



Model Number

SLA29/35/105/106

with 5-pin, M12 connector

Features

- Sensing 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 SB4 (SafeBox)

Accessories

OMH-05

Mounting aid for round steel $\varnothing$ 12 mm or sheet 1.5 mm ... 3 mm

OMH-21

Mounting bracket

OMH-22

Mounting bracket

OMH-MLV11-K

dove tail mounting clamp

MS SLP/SLA28

Fixing plate

MS SLPCM

Mounting bracket

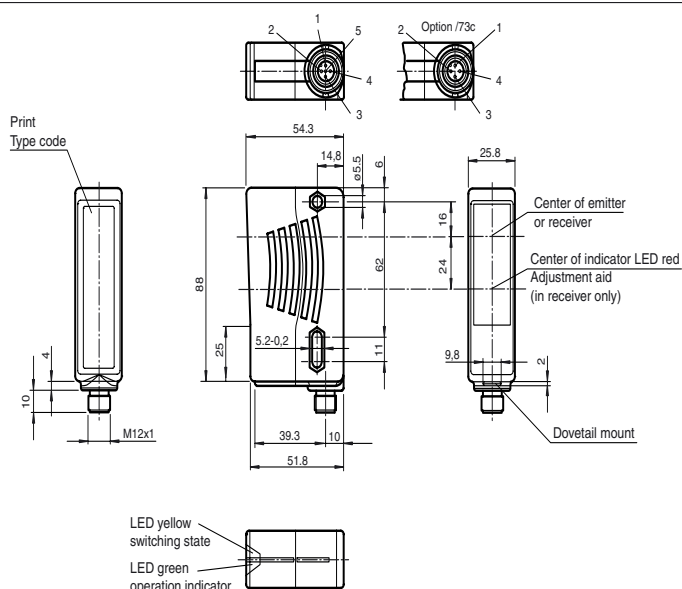
SLA-1-M

Deviation mirror

BA SLA25

Additional accessories can be found in the Internet.

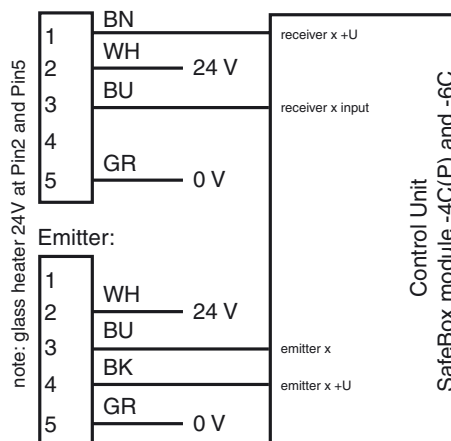
Dimensions



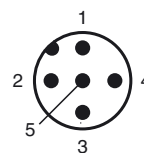
Electrical connection

Design with connector (Option /106)

Receiver:



Pinout



Technical data

System components

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

General specifications

Effective detection range	6 ... 65 m
Threshold detection range	85 m
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
Angle of divergence	$< 5^\circ$

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
Type	4

Indicators/operating means

Operation indicator	LED green
Function indicator	LED yellow: 1. LED lit constantly: signal $> 2 \times$ switching point (function reserve) 2. LED flashes: signal between $1 \times$ switching point and $2 \times$ switching point 3. LED off: signal $<$ switching point

Electrical specifications

Operating voltage	U_B	Power supply via control unit
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Conformity

Functional safety	ISO 13849-1
Product standard	EN 61496-1 ; IEC 61496-2

Ambient conditions

Ambient temperature	-35 ... 55 °C (-31 ... 131 °F) with heated optical face, fixed voltage 24 V DC $\pm 20\%$ /50 mA
Storage temperature	-20 ... 70 °C (-4 ... 158 °F)
Relative humidity	max. 95 %, not condensing

Mechanical specifications

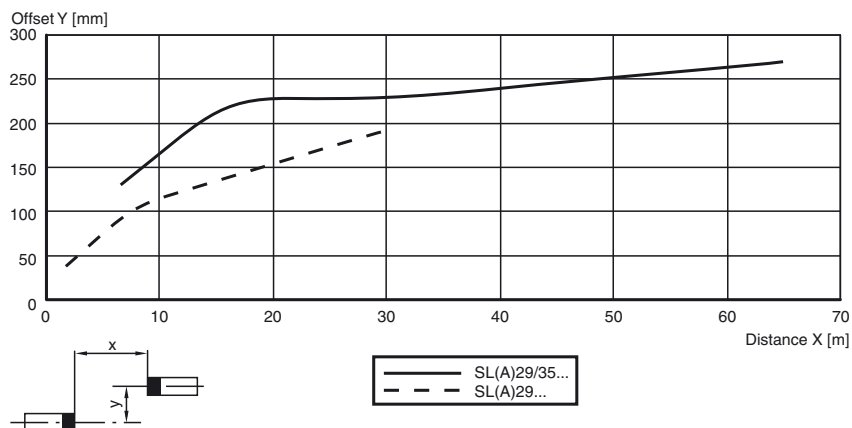
Degree of protection	IP67 according to EN 60529
Connection	M12 connector, 5 pin
Material	
Housing	ABS plastic, RLA 1021 (yellow) painted
Optical face	Plastic pane
Mass	per device 70 g

Approvals and certificates

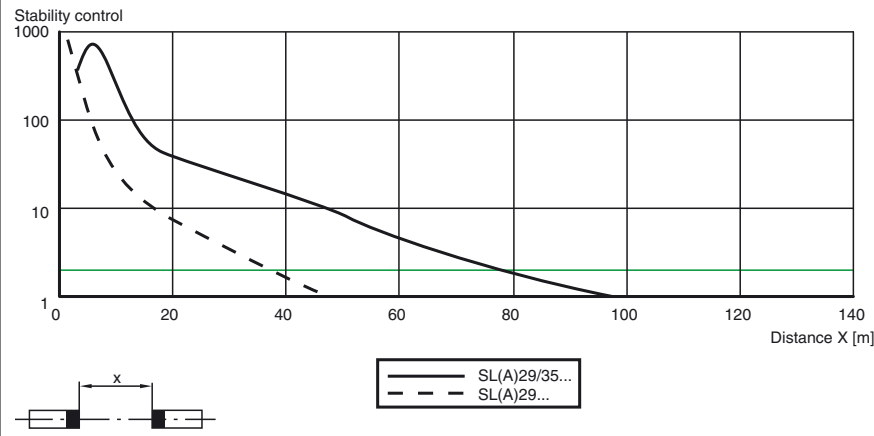
CE conformity	CE
CCC approval	CCC approval / marking not required for products rated ≤ 36 V
Approvals	TÜV; cULus (in operation with control unit SafeBox SB4)

Curves/Diagrams

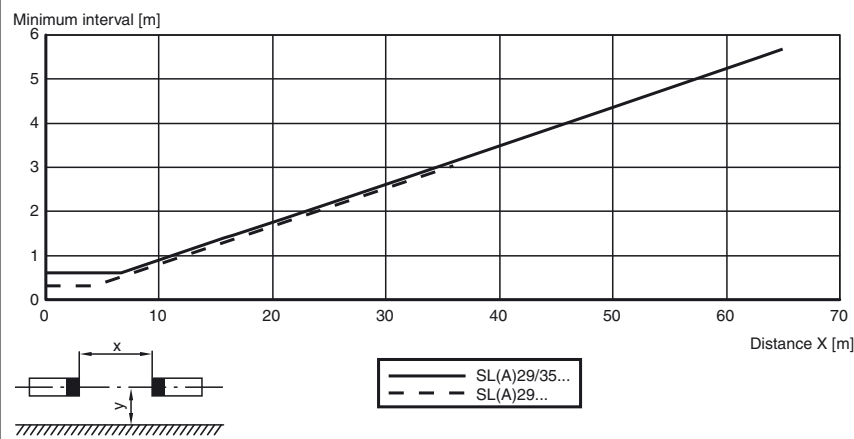
Characteristic response curve



Relative received light strength



Lateral interval to mirroring surfaces



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 $\geq$ 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