

# SPL-F280PPS1W04

SLG

SWITCHING AUTOMATION LIGHT GRIDS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
SPL-F280PPS1W04	1046764

Other models and accessories → [www.sick.de/SLG](http://www.sick.de/SLG)



### Detailed technical data

#### Features

<b>Technology</b>	Sender/receiver
<b>Minimum detectable object (MDO)</b>	Parallel beam, 45 mm
<b>Beam separation</b>	40 mm
<b>Optical light exit</b>	Flat
<b>Number of beams</b>	≥ 8
<b>Detection height</b>	280 mm
<b>Configuration</b>	Without teach button with configuration software
<b>Cross beam/parallel beam</b>	Parallel beam active
<b>Output 1</b>	Output 1 active, if light beam interrupted
<b>Automatic teach</b>	Automatic teach active
<b>Alignment aid</b>	Without alignment aid
<b>Muting function</b>	Muting function deactivated

#### Performance

<b>Maximum range</b>	3 m <sup>1)</sup>
<b>Minimum range</b>	Parallel beam: ≥ 0 mm <sup>2)</sup>
<b>Working range</b>	1.5 m
<b>Response time</b>	Parallel beam ≥ 19 ms

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

<sup>2)</sup> Aperture ± 10°.

#### Interfaces

<b>Switching output</b>	1 x PNP
<b>Inputs</b>	Job LED
<b>Connection type</b>	Short cable with connector M8, 4-pin

## Mechanics/electronics

<b>Wave length</b>	Infrared light, 950 nm
<b>Supply voltage <math>V_s</math></b>	DC24 V, $\pm 20\%$ <sup>1)</sup>
<b>Power consumption sender</b>	$\geq 50$ mA <sup>2)</sup>
<b>Power consumption receiver</b>	$\geq 50$ mA <sup>2) 2)</sup>
<b>Ripple</b>	$< 5 V_{pp}$
<b>Output current <math>I_{max}</math></b>	$\leq 100$ mA
<b>Output load capacitive</b>	100 nF
<b>Output load inductive</b>	1 H
<b>Initialization time</b>	1 s
<b>Dimensions (W x H x D)</b>	25 mm x 352.4 mm x 8 mm
<b>Housing material</b>	PMMA
<b>Indication</b>	LED
<b>Synchronization</b>	Optical
<b>Enclosure rating</b>	IP 65
<b>Circuit protection</b>	$U_V$ connections, reverse polarity protected, Output Q short-circuit protected, Interference pulse suppression
<b>Weight</b>	$\geq 40$ g
<b>Switching frequency</b>	500 kHz
<b>Aluminum stabilizer</b>	Without stabilizer

<sup>1)</sup> Limit values.

<sup>2)</sup> Without load.

## Ambient data

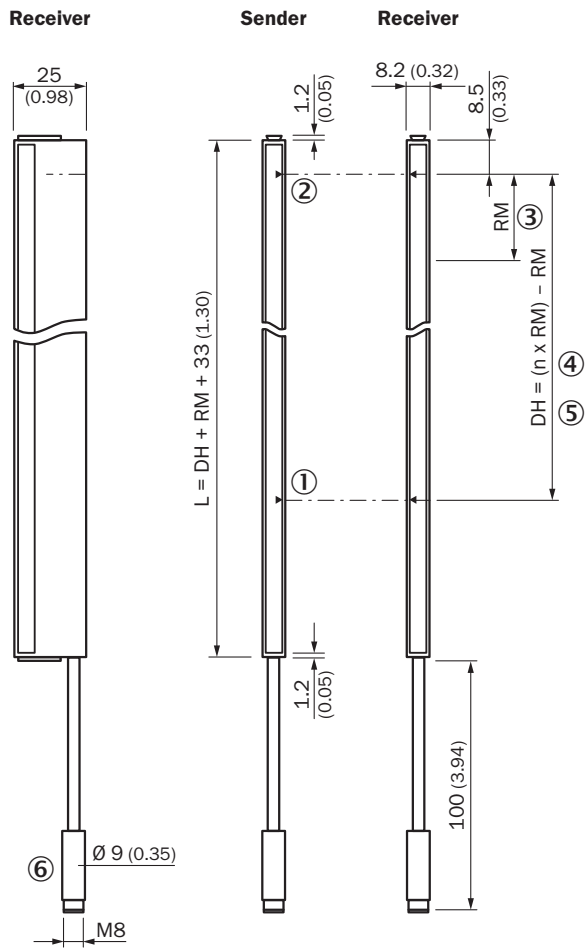
<b>Protection class</b>	III
<b>EMC</b>	EN 60947-5-2
<b>Ambient temperature</b>	Operation: $-25\text{ }^\circ\text{C} \dots +55\text{ }^\circ\text{C}$ Storage: $-25\text{ }^\circ\text{C} \dots +70\text{ }^\circ\text{C}$
<b>Ambient light immunity</b>	Direct: 100,000 lx <sup>1)</sup> Indirect: 150,000 lx
<b>Vibration resistance</b>	5 g, 10 Hz ... 55 Hz (IEC 68-2-6)
<b>Shock load</b>	10 g/ DIN EN 60068-2-29 / 16 ms

<sup>1)</sup> Sunlight.

Dimensional drawing (Dimensions in mm (inch))

Sxx-Fxxxxxx1xxx

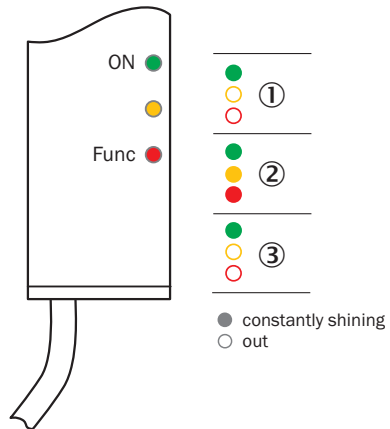
**Flat, without stabilizer**



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

## Adjustments

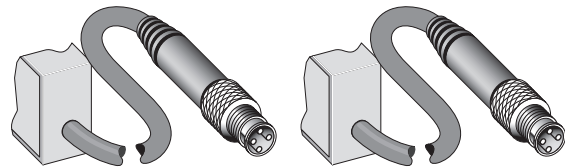
SPL, receiver, LED indication



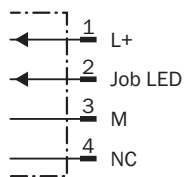
- ① Supply voltage
- ② Active if teach process active
- ③ No object in the light path

## Connection type and diagram

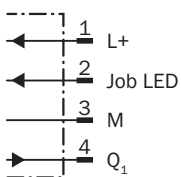
SPL



**Sender**



**Receiver**

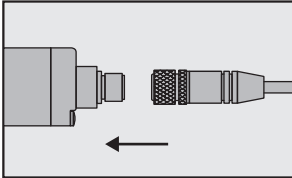


### Concept of operation

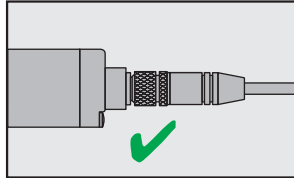
SPL

#### Plug & play

**1. Plug in and tighten the ring of the connector**

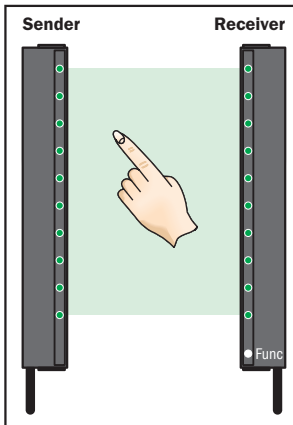


**2. Device is ready for use**



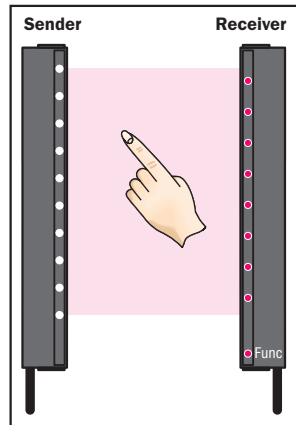
#### Easy installation

**1. Object picking from the indicated bin**



The "green" Job LEDs indicate the correct picking bin to the operator and confirm optically that the correct picking has taken place.

**2. Incorrect picking**



The "red" Job LEDs light in case of picking errors. The function LED "Func" will also turn "red" to indicate a picking error.

## Funktionsprinzip



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.de/SLG](http://www.sick.de/SLG)

	Brief description	Type	Part no.
<b>Mounting brackets and mounting plates</b>			
	Mounting bracket for light grids up to a monitoring height of 600 mm, mounting on the face sides, 2x BEF-SLG1, 2x BEF-SLG2	BEF-SLG-SET1	2055427
<b>Plug connectors and cables</b>			
	Head A: female connector, M8, 4-pin, straight Head B: cable Cable: PVC, unshielded, 2 m	DOL-0804-G02M	6009870

## 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)