



## Safety light curtain

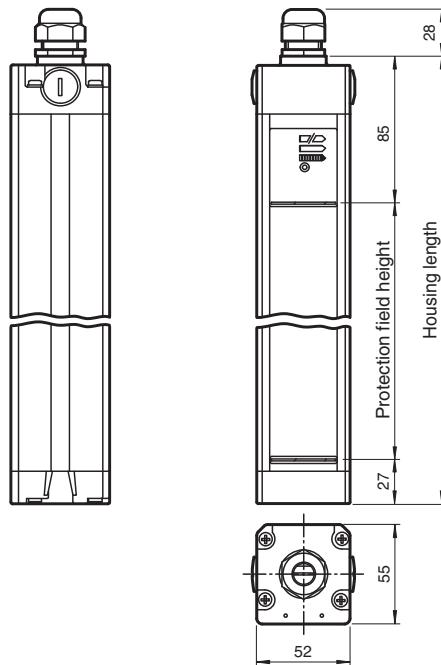
### SLC90-1200/31



- Sensing range up to 15 m
- Resolution 90 mm
- Protective field height up to 1800 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 relay monitor (Option 129)



## Dimensions



## Technical Data

### System components

Emitter	SLC90-1200-T
Receiver	SLC90-1200-R/31

### General specifications

Effective detection range	0.2 ... 15 m
Light source	IRED
Light type	modulated infrared light
LED risk group labelling	exempt group

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

## Technical Data

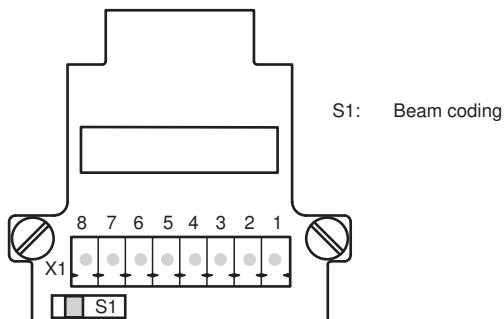
Tests	IEC/EN 61496	
Safety type according to IEC/EN 61496	4	
Width of protected area	0.2 ... 15 m	
Protection field height	1200 mm	
Number of beams	16	
Operating mode	can be selected with or without start/restart disable	
Optical resolution	90 mm	
Angle of divergence	< 5 °	
<b>Functional safety related 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>	1.5 E-8	
Type	4	
<b>Indicators/operating means</b>		
Operation indicator	7-segment display in emitter	
Diagnostics indicator	7-segment display in receiver	
Function indicator	in receiver: LED red: OSSD off LED green: OSSD on LED yellow: Protected area free, system start-ready	
Pre-fault indicator	LED orange	
Control elements	switch for start/restart disable, transmission coding	
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	24 V DC (-30 %/+25 %) / 24 V AC (-20 %/+10 %)
No-load supply current	I <sub>0</sub>	Emitter: ≤ 100 mA receiver: ≤ 150 mA
Protection class	III	
<b>Input</b>		
Activation current	approx. 10 mA	
Activation time	0.03 ... 1 s	
Test input	Reset-input for system test	
Function input	Start release	
<b>Output</b>		
Safety output	2 relay outputs, force-guided NO-contact	
Signal output	1 PNP each, max. 100 mA for start readiness and OSSD status	
Switching voltage	50 V	
Switching current	max. 2 A	
Switching power	100 VA	
Response time	30 ms	
<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	1310 mm	

## Technical Data

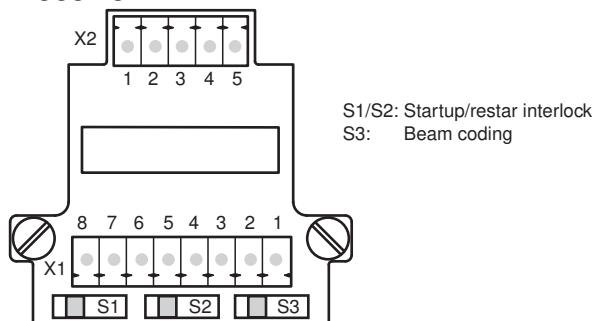
Degree of protection	IP67
Connection	M20 cable gland, terminal compartment with screw terminals, lead cross-section max. 1.5 mm <sup>2</sup>
Connection options	Further electrical connection options on request: Connector M12, 8-pin Connector DIN 43 651 Hirschmann, 6-pin+PE Connector M26x11 Hirschmann, 11-pin+PE
Material	
Housing	extruded aluminum profile, RAL 1021 (yellow) coated
Optical face	Plastic pane
Mass	Per 3900 g

## Connection

## Emitter:

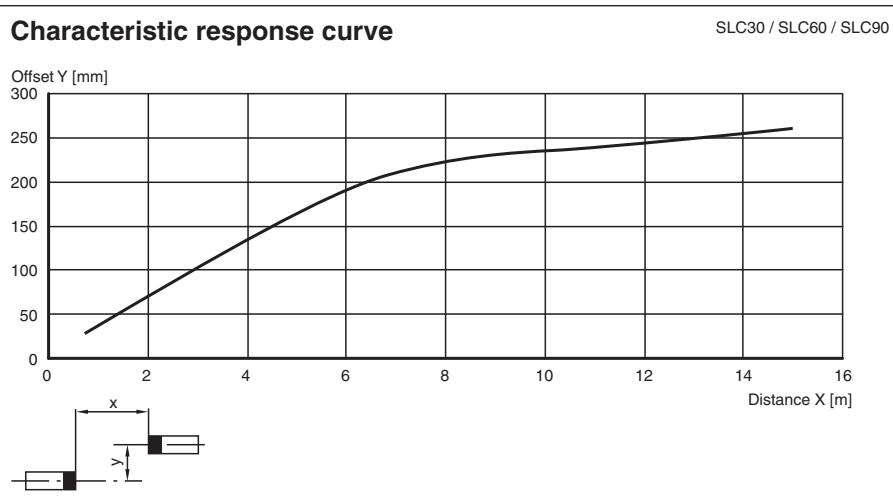


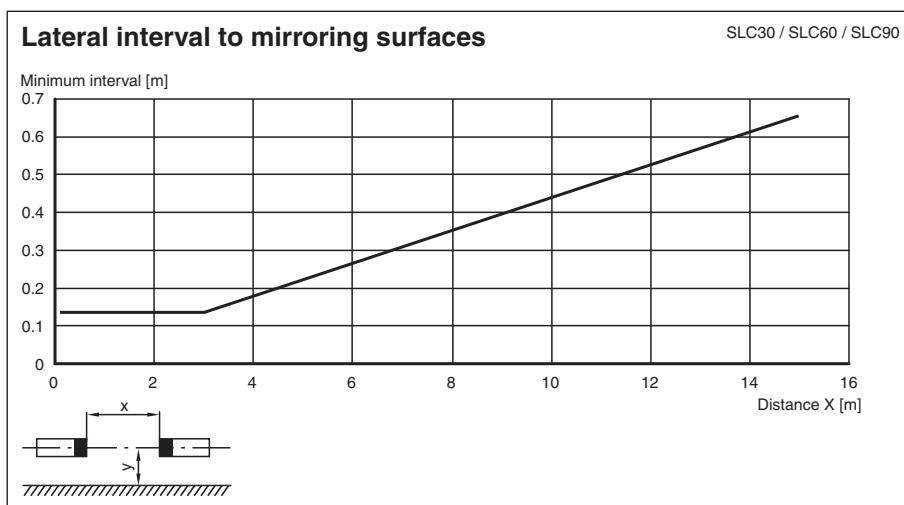
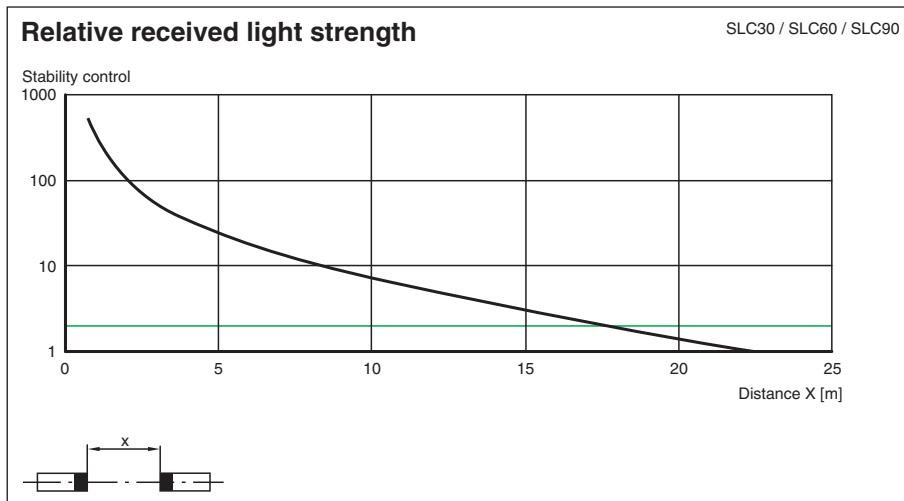
## Receiver:



terminal	emitter	receiver SLC...-R/31 (relay output)	receiver SLC...-R/31 (Relay monitor)
X1:1	Functional earth	Functional earth	Functional earth
X1:2		test (input)	Relay monitor
X1:3		OSSD2.2 (output)	OSSD2.2 (output)
X1:4		OSSD1.2 (output)	OSSD1.2 (output)
X1:5		OSSD2.1 (output)	OSSD2.1 (output)
X1:6		OSSD1.1 (output)	OSSD1.1 (output)
X1:7	0 V AC/DC	0 V AC/DC	0 V AC/DC
X1:8	24 V AC/DC	24 V AC/DC	24 V AC/DC
X2:1	Not placed on board	Start release (output)	Start release (output)
X2:2		Status OSSD (output)	Status OSSD (output)
X2:3		24 V reference potential for I/O	24 V reference potential for I/O
X2:4		0 V reference potential for I/O	0 V reference potential for I/O
X2:5		Startup readiness (input)	Startup readiness (input)

## Characteristic Curve





## Matching system components

Release date: 2020-03-20 Date of issue: 2020-10-06 Filename: 117622\_eng.pdf

	<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-4158</b>	Safety control unit
	<b>SB4-OR-4XP-3819</b>	Safety control unit

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

## 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-1200</b>	Protective glass panes for SLC series
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## 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