

# Safety thru-beam sensor

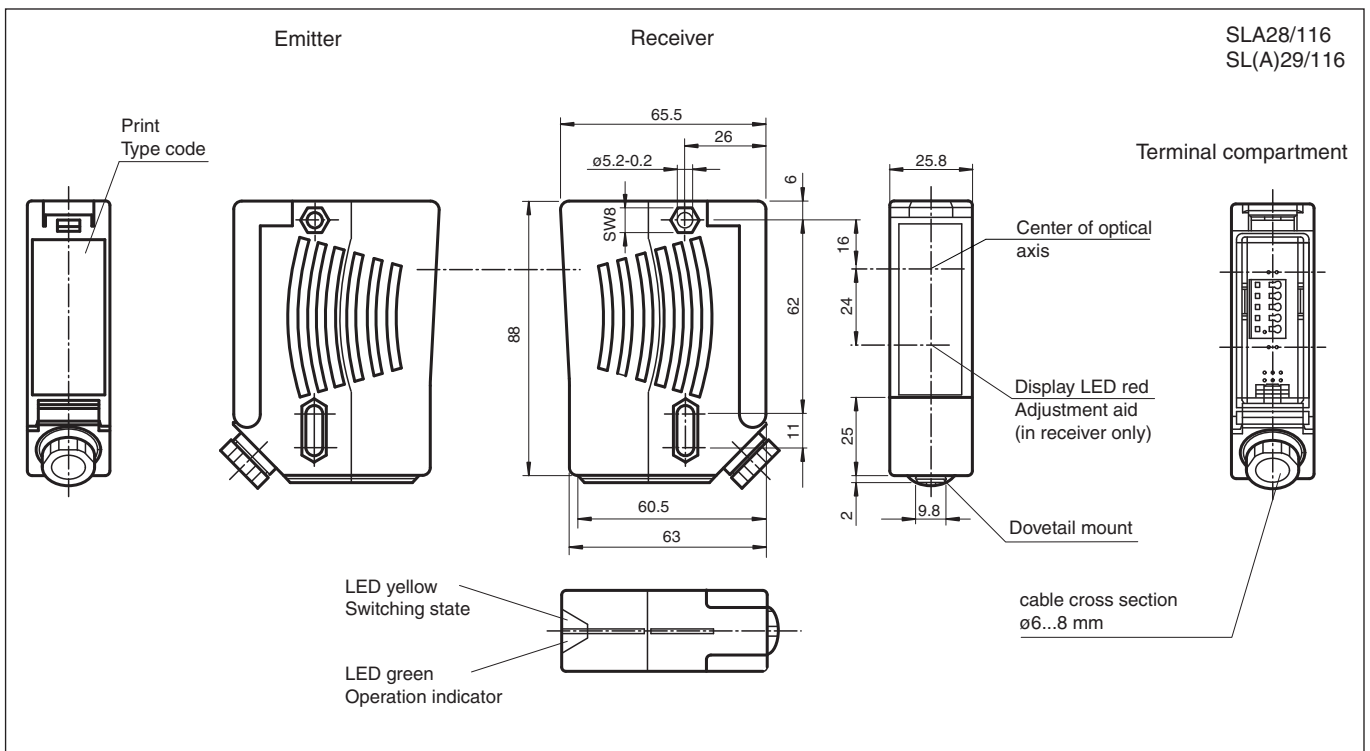
## SLA29/116



- Sensing range up to 30 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, degree of protection IP67
- Operation on control units of SB4 (SafeBox)



### Dimensions



### Technical Data

System components	
Emitter	SLA29-T/116
Receiver	SLA29-R/116
General specifications	
Effective detection range	0.2 ... 30 m
Threshold detection range	40 m

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

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## Technical Data

Light source		LED
Light type		modulated visible red light
Target size		static: 30 mm dynamic: 40 mm (at v = 1.6 m/s of the obstacle)
Alignment aid		LED red in receiver
Opening angle		< 5 °
<b>Functional safety related parameters</b>		
Safety Integrity Level (SIL)		SIL 3
Performance level (PL)		PL e
Category		Cat. 4
Mission Time (T <sub>M</sub> )		20 a
PFH <sub>d</sub>		4.4 E-10
Type		4
<b>Indicators/operating means</b>		
Operation indicator		LED green
Function indicator		LED yellow: 1. LED lit 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
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	Power supply via control unit
Protection class		III , IEC 61140
<b>Conformity</b>		
Functional safety		ISO 13849-1
Product standard		EN 61496-1 ; IEC 61496-2
<b>Approvals and certificates</b>		
CE conformity		CE
UKCA conformity		UKCA
UL approval		cULus Listed
TÜV approval		TÜV SÜD
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-20 ... 70 °C (-4 ... 158 °F)
Relative humidity		max. 95 %, not condensing
Shock resistance		10 g , 16 ms ; stationary applications only
Vibration resistance		1 mm , 10 ... 55 Hz ; stationary applications only
<b>Mechanical specifications</b>		
Degree of protection		IP67 according to EN 60529
Connection		terminal compartment
<b>Material</b>		
Housing		ABS plastic, RLA 1021 (yellow) painted
Optical face		Plastic pane
Mass		per device 70 g

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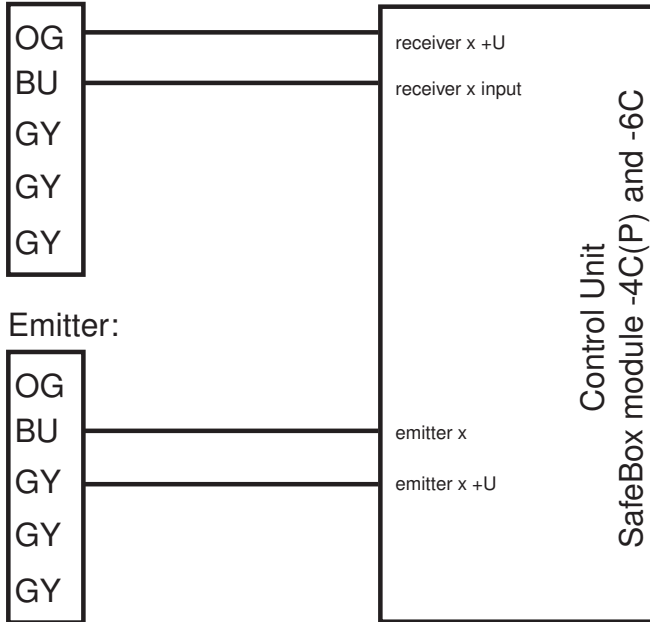
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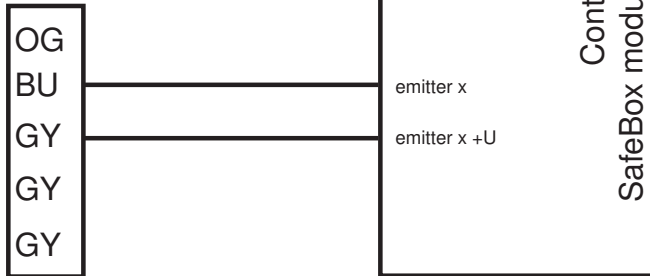
**Connection**

Design with terminal compartment

Receiver:

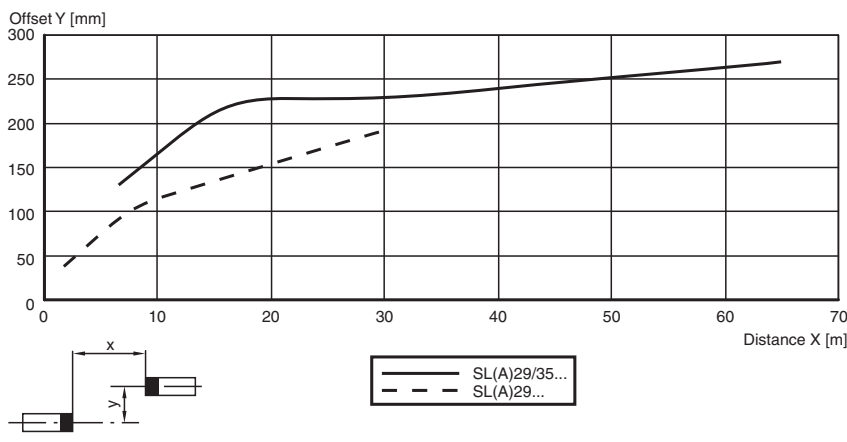


Emitter:

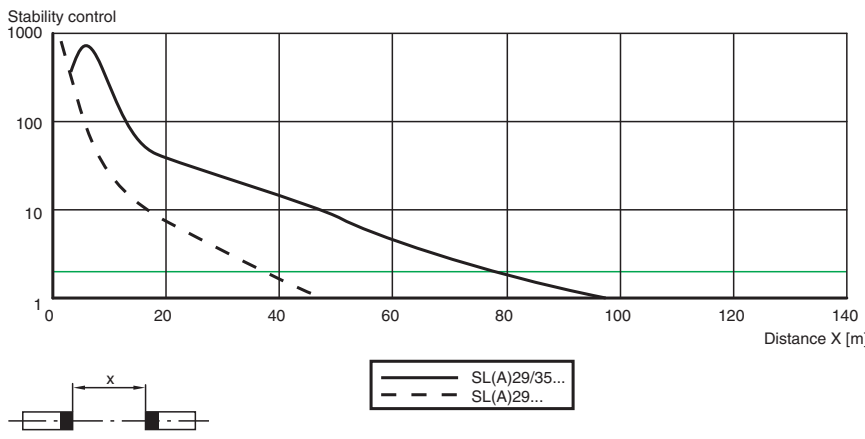


**Characteristic Curve**

Characteristic response curve



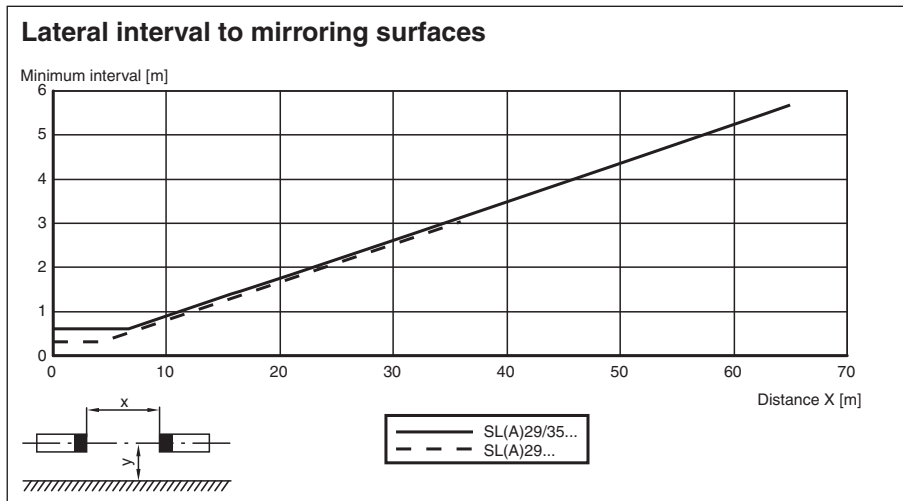
Relative received light strength



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## Characteristic Curve







## Matching System Components

	<b>SB4-OR-4CP</b>	Safety control unit
	<b>SC HDM-10 24V</b>	Safety control unit
	<b>SB4-OI1-4CP-4C-4C-4C</b>	Safety control unit
	<b>SC HDM-12 24V</b>	Safety control unit
	<b>SB4-OR-4CP-B</b>	SB4 series safety control unit with 1 optional module slot for functional enhancement
	<b>SB4-OR-4CP-B-B</b>	SB4 series safety control unit with optional module slots for functional enhancement
	<b>SB4-OR-4CP-B-B-B</b>	SB4 series safety control unit with optional module slots for functional enhancement
	<b>SB4-OR-4CP-B-B-B-B</b>	SB4 series safety control unit with optional module slots for functional enhancement
	<b>SB4-OR-4CP-2E</b>	Safety control unit
	<b>SB4-OR-4CP-4C</b>	Safety control unit
	<b>SB4-OR-4CP-4C-2E</b>	Safety control unit
	<b>SB4-OR-4CP-4M</b>	Safety control unit
	<b>SB4-OR-4CP-4M-2E</b>	Safety control unit

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**Accessories**

	<b>OMH-05</b>	Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm
	<b>OMH-21</b>	Mounting bracket: mounting aid for sensors in the RL* series
	<b>OMH-22</b>	Mounting aid for RL* series
	<b>SLA-1-M</b>	Deviation mirror

## Indication

### Additional information

For much easier alignment even for long distance applications, an additional red LED is located in the receiver's optics:

- LED constantly illuminated:  
signal strength < switching level
- LED flashes:  
signal strength is between 1-fold switching level and 2-fold switching level
- LED off:  
signal strength < 2-fold switching level (function reserve)

## 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