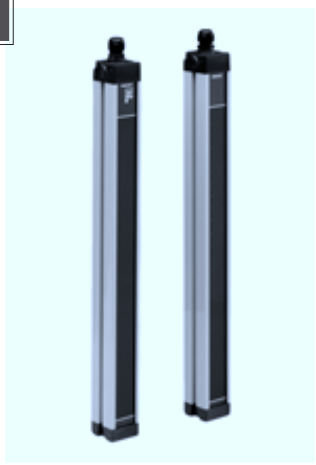
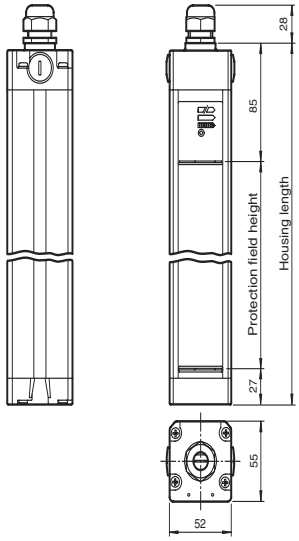


Dimensions



Model Number

SLC30-450/133

Safety light curtain

with 2 separate fail-safe semiconductor outputs

Features

- ATEX-approval for zone 2 and zone 22
- Sensing range up to 15 m
- Resolution 30 mm (hand protection)
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Safety outputs OSSD, external status displays OSSD
- Start/Restart disable
- Integrated function display
- Pre-fault indication

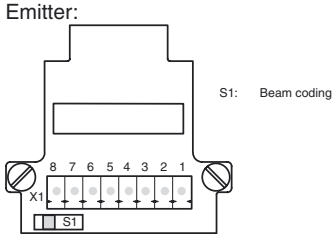
Accessories

PG SLC-1050
Protective glass panes for SLC series

BA SLC
laser alignment aid for safety light cutrtains series SLC

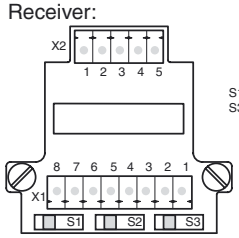
Electrical connection

Emitter:



S1: Beam coding

Receiver:



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

Terminal	Emitter	Receiver SLC...-R (semiconductor output)	Receiver SLC...-R/129 (Relay monitor)
X1:1	Functional earth	Functional earth	Functional earth
X1:2		Test (input)	Relay monitor
X1:3		0 V OSSD	0 V OSSD
X1:4		24 V OSSD	24 V OSSD
X1:5		OSSD2 (output)	OSSD2 (output)
X1:6		OSSD1 (output)	OSSD1 (output)
X1:7	0 V AC/DC	0 V DC	0 V DC
X1:8	24 V AC/DC	24 V DC	24 V DC
X2:1	Not placed on board	Start release (output)	Start release (output)
X2:2		Status OSSD (output)	Status OSSD (output)
X2:3		n.c.	n.c.
X2:4		n.c.	n.c.
x2:5		Startup readiness (input)	Startup readiness (input)

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PEPPERL+FUCHS SENSING YOUR NEEDS

Technical data

System components		
Emitter		SLC30-450-T/133
Receiver		SLC30-450-R/133
General specifications		
Effective detection range		0.2 ... 15 m
Light source		IRED
Light type		modulated infrared light
Safety type according to IEC/EN 61496		4
Width of protected area		0.2 ... 15 m
Protection field height		450 mm
Number of beams		24
Operating mode		can be selected with or without start/restart disable
Optical resolution		30 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		1.35 E-8
Type		4
Indicators/operating means		
Operating display		7-segment display in emitter
Diagnostics display		7-segment display in receiver
Function display		in receiver: LED red: OSSD off LED green: OSSD on LED yellow: Protected area free, system start-ready
Pre-fault indication		LED orange
Controls		switch for start/restart disable, 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
Test input		Reset-input for system test
Function input		Start release
Output		
Safety output		2 separated fail safe semiconductor outputs
Signal output		1 PNP, max. 100 mA for start readiness , short-circuit protected 1 PNP, max. 100 mA for OSSD status , short-circuit protected
Switching voltage		Operating voltage -2 V
Switching current		max. 0.5 A
Response time		12 ms
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
Protection degree		IP66
Connection		M20 cable gland , Cable diameter Ø5.5 ... 13 mm , 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 1650 g
General information		
System components		
Emitter		SLC30-450-T/133
Receiver		SLC30-450-R/133
Use in the hazardous area		see more details for the use in hazardous areas
Category		3G; 3D
Compliance with standards and directives		
Directive conformity		
Machinery Directive 2006/42/EC		EN ISO 13849-1:2008 EN 61496-1:2004/A1:2008
EMC Directive 2004/108/EC		EN 61000-6-4:2007 + A1:2011
Standard conformity		
Standards		IEC 61496-2:2006 EN 50178:1997
Approvals and certificates		

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CE conformity	CE
CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.
TÜV approval	TÜV

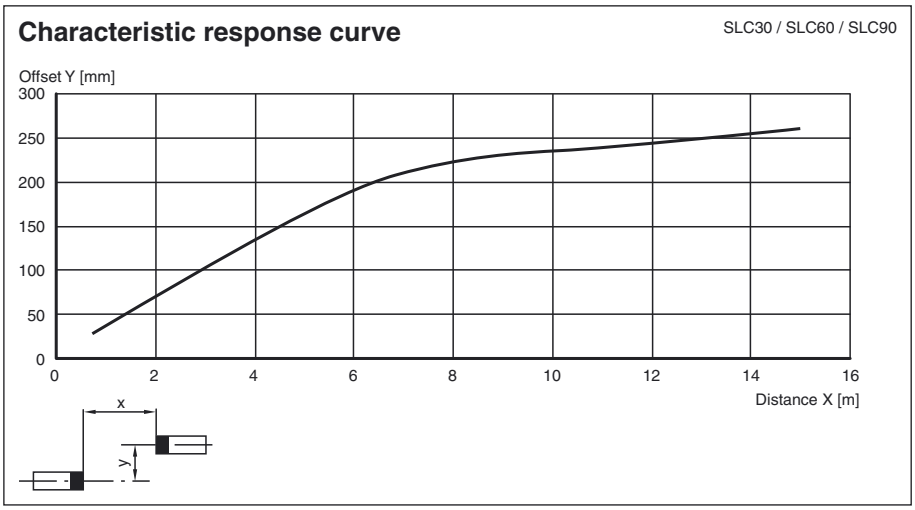
ATEX 3G (nA)

Instruction	**Manual electrical apparatus for hazardous areas**
Device category 3G (nA)	for use in hazardous areas with gas, vapour and mist
Directive conformity	94/9/EG
Standard conformity	EN 60079-0:2009 , EN 60079-15:2010 , EN 60079-28:2007
Ex-identification	II 3 G Ex nAc op is IIC T4
Installation, Comissioning	Laws and/or regulations and standards governing the use or intended usage goal must be observed. By fitting a suitable external fixture, the connecting cable is secured against the transmission of rotational movements and tensile loading on the connections. After opening the enclosure (connection cap) and connecting the wires, but before mounting the connection cap, ensure the seal is correctly fitted and intact. Damaged seals are to be replaced.
Maintenance	No modifications must be undertaken on apparatus, which is operated in hazardous areas. Repairs to such apparatus are not permissible.
Special conditions	
Maximum permissible ambient temperature T_{Umax}	55 °C (131 °F)
Protection from mechanical danger	The cable and wire gland and end caps are to be protected from mechanical shock.
Protection from UV light	The sensor must be protected against harmful UV radiation. This can be achieved by using the sensor indoors.
Electrostatic charging	The enclosure is to be grounded with help of the accompanying grounding terminal EC SLC EX via a wire with a cross section of 4 mm^2.
Protection of overvoltage	Precautions must be taken to prevent the rated voltage being exceeded by more than 40 % due to transient disturbances.
Other conditions	Do not open or disconnect when energized! By fitting a suitable external fixture, the connecting cable is secured against the transmission of rotational movements and tensile loading on the connections. After opening the enclosure (connection cap) and connecting the wires, but before mounting the connection cap, ensure the seal is correctly fitted and intact. Damaged seals are to be replaced.

ATEX 3D

Instruction	**Manual electrical apparatus for hazardous areas**
Details for use in hazardous areas	Electrical apparatus for potentially explosive atmospheres
Directive conformity	94/9/EG
Standard conformity	EN 60079-31:2009
Ex-identification	II 3 D Ex tc IIIC T90 °C
Installation, Comissioning	Laws and/or regulations and standards governing the use or intended usage goal must be observed. By fitting a suitable external fixture, the connecting cable is secured against the transmission of rotational movements and tensile loading on the connections. After opening the enclosure (connection cap) and connecting the wires, but before mounting the connection cap, ensure the seal is correctly fitted and intact. Damaged seals are to be replaced.
Maintenance	No modifications must be undertaken on apparatus, which is operated in hazardous areas. Repairs to such apparatus are not permissible.
Special conditions	
Protection from mechanical danger	The cable and wire gland and end caps are to be protected from mechanical shock.
Protection from UV light	The sensor must be protected against harmful UV radiation. This can be achieved by using the sensor indoors.
Electrostatic charging	The enclosure is to be grounded with help of the accompanying grounding terminal EC SLC EX via a wire with a cross section of 4 mm^2.
Protection of overvoltage	Precautions must be taken to prevent the rated voltage being exceeded by more than 40 % due to transient disturbances.

Curves/Diagrams



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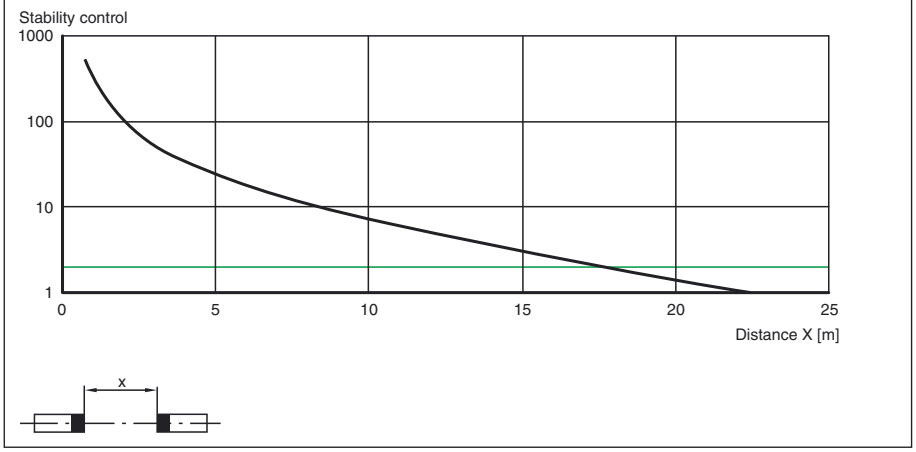
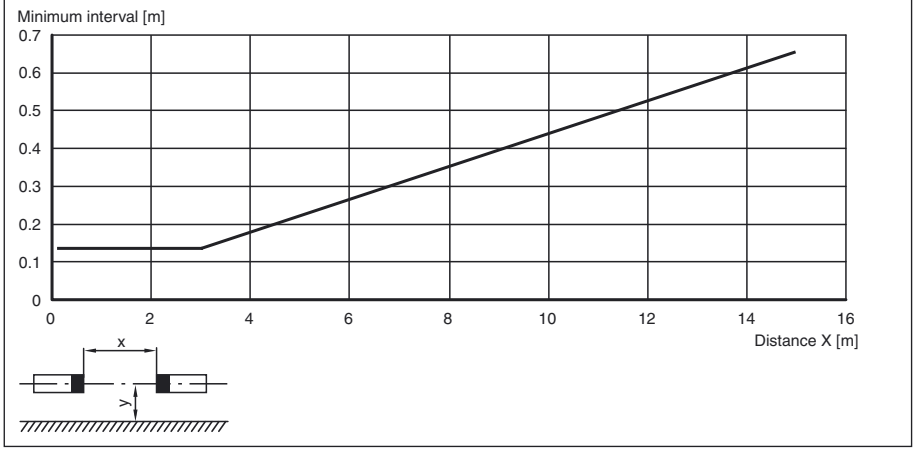
Relative received light strength

SLC30 / SLC60 / SLC90



Lateral interval to mirroring surfaces

SLC30 / SLC60 / SLC90



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

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- 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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