

Safety light curtain

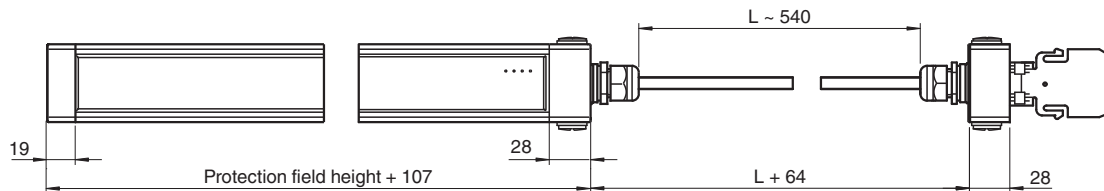
SLC14-450-S



- Sensing range up to 5 m
- Resolution 14 mm (finger protection)
- Protection field height up to 750 mm
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Master/Slave detection, Plug and Play
- Start/Restart disable
- Degree of protection IP67
- Integrated function display
- Pre-fault indication
- Safety outputs OSSD in potential-separated semiconductor design or with monitored, compelled connection NC-contacts
- Optional with ATEX certificates for zone 2 and 22 and degree of protection IP66 (Option 133)



Dimensions



Technical Data

System components

Emitter	SLC14-450-T-S
Receiver	SLC14-450-R-S

General specifications

Effective detection range	0.2 ... 5 m
Light source	IRED

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

Light type	modulated infrared light	
LED risk group labelling	exempt group	
Tests	IEC/EN 61496	
Safety type according to IEC/EN 61496	4	
Width of protected area	0.2 ... 5 m	
Protection field height	450 mm	
Number of beams	48	
Operating mode	in the master	
Optical resolution	14 mm	
Angle of divergence	< 5 °	
Functional safety related parameters		
Safety Integrity Level (SIL)	SIL 3	
Performance level (PL)	PL e	
Category	Cat. 4	
Mission Time (T _M)	20 a	
PFH _d	2.42 E-8	
Type	4	
Indicators/operating means		
Operation indicator	in the master	
Diagnostics indicator	in the master	
Function indicator	in the master	
Pre-fault indicator	in the master	
Control elements	in the master	
Electrical specifications		
Operating voltage	U _B	from master
No-load supply current	I ₀	from master
Protection class	III	
Input		
Test input	in the master	
Function input	in the master	
Output		
Safety output	in the master	
Signal output	in the master	
Response time	depends on height of protective field	
Conformity		
Functional safety	ISO 13849-1	
Product standard	EN 61496-1 ; IEC 61496-2	
Approvals and certificates		
CE conformity	CE	
UL approval	cULus Listed	
CCC approval	CCC approval / marking not required for products rated ≤36 V	
TÜV approval	TÜV	
Ambient conditions		
Ambient temperature	0 ... 55 °C (32 ... 131 °F)	
Storage temperature	-25 ... 70 °C (-13 ... 158 °F)	
Relative humidity	max. 95 %, not condensing	
Mechanical specifications		
Housing length L	560 mm	
Degree of protection	IP67	
Connection	M20 cable gland , terminal compartment with screw terminals, lead cross-section max. 1.5 mm ²	
Material		
Housing	extruded aluminum profile, RAL 1021 (yellow) coated	

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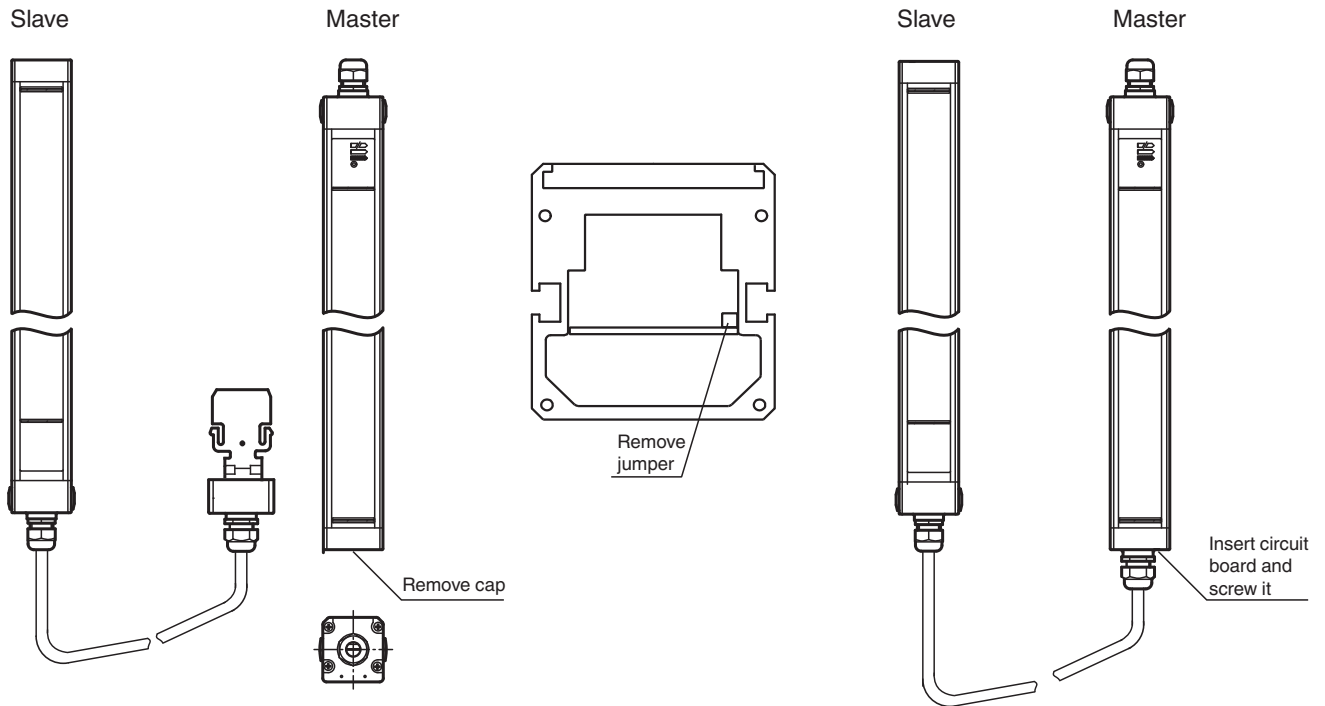
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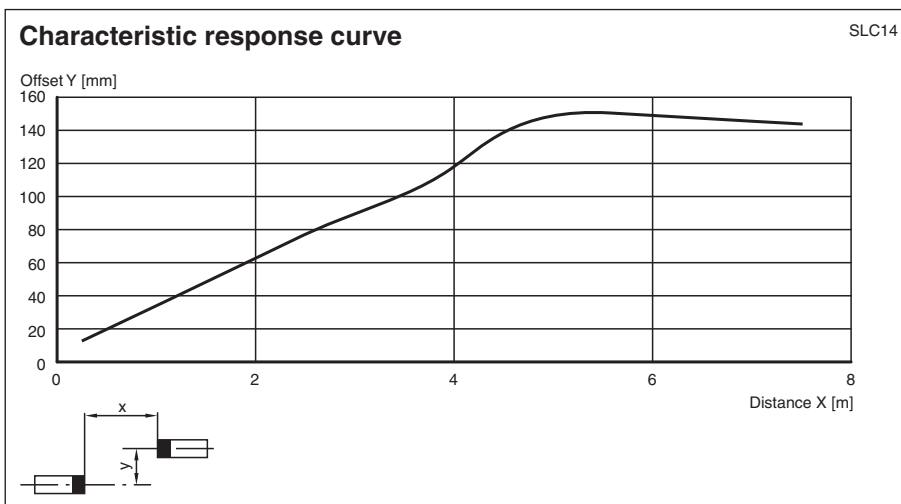
Technical Data

Optical face	Plastic pane
Mass	Per 1650 g

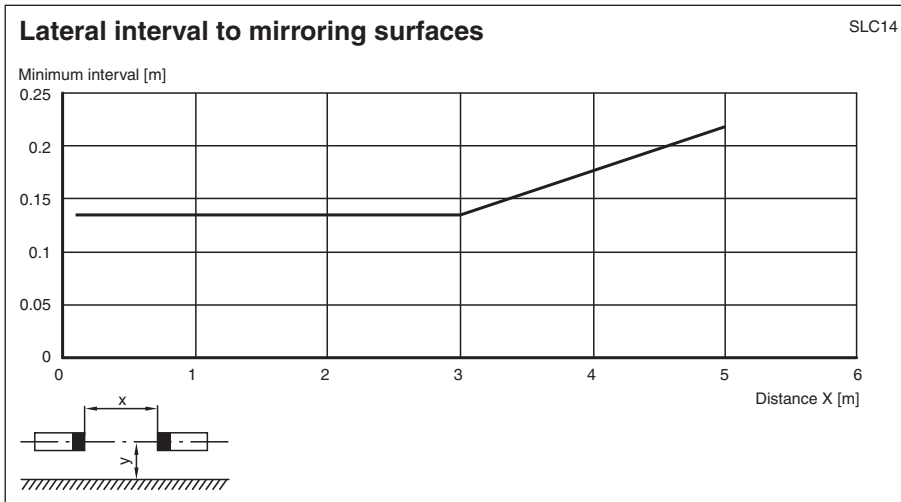
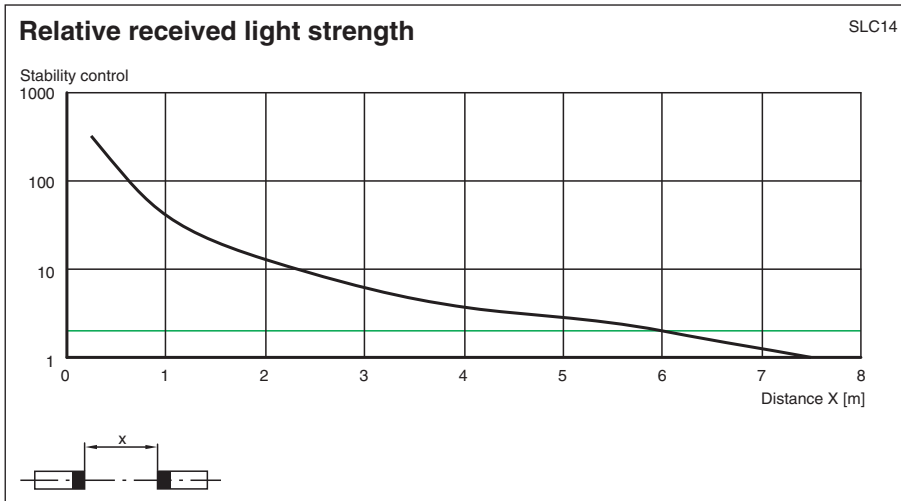
Connection



Characteristic Curve



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Matching system components

	SB4-OR-4XP-B-4159	Safety control unit
	SB4-OR-4XP	Safety control unit
	SB4-OR-4XP-B	SB4 series safety control unit with 1 optional module slot for functional enhancement
	SB4-OR-4XP-B-B	SB4 series safety control unit with optional module slots for functional enhancement
	SB4-OR-4XP-B-B-B	SB4 series safety control unit with optional module slots for functional enhancement
	SB4-OR-4XP-B-B-B-B	SB4 series safety control unit with optional module slots for functional enhancement
	SB4-OR-4XP-B-B-B-B-B	SB4 series safety control unit with optional module slots for functional enhancement
	SB4-OR-4XP-B-4158	Safety control unit
	SB4-OR-4XP-3819	Safety control unit

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Matching system components

	SB4-OR-4XP-4M	Safety control unit
	SB4-OR-4XP-4MD	Safety control unit
	SB4-OR-4XP-4M-4136	Safety control unit of series SB4
	SB4-OR-4XP-4X	Safety control unit
	SB4-OR-4XP-4X-3819	Safety control unit
	SB4-OR-4XP-4136	Safety control unit of series SB4

Accessories

	PG SLC-450	Protective glass panes for SLC series
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Notes

Response times of cascading units

If cascading units are set up, the response time of the entire SLC, consisting of a master and a slave, must be determined. The overall number of beams for master and slave can be determined from technical data sheets. Depending on the type of output, the resulting response time can be read from the table.

Number of beams	Response time in milliseconds	
	Semiconductor output	Relay output
8	10	30
16	10	30
24	12	32
32	14	34
40	16	36
48	18	38
56	20	40
64	22	42
72	24	44
80	26	46
88	28	48
96	30	50

Example: Master: SLC14-300/31 32 beams
 Slave: SLC60-90-S+ 24 beams
56 beams

56 beams, OSSD relay --> response time = 40 ms.

Notes

Master slave mode

Master: SLC... (semiconductor)
 or
 SLC.../31 (relay)
 Slave: SLC...-S

Using slaves makes it possible to lengthen protective fields or to form protective fields that lie in more than just one level. When you select slaves that can be connected, you should take into consideration that the maximum number of 96 light rays must not be exceeded.

There are slaves for transmitters and receivers. These may simply be connected to the master light curtain. As many as 2 slaves may be connected respectively to the transmitter and receiver unit.

Installation:

1. The end cap should be screwed off for the light curtain (without cable gland).
2. The plug-in jumper on the connectors of the printed circuit board, which is now visible, should be removed.
3. The slave is designed so that the cap located on the cable connector can be plugged directly onto the open end of the light curtain with the printed circuit board.
4. After you have screwed on the connection cap, the system is complete.

System accessories

- Mounting set SLC
- Test rods SLC14/SLC30/SLC60
- Protective glass pieces for SLC (to protect the optically functional surface)
- Lateral screwed connection SLC
- Profile alignment aid
- Laser alignment aid SLC
- Mirror for SLC (for securing hazardous areas on multiple sides)
- Ground pillar UC SLP/SLC
- Housing for pillar
 Enclosure UC SLP/SLC
- Collision protector
 Damping UC SLP/SLC

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