



# FLG4-20025021

FLG

SWITCHING AUTOMATION LIGHT GRIDS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type          | Part no. |
|---------------|----------|
| FLG4-20025021 | 6050069  |

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

### Detailed technical data

#### Features

|  |   |
|--|---|
| <b>Device version</b>                  | Open  |
| <b>Sensor principle</b>                | Sender/receiver   |
| <b>Minimum detectable object (MDO)</b> | 2 mm, dynamic: 4 mm<br>6 mm, static: 6 mm                 |
| <b>Beam separation</b>                 | 4 mm  |
| <b>Detection height</b>                | 250 mm  |
| <b>Output function</b>                 | Light/dark switching adjustable by means of rotary switch |

#### Mechanics/electronics

|  |   |
|--|---|
| <b>Wave length</b>                         | 880 nm  |
| <b>Supply voltage <math>V_s</math></b>     | DC 18 V ... 30 V <sup>1)</sup>  |
| <b>Ripple</b>                              | < 10 %  |
| <b>Output current <math>I_{max}</math></b> | ≤ 100 mA  |
| <b>Off delay</b>                           | 0 s ... 5 s <sup>2)</sup>   |
| <b>Initialization time</b>                 | 0.3 s   |
| <b>Switching output</b>                    | PNP <sup>3)</sup><br>NPN  |
| <b>Dimensions (W x H x D)</b>              | 312 mm x 230 mm x 25 mm   |
| <b>Connection type</b>                     | Male connector M12, 4-pin   |
| <b>Housing material</b>                    | Aluminum, painted   |
| <b>Indication</b>                          | LED   |
| <b>Enclosure rating</b>                    | IP65  |
| <b>Circuit protection</b>                  | $U_V$ connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |

<sup>1)</sup> Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

<sup>2)</sup> Adjustable.

<sup>3)</sup> Q /  $\bar{Q}$ .

|                            |          |
|----------------------------|----------|
| <b>Protection class</b>    | III      |
| <b>Weight</b>              | 0.86 kg  |
| <b>Switching frequency</b> | 5,000 Hz |

<sup>1)</sup> Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

<sup>2)</sup> Adjustable.

<sup>3)</sup> Q /  $\bar{Q}$ .

## Performance

|                               |                 |
|-------------------------------|-----------------|
| <b>Detection area (W x H)</b> | 250 mm x 200 mm |
| <b>Response time</b>          | < 0.1 ms        |

## Ambient data

|                                      |                               |
|--------------------------------------|-------------------------------|
| <b>Shock resistance</b>              | EN 60068-2-27                 |
| <b>Vibration resistance</b>          | EN 60068-2-6                  |
| <b>EMC</b>                           | EN 60947-5-2                  |
| <b>Ambient light immunity</b>        | Sunlight: 10,000 lx           |
| <b>Ambient operating temperature</b> | 0 °C ... +60 °C <sup>1)</sup> |
| <b>Ambient temperature, storage</b>  | -20 °C ... +80 °C             |

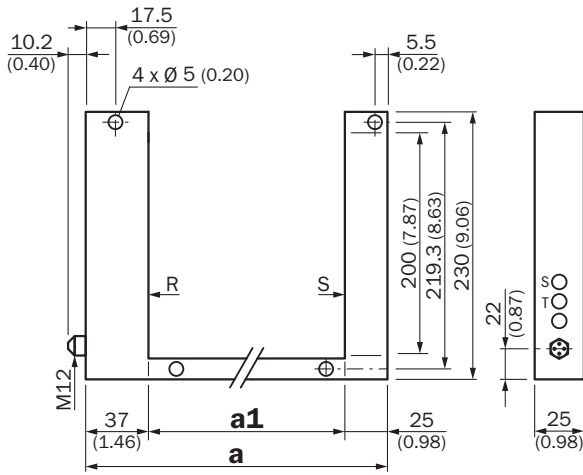
<sup>1)</sup> In static mode: constant temperature around teaching point will be assumed.

## 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))

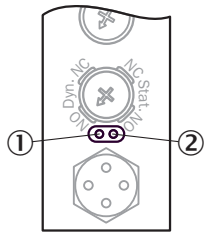
FLGx-200xxx2x



|                      | <b>a</b>    | <b>a1</b>  |
|----------------------|-------------|------------|
| <b>FLGx-200120xx</b> | 182 (7.17)  | 120 (4.72) |
| <b>FLGx-200180xx</b> | 242 (9.53)  | 180 (7.09) |
| <b>FLGx-200250xx</b> | 312 (12.28) | 250 (9.84) |

**Adjustments**

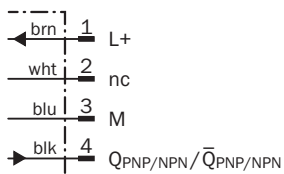
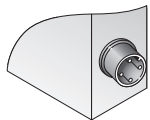
Display LED



- ① Yellow LED: status output
- ② Red LED: error or button lock active (blinking)

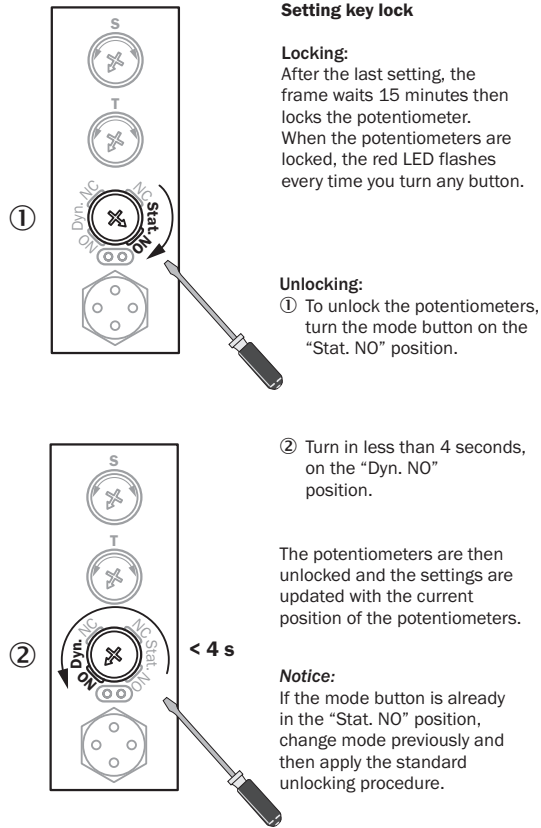
**Connection type and diagram**

Connection type and diagram



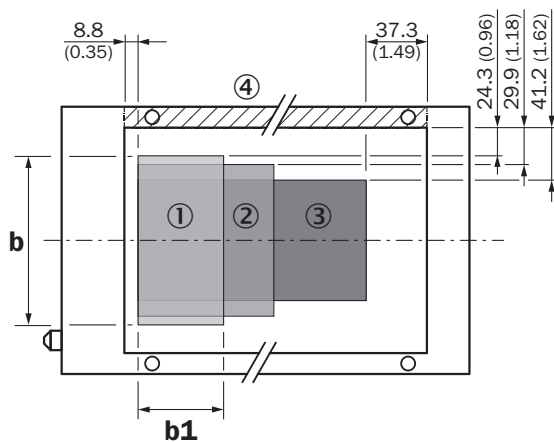
## Concept of operation

### Setting the key lock



## Diagramm

### Limited detection area



### Dimensions in mm (inch)


|                 | b            | b1           |
|-----------------|--------------|--------------|
| ① FLG2-xxx120xx | 151.4 (5.96) | 73.9 (2.91)  |
| ② FLG2-xxx180xx | 140.2 (5.52) | 133.9 (5.27) |
| ③ FLG2-xxx250xx | 117.6 (4.63) | 203.9 (8.03) |

All dimensions in mm (inch)

④ Side is missing in open version

### Recommended accessories

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

|   | 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  |

## 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)