Dimensions

Option -L with indicator lamp (receiver only)

Emitter SLP...-3-T   Receiver SLPCM...-3-R   SLPCM...-3

ø 57

Indicator lamp

197

topmost beam

beam 3   46

400

beam 2

936

400

beam 1   90

203

156

Cable gland M16

33.5

64

32

70

Status indicator of the particular safety beam

Status indicator of the system

Connector ext. indicator lamp

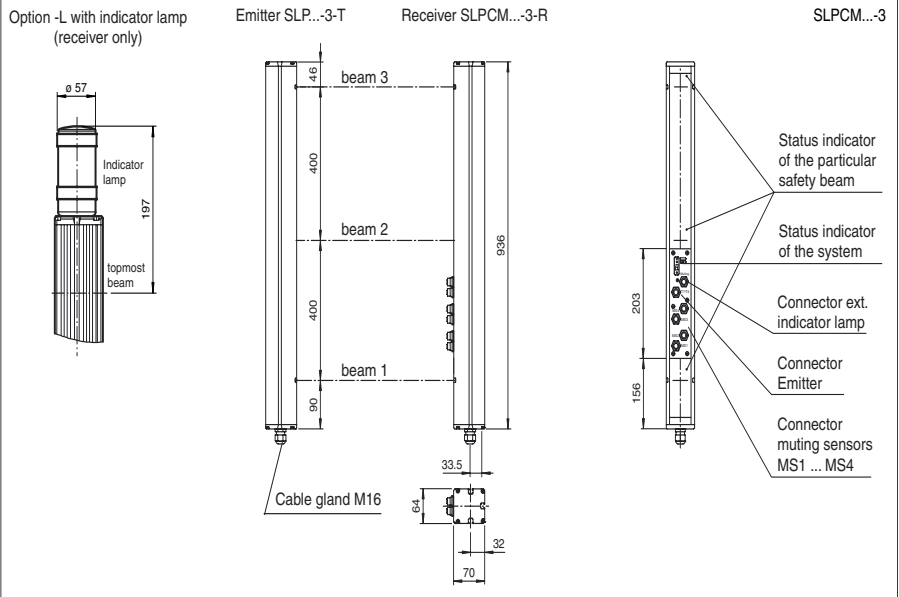Connector Emitter

Connector muting sensors MS1 ... MS4

Model Number

SLPCM10-3-L

with 2 separate fail-safe semiconductor outputs

Features

- 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
- Sequential and parallel muting in various operating modes
- Emergency muting for the correction of the material jam
- Integrated relay monitor
- 7-segment diagnostic display
- Integrated function display
- Pre-fault indication
- OSSD outputs as semiconductor or relay outputs

Accessories

PG SLP-3
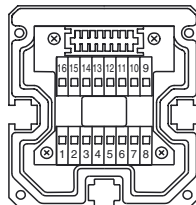Protective glass panes for SLP series

Electrical connection

Emitter SLP

T1 T2 T3 T4 NC ⊥

T5 T6 T7 T8 NC ⊥
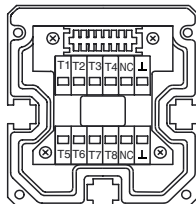
T1	-	Emitter channel 1
T2	-	Emitter channel 2
T3	-	Emitter channel 3
⊥	-	0 V

Receiver SLPCM

16 15 14 13 12 11 10 9

1 2 3 4 5 6 7 8

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

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com
USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com
Germany: +49 621 776 4411
fa-info@de.pepperl-fuchs.com
Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS
SENSING YOUR NEEDS

1

Release date: 2015-05-19 15:41   Date of issue: 2015-05-19   114875_eng.xml

Technical data

System components

Emitter	SLP10-3-T
Receiver	SLPCM10-3-R-L

General specifications

Effective detection range	0.2 ... 10 m
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, muting operating modes
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	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 LED yellow: types of muting operation
Muting indicator	Indicator lamp
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, muting sensors (max. 4)

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 startup readiness, OSSD on, OSSD off, muting lamp, signals in parallel in the lamp socket
Switching voltage	Operating voltage -2 V
Switching current	max. 0.5 A
Response time	20 ms

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
Connection	M16 cable gland , terminal compartment with cage terminals, M12 connector for transmitters, muting lamp, etc., muting sensors, lamp socket for muting lamp, etc.
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

Compliance with standards and directives
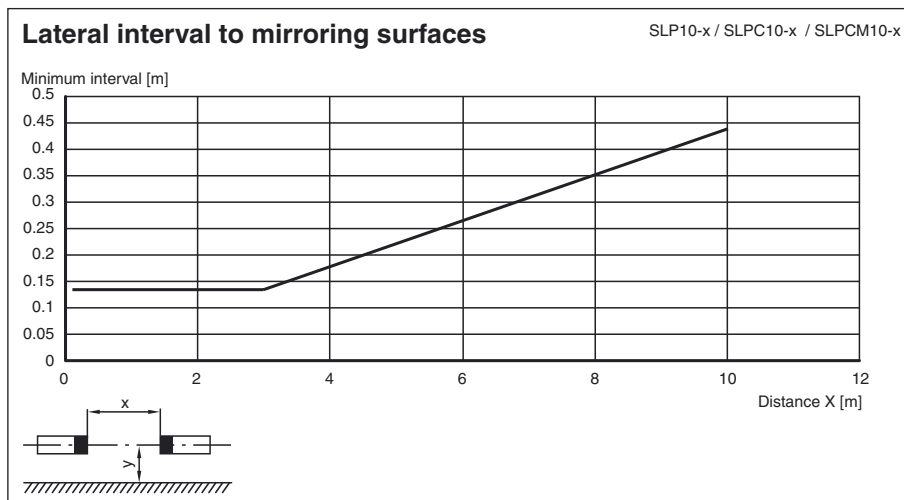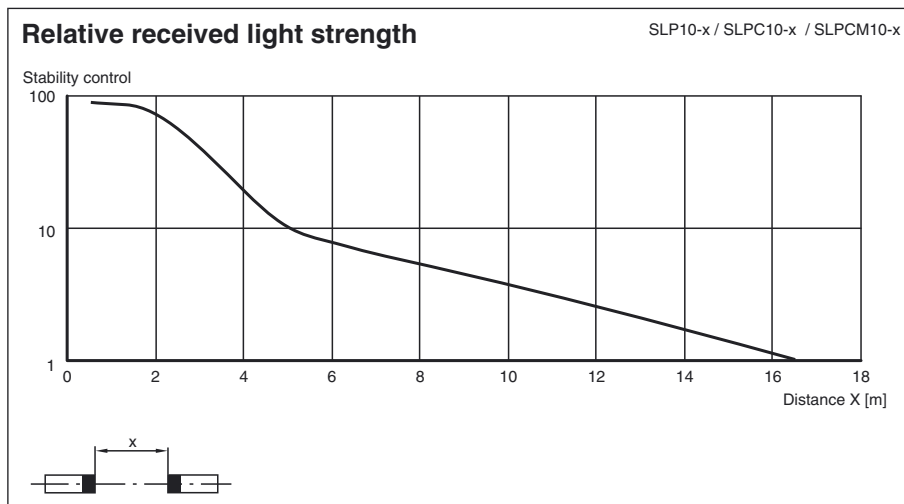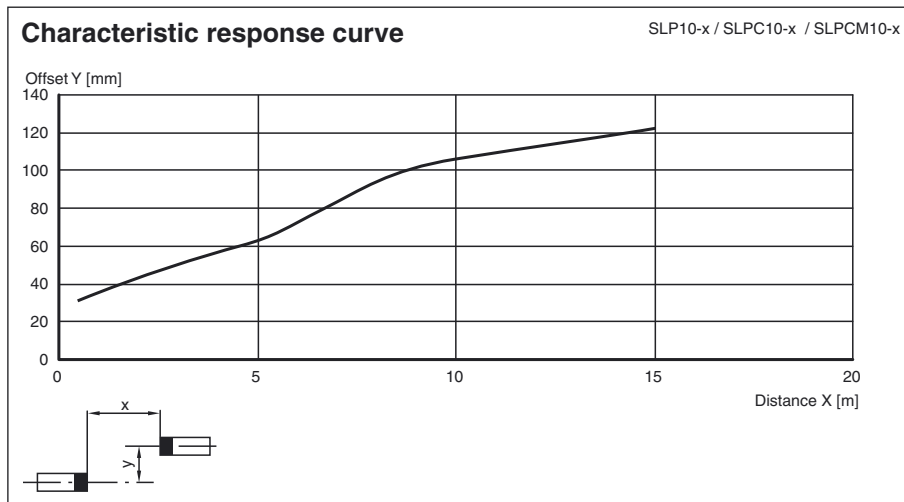
Directive conformity	CE
Machinery Directive 2006/42/EC	EN ISO 13849-1:2008 ; EN 61496-1:2013
EMC Directive 2004/108/EC	EN 61000-6-4:2007/A1:2011
Standard conformity	
Standards	IEC 61496-2:2013

Approvals and certificates

CCC approval	CCC approval / marking not required for products rated ≤36 V
Approvals	TÜV

Curves/Diagrams

Characteristic response curve
SLP10-x / SLPC10-x / SLPCM10-x

Offset Y [mm]

Distance X [m]

x

y

Relative received light strength
SLP10-x / SLPC10-x / SLPCM10-x

Stability control

Distance X [m]

x

Lateral interval to mirroring surfaces
SLP10-x / SLPC10-x / SLPCM10-x

Minimum interval [m]

Distance X [m]

x

y

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

PEPPERL+FUCHS
SENSING YOUR NEEDS

Additional information

Socket assignment on the front side of the device

Indicator lamp control —⊗—

Socket	Function
1	OSSD on
2	OSSD off
3	0 V
4	Readiness for startup
5	Muting (monitored)

T1 - T4 transmitter control

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

Muting sensor inputs MS1 - MS4

Socket	Function
1	+ 24 V
3	0 V
4	Sensor signal

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 SLP-3-M

PEPPERL+FUCHS
SENSING YOUR NEEDS