

Safety light grid with integrated control unit



SLPC10-3

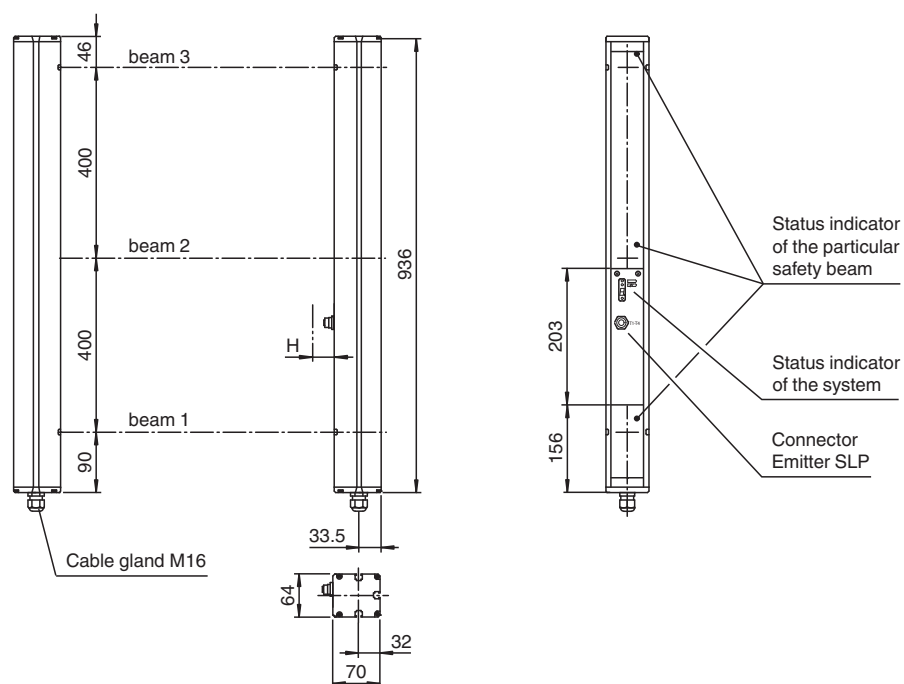
- Sensing range up to 10 m
- 3-radial design
- Beam spacing 400 mm
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Red transmission light
- Usable with or without start/restart disable
- Integrated relay monitor
- 7-segment diagnostic display
- Integrated function display
- Pre-fault indication
- OSSD outputs as semiconductor or relay outputs



Dimensions

Emitter SLP...-3-T

Receiver SLPC...-3-R



Technical Data

System components

Emitter	SLP10-3-T
Receiver	SLPC10-3-R

General specifications

Effective detection range	0.2 ... 10 m
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Technical Data

Light source	LED	
Light type		modulated visible red light
Tests	IEC/EN 61496	
Safety type according to IEC/EN 61496		4
Marking	CE	
Target size		static: 32 mm dynamic: 50 mm (at v = 1.6 m/s of the obstacle)
Beam spacing	400 mm	
Number of beams		3
Operating mode	Start/restart disable, relay monitor,	
Angle of divergence		< 5 °
Functional safety related parameters		
Performance level (PL)		PL e
Category	Cat. 4	
Mission Time (T _M)		20 a
PFH _d	3.54 E-9	
Type		4
Indicators/operating means		
Diagnostics indicator		7-segment display
Function indicator	LED red: per receiver channel off: interruption flashes: receiver continuously on: reception with sufficient stability control on the front plate: LED red: OSSD off LED green: OSSD on	
Pre-fault indicator		LED red next to receiver flashes
Control elements	10 DIP switch in receiver terminal compartment	
Electrical specifications		
Operating voltage	U _B	24 V DC -15% / +25% , galvanically isolated
No-load supply current	I ₀	max. 250 mA
Protection class	III , IEC 61140	
Input		
Activation current	approx. 10 mA	
Activation time		0.03 ... 1 s
Test input	Reset-input for system test	
Function input	Relay monitor, start release	
Output		
Pre-fault indication output		1 PNP, +U _B -2 V, max. 300 mA
Safety output	2 separated fail safe semiconductor outputs	
Signal output		1 PNP each, max. 300 mA for start readiness, OSSD on, OSSD off
Switching voltage	Operating voltage -2 V	
Switching current		max. 0.5 A
Response time	20 ms	
Conformity		
Functional safety	ISO 13849-1	
Product standard		EN 61496-1 ; IEC 61496-2
Approvals and certificates		
CE conformity		CE
Approvals	TÜV SÜD	
Ambient conditions		
Ambient temperature	0 ... 50 °C (32 ... 122 °F)	
Storage temperature		-20 ... 70 °C (-4 ... 158 °F)
Relative humidity	max. 95 %, not condensing	
Mechanical specifications		
Degree of protection	IP65	

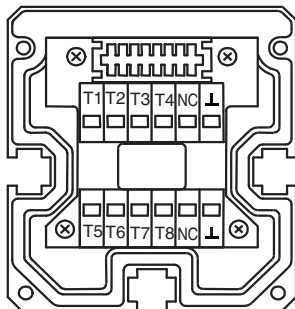
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Technical Data

Connection	M16 cable gland , terminal compartment with cage-terminals, M12-connector for emitter
Connection options	Further electrical connection options on request: Connector DIN 43 651 Hirschmann, emitter: 6-pin+PE, receiver: 11-pin+PE
Material	
Housing	extruded aluminum profile, RAL 1021 (yellow) coated
Optical face	Plastic pane
Mass	Per 3400 g

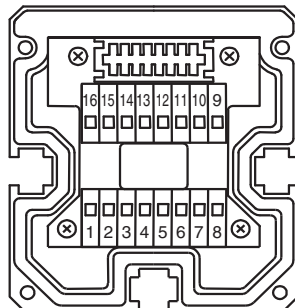
Connection

Emitter SLP



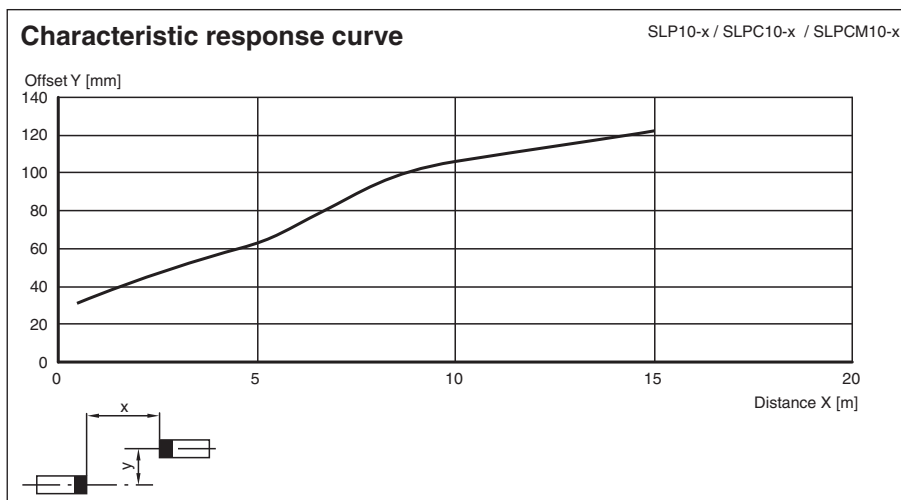
- T1 - Emitter channel 1
- T2 - Emitter channel 2
- T3 - Emitter channel 3
- ⏏ - 0 V

Receiver SLPC

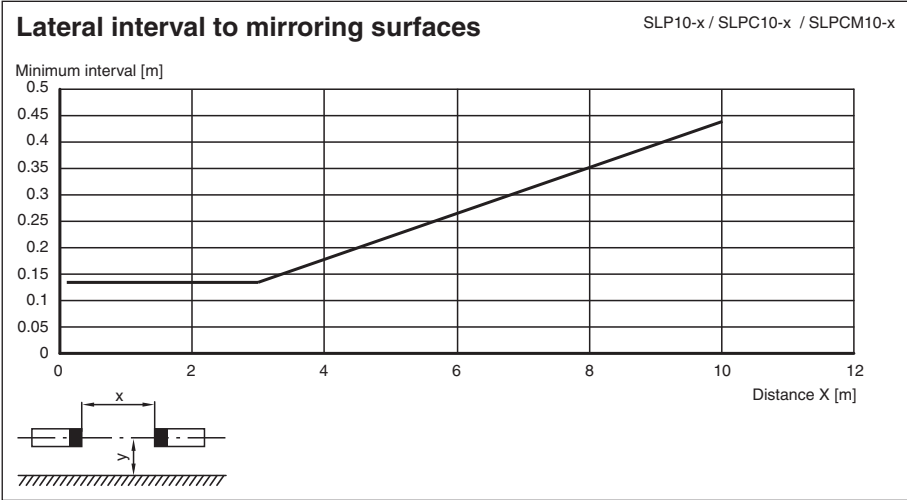
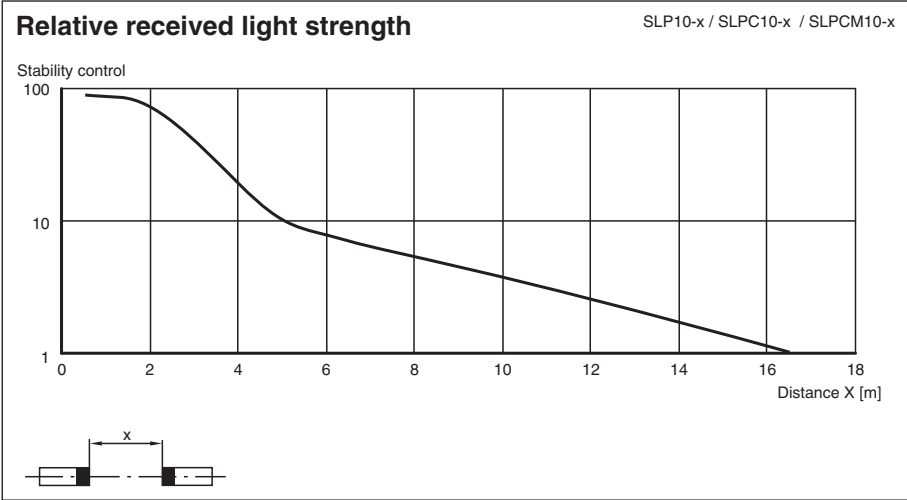


Receiver SLPC (semiconductor outputs)	Receiver SLPC/31 (Relay outputs)
4 - n.c. 5 - - 6 - + 7 - OSSD 1 8 - OSSD 2	1 - Functional earth 2 - 0 V 3 - 24 V 4 - 5 - 6 - 7 - 8 - 9 - input, Relay monitor 10 - input, Start release 11 - input, Reset 12 - PNP-output, Soiled optics 13 - n.c. 14 - PNP-output, Startup readiness 15 - PNP-output, Indicator OSSD OFF 16 - PNP-output, Indicator OSSD ON

Characteristic Curve



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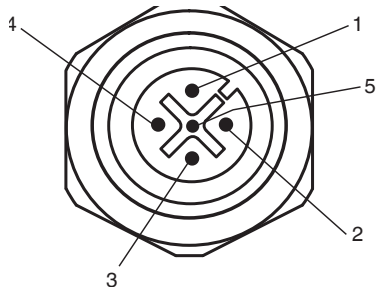


Accessories

	PG SLP-3	Protective glass panes for SLP series
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Additional information

Socket assignment on the front side of the device



T1 - T4 transmitter control

Socket	Function
1	Transmitter channel 1
2	Transmitter channel 2
3	0 V
4	Transmitter channel 3

System accessories

- Mounting set MS SLP
- Profile alignment aid PA SLP/SLC
- Laser alignment aid BA SLP
- Ground pillar UC SLP/SLC
- Housing for pillar
Enclosure UC SLP/SLC
- Collision protector
Damping UC SLP/SLC
- Redirection mirror for multi-side protection of hazardous areas
SLP-3-M