





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

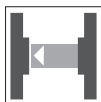
Safety light barriers

Safety light grids

Safety light grids with internal control unit

Safety light curtains

Control units



SLA5

Safety through beam sensor



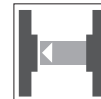
Features

- 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)

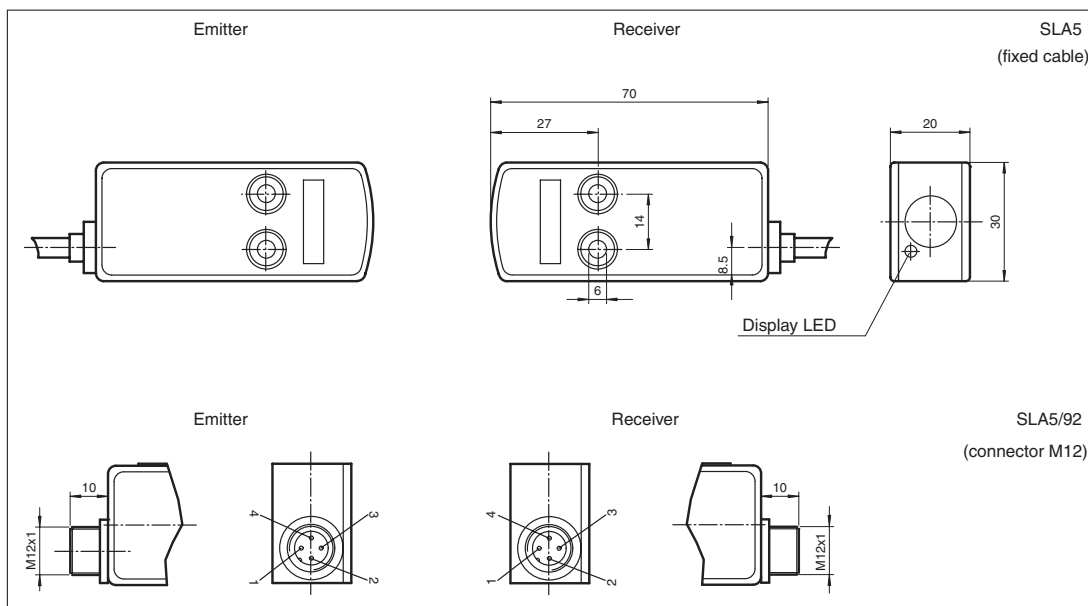
For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories“.

Technical data

		Ordering code				
			SLA5	SLA5/33 K=5m	SLA5/33 K=10m	SLA5/92
Safety light grids	Construction type(S2)	Rectangular type	◆	◆	◆	◆
	Effective detection range	0 ... 5 m	◆	◆	◆	◆
	Number of protective field beams	1	◆	◆	◆	◆
	Light source	LED	◆	◆	◆	◆
Safety light grids with internal control unit	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	◆	◆	◆	◆
Safety light curtains	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	◆	◆	◆	◆
Control units	System components	Emitter				
		SLA5-T	◆			
		SLA5-T/33 K=10m			◆	
		SLA5-T/33 K=5m		◆		
	Receiver	SLA5-T/92				◆
		SLA5-R	◆			
		SLA5-R/33 K=10m			◆	
		SLA5-R/33 K=5m		◆		
		SLA5-R/92				◆



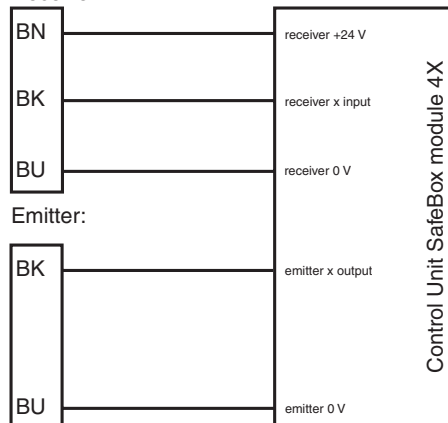
Dimensions



Electrical connection

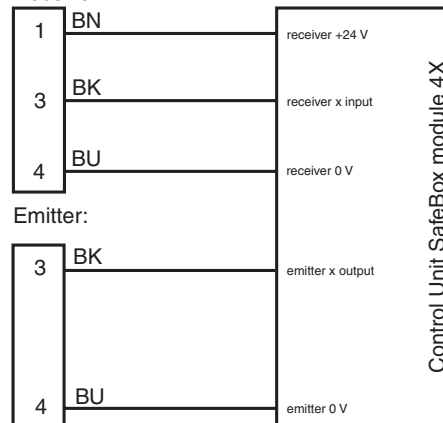
Design with fixed cable

Receiver:

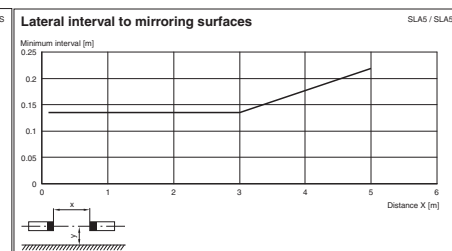
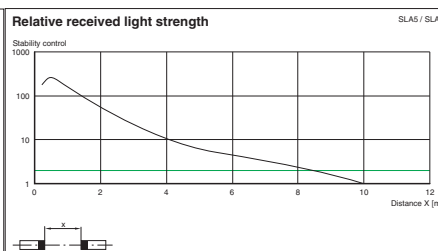
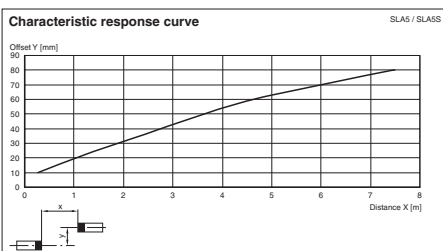


Design with connector plug

Receiver:



Diagrams



System accessories

Control units

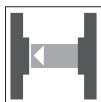
SB4 (SafeBox)

Cable sockets (only for option /92)

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



SLA5S

Safety through beam sensor



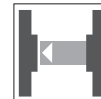
Features

- 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)

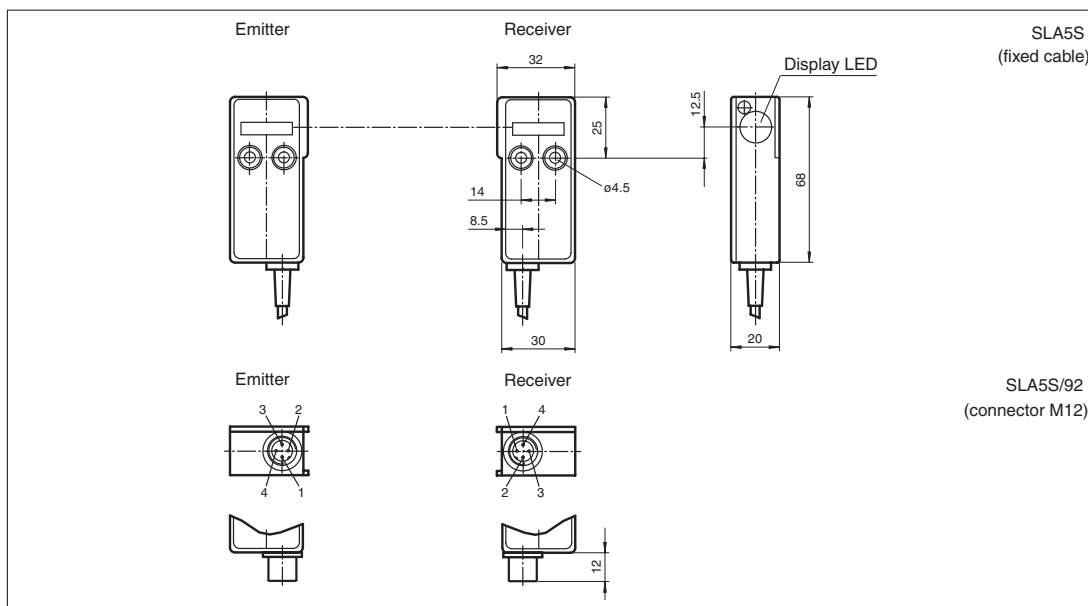
For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories“.

Technical data

	Ordering code			
		SLA5S	SLA5S/33 K=5m	SLA5S/92
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	◆	◆	◆
System components				
Emitter	SLA5S-T	◆		
	SLA5S-T/33 K=5m		◆	
	SLA5S-T/92			◆
Receiver	SLA5S-R	◆		
	SLA5S-R/33 K=5m		◆	
	SLA5S-R/92			◆



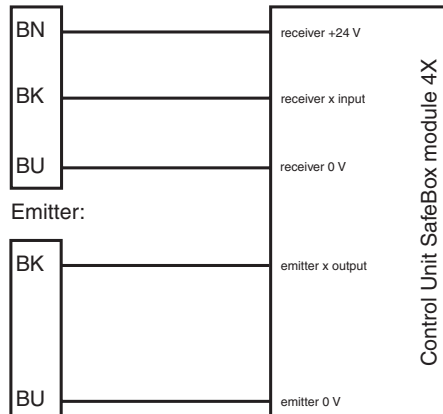
Dimensions



Electrical connection

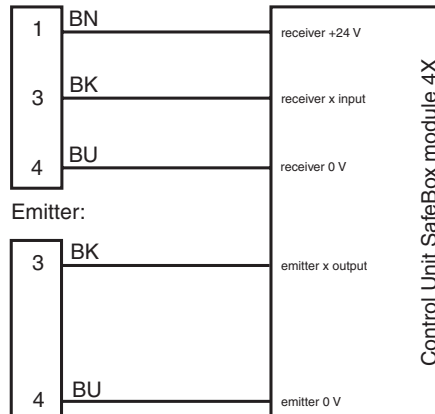
Design with fixed cable

Receiver:

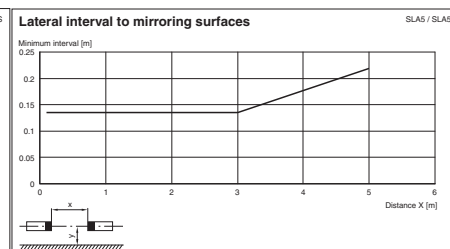
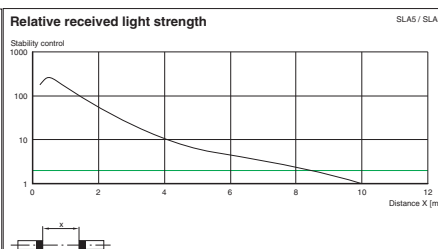
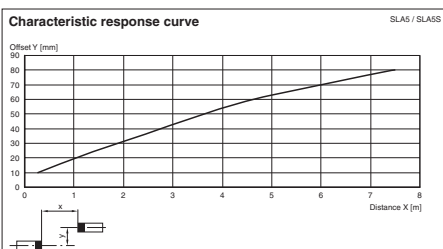


Design with connector plug

Receiver:



Diagrams



System accessories

Control units

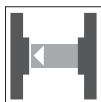
SB4 (SafeBox)

Cable sockets (only for option /92)

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



SL12/...

Safety through beam sensor



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

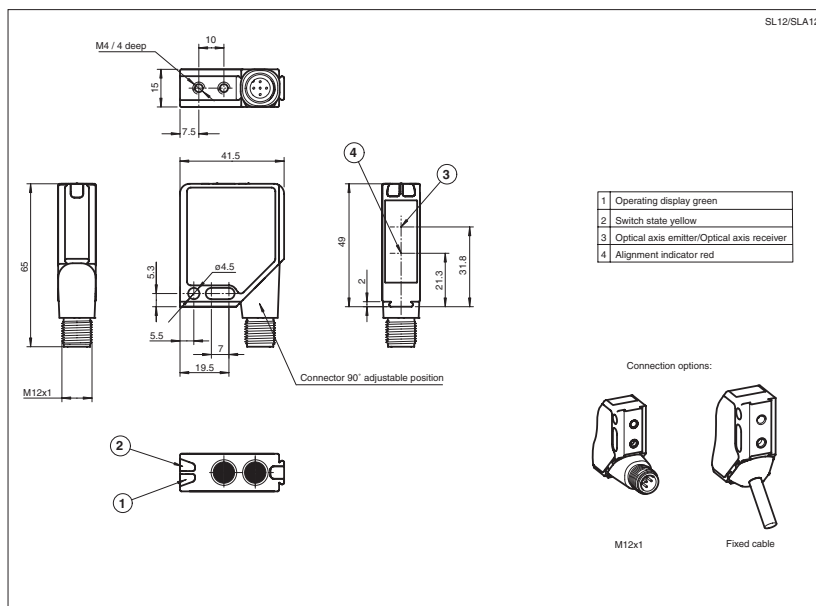
For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories“.

Technical data

		Ordering code	SL12/124	SL12/115
Safety through beam sensors	Construction type(S2)	Miniature housing	◆	◆
	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	2	◆	◆
Safety light grids	Light type	red, modulated light	◆	◆
	Angle of divergence	< 10 °	◆	◆
	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	◆	◆
Safety light grids with internal control unit	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	◆	◆
	Optical face	Plastic pane	◆	◆
	Mass	per device 60 g	◆	◆
	System components	Ordering data	◆	◆
	Emitter	SL12-T/115 SL12-T/124	◆	◆
	Receiver	SL12-R/115 SL12-R/124	◆	◆
			◆	
Safety light curtains				
Control units				

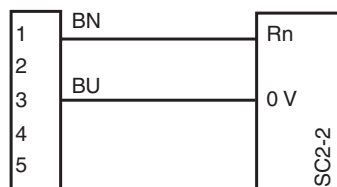


Dimensions

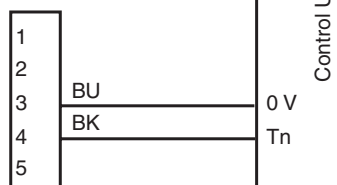


Electrical connection

Receiver:

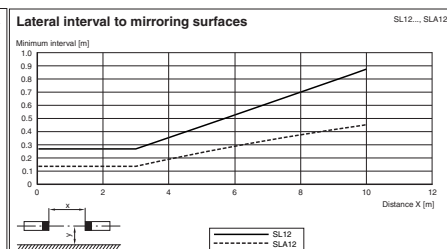
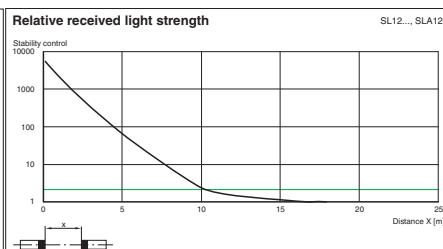
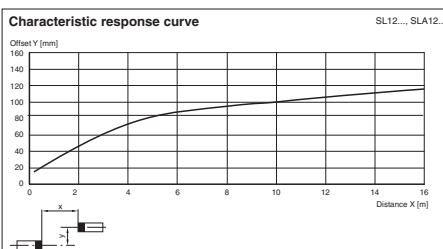


Emitter:



Control Unit SC2-2

Diagrams



System accessories

Control units

SC2-2

Cable sockets (not for option /115)

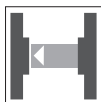
straight: V15-G-2M-PVC
V15-G-5M-PVC
V15-G-10M-PVC
angled: V15-W-2M-PVC
V15-W-5M-PVC
V15-W-10M-PVC

Mounting aids

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

Further accessories

Redirection mirror
SLA-1-M



SLA12/...

Safety through beam sensor



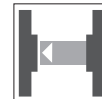
Features

- 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

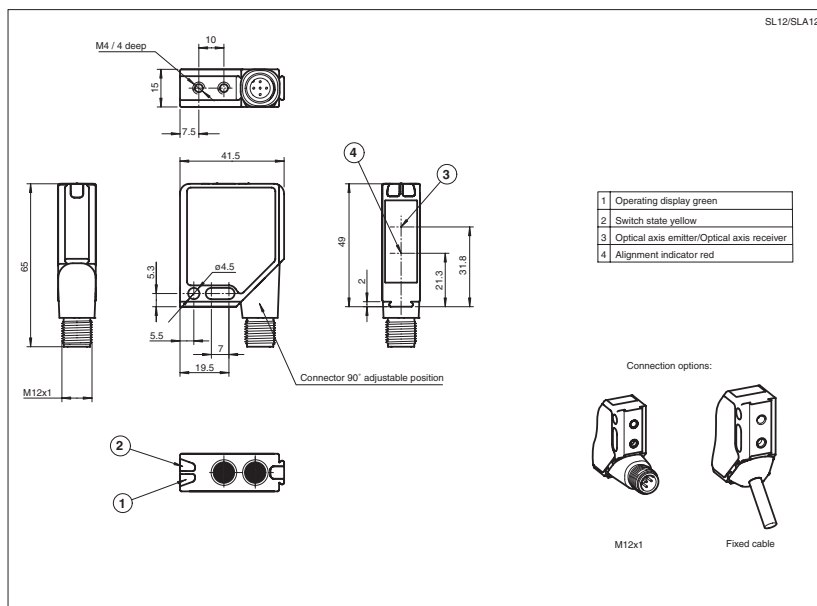
For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories“.

Technical data

		Ordering code	SLA12/124	SLA12/115
Safety light grids	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 light grids with internal control unit	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	◆	◆
Safety light curtains	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	◆	
Control units				

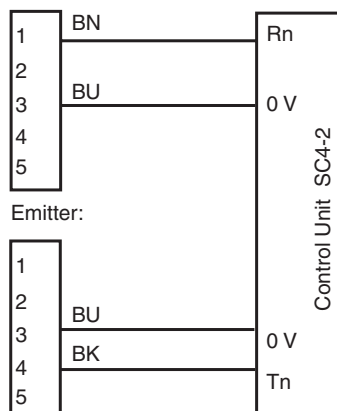


Dimensions

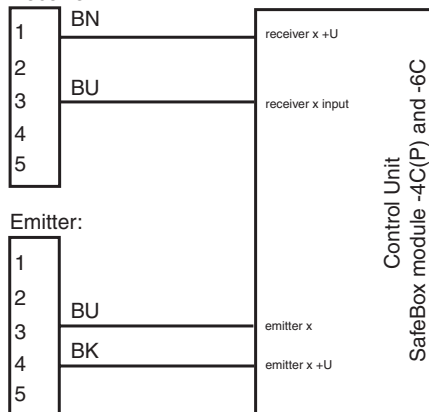


Electrical connection

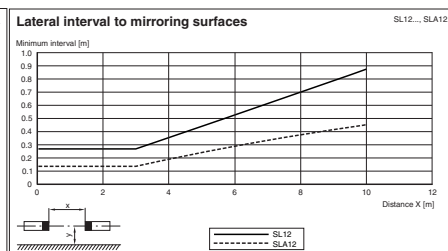
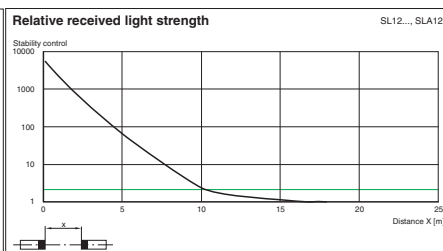
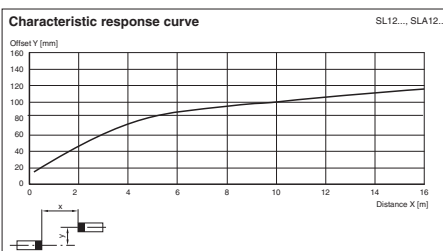
Receiver:



Receiver:



Diagrams



System accessories

Control units

SC4-2
SB4 (SafeBox)

Cable sockets (not for option /115)

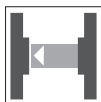
straight: V15-G-2M-PVC
V15-G-5M-PVC
V15-G-10M-PVC
angled: V15-W-2M-PVC
V15-W-5M-PVC
V15-W-10M-PVC

Mounting aids

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

Further accessories

Redirection mirror
SLA-1-M



SL29/...

Safety through beam sensor



Features

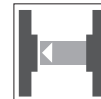
- Test input (Type 2 according to IEC/EN 61496-1)
 - Red transmission light
 - Integrated alignment aid
 - Clearly visible LED functional display and pre-fault indicator on the receiver
 - Sturdy housing
 - Protection degree IP67
 - Operation on control units of series SC2-2
 - Extended temperature range 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“.

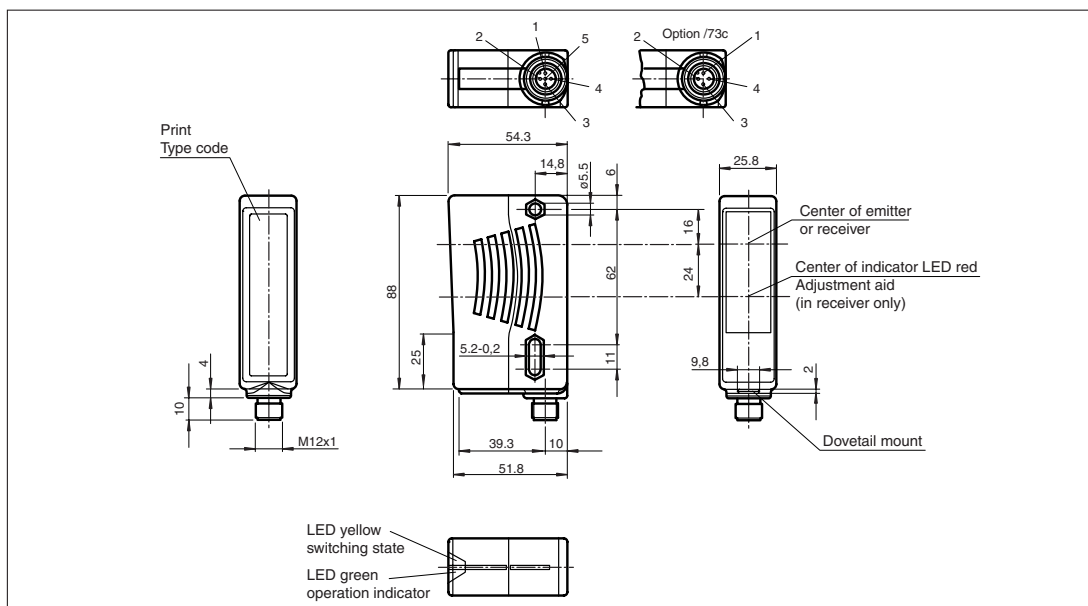
Technical data

		Ordering code	SL29/105/106	SL29/35/105/106 R=65M	SL29/73c	SL29/35/73c R=65M
Safety light grids	Construction type(S2)	Rectangular type	◆	◆	◆	◆
	Effective detection range	0.2 ... 30 m	◆	◆	◆	◆
		6 ... 65 m		◆		◆
	Threshold detection range	40 m	◆		◆	
Safety light grids with internal control unit		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 °	◆	◆	◆	◆
Safety light curtains	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)	◆	◆	◆	◆
Control units	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			◆	

Date of edition 05/17/2006



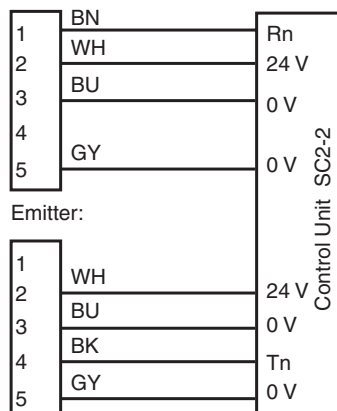
Dimensions



Electrical connection

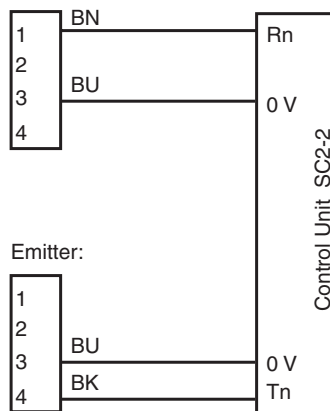
Design with connector (Option /106)

Receiver:

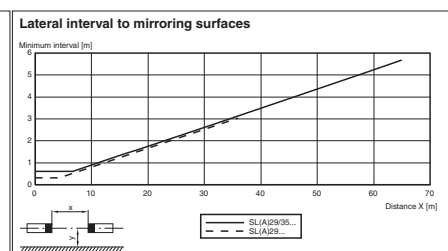
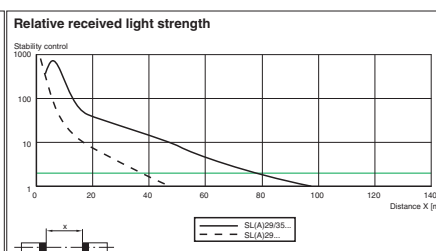
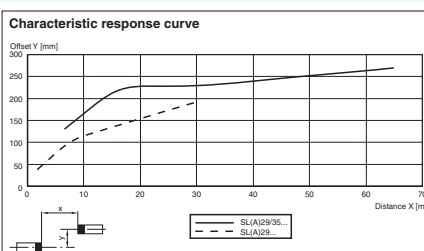


Design with connector

Receiver:



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

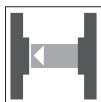
Option /116: no

Mounting aids

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

Further accessories

Laser alignment aid
BA SLA28
Redirection mirror
SLA-1-M



SL29/.../116...

Safety through beam sensor



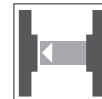
Features

- 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

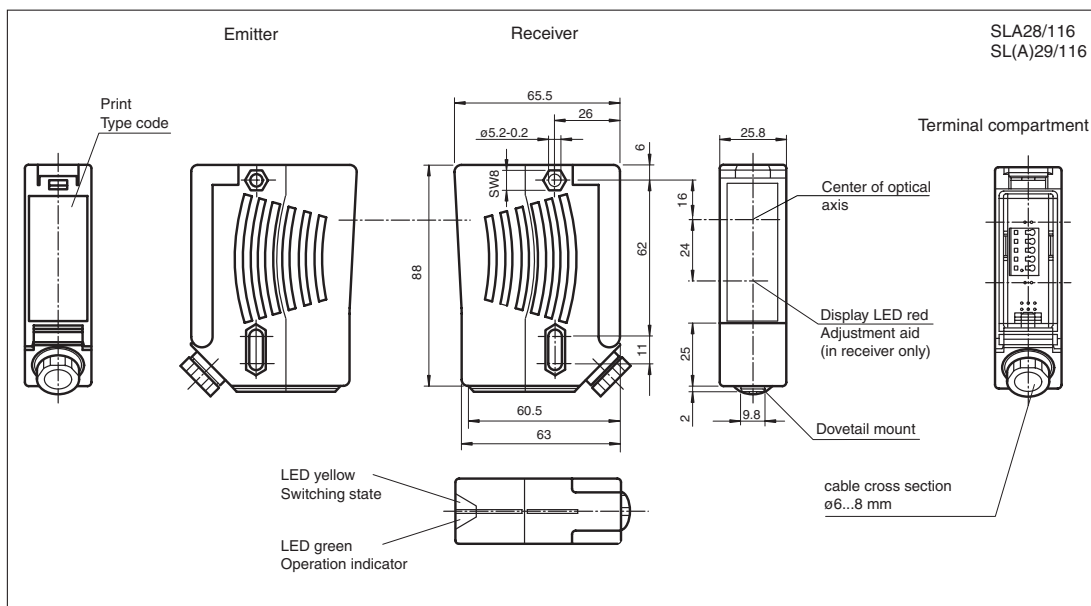
For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories“.

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	◆	◆	◆
Safety light grids with internal control unit		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	◆	◆	◆
Safety light curtains	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	◆	◆	◆
Control units	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	◆	◆	◆
Control units	Receiver	SL29-R/106/116	◆	◆	◆
		SL29-R/116	◆	◆	◆
		SL29-R/35/106/116 R=65m	◆	◆	◆
		SL29-R/35/116 R=65m	◆	◆	◆



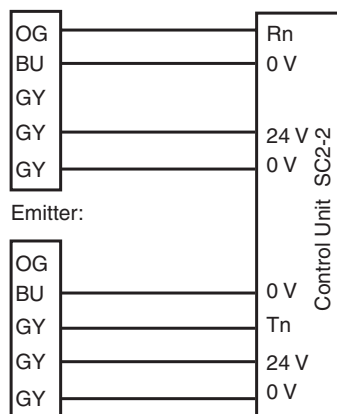
Dimensions



Electrical connection

Design with terminal compartment (Option /106)

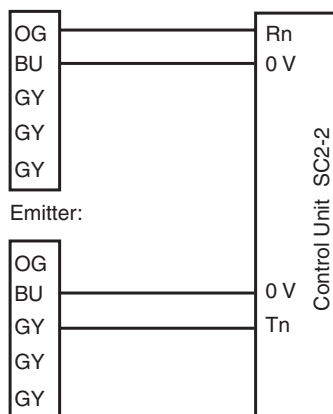
Receiver:



Emitter:

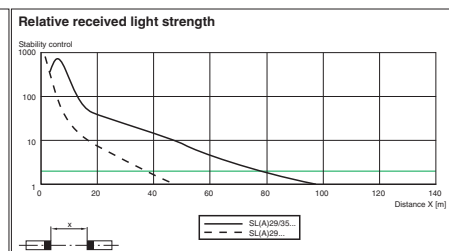
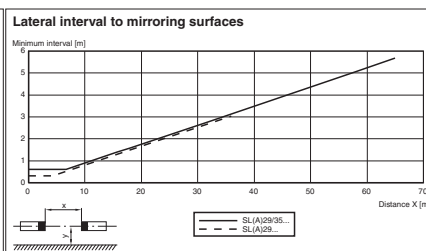
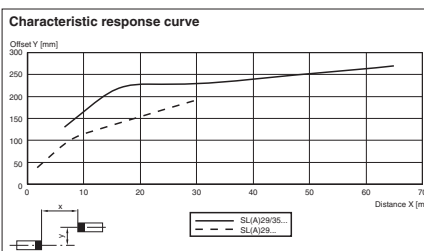
Design with terminal compartment

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

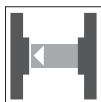
Option /116: no

Mounting aids

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

Further accessories

Laser alignment aid
BA SLA28
Redirection mirror
SLA-1-M



SLA29/...

Safety through beam sensor



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“.

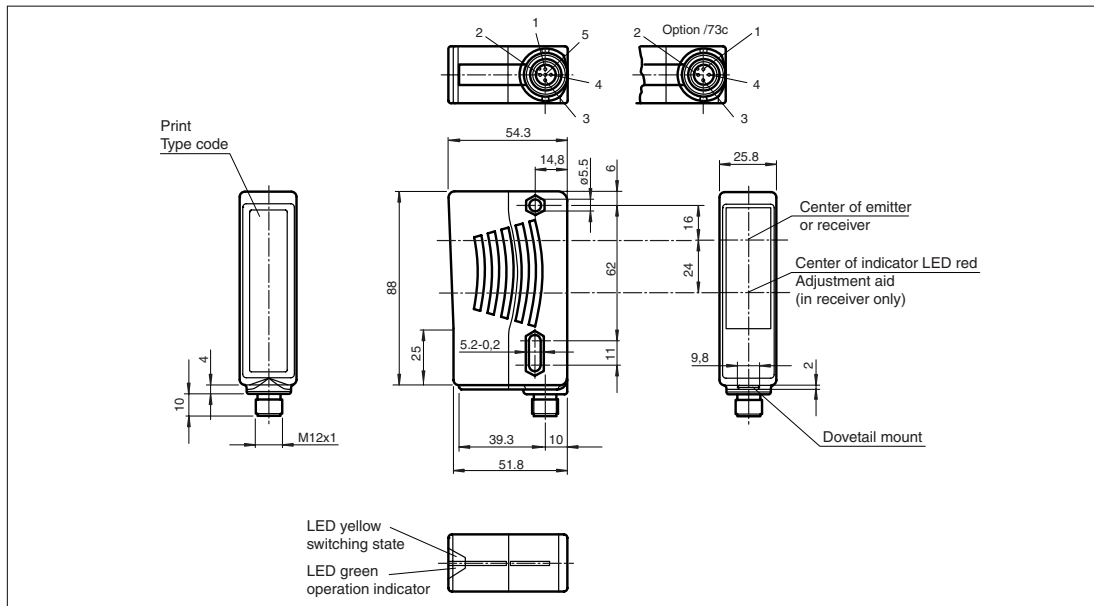
Technical data

		Ordering code			
		SLA29/105/106	SLA29/35/105/106 R=65m	SLA29/73c	SLA29/35/73c R=65m
Safety light grids	Construction type(S2)	Rectangular type	◆	◆	◆
	Effective detection range	0.2 ... 30 m	◆	◆	◆
		6 ... 65 m		◆	◆
	Threshold detection range	40 m	◆	◆	◆
Safety light grids with internal control unit		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 °	◆	◆	◆
Safety light curtains	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		◆	◆
Control units		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	◆		
Control units		SLA29-R/35/105/106 R=65m		◆	
		SLA29-R/35/73c R=65m			◆
		SLA29-R/73c			◆

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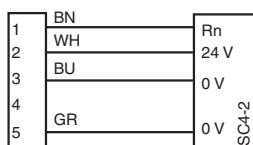
Dimensions



Electrical connection

Design with connector (Option /106)

Receiver:

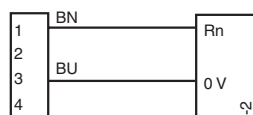


Emitter:

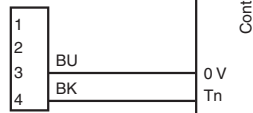


Design with connector

Receiver:

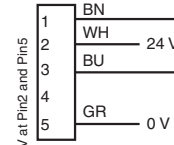


Emitter:

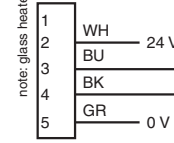


Design with connector (Option /106)

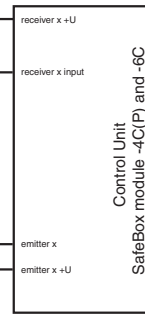
Receiver:



Emitter:

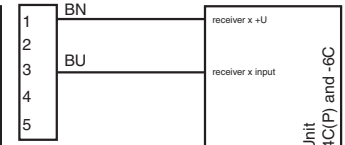


note: glass heater 24V at Pin2 and Pin5

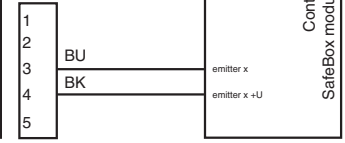


Design with connector

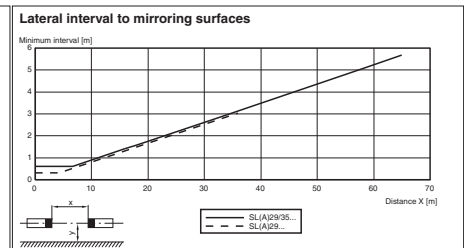
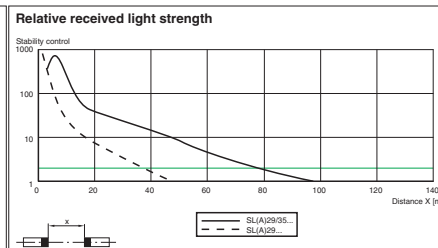
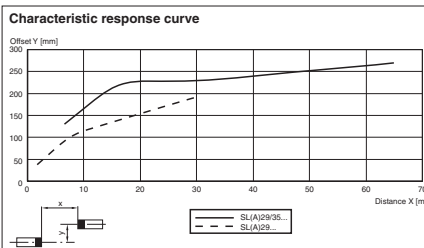
Receiver:



Emitter:



Diagrams



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

angled:

Option /105:

straight:

V15-G-2M-PVC
V15-G-5M-PVC
V15-G-10M-PVC
V15-W-2M-PVC
V15-W-5M-PVC
V15-W-10M-PVC

angled:

Option /116:

no

Mounting aids

OMH-21

OMH-22

OMH-05

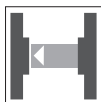
OMH-MLV11-K

Further accessories

Laser alignment aid BA SLA28

Muting Set MS SLP/SLA28

Redirection mirror SLA-1-M



SLA29/.../116...

Safety through beam sensor



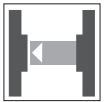
Features

- 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

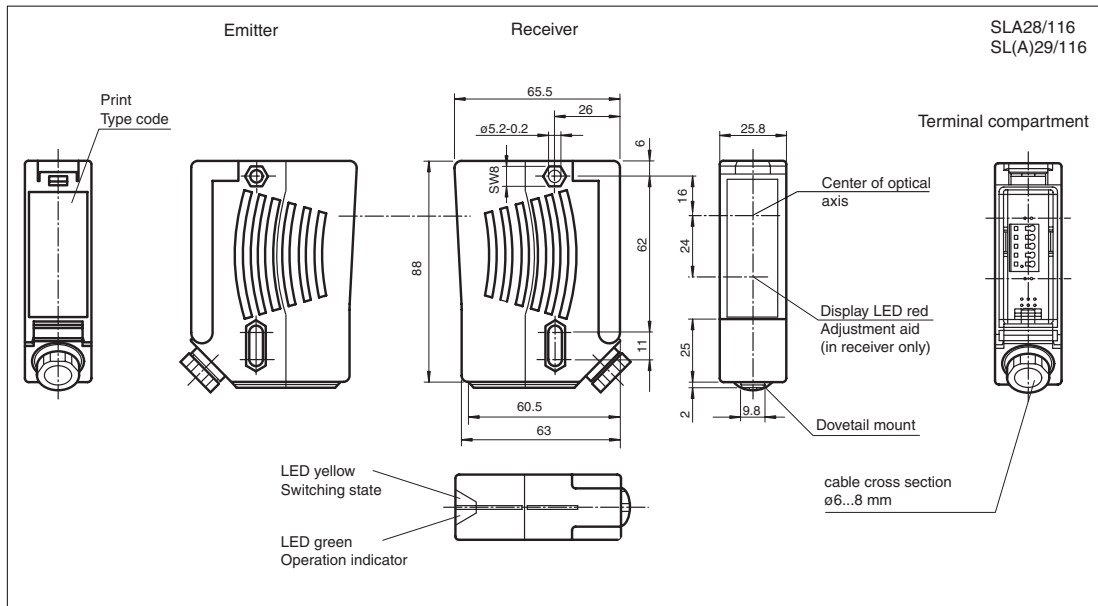
For required control units refer to chapter „Control units“
For suitable mounting aids and more refer to chapter „Accessories“.

Technical data

		Ordering code		
		SLA29/116	SLA29/35/116 R=65m	SLA29/106/116
Safety light grids	Construction type(S2)	Rectangular type	◆	◆
	Effective detection range	0.2 ... 30 m	◆	◆
		6 ... 65 m		◆
	Threshold detection range	40 m	◆	◆
Safety light grids with internal control unit		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 °	◆	◆
Safety light curtains	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)	◆	◆
Control units	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		◆
Control units	Receiver	SLA29-R/106/116		◆
		SLA29-R/116	◆	
		SLA29-R/35/116 R=65m		◆

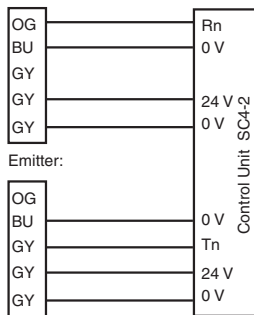


Dimensions

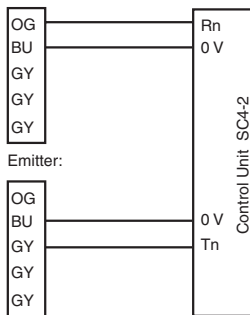


Electrical connection

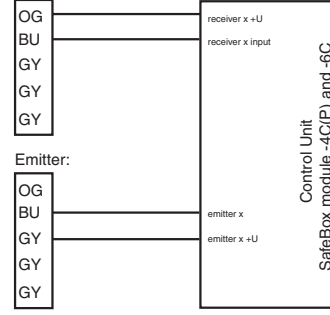
Design with terminal compartment (Option /106)
Receiver:



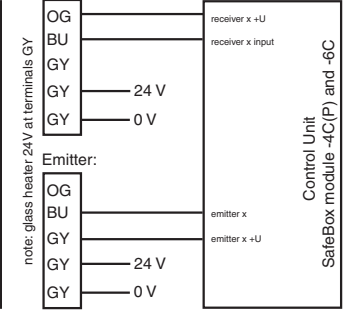
Design with terminal compartment
Receiver:



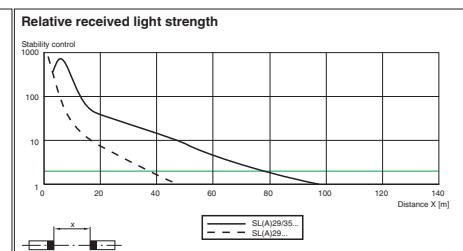
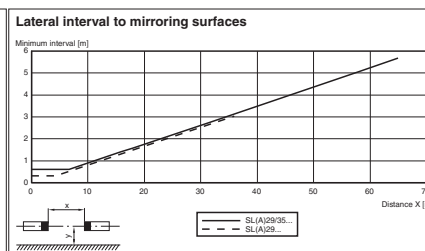
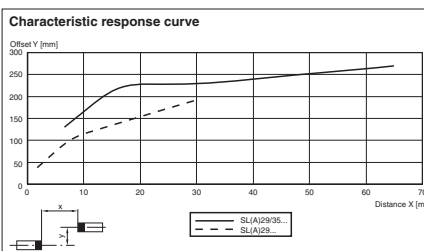
Design with terminal compartment
Receiver:



Design with terminal compartment (Option /106)
Receiver:



Diagrams



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

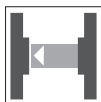
Option /116: no

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



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

Safety light grids

Safety light grids with internal control unit

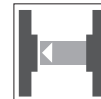
Safety light curtains

Control units

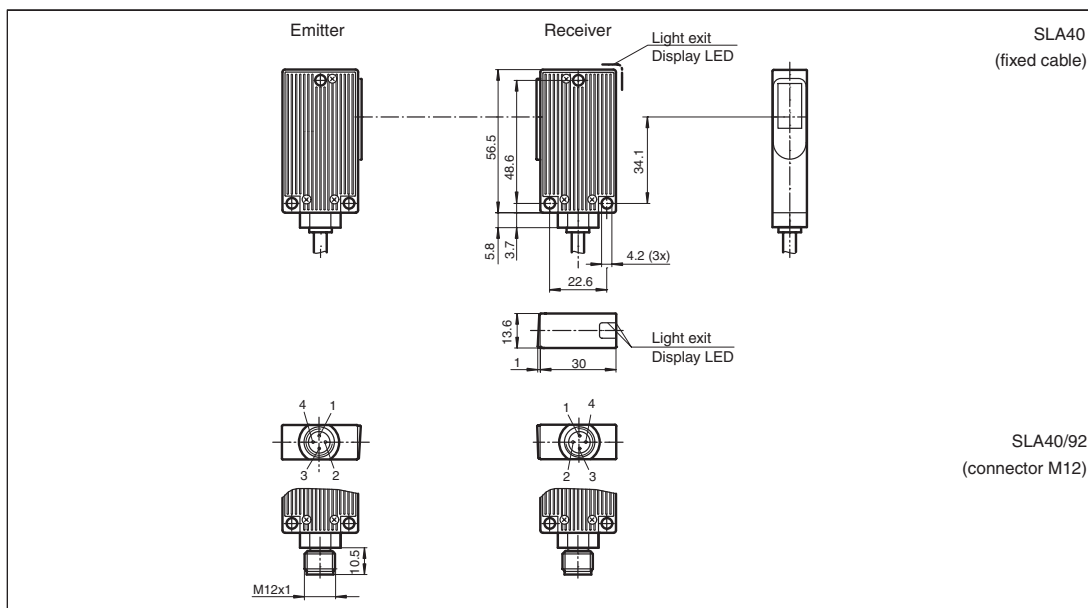
Ordering code

		SLA40	SLA40-2442/33 K=2m	SLA40/33 K=5m	SLA40/33 K=10m	SLA40-2442	SLA40/92
Construction type(S2)	Rectangular type	◆	◆	◆	◆	◆	◆
Effective detection range	0 ... 4 m	◆	◆	◆	◆	◆	◆
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 °	◆	◆	◆	◆	◆	◆
Series	SLA	◆	◆	◆	◆	◆	◆
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	◆	◆	◆	◆	◆	◆
	IP67	◆	◆	◆	◆	◆	◆
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	◆	◆	◆	◆	◆	◆
Material		◆	◆	◆	◆	◆	◆
Housing	aluminium pressure moulding, RLA 1021 (yellow) painted	◆	◆	◆	◆	◆	◆
Optical face	Glass	◆	◆	◆	◆	◆	◆
	Plastic pane	◆	◆	◆	◆	◆	◆
Mass	Per 100 g	◆	◆	◆	◆	◆	◆
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	◆	◆	◆	◆	◆	◆

Date of edition 05/17/2006



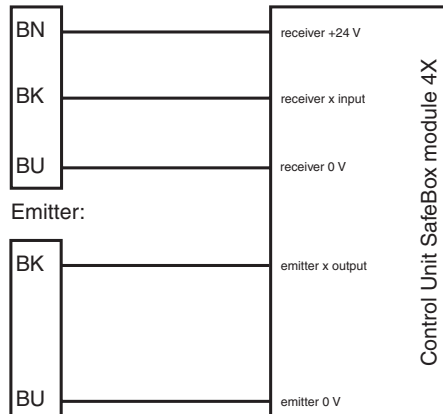
Dimensions



Electrical connection

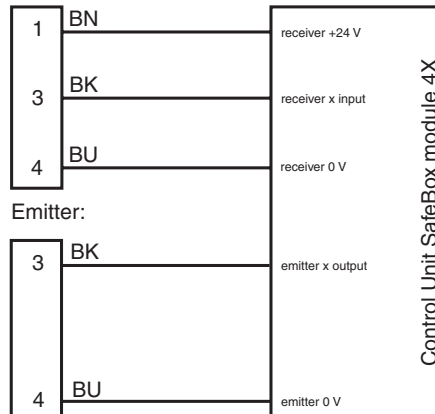
Design with fixed cable

Receiver:

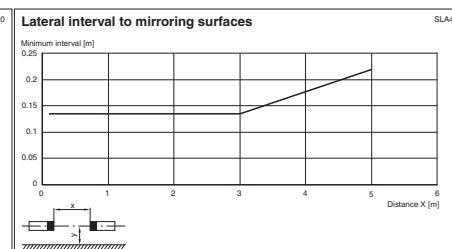
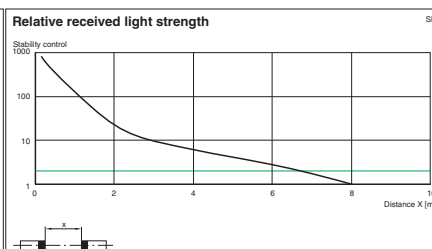
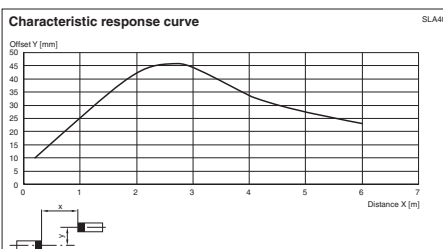


Design with connector plug

Receiver:



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