Dimensions

Print Type code

54.3
14,8
ø5,5
6
88
25
5.2-0,2
4
10
M12x1
39.3 · 10
51.8

25.8
16
62
24
11
9,8
2

Center of emitter or receiver
Center of indicator LED red
Adjustment aid (in receiver only)

Dovetail mount

LED yellow switching state
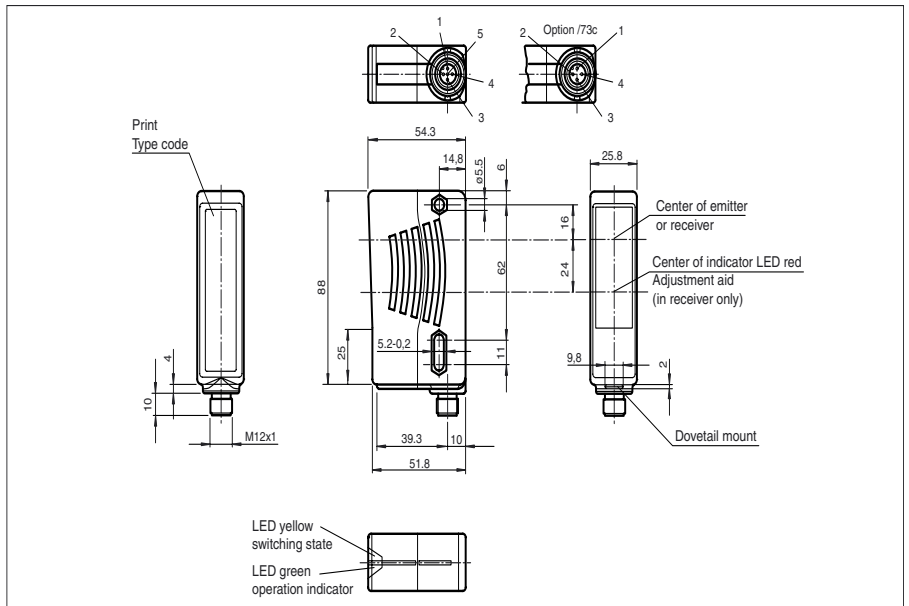LED green operation indicator

2 1 5 4 3
2 Option /73c 1 4 3

Model Number

SLA29/35/105/106

Safety thru-beam sensor
with 5-pin, M12 connector

Features

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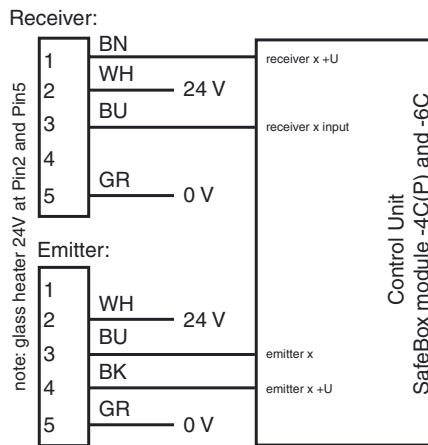- Operation on control units of series SB4 (SafeBox) and SC4-2

Accessories

OMH-05
Mounting aid

OMH-21
Mounting aid

OMH-22
Mounting aid

OMH-MLV11-K
Mounting aid

BA SLA28
Mounting aid Safety

MS SLP/SLA28
Mounting aid Safety

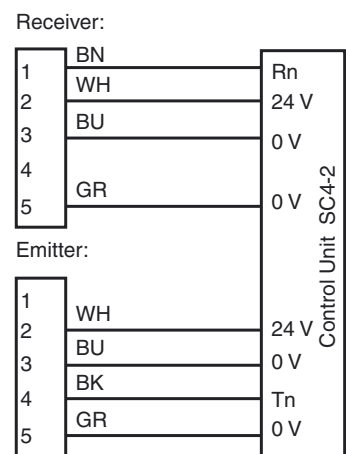**MS SLPCM**
Mounting aid Safety

SLA-1-M

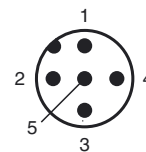Additional accessories can be found in the Internet.

Electrical connection

Design with connector (Option /106)
Receiver:

note: glass heater 24V at Pin2 and Pin5

1	BN	
2	WH	24 V
3	BU	
4		receiver x +U
5	GR	receiver x input
		0 V

Emitter:

1		
2	WH	24 V
3	BU	
4	BK	emitter x
5	GR	emitter x +U
		0 V

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

Design with connector (Option /106)
Receiver:

1	BN	Rn
2	WH	24 V
3	BU	0 V
4		
5	GR	0 V

Emitter:

1		
2	WH	24 V
3	BU	0 V
4	BK	Tn
5	GR	0 V

Control Unit SC4-2

Pinout

Subject to modifications without notice

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Technical data

General specifications

Effective detection range	6 ... 65 m
Threshold detection range	85 m
Light source	LED
Light type	red, modulated light
Approvals	TÜV; cULus (in operation with contol unit SafeBox SB4)
Tests	IEC/EN 61496
Safety type according to IEC/EN 61496	4
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
Angle of divergence	< 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	0.44 E-9

Indicators/operating means

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

Electrical specifications

Operating voltage	U_B	Power supply via control unit

Ambient conditions

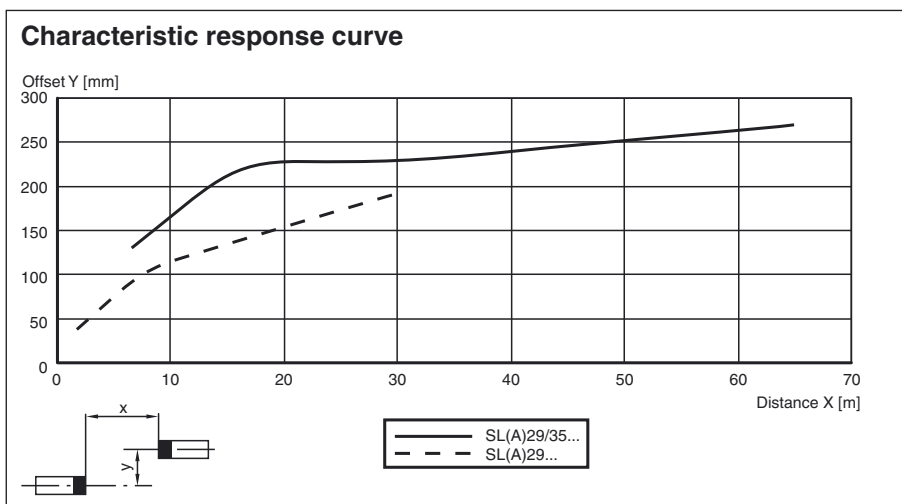|	
Ambient temperature	-35 ... 55 °C (238 ... 328 K) with heated optical face, fixed voltage 24 V DC ± 20 %/50 mA
Storage temperature	-20 ... 70 °C (253 ... 343 K)
Relative humidity	max. 95 %, not condensing

Mechanical specifications

Protection degree	IP67 according to EN 60529
Connection	M12 connector, 5 pin
Material	
Housing	ABS plastic, RLA 1021 (yellow) painted
Optical face	Plastic pane
Mass	per device 70 g

General information

System components	
Emitter	SLA29-T/35/105/106
Receiver	SLA29-R/35/105/106

Curves/Diagrams

Characteristic response curve

Release date: 2009-12-14 11:25   Date of issue: 2009-12-14   T13312_ENG.xml

Relative received light strength

Stability control

Distance X [m]

SL(A)29/35...
SL(A)29...

Lateral interval to mirroring surfaces

Minimum interval [m]

Distance X [m]

SL(A)29/35...
SL(A)29...
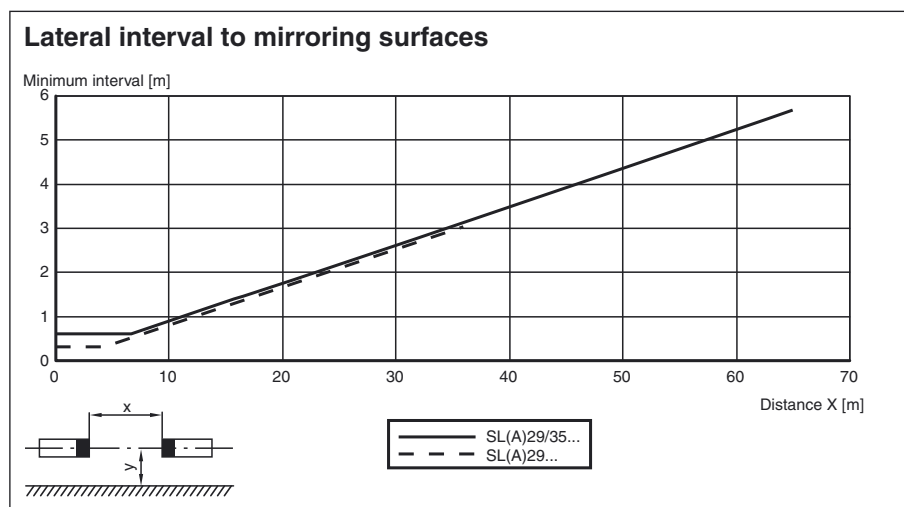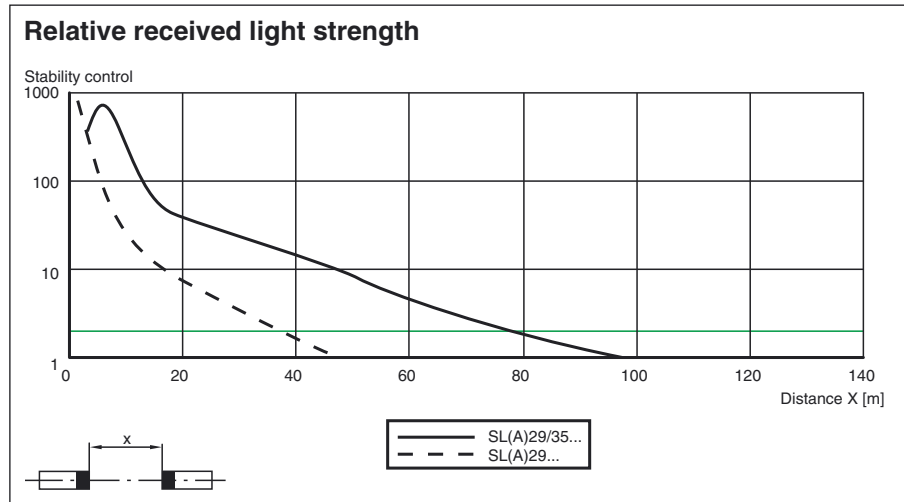
Additional information

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:

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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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