Safety thru-beam sensor
SLA29/116
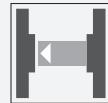
- Sensing range up to 30 m
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Red transmission light
- Integrated alignment aid
- Clearly visible LED functional display and pre-fault indicator on the receiver
- Sturdy housing
- Waterproof, degree of protection IP67
- Operation on control units of SB4 (SafeBox)

Dimensions
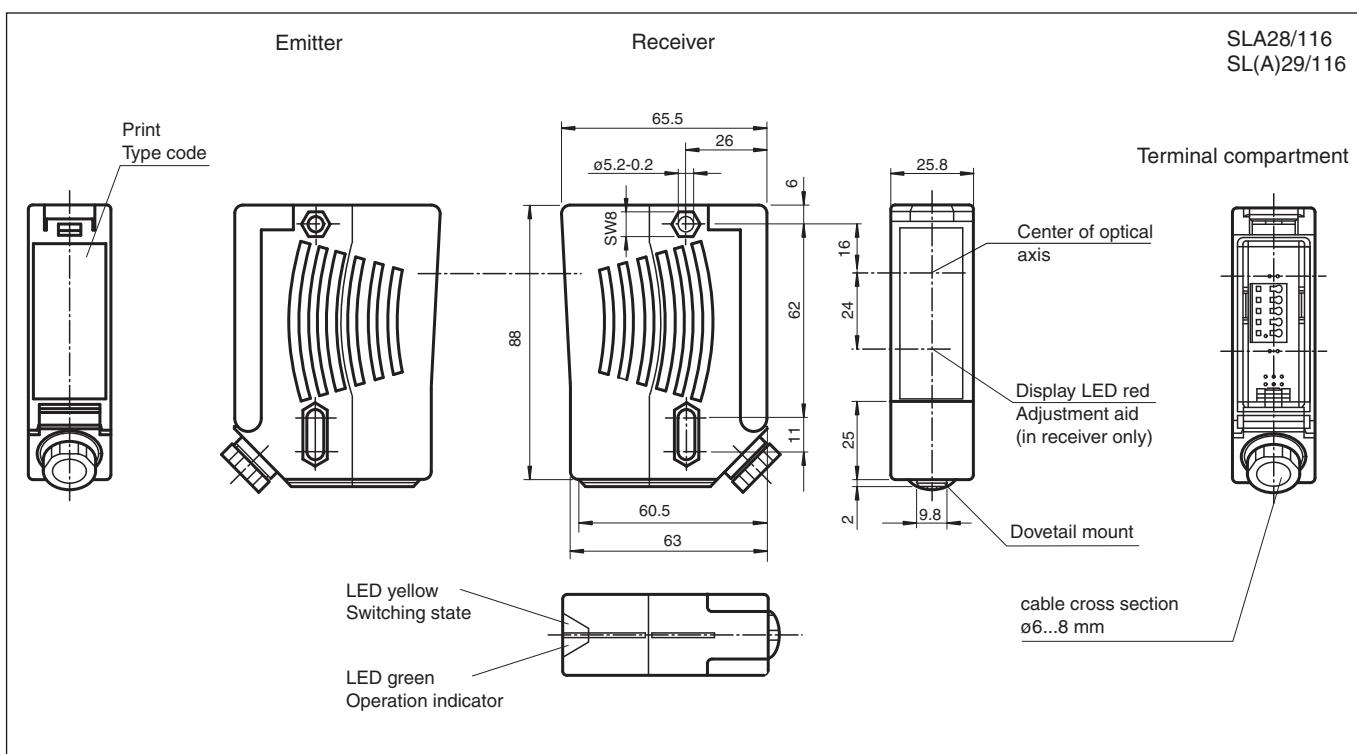
Emitter   Receiver   SLA28/116
SL(A)29/116

Print Type code

65.5
26
ø5.2-0.2
SW8
6
16
24
62
88
25.8
Center of optical axis
Display LED red
Adjustment aid (in receiver only)
11
25
2
9.8
60.5
63
Dovetail mount
Terminal compartment
cable cross section ø6...8 mm

LED yellow Switching state
LED green Operation indicator

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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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 °
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 3
Performance level (PL)		PL e
Category		Cat. 4
Mission Time (T_M)		20 a
PFH_d		4.4 E-10
Type		4
Indicators/operating means		
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
Electrical specifications		
Operating voltage	U_B	Power supply via control unit
Protection class		III , IEC 61140
Conformity		
Functional safety		ISO 13849-1
Product standard		EN 61496-1 ; IEC 61496-2
Approvals and certificates		
CE conformity		CE
UKCA conformity		UKCA
UL approval		cULus Listed
TÜV approval		TÜV SÜD
Ambient conditions		
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
Mechanical specifications		
Degree of protection		IP67 according to EN 60529
Connection		terminal compartment
Material		
Housing		ABS plastic, RLA 1021 (yellow) painted
Optical face		Plastic pane
Mass		per device 70 g

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Connection

Design with terminal compartment

Receiver:

OG		receiver x +U
BU		receiver x input
GY		
GY		
GY		

Emitter:

OG		
BU		emitter x
GY		emitter x +U
GY		
GY		

Control Unit
SafeBox module -4C(P) and -6C
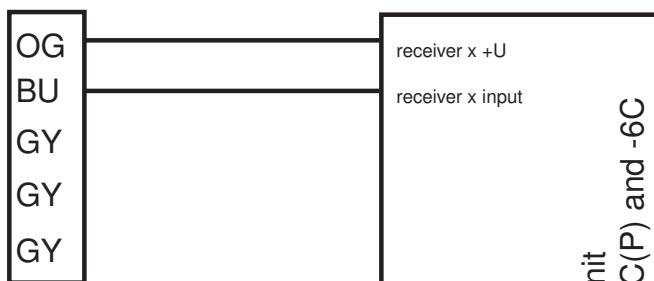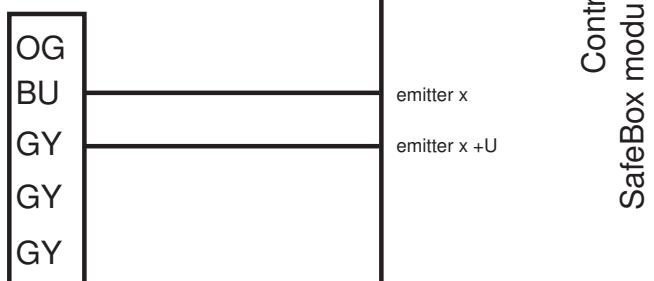
Characteristic Curve

Characteristic response curve

Offset Y [mm]

Distance X [m]

— SL(A)29/35...
- - - SL(A)29...
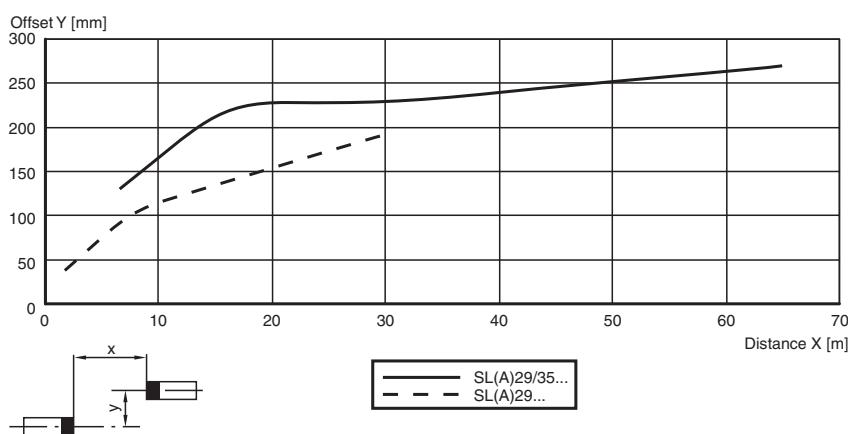
Relative received light strength

Stability control

Distance X [m]

— SL(A)29/35...
- - - SL(A)29...

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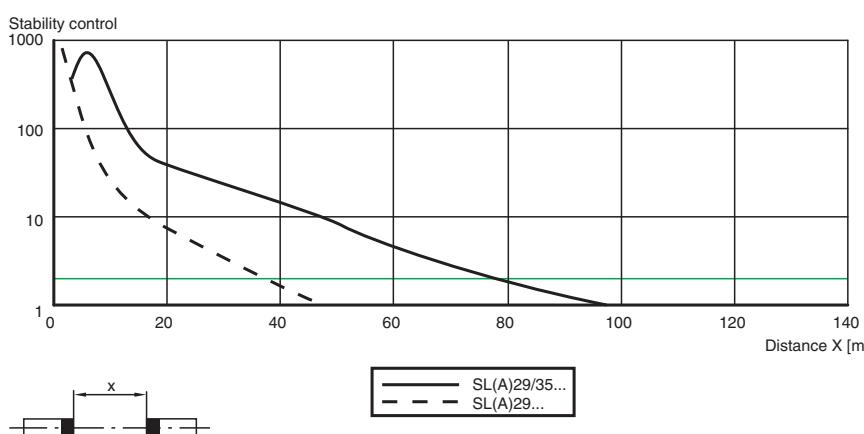
Characteristic Curve

Lateral interval to mirroring surfaces

Minimum interval [m]

Distance X [m]

——	SL(A)29/35...
- - -	SL(A)29...
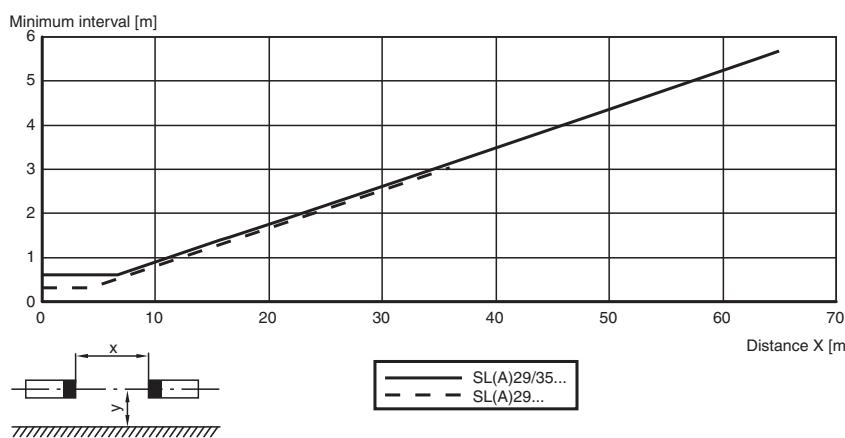
Matching System Components

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

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Accessories

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

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Indication

Additional information

For much easier alignment even for lond distance applications, an additional red LED is located in the receivers 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

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