Dimensions

Model Number

SLC14-1800/129/130

with 2 separate fail-safe semiconductor outputs

Features

- Sensing range up to 5 m
- Resolution 14 mm (finger protection)
- Protective field height up to 1800 mm
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Master/Slave detection, Plug and Play
- Very short response time
- Degree of protection IP67
- Integrated function display
- Pre-fault indication
- Safety outputs OSSD in potential-separated semiconductor version
- Start/Restart disable preset by Option /129
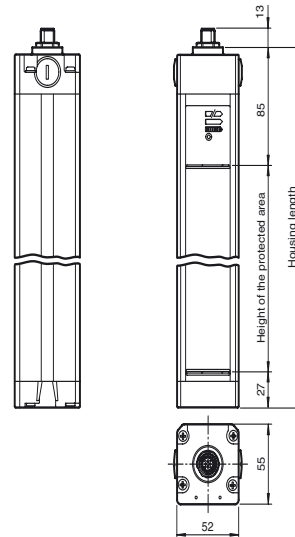- Integrated relay monitor

Accessories

PG SLC-1800
Protective glass panes for SLC series

BA SLC
laser alignment aid for safety light cutrtains series SLC
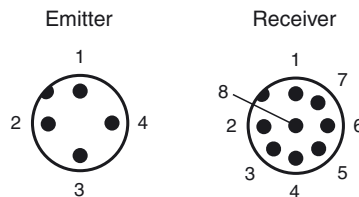
Electrical connection

Emitter

1	+UB
2	n.c.
3	0 V
4	Shield

Receiver

1	Ready
2	+UB
3	Restart
4	Test (/129 RM)
5	OSSD1
6	OSSD2
7	0 V
8	Shield

Pinout

Emitter

Receiver

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

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Technical data

System components

Emitter	SLC14-1800-T/130
Receiver	SLC14-1800-R/129/130

General specifications

Effective detection range	0.2 ... 5 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 ... 5 m
Protection field height	1800 mm
Number of beams	192
Operating mode	Startup/restart disable preset with Relay monitor (preset)
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	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	Transmission coding

Electrical specifications

Operating voltage	U_B	24 V DC (-30 %/+25 %)
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
Function input	Start release

Output

Safety output	2 separated fail safe semiconductor outputs
Signal output	1 PNP, max. 100 mA for start readiness
Switching voltage	Operating voltage -2 V
Switching current	max. 0.5 A
Response time	36 ms

Conformity

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

Ambient conditions

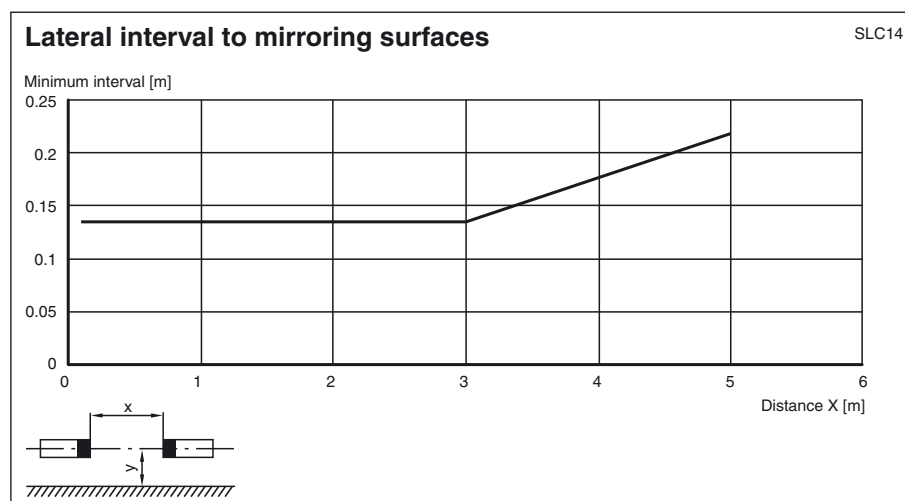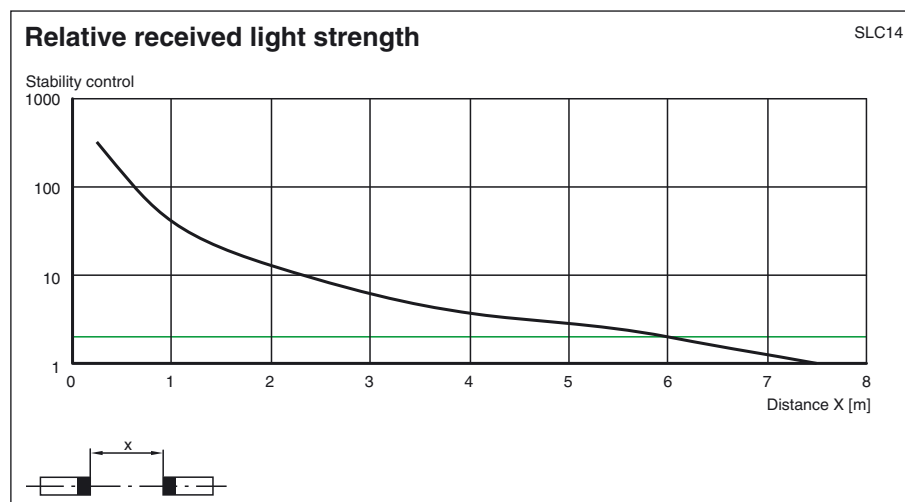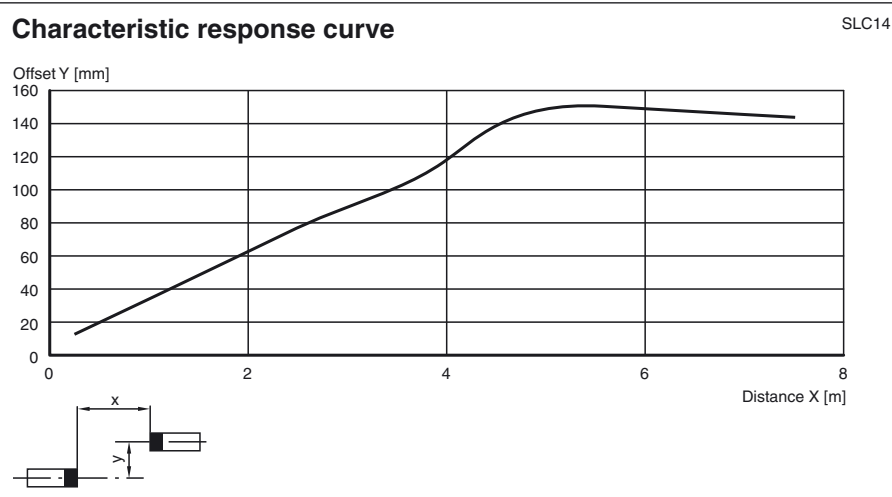|	
Ambient temperature	0 ... 55 °C (32 ... 131 °F)
Storage temperature	-25 ... 70 °C (-13 ... 158 °F)
Relative humidity	max. 95 %, not condensing

Mechanical specifications

Housing length L	1910 mm
Degree of protection	IP67
Connection	Emitter: terminal compartment with screw terminals, lead cross-section max. 1.5 mm^2 Receiver: terminal compartment with screw terminals, lead cross-section max. 1.5 mm^2
Material	
Housing	extruded aluminum profile, RAL 1021 (yellow) coated
Optical face	Plastic pane
Mass	Per 5700 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

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

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Curves/Diagrams

Characteristic response curve
SLC14

Offset Y [mm]

Distance X [m]

Relative received light strength
SLC14

Stability control

Distance X [m]

Lateral interval to mirroring surfaces
SLC14

Minimum interval [m]

Distance X [m]

Note

Master-Slave operation

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

Release date: 2017-12-07 14:18   Date of issue: 2017-12-07   126045_eng.xml

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3

The use of slaves allows both the protection fields to be extended and protection fields to be created that do not all exist at a single level. When deciding which slaves to connect, remember that the total maximum of 96 beams must not be exceeded. Up to 192 beams are possible if the /130 option is selected.

Slaves exist for the transmitter and the receiver. These simply need to be connected to the master light curtain. Up to two slaves can be connected to both the transmitter and receiving units. Only one slave can be connected if the /130 option is selected.

Installation:

1 The end cap (no cable gland) on the light curtain is unscrewed and removed.

2 The plug-in jumper on the connectors of the now visible PCB is removed.

3 The slave is designed in such a way that the cap and PCB on the connecting cable plug directly onto the open end of the light curtain.

4 Once the end cap has been screwed on, the system is complete.

System accessories

- Mounting set SLC

- Test rods SLC14/SLC30/SLC60

- Protection glass for SLC (to protect the optical surface)

- Side cable gland SLC

- Profile alignment tool

- Beam alignment tool SLC

- Mirror for SLC (to protect danger areas on more than one side)

- Stands UC SLP/SLC

- Enclosure for stands
  Enclosure UC SLP/SLC

- Start protection
  Damping UC SLP/SLC