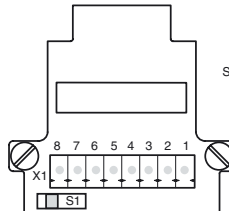## Dimensions

Model Number

SLC90-600/31

with 2 relay outputs with two force-guided normally open contacts

Features

- 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
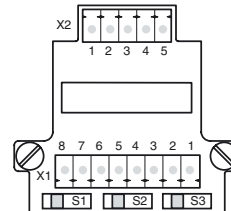- Optional with relay monitor (Option 129)

Accessories

PG SLC-600
Protective glass panes for SLC series

BA SLC
laser alignment aid for safety light cutrtains series SLC

Electrical connection

Emitter:

S1: Beam coding

Receiver:

S1/S2: Startup/restar interlock
S3: Beam coding

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		Start release (output)	Start release (output)
X2:2		Status OSSD (output)	Status OSSD (output)
X2:3	Not placed on board	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)

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

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Technical data

System components

Emitter	SLC90-600-T
Receiver	SLC90-600-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
Tests	IEC/EN 61496
Safety type according to IEC/EN 61496	4
Width of protected area	0.2 ... 15 m
Protection field height	600 mm
Number of beams	8
Operating mode	can be selected with or without start/restart disable
Optical resolution	90 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	1.5 E-8
Type	4

Indicators/operating means

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

Electrical specifications

Operating voltage	U_B	24 V DC (-30 %/+25 %) / 24 V AC (-20 %/+10 %)
No-load supply current	I_0	Emitter: ≤ 100 mA receiver: ≤ 150 mA
Protection class		III

Input

Activation current	approx. 10 mA
Activation time	0.03 ... 1 s
Test input	Reset-input for system test
Function input	Start release

Output

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

Conformity

Functional safety	ISO 13849-1
Product standard	EN 61496-1 ; IEC 61496-2

Ambient conditions

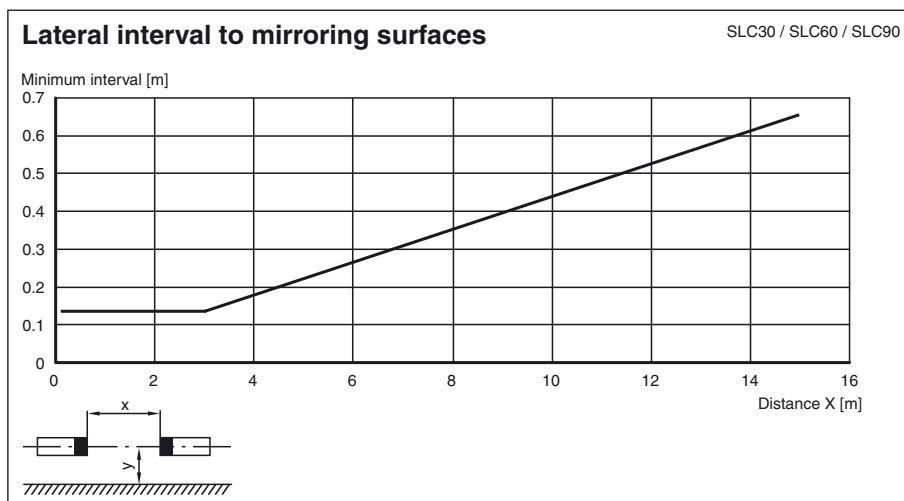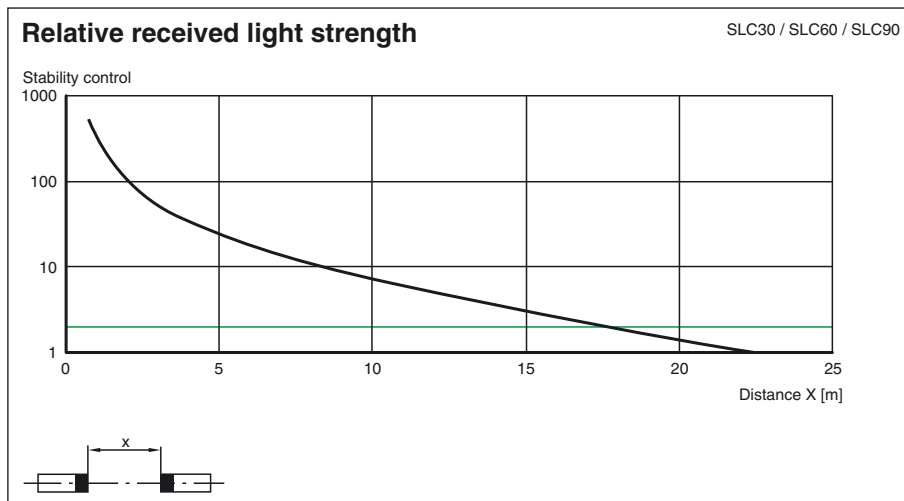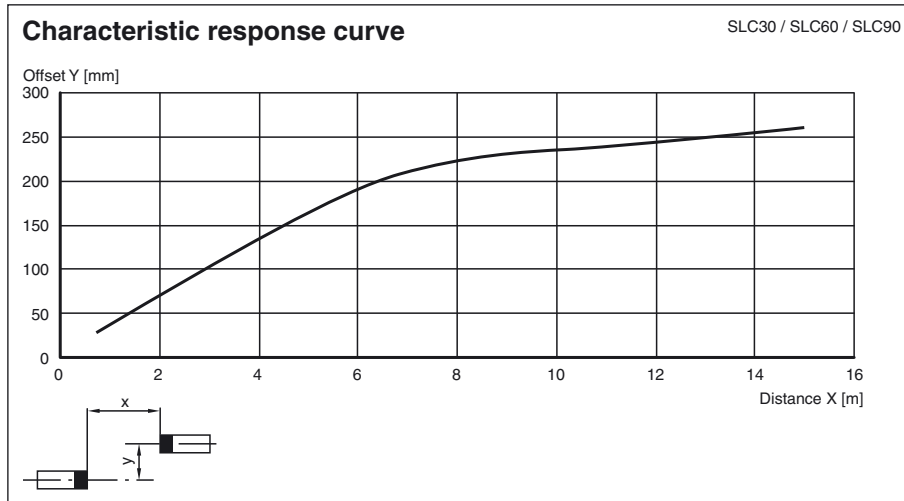|	
Ambient temperature	0 ... 55 °C (32 ... 131 °F)
Storage temperature	-25 ... 70 °C (-13 ... 158 °F)
Relative humidity	max. 95 %, not condensing

Mechanical specifications

Housing length L	710 mm
Degree of protection	IP67
Connection	M20 cable gland , terminal compartment with screw terminals, lead cross-section max. 1.5 mm^2
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 2100 g

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

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Curves/Diagrams

Characteristic response curve
SLC30 / SLC60 / SLC90

Offset Y [mm]

Distance X [m]

Relative received light strength
SLC30 / SLC60 / SLC90

Stability control

Distance X [m]

Lateral interval to mirroring surfaces
SLC30 / SLC60 / SLC90

Minimum interval [m]

Distance X [m]

Notes

Master slave mode

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

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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