



Model Number

SLCS90 Series

Safety light curtain

with 2 separate fail-safe semiconductor outputs

Features

- Resolution 90 mm
- Protection field height up to 2400 mm
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- SIL3 (IEC 61508)
- Temperature range -30 ... 60°C (-22 ... 140 °F)
- Slim design, mounting on three sides

Description

The Safety light curtain SLCT 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 (90 mm) that can be reliably detected within the entire protected area range.

Accessories

OMH-SLCT-06

Swivel Bracket

OMH-SLCT-01

Quick clamp and adjustment system

OMH-SLCT-02

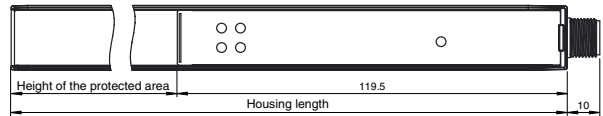
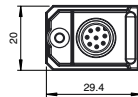
Attachment aid for OMH-SLCT-01

OMH-SLCT-03

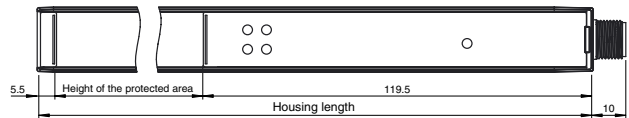
Mounting bracket including adjustment

OMH-SLCT-04

Dimensions



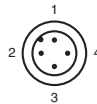
Height of the protected area ≤ 1200 mm



Height of the protected area > 1200 mm

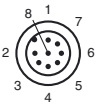
Electrical connection

Transmitter unit:



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

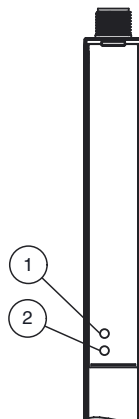
Receiver unit:



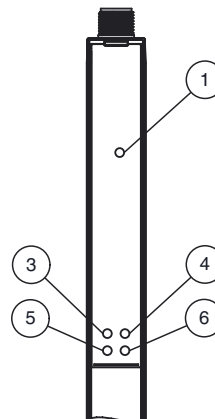
Pin	Receiver unit
1	Restart Interlock (RI)
2	24 V DC
3	Relay Monitor (RM)
4	Status / Select RI-RM
5	OSSD1
6	OSSD2
7	0 V DC
8	Mode A/B

Indicators/operating means

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

Technical data

General specifications

Effective detection range	0.4 ... 8 m
Light source	IREC
Light type	modulated infrared light , 850 nm
Tests	EN IEC 61496, IEC 61508 part 1,2,3,4, EN ISO 13849, EN 50178, EN 60870-5-1, EN 61000-6-3
Safety type according to IEC/EN 61496	4
Safety Integrity Level (SIL)	SIL3 (IEC 61508)
Performance level (PL)	PL e (EN ISO 13849-1)
Protection field height	see Table 1, max. 2400 mm
Operating mode	Startup/restart disable, deactivateable
Optical resolution	90 mm
Angle of divergence	5 °
Ambient light limit	Not sensitive to ambient light in accordance with EN 61496-2
UL File Number	E215245

Functional safety related parameters

Safety Integrity Level (SIL)	SIL 3
Performance level (PL)	PL e
Category	Cat. 4
Mission Time (T _M)	20 a
Type	4

Indicators/operating means

Operation indicator	green: Power on
Function indicator	Green: OSSD ON , Red: OSSD OFF
Status indicator	Emitter 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
No-load supply current	I ₀	Emitter unit: ≤ 150 mA Receiver: ≤ 150 mA (without outputs)
Protection class		III , IEC 61140
Power consumption	P ₀	Emitter unit: 5 W Receiver: 15 W

Input 1

Input type	Emitter unit test
Input format	Break contact
Switching voltage	24 V DC
Input current	5 mA

Input 2

Input type	Emitter 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 emitter unit, mode A/B)
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Output

Response time	see Table 1, max. 17 ms
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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

Ambient conditions

Ambient temperature	-30 ... 60 °C (-22 ... 140 °F)
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)
Relative humidity	max. 95 %, not condensing

Mechanical specifications

Housing length L	see table 2
Degree of protection	IP65 , For indoor use only
Connection	Emitter 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 , gold anodized
Optical face	Plastic pane , Transparent polycarbonate
Mass	see table 2

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

CE conformity	CE
UL approval	cULus Listed
CCC approval	CCC approval / marking not required for products rated ≤36 V
TÜV approval	TÜV

Additional information

Table 1 - Response time:

Height of the protected area [mm]	Response time [ms]
300	8
600	10
900	11
1200	12
1500	14
1800	15
2100	16
2400	17

Table 2 - Total length and weight:

Height of the protected area [mm]	Total length of transmitter/receiver unit [mm]	Weight of transmitter/receiver unit [g]
300	419	250
600	719	430
900	1019	600
1200	1319	760
1500	1625	940
1800	1925	1100
2100	2225	1270
2400	2525	1440

System accessories**Mounting aid**

OMH-SLCT-01	Press & Release quick clamp and adjustment system
OMH-SLCT-02	Attachment aid for Press & Release quick clamp and adjustment system
OMH-SLCT-03	Mounting aid with fixed bearing (long) for mounting or used to connect 2 light gids
OMH-SLCT-04	Mounting aid with loose bearing (narrow)

Other accessories

TR 14/30/50/60	Test rod for 14 mm, 30 mm, 50 mm or 60 mm resolution
AA SLCT-01	Alignment aid (box level to snapped into the lateral grooves), Angle error: < 1°

Connecting cable

V1-G-BK2M-PUR-U:	Cable, M12, 4-pin, 2 m, UL-connector
V1-G-BK5M-PUR-U:	Cable, M12, 4-pin, 5 m, UL-connector
V1-G-BK10M-PUR-U:	Cable, M12, 4-pin, 10 m, UL-connector
V19-G-BK2M-PUR-U:	Cable, M12, 8-pin, 2 m, UL-connector
V19-G-BK5M-PUR-U:	Cable, M12, 8-pin, 5 m, UL-connector
V19-G-BK10M-PUR-U:	Cable, M12, 8-pin, 10 m, UL-connector

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