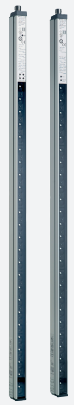

Safety light curtain

SLCT30/35

- Resolution 30 mm (hand protection)
- Protection field height up to 2400 mm
- Self-testing (type 2 as per IEC/EN 61496-1)
- SIL1 acc. to IEC 61508
- Sensing range up to 20 m
- Degree of protection IP67
- Temperature range -35 ... 60°C (-31 ... 140 °F)
- Slim design, mounting on three sides

Safety light curtain

Function

The safety light curtain consists of a transmitter and a receiver unit. The protected area is formed by infrared light beams transmitted from the transmitter unit to the receiver unit. The spacing between the individual light beams determines the minimum obstruction size (30 mm) that can be reliably detected within the entire protected area range.

Application

- Active opto-electronic protective device (AOPD) for protection of people in danger zones and high risk areas
- Hand protection from 30 mm resolution
- Finger protection from 14 mm resolution

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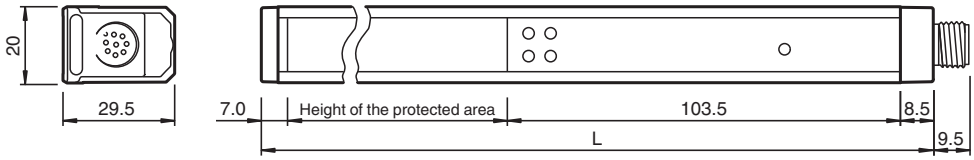
Dimensions



Technical Data

General specifications		
Effective detection range		5 ... 20 m
Light source		IRED
Light type		modulated infrared light , 850 nm
Protection field height		see Table 1, max. 2400 mm
Operating mode		Startup/restart disable, deactivateable
Optical resolution		30 mm
Opening angle		< 5 °
Ambient light limit		Not sensitive to ambient light in accordance with IEC 61496-2
UL File Number		E215245
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 1
Performance level (PL)		PL c
Category		Cat. 2
Mission Time (T_M)		20 a
PFH_d		Depending on the protection field height; see Manual
Type		2
Indicators/operating means		
Operation indicator		green: Power on
Function indicator		Green: OSSD ON , Red: OSSD OFF
Status indicator		Transmitter unit: LED yellow: Mode, test or error Receiver: LED yellow: Start readiness, function reserve or error
Electrical specifications		
Operating voltage	U_B	24 V DC (-20%, +30%) ; Power supply with safe isolation: 24 V DC

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No-load supply current	I_0	Transmitter unit:≤ 150 mA Receiver: ≤ 150 mA (outputs open)
Protection class		III , IEC 61140
Power consumption	P_0	Transmitter unit: 5 W Receiver: 15 W
Input 1		
Input type		Transmitter unit test
Input format		Break contact
Switching voltage		24 V DC
Input current		5 mA
Input 2		
Input type		Transmitter unit, mode A/B
Function		Beam Code A: open or 0 V Beam Code B: 24 V DC, 5 mA
Input 3		
Input type		Receiver unit relay monitor
Input format		Break contact
Switching voltage		24 V DC
Input current		5 mA
Input 4		
Input type		Receiver unit, start release
Input format		Break contact
Input current		5 mA
Input 5		
Input type		Receiver unit, mode A/B (see transmitter unit, mode A/B)
Output		
Response time		see Table 1, max. 48 ms
Output 1		
Output type		Receiver unit OSSD
Signal output		PNP semiconductor , monitored for short and cross circuits
Switching voltage		ON: U_B - 2 V; OFF: < 1 V
Switching current		ON: max. 0.1 A; OFF: < 5 µA
Output 2		
Output type		Receiver signal output start readiness
Signal output		PNP-semiconductor, short-circuit protected, 0.1A
Conformity		
Functional safety		ISO 13849-1 ; EN 61508 part1-4
Product standard		EN 61496-1 ; IEC 61496-2
Photobiological safety		Risk group 0 according to IEC 62471
Approvals and certificates		
CE conformity		CE
UKCA conformity		UKCA
UL approval		cULus Listed
TÜV approval		TÜV SÜD
Ambient conditions		
Ambient temperature		-35 ... 60 °C (-31 ... 140 °F)
Storage temperature		-35 ... 70 °C (-31 ... 158 °F)
Relative humidity		max. 95 %, not condensing
Shock resistance		10 g , 16 ms ; stationary applications only
Vibration resistance		0.35 mm , 10 ... 55 Hz ; stationary applications only
Mechanical specifications		
Housing length L		see table 2
Degree of protection		IP67 , For indoor use only

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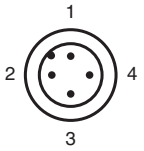
Technical Data

Connection	Transmitter unit: 4-pin, M12 x 1 connector Receiver: 8-pin, M12 x 1 connector Cable cross section min. 0.25 mm^2 Max. cable length 50 m
Material	
Housing	extruded aluminum section , Silver anodized
Optical face	Plastic pane , Transparent polycarbonate
Mass	see table 2
General information	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

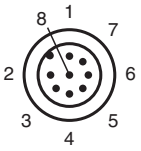
Connection

Transmitter unit:



Pin	Transmitter unit
1	24 V DC
2	Mode A/B
3	0 V DC
4	Test

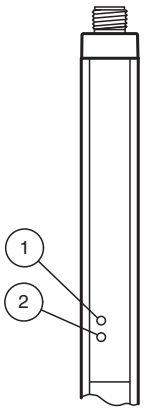
Receiver unit:



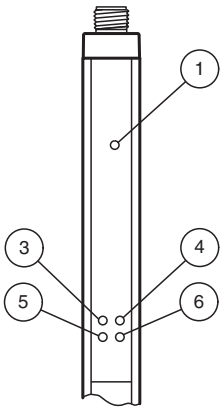
Pin	Receiver unit
1	Restart Interlock (RI)
2	24 V DC
3	Relay Monitor (RM)
4	Status / Select RI-RM
5	OSSD1
6	OSSD2
7	0 V DC
8	Mode A/B

Assembly

Transmitter unit



Receiver unit



1	Power	green
2	Mode A/B, Status	yellow
3	OSSD OFF	red
4	OSSD ON	green
5	Restart/Status	yellow
6	Mode A/B	yellow

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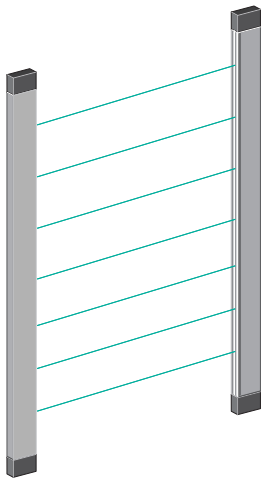
Application



Technical Features

Table 1: Response Time

Protection field height [mm]	Response time [ms]
100	8
200	10
300	11
400	12
500	14
600	15
700	16
800	17
900	19
1000	20
1100	21
1200	23
1300	24
1400	25
1500	26
1600	28
1700	29
1800	30
1900	32
2000	33
2100	34
2200	35
2300	37
2400	38

Table 2: Total Length and Weight

Protection field height [mm]	Total length of transmitter/receiver unit [mm]	Weight of transmitter/receiver unit [g]
100	219	140
200	319	200
300	419	250
400	519	310
500	619	370
600	719	430
700	819	480
800	919	540
900	1019	600
1000	1119	650
1100	1219	710
1200	1319	760
1300	1425	820
1400	1525	880
1500	1625	940
1600	1725	990

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Technical Features

Protection field height [mm]	Total length of transmitter/receiver unit [mm]	Weight of transmitter/receiver unit [g]
1700	1825	1050
1800	1925	1100
1900	2025	1160
2000	2125	1210
2100	2225	1270
2200	2325	1320
2300	2425	1380
2400	2525	1440

Type Code

S	L	C	(1)	(2)	(2)	–	(3)	(3)	(3)	(3)	–	(4)	/	(5)	(5)

SLC	Device
SLC	Safety light curtain

(1)	Safety light curtain type
S	Self-monitoring, type 4
T	Testing, type 2

(2)	Resolution
14	14 mm
30	30 mm
60	60 mm
90	90 mm

(3)	Protection field height
100	100 mm
200	110 mm
300	300 mm
...	...
2400	2400 mm

(4)	Principle
T	Transmitter
R	Receiver

(5)	Option
35	Extended detection range

Matching System Components

	SB4-OR-4XP-B-4159	Safety control unit
	SB4-OR-4XP	Safety control unit
	SB4-OR-4XP-B	SB4 series safety control unit with 1 optional module slot for functional enhancement
	SB4-OR-4XP-B-B	SB4 series safety control unit with optional module slots for functional enhancement
	SB4-OR-4XP-B-B-B	SB4 series safety control unit with optional module slots for functional enhancement
	SB4-OR-4XP-B-B-B-B	SB4 series safety control unit with optional module slots for functional enhancement
	SB4-OR-4XP-B-B-B-B-B-B	SB4 series safety control unit with optional module slots for functional enhancement

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Matching System Components

	SB4-OR-4XP-B-4158	Safety control unit
	SB4-OR-4XP-3819	Safety control unit
	SB4-OR-4XP-4M	Safety control unit
	SB4-OR-4XP-4MD	Safety control unit
	SB4-OR-4XP-4X	Safety control unit
	SB4-OR-4XP-4X-3819	Safety control unit

Accessories

	TR 14/30/50/60	Test rod for safety light curtain SLCT
	AA SLCT-01	Profile alignment aid; simplified alignment of the SLCS and SLCT safety light curtains
	OMH-SLCT-100-1200	Mounting base for floor mounting and cover plate
	OMH-SLCT-100-1500	Mounting base for floor mounting and cover plate
	OMH-SLCT-100-2100	Mounting base for floor mounting and cover plate
	OMH-SLCT-100-2500	Mounting base for floor mounting and cover plate
	OMH-SLCT-110-1200	Mounting base for floor mounting with rear panel and cover plate
	OMH-SLCT-110-1500	Mounting base for floor mounting with rear panel and cover plate
	OMH-SLCT-110-2100	Mounting base for floor mounting with rear panel and cover plate
	OMH-SLCT-120-1200	Side protection for mounting base
	OMH-SLCT-120-1500	Side protection for mounting base
	OMH-SLCT-120-2100	Side protection for mounting base
	OMH-SLCT-120-2500	Side protection for mounting base

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Accessories

	OMH-SLCT-200	Floor mount
	SLCT-M-01-1200	Inclined mirror for stable 90° deflection with cover plate
	SLCT-M-01-1500	Inclined mirror for stable 90° deflection with cover plate
	SLCT-M-01-2100	Inclined mirror for stable 90° deflection with cover plate
	OMH-SLCT-12-500	Mounting bracket, muting arm with round rod d=12 mm
	OMH-SLCT-01	Quick clamp and adjustment system
	OMH-SLCT-02	Attachment aid for OMH-SLCT-01
	OMH-SLCT-03	Mounting bracket including adjustment
	OMH-SLCT-04	Mounting bracket including adjustment (with loose bearing)
	OMH-SLCT-05	Mounting bracket including adjustment
	OMH-SLCT-06	Swivel Bracket

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