



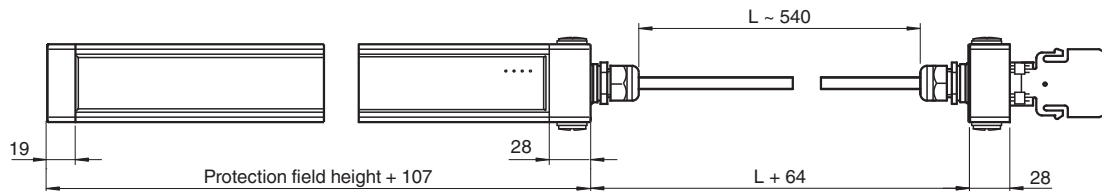
## Safety light curtain SLC14-450-S



- 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

## Technical Data

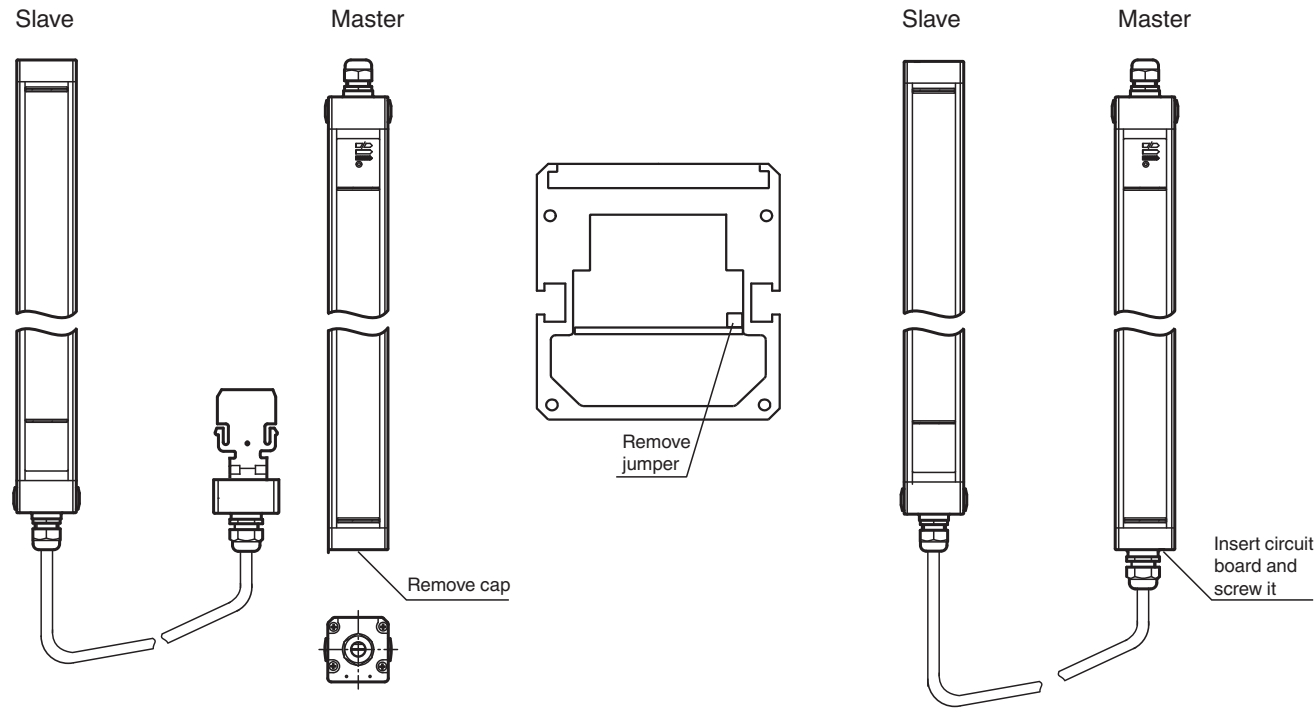
Light type		modulated infrared light
LED risk group labelling		exempt group
Tests		IEC/EN 61496
Safety type according to IEC/EN 61496		4
Width of protected area		0.2 ... 5 m
Protection field height		450 mm
Number of beams		48
Operating mode		in the master
Optical resolution		14 mm
Angle of divergence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

Release date: 2020-03-20 Date of issue: 2020-10-06 Filename: 117584\_eng.pdf

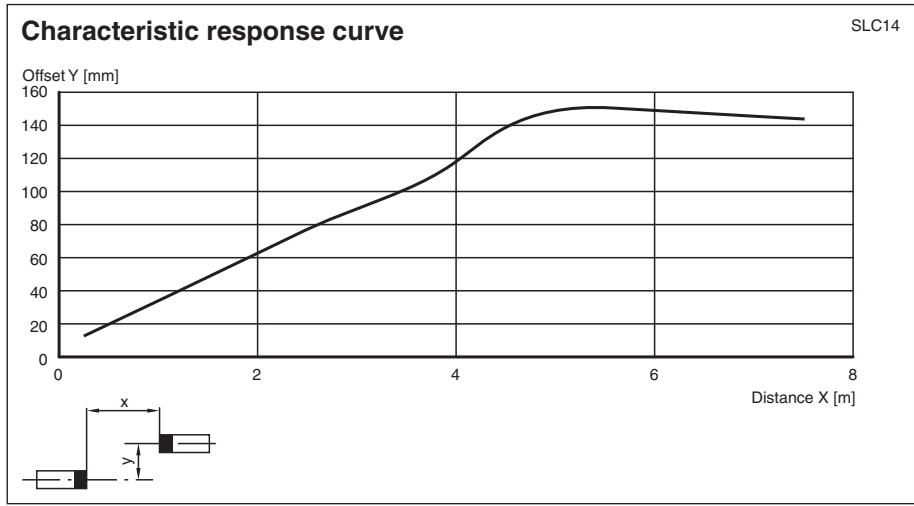
Technical Data

Optical face	Plastic pane
Mass	Per 1650 g

Connection



Characteristic Curve

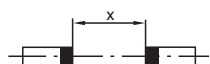
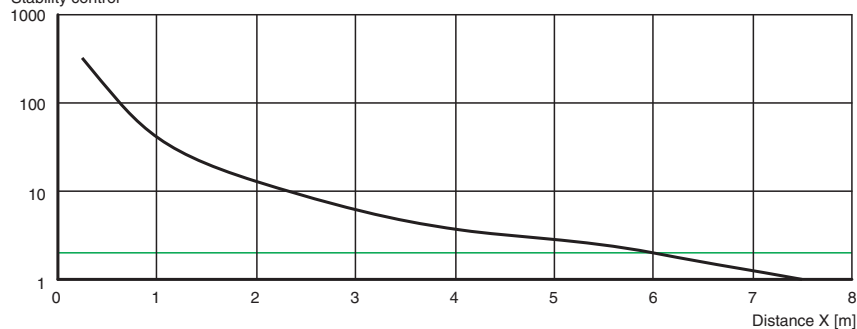


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## Relative received light strength

SLC14

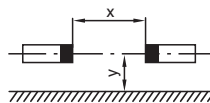
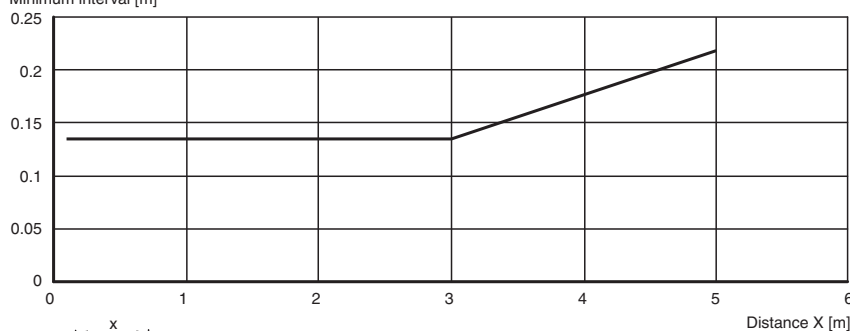
Stability control



## Lateral interval to mirroring surfaces

SLC14







Minimum interval [m]



## Matching system components

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

## Matching system components

	<b>SB4-OR-4XP-4M</b>	Safety control unit
	<b>SB4-OR-4XP-4MD</b>	Safety control unit
	<b>SB4-OR-4XP-4M-4136</b>	Safety control unit of series SB4
	<b>SB4-OR-4XP-4X</b>	Safety control unit
	<b>SB4-OR-4XP-4X-3819</b>	Safety control unit
	<b>SB4-OR-4XP-4136</b>	Safety control unit of series SB4

## Accessories

	<b>PG SLC-450</b>	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