF2A14-050VB3XLEAX | 2096235  |
| Terminal and alignment brackets                                                     |                                                                                                                                       |                    |          |
|  | 4 pieces, Mounting kit 1, rotatable, swivel mount, plastic                                                                            | BEF-2SMKEAKU4      | 2019649  |

## 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](http://www.sick.com)