

Safety light barriers

Safety light grids

Safety light grids with internal control unit

Safety light curtains

Control units

Date of edition 05/17/2006

Description



Single direction light barriers of type SL/SLA together with a control unit of series **SafeBox** or **SC** form an photoelectronic protection device of category 2 or 4 (EN 954-1) or type 2 or 4 (according to IEC/EN 61496).

The protection device can be in single or multiple beam design.

A single direction light barrier consists of a sender and a receiver.

The single direction light barriers SL/SLA, the control unit SafeBox or SC, muting sensors and other user-selectable safety devices (e.g. E-stop) combine into a modular protection system.

1 to 8 light barriers can be connected to a control unit. The light barriers can be mixed freely, but a light barrier must consist of a sender and receiver of the same type.

The supply voltage required for the light barrier is provided by the control unit. The control unit also triggers the sender and evaluates the signal transmitted by the receiver (e.g. light beam interruption).

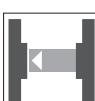
Series SL/SLA are available in different designs and ranges.

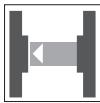
Dependent on the type of light barrier used the range can be up to 65 m.

Protection from several directions can be achieved with the use of redirection mirrors (extra).

Applications

Normally used for increased risk of injury. For example for access control of pallet systems, robots, wood processing machines, packaging machines, overhead warehouse shelves and machine lines.

Operating	Type code	Control unit	Category	Detection range	Page
	SLA5 SLA5/92	SafeBox	4	0 m ... 5 m	26
	SLA5S SLA5S/92	SafeBox	4	0 m ... 5 m	28
	SL12	SafeBox / SC2	2	0 m ... 10 m	30
	SLA12	SafeBox / SC4	4	0 m ... 10 m	32
	SL29	SafeBox / SC2	2	0 m ... 65 m	34
	SL29/116	SafeBox / SC2	2	0 m ... 65 m	36
	SLA29	SafeBox / SC4	4	0 m ... 65 m	38
	SLA29/116	SafeBox / SC4	4	0 m ... 65 m	40
	SLA40 SLA40/92	SafeBox	4	0 m ... 4 m	42



CE

**Features**

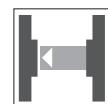
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Red transmission light
- Clearly visible LED functional display and pre-fault indicator on the receiver
- Sturdy housing
- Operation on control units of SB4 (SafeBox)

For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories.“

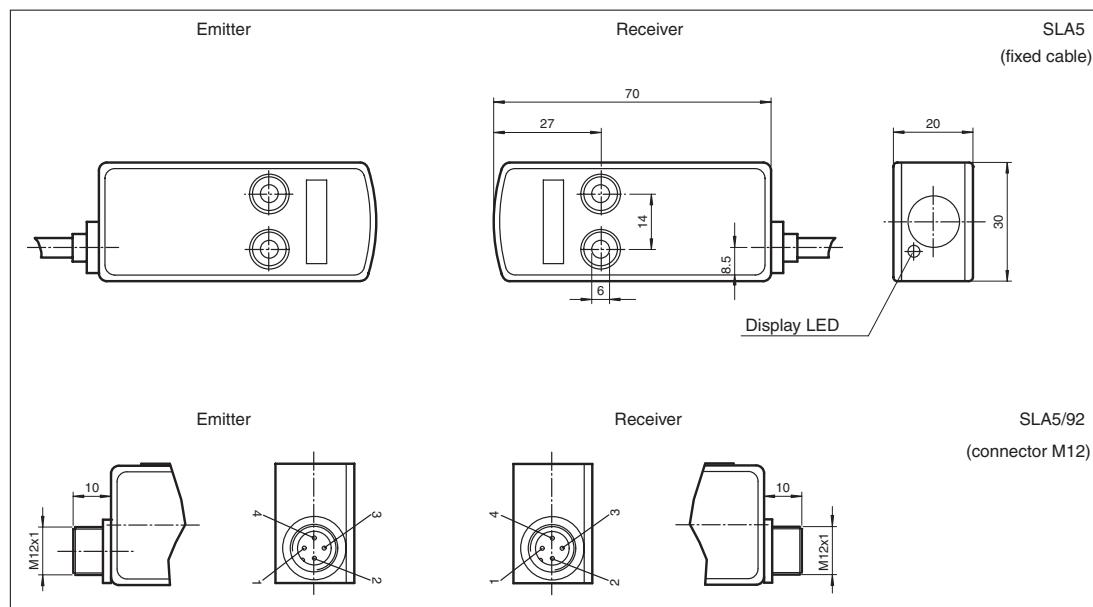
Technical data

Ordering code

		SLA5	SLA5/33 K=5m	SLA5/33 K=10m	SLA5/92
Construction type(S2)	Rectangular type	◆	◆	◆	◆
Effective detection range	0 ... 5 m	◆	◆	◆	◆
Number of protective field beams	1	◆	◆	◆	◆
Light source	LED	◆	◆	◆	◆
Approvals	TÜV	◆	◆	◆	◆
Tests	IEC/EN 61496	◆	◆	◆	◆
Marking	CE	◆	◆	◆	◆
Obstacle size	static: 10 mm dynamic: 30 mm (at v = 1.6 m/s of the obstacle)	◆	◆	◆	◆
Safety category according to IEC/EN 61496	4	◆	◆	◆	◆
Light type	red, modulated light	◆	◆	◆	◆
Angle of divergence	< 5 °	◆	◆	◆	◆
Function display	LED yellow/green in receiver: off: Interruption yellow: transmission green: reception with sufficient stability control	◆	◆	◆	◆
Pre-fault indication	LED functional display yellow	◆	◆	◆	◆
Operating voltage	Power supply via control unit	◆	◆	◆	◆
Ambient temperature	-20 ... 60 °C (253 ... 333 K)	◆	◆	◆	◆
Storage temperature	-20 ... 70 °C (253 ... 343 K)	◆	◆	◆	◆
Relative humidity	max. 95 %, not condensing	◆	◆	◆	◆
Protection degree	IP65	◆	◆	◆	◆
Connection	Fixed cable, 10 m; 0.25 mm ²				◆
	Fixed cable 2 m; 0.25 mm ²	◆			
	Fixed cable, 5 m; 0.25 mm ²		◆		
	M12 connector, 4-pin			◆	
Housing	ABS plastic, RLA 1021 (yellow) painted	◆	◆	◆	◆
Optical face	Plastic lens	◆	◆	◆	◆
Mass	Per 95 g	◆	◆	◆	◆
System components					
Emitter	SLA5-T	◆			
	SLA5-T/33 K=10m		◆		
	SLA5-T/33 K=5m			◆	
	SLA5-T/92				◆
Receiver	SLA5-R	◆			
	SLA5-R/33 K=10m		◆		
	SLA5-R/33 K=5m			◆	
	SLA5-R/92				◆



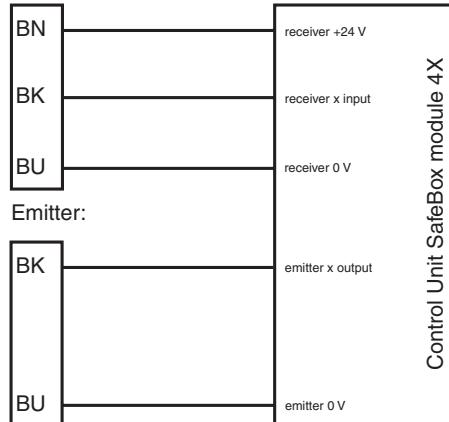
Dimensions



Electrical connection

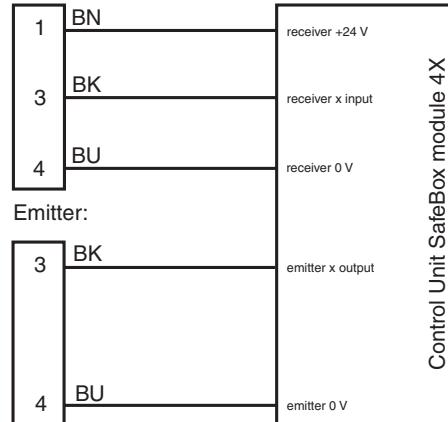
Design with fixed cable

Receiver:

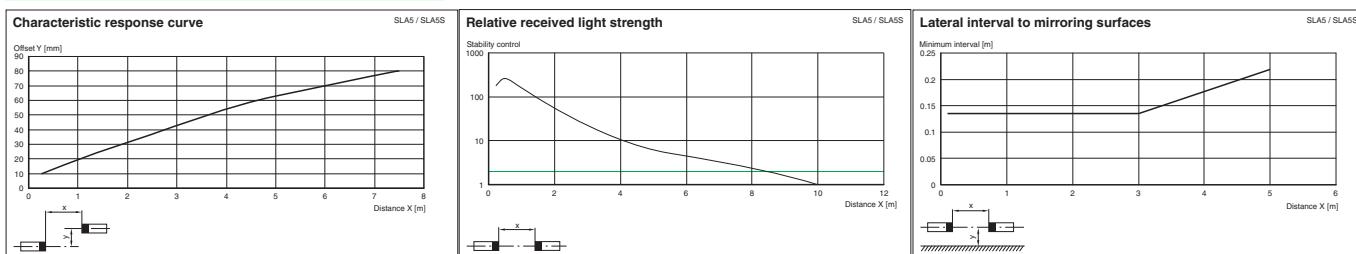


Design with connector plug

Receiver:



Diagrams



System accessories

Control units

SB4 (SafeBox)

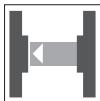
Cable sockets (only for option /92)

Further accessories

Redirection mirror

SLA-1-M

straight:	V1-G-2M-PVC
	V1-G-5M-PVC
	V1-G-10M-PVC
angled:	V1-W-2M-PVC
	V1-W-5M-PVC
	V1-W-10M-PVC



CE

**Features**

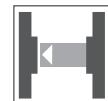
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Optical-system lateral
- Red transmission light
- Clearly visible LED functional display and pre-fault indicator on the receiver
- Sturdy housing
- Operation on control units of SB4 (SafeBox)

For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories.“

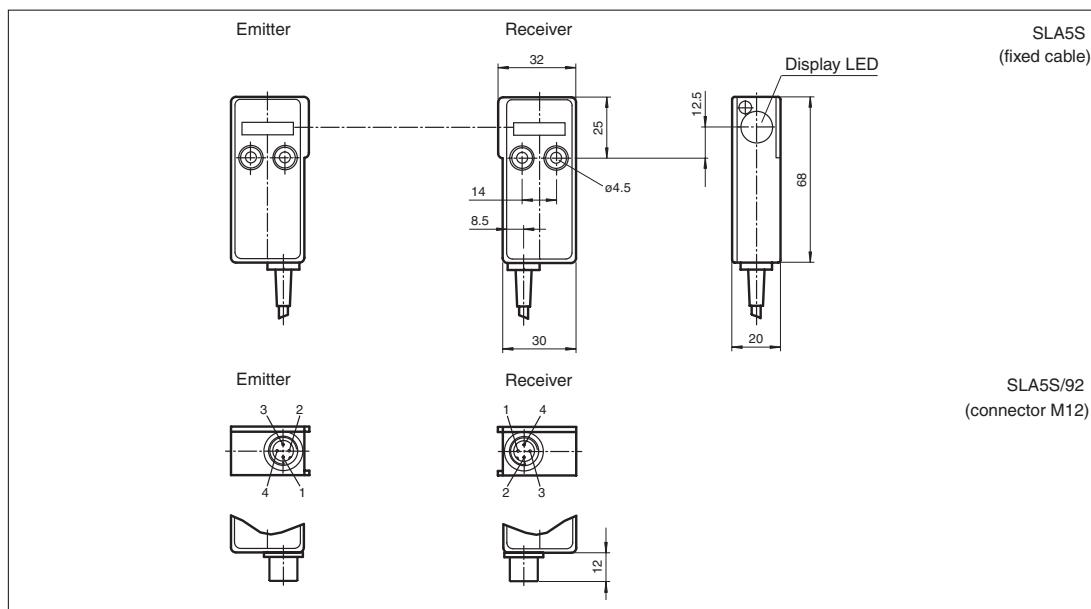
Technical data

Ordering code

		SLA5S	SLA5S/33 K=5m	SLA5S/92
Safety light grids				
Construction type(S2)	Rectangular type	◆	◆	◆
Effective detection range	0 ... 5 m	◆	◆	◆
Number of protective field beams	1	◆	◆	◆
Light source	LED	◆	◆	◆
Approvals	TÜV	◆	◆	◆
Tests	IEC/EN 61496	◆	◆	◆
Marking	CE	◆	◆	◆
Obstacle size	static: 10 mm dynamic: 30 mm (at v = 1.6 m/s of the obstacle)	◆	◆	◆
Safety category according to IEC/EN 61496	4	◆	◆	◆
Light type	red, modulated light	◆	◆	◆
Angle of divergence	< 5 °	◆	◆	◆
Function display	LED yellow/green in receiver: off: Interruption yellow: transmission green: reception with sufficient stability control	◆	◆	◆
Pre-fault indication	LED functional display yellow	◆	◆	◆
Operating voltage	Power supply via control unit	◆	◆	◆
Ambient temperature	-20 ... 60 °C (253 ... 333 K)	◆	◆	◆
Storage temperature	-20 ... 70 °C (253 ... 343 K)	◆	◆	◆
Relative humidity	max. 95 %, not condensing	◆	◆	◆
Protection degree	IP65	◆	◆	◆
Connection	Fixed cable 2 m; 0.25 mm ²	◆		
	Fixed cable, 5 m; 0.25 mm ²		◆	
	M12 connector, 4-pin			◆
Housing	ABS plastic, RLA 1021 (yellow) painted	◆	◆	◆
Optical face	Plastic lens	◆	◆	◆
Mass	Per 95 g	◆	◆	◆
Safety light curtains				
System components				
Emitter	SLA5S-T	◆		
	SLA5S-T/33 K=5m		◆	
	SLA5S-T/92			◆
Receiver	SLA5S-R	◆		
	SLA5S-R/33 K=5m		◆	
	SLA5S-R/92			◆
Control units				



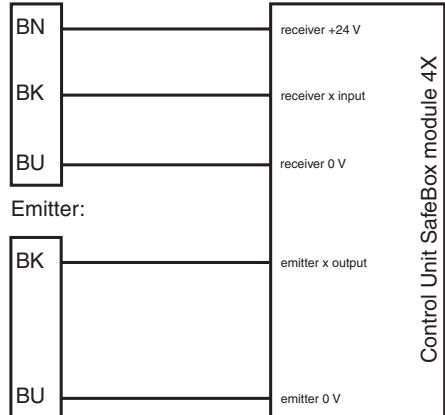
Dimensions



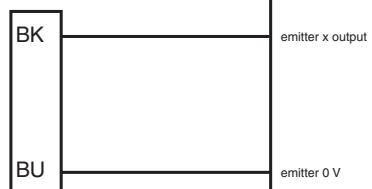
Electrical connection

Design with fixed cable

Receiver:

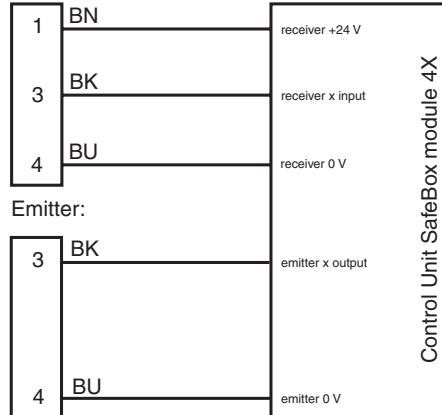


Emitter:

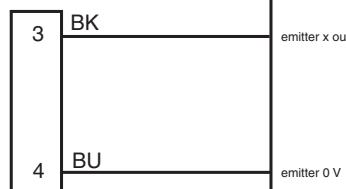


Design with connector plug

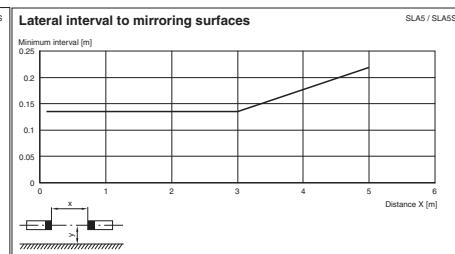
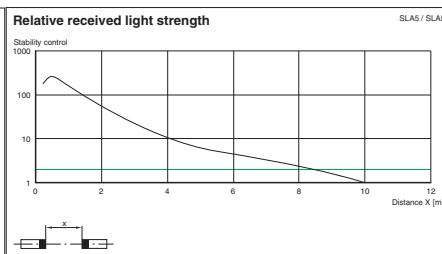
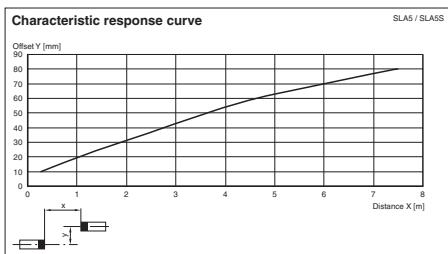
Receiver:



Emitter:



Diagrams



System accessories

Control units

SB4 (SafeBox)

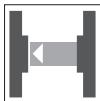
Cable sockets (only for option /92)

straight: V1-G-2M-PVC
V1-G-5M-PVC
V1-G-10M-PVC

angled: V1-W-2M-PVC
V1-W-5M-PVC
V1-W-10M-PVC

Further accessories

Redirection mirror
SLA-1-M



CE

**Features**

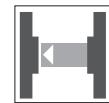
- Detection range up to 10 m
- Test input (Type 2 according to IEC/EN 61496-1)
- Red transmission light
- Integrated alignment aid
- Clearly visible LED functional display and pre-fault indicator on the receiver
- Sturdy housing
- Waterproof, protection class IP67
- Operation on control units of series SC2-2

For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories.“

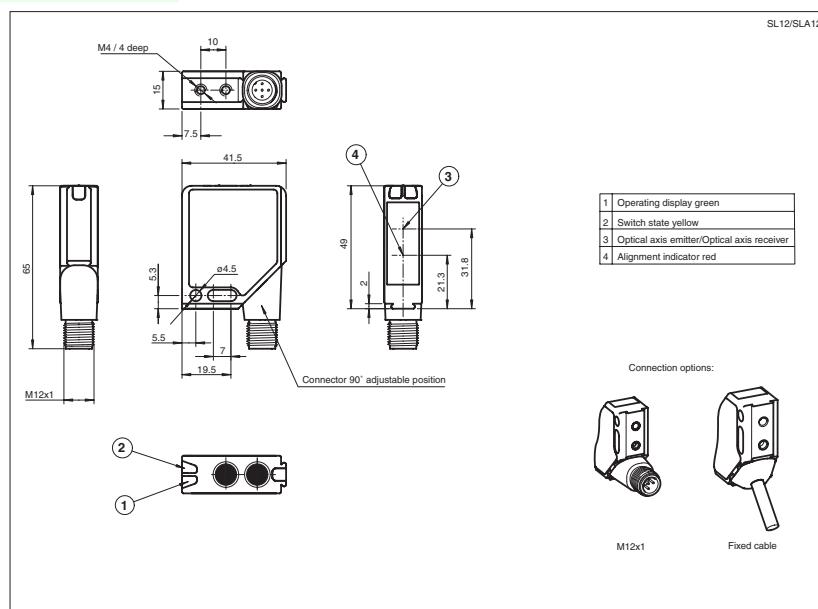
Technical data

Ordering code

	SL12/124	SL12/115
Construction type(S2)	◆	◆
Effective detection range	◆	◆
Threshold detection range	◆	◆
Light source	◆	◆
Approvals	◆	◆
Tests	◆	◆
Marking	◆	◆
Obstacle size	◆	◆
Alignment aid	◆	◆
Safety category according to IEC/EN 61496	◆	◆
Light type	◆	◆
Angle of divergence	◆	◆
Series	◆	◆
Operating display	◆	◆
Function display	◆	◆
Operating voltage	◆	◆
Ambient temperature	◆	◆
Storage temperature	◆	◆
Relative humidity	◆	◆
Protection degree	◆	◆
Connection	◆	◆
Housing	◆	◆
Optical face	◆	◆
Mass	◆	◆
System components	◆	◆
Emitter	◆	◆
Receiver	◆	◆

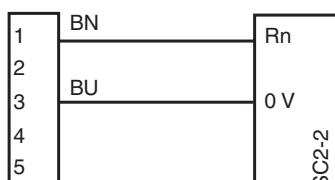


Dimensions

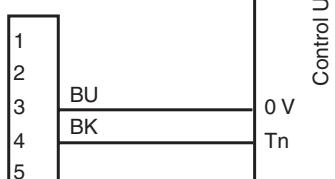


Electrical connection

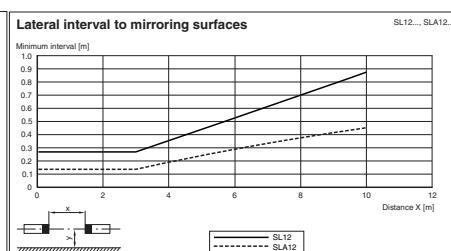
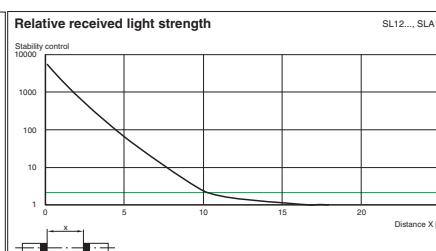
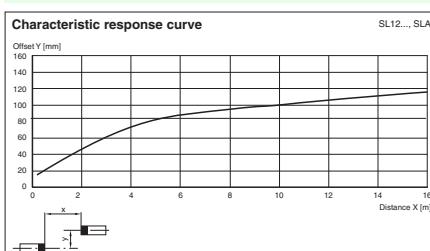
Receiver:



Emitter:



Diagrams



System accessories

Mounting aids

Control units

SC2-2

Cable sockets (not for option /115)

straight: V15-G-2M-PVC
V15-G-5M-PVC
V15-G-10M-PVC

angled: V15-W-2M-PVC
V15-W-5M-PVC
V15-W-10M-PVC

OMH-06

OMH-MLV12-HWG

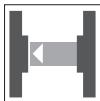
OMH-MLV12-HWK

OMH-K01

OMH-K02

Further accessories

Redirection mirror
SLA-1-M



CE

**Features**

- Detection range up to 10 m
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Red transmission light
- Integrated alignment aid
- Clearly visible LED functional display and pre-fault indicator on the receiver
- Sturdy housing
- Waterproof, protection class IP67
- Operation on control units of series SB4 (SafeBox) and SC4-2

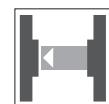
For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories.“

Technical data

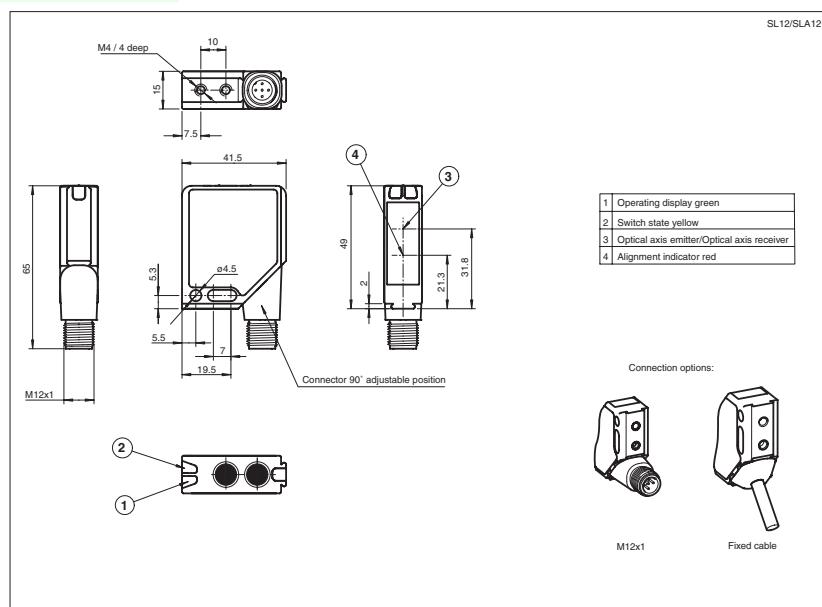
Ordering code

SLA12/124 SLA12/115

Construction type(S2)	Miniature housing	◆	◆
Focke Ident-No.			
Effective detection range	0.2 ... 10 m	◆	◆
Threshold detection range	16 m	◆	◆
Light source	LED, 660 nm	◆	◆
Approvals	TÜV	◆	◆
Tests	IEC/EN 61496	◆	◆
Marking	CE	◆	◆
Obstacle size	static: 10 mm dynamic: 30 mm (at v = 1.6 m/s of the obstacle)	◆	◆
Alignment aid	LED red	◆	◆
Safety category according to IEC/EN 61496	4	◆	◆
Light type	red, modulated light	◆	◆
Angle of divergence	< 5 °	◆	◆
Series	MLV12	◆	◆
Operating display	LED green	◆	◆
Function display	LED yellow: 1. LED lits constantly: signal > 2 x switching point (function reserve) 2. LED flashes: signal between 1 x switching point and 2 x switching point 3. LED off: signal < switching point	◆	◆
Operating voltage	Power supply via control unit	◆	◆
Ambient temperature	-20 ... 60 °C (253 ... 333 K)	◆	◆
Storage temperature	-20 ... 70 °C (253 ... 343 K)	◆	◆
Relative humidity	max. 95 %, not condensing	◆	◆
Protection degree	IP67 according to EN 60529	◆	◆
Connection	2.5 m fixed cable, 5-core, Euronorm connector, 5-pin with metal thread M12 x 1, may be rotated 90°	◆	
Housing	Frame: die-cast zinc, nickel-plated Laterals: plastic PC, glass-fiber reinforced RAL 1021 (yellow)	◆	◆
Optical face	Plastic pane	◆	◆
Mass	per device 60 g	◆	◆
System components	Ordering data	◆	◆
Emitter	SLA12-T/115	◆	
	SLA12-T/124	◆	
Receiver	SLA12-R/115	◆	
	SLA12-R/124	◆	

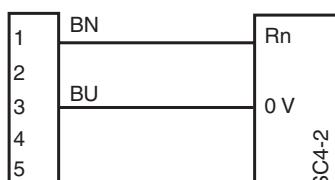


Dimensions



Electrical connection

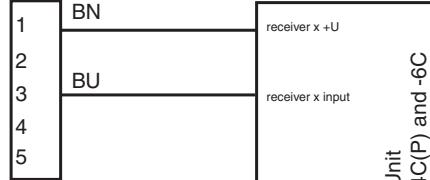
Receiver:



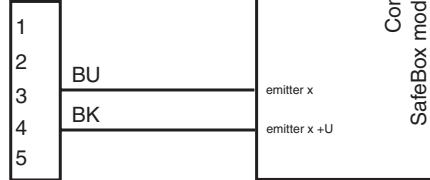
Emitter:



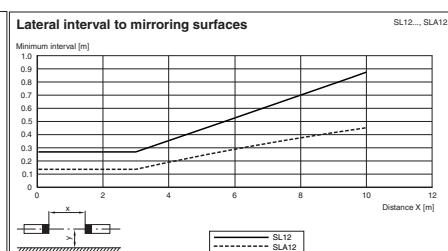
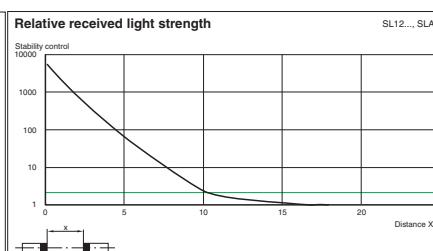
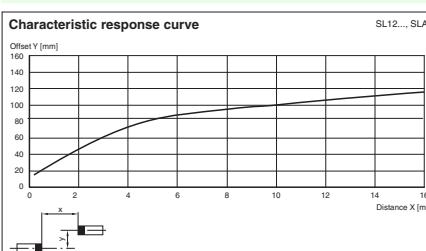
Receiver:



Emitter:



Diagrams



System accessories

Control units

SC4-2
SB4 (SafeBox)

Cable sockets (not for option /115)

straight: V15-G-2M-PVC
V15-G-5M-PVC
V15-G-10M-PVC

angled: V15-W-2M-PVC
V15-W-5M-PVC
V15-W-10M-PVC

Mounting aids

OMH-06
OMH-MLV12-HWG
OMH-MLV12-HWK
OMH-K01
OMH-K02

Further accessories

Redirection mirror
SLA-1-M



Features

- Test input (Type 2 according to IEC/EN 61496-1)
- Red transmission light
- Integrated alignment aid
- Clearly visible LED functional display and pre-fault indicator on the receiver
- Sturdy housing
- Protection degree IP67
- Operation on control units of series SC2-2
- Extended temperature range up to -35 °C with heated front panel
SL29/105/106
SL29/35/105/106 R=65M

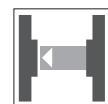
For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories.“

Technical data

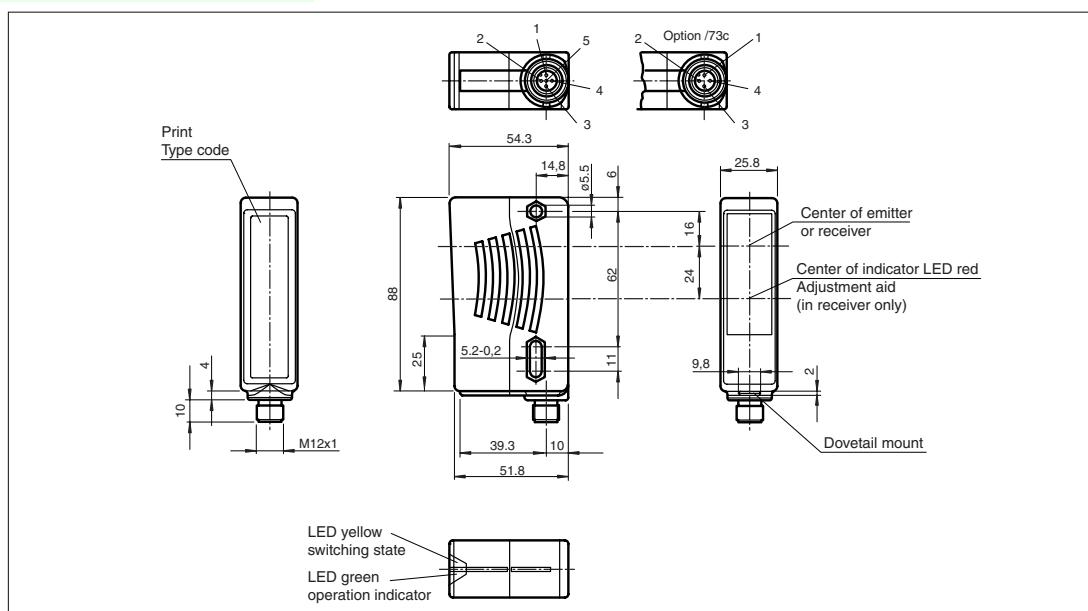
Ordering code

SL29/105/106	SL29/35/105/106 R=65M
SL29/73c	SL29/35/73c R=65M

		SL29/105/106	SL29/35/105/106 R=65M	SL29/73c	SL29/35/73c R=65M
Construction type(S2)	Rectangular type	◆	◆	◆	◆
Effective detection range	0.2 ... 30 m	◆	◆	◆	◆
	6 ... 65 m	◆	◆	◆	◆
Threshold detection range	40 m	◆	◆	◆	◆
	85 m	◆	◆	◆	◆
Light source	LED	◆	◆	◆	◆
Approvals	TÜV	◆	◆	◆	◆
Tests	IEC/EN 61496	◆	◆	◆	◆
Marking	CE	◆	◆	◆	◆
Obstacle size	static: 30 mm dynamic: 40 mm (at v = 1.6 m/s of the obstacle)	◆	◆	◆	◆
Alignment aid	LED red	◆	◆	◆	◆
Safety category according to IEC/EN 61496	2	◆	◆	◆	◆
Light type	red, modulated light	◆	◆	◆	◆
Angle of divergence	< 10 °	◆	◆	◆	◆
Series	29	◆	◆	◆	◆
Operating display	LED green	◆	◆	◆	◆
Function display	LED yellow: 1. LED lits constantly: signal > 2 x switching point (function reserve) 2. LED flashes: signal between 1 x switching point and 2 x switching point 3. LED off: signal < switching point	◆	◆	◆	◆
Operating voltage	Power supply via control unit	◆	◆	◆	◆
Ambient temperature	-20 ... 60 °C (253 ... 333 K)	◆	◆	◆	◆
	-35 ... 55 °C (238 ... 328 K) with heated optical face, fixed voltage 24 V DC ± 20 %/50 mA	◆	◆		
Storage temperature	-20 ... 70 °C (253 ... 343 K)	◆	◆	◆	◆
Relative humidity	max. 95 %, not condensing	◆	◆	◆	◆
Protection degree	IP67 according to EN 60529	◆	◆	◆	◆
Connection	M12 connector, 4-pin	◆	◆	◆	◆
	M12 connector, 5 pin	◆	◆	◆	◆
Housing	Plastic ABS, front part black, back part yellow (RAL1021)	◆	◆	◆	◆
Optical face	Plastic pane	◆	◆	◆	◆
Mass	per device 70 g	◆	◆	◆	◆
System components	Ordering data	◆	◆	◆	◆
Emitter	SL29-T/105/106	◆			
	SL29-T/35/105/106 R=65m		◆		
	SL29-T/35/73c R=65m			◆	
	SL29-T/73c				◆
Receiver	SL29-R/105/106		◆		
	SL29-R/35/105/106 R=65m			◆	
	SL29-R/35/73c R=65m				◆
	SL29-R/73c				◆



Dimensions



Electrical connection

Design with connector (Option /106)

Receiver:

1	BN	Rn
2	WH	24 V
3	BU	0 V
4	GY	0 V
5		SC2-2

Emitter:

1	WH	24 V
2	BU	0 V
3	BK	Tn
4	GY	0 V
5		SC2-2

Design with connector

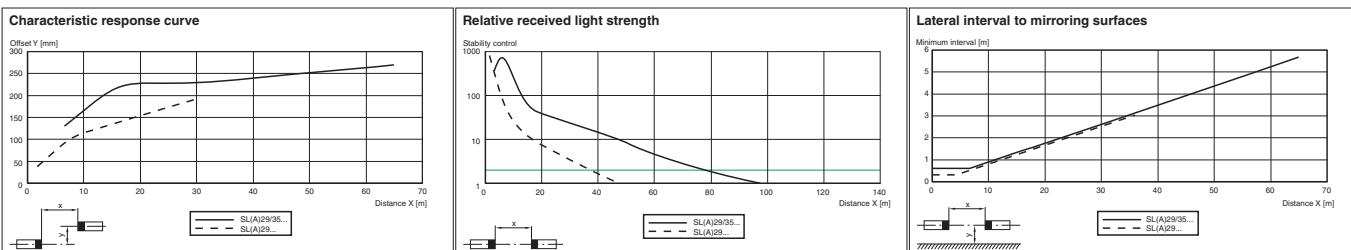
Receiver:

1	BN	Rn
2	BU	0 V
3		SC2-2
4		

Emitter:

1	BU	0 V
2		
3	BK	
4		Tn

Diagrams



System accessories

Control units

SC2-2

Cable sockets

Option /73c:

straight:	V1-G-2M-PVC
	V1-G-5M-PVC
	V1-G-10M-PVC
angled:	V1-W-2M-PVC
	V1-W-5M-PVC
	V1-W-10M-PVC

Option /105:

straight:	V15-G-2M-PVC
	V15-G-5M-PVC
	V15-G-10M-PVC
angled:	V15-W-2M-PVC
	V15-W-5M-PVC
	V15-W-10M-PVC

Option /116:

no

Mounting aids

OMH-21

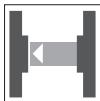
OMH-22

OMH-05

OMH-MLV11-K

Further accessories

Laser alignment aid
BA SLA28Redirection mirror
SLA-1-M



CE



Features

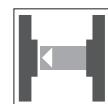
- Test input (Type 2 according to IEC/EN 61496-1)
- Red transmission light
- Integrated alignment aid
- Clearly visible LED functional display and pre-fault indicator on the receiver
- Sturdy housing
- Protection degree IP67
- Operation on control units of series SC2-2
- Extended temperature range up to -35 °C with heated front panel
SL29/106/116
SL29/35/106/116 R=65m

For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories.“

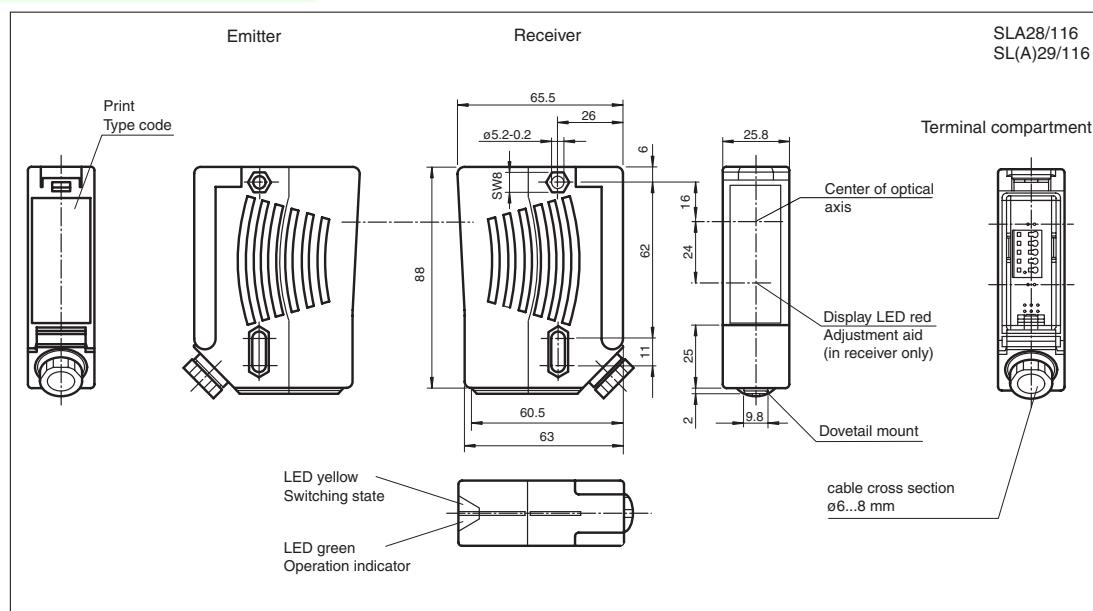
Technical data

Ordering code

		SL29/116	SL29/35/116 R=65m	SL29/106/116	SL29/35/106/116 R=65m
Safety light grids					
Construction type(S2)	Rectangular type	◆	◆	◆	◆
Effective detection range	0.2 ... 30 m	◆	◆	◆	◆
	6 ... 65 m	◆	◆	◆	◆
Threshold detection range	40 m	◆	◆	◆	◆
	85 m	◆	◆	◆	◆
Light source	LED	◆	◆	◆	◆
Approvals	TÜV	◆	◆	◆	◆
Tests	IEC/EN 61496	◆	◆	◆	◆
Marking	CE	◆	◆	◆	◆
Obstacle size	static: 30 mm dynamic: 40 mm (at v = 1.6 m/s of the obstacle)	◆	◆	◆	◆
Alignment aid	LED red	◆	◆	◆	◆
Safety category according to IEC/EN 61496	2	◆	◆	◆	◆
Light type	red, modulated light	◆	◆	◆	◆
Angle of divergence	< 10 °	◆	◆	◆	◆
Series	29	◆	◆	◆	◆
Operating display	LED green	◆	◆	◆	◆
Function display	LED yellow: 1. LED lits constantly: signal > 2 x switching point (function reserve) 2. LED flashes: signal between 1 x switching point and 2 x switching point 3. LED off: signal < switching point	◆	◆	◆	◆
Operating voltage	Power supply via control unit	◆	◆	◆	◆
Ambient temperature	-20 ... 60 °C (253 ... 333 K)	◆	◆	◆	◆
	-35 ... 55 °C (238 ... 328 K) with heated optical face, fixed voltage 24 V DC ± 20 %/50 mA	◆	◆	◆	◆
Storage temperature	-20 ... 70 °C (253 ... 343 K)	◆	◆	◆	◆
Relative humidity	max. 95 %, not condensing	◆	◆	◆	◆
Protection degree	IP67 according to EN 60529	◆	◆	◆	◆
Connection	terminal compartment	◆	◆	◆	◆
Housing	Plastic ABS, front part black, back part yellow (RAL1021)	◆	◆	◆	◆
Optical face	Plastic pane	◆	◆	◆	◆
Mass	per device 70 g	◆	◆	◆	◆
System components	Ordering data	◆	◆	◆	◆
Emitter	SL29-T/106/116			◆	
	SL29-T/116			◆	
	SL29-T/35/106/116 R=65m			◆	
	SL29-T/35/116 R=65m			◆	
Receiver	SL29-R/106/116			◆	
	SL29-R/116			◆	
	SL29-R/35/106/116 R=65m			◆	
	SL29-R/35/116 R=65m			◆	



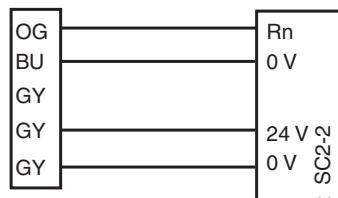
Dimensions



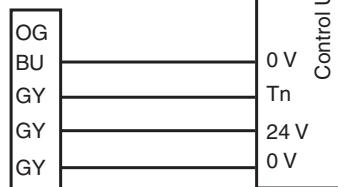
Electrical connection

Design with terminal compartment (Option /106)

Receiver:

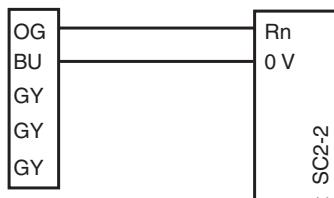


Emitter:

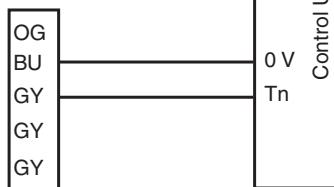


Design with terminal compartment

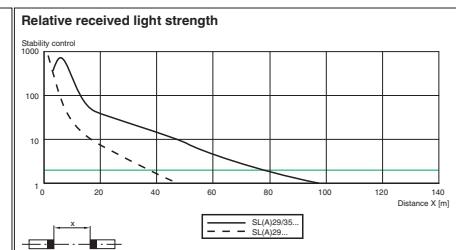
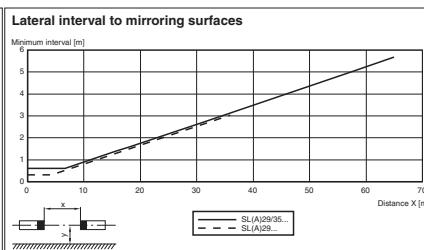
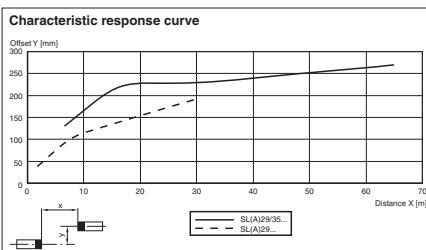
Receiver:



Emitter:



Diagrams



System accessories

Control units

SC2-2

Cable sockets

Option /73c:

straight:	V1-G-2M-PVC
	V1-G-5M-PVC
	V1-G-10M-PVC
angled:	V1-W-2M-PVC
	V1-W-5M-PVC
	V1-W-10M-PVC

Option /105:

straight:	V15-G-2M-PVC
	V15-G-5M-PVC
	V15-G-10M-PVC
angled:	V15-W-2M-PVC
	V15-W-5M-PVC
	V15-W-10M-PVC

Option /116:

no

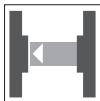
Mounting aids

- OMH-21
- OMH-22
- OMH-05
- OMH-MLV11-K

Further accessories

- Laser alignment aid BA SLA28

- Redirection mirror SLA-1-M



CE

**Features**

- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Red transmission light
- Integrated alignment aid
- Clearly visible LED functional display and pre-fault indicator on the receiver
- Sturdy housing
- Waterproof, protection class IP67
- Operation on control units of series SB4 (SafeBox) and SC4-2
- Extended temperature range up to -35 °C with heated front panel
SLA29/105/106
SLA29/35/105/106 R=65m

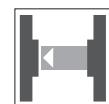
For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories.“

Technical data

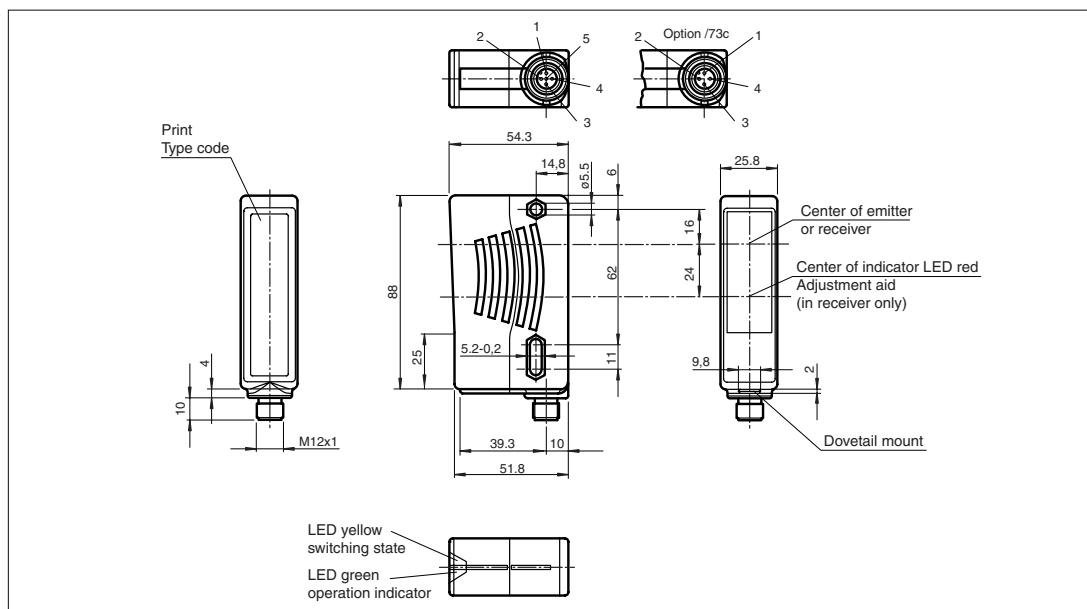
Ordering code

SLA29/105/106	SLA29/35/105/106 R=65m
SLA29/73c	SLA29/35/73c R=65m

Construction type(S2)	Rectangular type	◆	◆	◆	◆
Effective detection range	0.2 ... 30 m	◆	◆	◆	◆
	6 ... 65 m	◆	◆	◆	◆
Threshold detection range	40 m	◆	◆	◆	◆
	85 m	◆	◆	◆	◆
Light source	LED	◆	◆	◆	◆
Approvals	TÜV	◆	◆	◆	◆
Tests	IEC/EN 61496	◆	◆	◆	◆
Marking	CE	◆	◆	◆	◆
Obstacle size	static: 30 mm dynamic: 40 mm (at v = 1.6 m/s of the obstacle)	◆	◆	◆	◆
Alignment aid	LED red in receiver	◆	◆	◆	◆
Safety category according to IEC/EN 61496	4	◆	◆	◆	◆
Light type	red, modulated light	◆	◆	◆	◆
Angle of divergence	< 5 °	◆	◆	◆	◆
Series	29	◆	◆	◆	◆
Operating display	LED green	◆	◆	◆	◆
Function display	LED yellow: 1. LED lits constantly: signal > 2 x switching point (function reserve) 2. LED flashes: signal between 1 x switching point and 2 x switching point 3. LED off: signal < switching point	◆	◆	◆	◆
Operating voltage	Power supply via control unit	◆	◆	◆	◆
Ambient temperature	-20 ... 60 °C (253 ... 333 K)	◆	◆	◆	◆
	-35 ... 55 °C (238 ... 328 K) with heated optical face, fixed voltage 24 V DC ± 20 %/50 mA	◆	◆	◆	◆
Storage temperature	-20 ... 70 °C (253 ... 343 K)	◆	◆	◆	◆
Relative humidity	max. 95 %, not condensing	◆	◆	◆	◆
Protection degree	IP67 according to EN 60529	◆	◆	◆	◆
Connection	M12 connector, 4-pin	◆	◆	◆	◆
	M12 connector, 5 pin	◆	◆	◆	◆
Housing	ABS plastic, RLA 1021 (yellow) painted	◆	◆	◆	◆
Optical face	Plastic pane	◆	◆	◆	◆
Mass	per device 70 g	◆	◆	◆	◆
System components	Ordering data	◆	◆	◆	◆
Emitter	SLA29-T/105/106	◆			
	SLA29-T/35/105/106 R=65m		◆		
	SLA29-T/35/73c R=65m			◆	
	SLA29-T/73c				◆
Receiver	SLA29-R/105/106		◆		
	SLA29-R/35/105/106 R=65m			◆	
	SLA29-R/35/73c R=65m				◆
	SLA29-R/73c				◆



Dimensions



Electrical connection

Design with connector (Option /106)

Receiver:

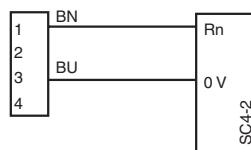


Emitter:

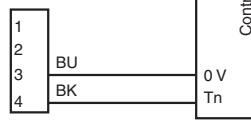


Design with connector

Receiver:

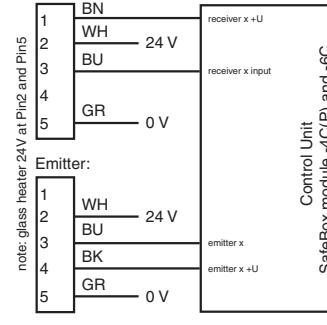


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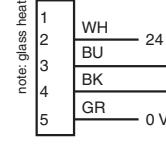


Design with connector (Option /106)

Receiver:

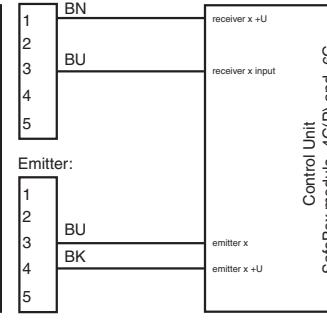


Emitter:

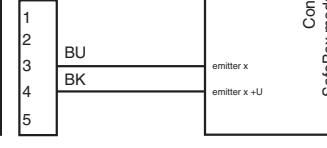


Design with connector

Receiver:

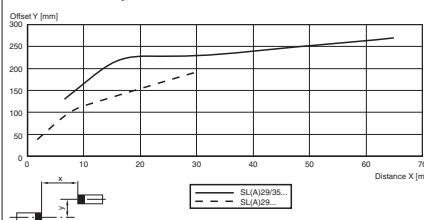


Emitter:

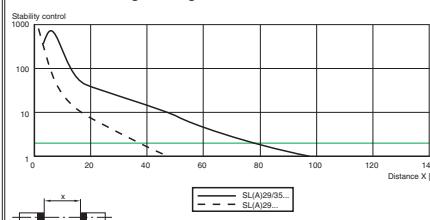


Diagrams

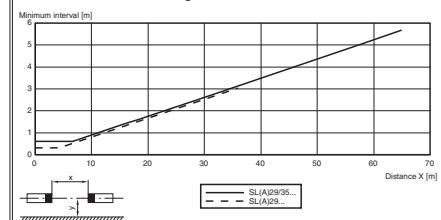
Characteristic response curve



Relative received light strength



Lateral interval to mirroring surfaces



System accessories

Control units

SC4-2
SB4 (SafeBox)

Cable sockets

Option /73c:

straight:	V1-G-2M-PVC V1-G-5M-PVC V1-G-10M-PVC
angled:	V1-W-2M-PVC V1-W-5M-PVC V1-W-10M-PVC

Option /105:

straight:	V15-G-2M-PVC V15-G-5M-PVC V15-G-10M-PVC
angled:	V15-W-2M-PVC V15-W-5M-PVC V15-W-10M-PVC

Option /116:

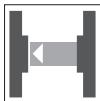
no

Mounting aids

OMH-21
OMH-22
OMH-05
OMH-MLV11-K

Further accessories

Laser alignment aid BA SLA28
Muting Set MS SLP/SLA28
Redirection mirror SLA-1-M



CE

**Features**

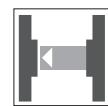
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Red transmission light
- Integrated alignment aid
- Clearly visible LED functional display and pre-fault indicator on the receiver
- Sturdy housing
- Waterproof, protection class IP67
- Operation on control units of series SB4 (SafeBox) and SC4-2
- Extended temperature range up to -35 °C with heated front panel
SLA29/106/116

For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories.“

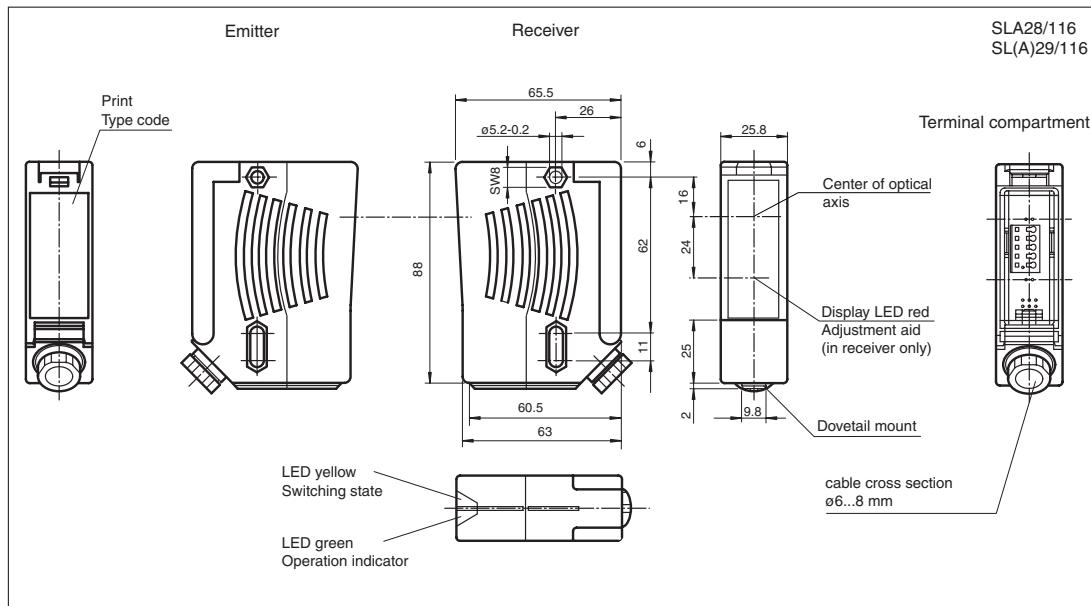
Technical data

Ordering code

	SLA29/116	SLA29/35/116 R=65m	SLA29/106/116
Construction type(S2)	Rectangular type		
Effective detection range	0.2 ... 30 m	◆	◆
	6 ... 65 m	◆	◆
Threshold detection range	40 m	◆	◆
	85 m	◆	◆
Light source	LED	◆	◆
Approvals	TÜV	◆	◆
Tests	IEC/EN 61496	◆	◆
Marking	CE	◆	◆
Obstacle size	static: 30 mm dynamic: 40 mm (at v = 1.6 m/s of the obstacle)	◆	◆
Alignment aid	LED red in receiver	◆	◆
Safety category according to IEC/EN 61496	4	◆	◆
Light type	red, modulated light	◆	◆
Angle of divergence	< 5 °	◆	◆
Series	29	◆	◆
Operating display	LED green	◆	◆
Function display	LED yellow: 1. LED lits constantly: signal > 2 x switching point (function reserve) 2. LED flashes: signal between 1 x switching point and 2 x switching point 3. LED off: signal < switching point	◆	◆
Operating voltage	Power supply via control unit	◆	◆
Ambient temperature	-20 ... 60 °C (253 ... 333 K)	◆	◆
	-35 ... 55 °C (238 ... 328 K) with heated optical face, fixed voltage 24 V DC ± 20 %/50 mA	◆	◆
Storage temperature	-20 ... 70 °C (253 ... 343 K)	◆	◆
Relative humidity	max. 95 %, not condensing	◆	◆
Protection degree	IP67 according to EN 60529	◆	◆
Connection	terminal compartment	◆	◆
Housing	ABS plastic, RLA 1021 (yellow) painted	◆	◆
Optical face	Plastic pane	◆	◆
Mass	per device 70 g	◆	◆
System components	Ordering data	◆	◆
Emitter	SLA29-T/106/116	◆	
	SLA29-T/116		◆
	SLA29-T/35/116 R=65m	◆	
Receiver	SLA29-R/106/116		◆
	SLA29-R/116	◆	
	SLA29-R/35/116 R=65m		◆



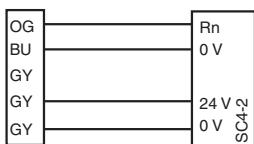
Dimensions



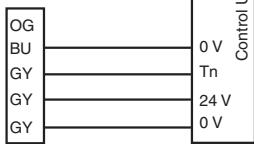
Electrical connection

Design with terminal compartment (Option /106)

Receiver:

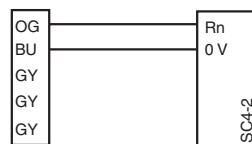


Emitter:

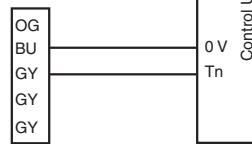


Design with terminal compartment

Receiver:

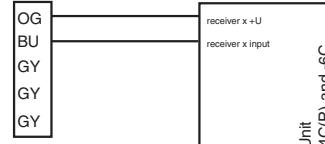


Emitter:

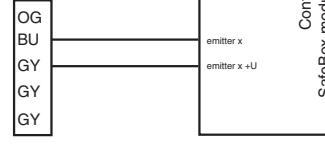


Design with terminal compartment

Receiver:

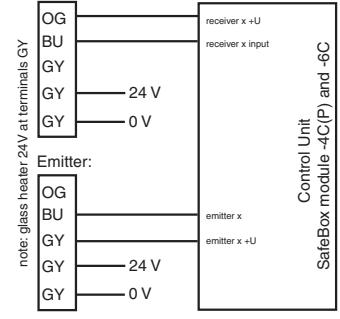


Emitter:



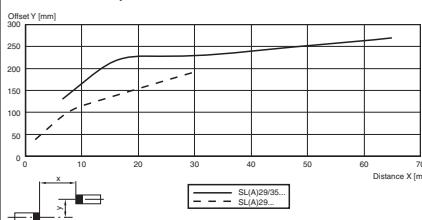
Design with terminal compartment (Option /106)

Receiver:

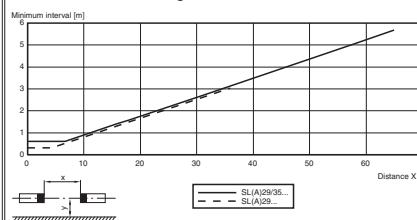


Diagrams

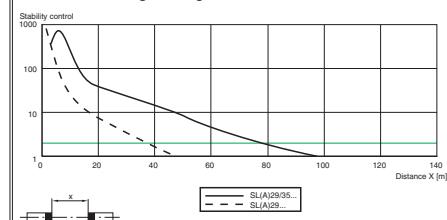
Characteristic response curve



Lateral interval to mirroring surfaces



Relative received light strength



System accessories

Control units

SC4-2
SB4 (SafeBox)

Cable sockets

Option /73c:

straight:	V1-G-2M-PVC V1-G-5M-PVC V1-G-10M-PVC
angled:	V1-W-2M-PVC V1-W-5M-PVC V1-W-10M-PVC

Option /105:

straight:	V15-G-2M-PVC V15-G-5M-PVC V15-G-10M-PVC
angled:	V15-W-2M-PVC V15-W-5M-PVC V15-W-10M-PVC

Option /116:

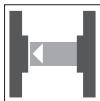
no

Mounting aids

OMH-21
OMH-22
OMH-05
OMH-MLV11-K

Further accessories

Laser alignment aid BA SLA28
Muting Set MS SLP/SLA28
Redirection mirror SLA-1-M



SLA40...

Safety through beam sensor

CE



Features

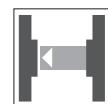
- Detection range up to 4 m
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Red transmission light
- Clearly visible LED functional display and pre-fault indicator on the receiver
- Metal housing
- Connection via M12 connector or fixed cable
- Operation on control units of SB4 (SafeBox)
- Protection type IP67 optional

For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories.“

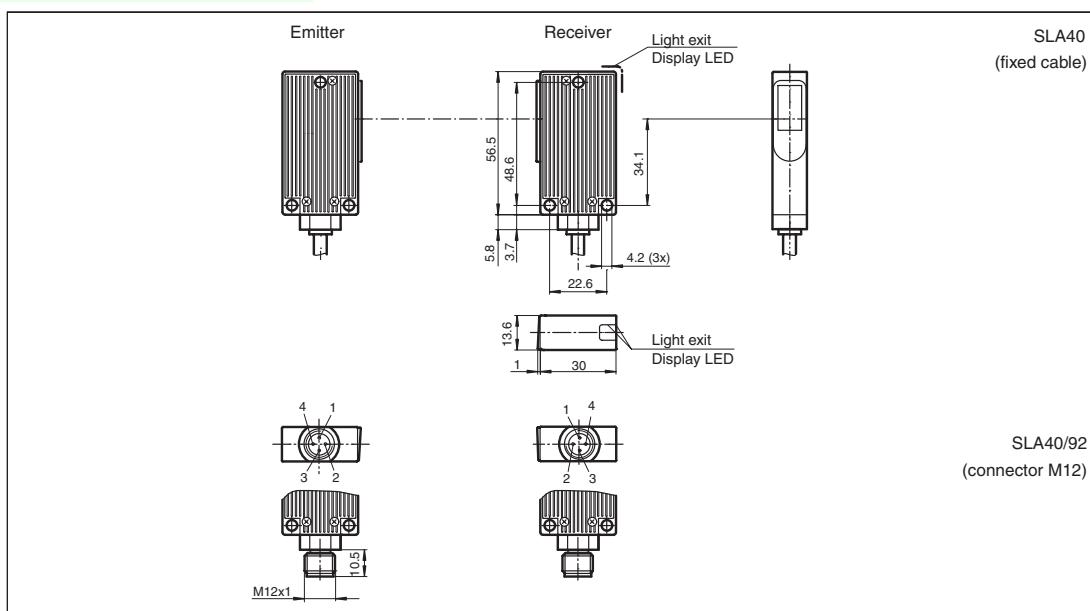
Technical data

Ordering code

	SLA40	SLA40-2442/33 K=2m	SLA40/33 K=5m	SLA40/33 K=10m	SLA40-2442	SLA40/92
Construction type(S2)	◆	◆	◆	◆	◆	◆
Effective detection range	◆	◆	◆	◆	◆	◆
Light source	◆	◆	◆	◆	◆	◆
Approvals	◆	◆	◆	◆	◆	◆
Tests	◆	◆	◆	◆	◆	◆
Marking	◆	◆	◆	◆	◆	◆
Obstacle size	◆	◆	◆	◆	◆	◆
Safety category according to IEC/EN 61496	◆	◆	◆	◆	◆	◆
Light type	◆	◆	◆	◆	◆	◆
Angle of divergence	◆	◆	◆	◆	◆	◆
Series	◆	◆	◆	◆	◆	◆
Function display	◆	◆	◆	◆	◆	◆
Pre-fault indication	◆	◆	◆	◆	◆	◆
Operating voltage	◆	◆	◆	◆	◆	◆
Ambient temperature	◆	◆	◆	◆	◆	◆
Storage temperature	◆	◆	◆	◆	◆	◆
Relative humidity	◆	◆	◆	◆	◆	◆
Protection degree	◆	◆	◆	◆	◆	◆
Connection	◆	◆	◆	◆	◆	◆
Material	◆	◆	◆	◆	◆	◆
Housing	◆	◆	◆	◆	◆	◆
Optical face	◆	◆	◆	◆	◆	◆
Mass	◆	◆	◆	◆	◆	◆
System components	◆	◆	◆	◆	◆	◆
Emitter	◆	◆	◆	◆	◆	◆
SLA40-T						
SLA40-T-2442						
SLA40-T-2442 K=2m						
SLA40-T/33 K=10m						
SLA40-T/33 K=5m						
SLA40-T/92						
Receiver	◆	◆	◆	◆	◆	◆
SLA40-R						
SLA40-R-2442						
SLA40-R-2442 K=2m						
SLA40-R/33 K=10m						
SLA40-R/33 K=5m						
SLA40-R/92						



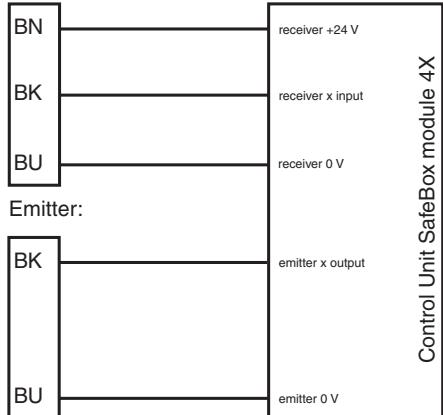
Dimensions



Electrical connection

Design with fixed cable

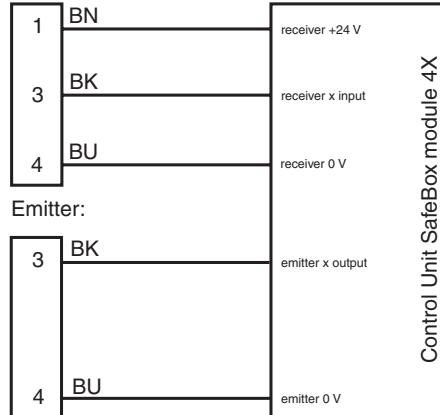
Receiver:



Emitter:

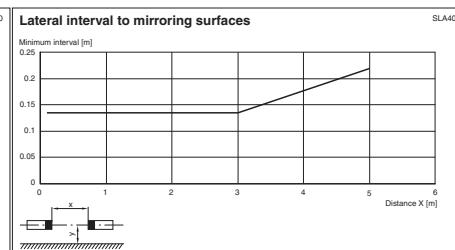
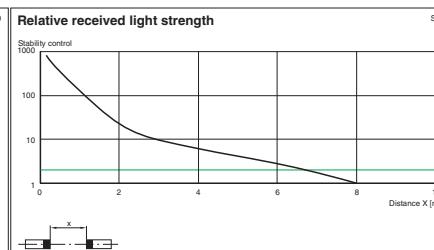
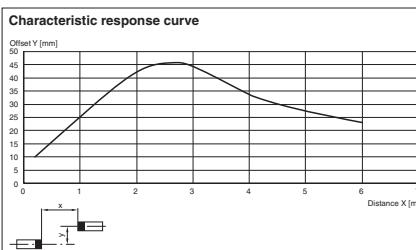
Design with connector plug

Receiver:



Emitter:

Diagrams



System accessories

Control units

SB4 (SafeBox)

Cable sockets (only option /92)

straight:	V1-G-2M-PVC
	V1-G-5M-PVC
	V1-G-10M-PVC
angled:	V1-W-2M-PVC
	V1-W-5M-PVC
	V1-W-10M-PVC

Mounting aids

OMH-40

Further accessories

Redirection mirror
SLA-1-M