



SGS4-S140F7PS1T00

SLG

SWITCHING AUTOMATION LIGHT GRIDS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-------------------|----------|
| SGS4-S140F7PS1T00 | 1047077 |

Other models and accessories → www.sick.com/SLG

Detailed technical data

Features

| | |
|--|--|
| Sensor principle | Sender/receiver |
| Minimum detectable object (MDO) | Parallel beam, 45 mm |
| Beam separation | 40 mm |
| Optical light exit | Slim |
| Number of beams | 36 |
| Detection height | 1,400 mm |
| Parameterization | Teach-in button |
| Cross beam/parallel beam | Parallel beam active |
| Output 1 | Output 1 active, if light beam interrupted |
| Automatic teach | Automatic teach inactive |
| Alignment aid | Without alignment aid |
| Output 2 | Output 2 active, if light beam interrupted |
| Muting function output 2 | No muting function at output 2 |
| Output weak signal 2 | Output weak signal output 2 inactive |
| Muting function | Muting function deactivated |

Mechanics/electronics

| | |
|---|--------------------|
| Light source | Infrared light |
| Wave length | 950 nm |
| Supply voltage V_s | DC24 V, $\pm 20\%$ |
| Power consumption receiver | ≤ 70 mA |
| Ripple | $< 5 V_{pp}$ |
| Output current $I_{max.}$ | 100 mA |
| Output load, capacitive | 100 nF |
| Output load, Inductive | 1 H |

¹⁾ Operating in outdoor condition only with a external protection housing.

| | |
|-------------------------------|--|
| Initialization time | 1 s |
| Switching output | PNP |
| Inputs | Teach-in input (receiver) Test input (sender) HIGH = 10 V ... 30 V / LOW = < 5 V |
| Dimensions (W x H x D) | 25 mm x 1,472.4 mm x 8.2 mm |
| Connection type | Cable with M8 male connector, 4-pin |
| Housing material | PMMA |
| Indication | LED |
| Synchronization | Optical |
| Enclosure rating | IP65 1) |
| Circuit protection | U _V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression |
| Protection class | III |
| Weight | 180 g |
| Pulse frequency | 500 kHz |
| Aluminum stabilizer | Without stabilizer |

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

Performance

| | |
|------------------------|------------------------------------|
| Maximum range | 10 m ¹⁾ |
| Minimum range | Parallel beam: ≥ 0 m ²⁾ |
| Operating range | 7 m |
| Response time | Parallel beam, 19 ms |

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

2) Aperture ± 10°.

Ambient data

| | |
|--------------------------------------|--|
| Shock resistance | 10 g / DIN EN 60068-2-29 / 16 ms |
| Vibration resistance | 5 g, 10 Hz ... 55 Hz (IEC 68-2-6) |
| EMC | EN 60947-5-2 |
| Ambient light immunity | Direct: 100,000 lx ¹⁾ Indirect: 150,000 lx |
| Ambient operating temperature | -25 °C ... +55 °C |
| Ambient temperature, storage | -25 °C ... +70 °C |

1) Sunlight.

Classifications

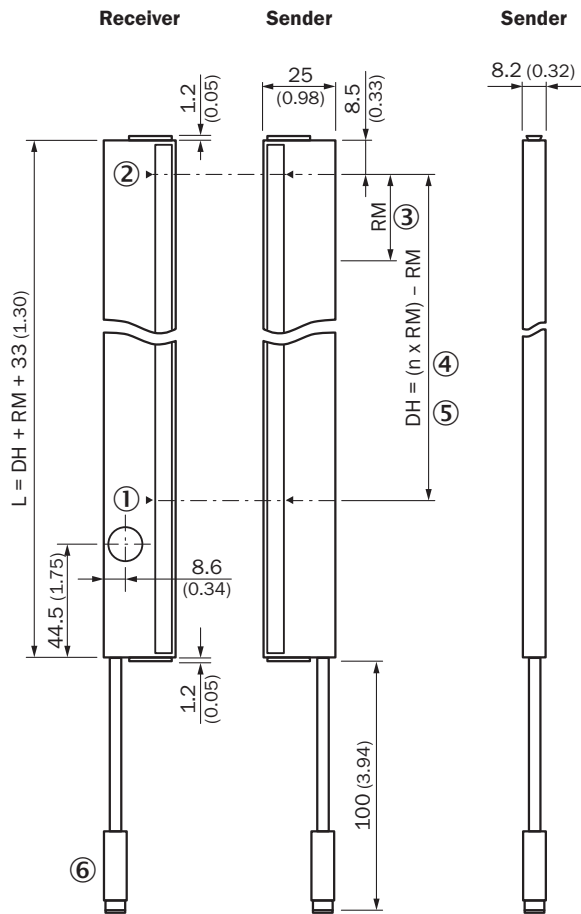
| | |
|---------------------|----------|
| eCl@ss 5.0 | 27270910 |
| eCl@ss 5.1.4 | 27270910 |
| eCl@ss 6.0 | 27270910 |
| eCl@ss 6.2 | 27270910 |
| eCl@ss 7.0 | 27270910 |

| | |
|-----------------------|----------|
| eCl@ss 8.0 | 27270910 |
| eCl@ss 8.1 | 27270910 |
| eCl@ss 9.0 | 27270910 |
| eCl@ss 10.0 | 27270910 |
| eCl@ss 11.0 | 27270910 |
| eCl@ss 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 (Dimensions in mm (inch))

Sxx-Sxxxxxx1xxx

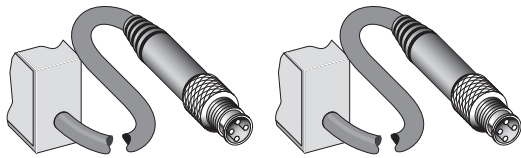
Slim, without stabilizer



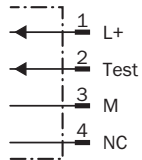
- ① First beam
- ② Last beam
- ③ Beam separation (RM)
- ④ Number of beams (n)
- ⑤ Detection height (DH)
- ⑥ Connection

Connection type and diagram

Connection type and diagram

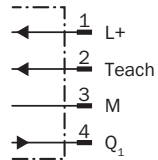


Sender



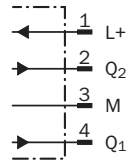
Receiver

SGSx-xxxxP (PNP)
 SGSx-xxxxN (NPN)



Receiver

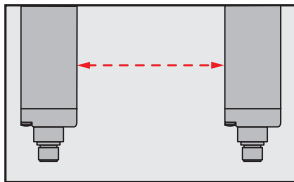
SGSx-xxxxF (2 x PNP)
 SGSx-xxxxE (2 x NPN)



Concept of operation

Specific features

Optical synchronization



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

Functional principle



Slim & Flat



- ① Slim model = light emission on narrow side
- ② Flat model = light emission on broad side

Recommended accessories

Other models and accessories → www.sick.com/SLG

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
| Mounting brackets and plates | | | |
|  | Mounting bracket for light grids from a detection height of 600 mm (with slot, recommended for compensation of material extension caused by temperature), mounting position: front, 2x BEF-SLG1, 2x BEF-SLG2 | BEF-SLG-SET1 | 2055427 |
| Plug connectors and cables | | | |
|  | Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m | YF8U14-020VA3XLEAX | 2095888 |

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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.”

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