## Photo electric system



## **SlimLine**

- Photo electric system with modulated infrared light
- · Self-contained amplifier
- Range up to 40 m (131 ft)
- Transistor output npn/pnp
- Switching frequency max. 500 Hz
- Metal housing, IP 67
- Outputs are short circuit proof
- · Reverse polarity protection



## **Short description**

The infrared photo electric systems SlimLine are powerful through-beam light barrier which are characterized by their very small and robust type.

The sensor heads are filled with resin to guarantee the high degree of protection, IP 67. This allows for applications in extreme areas with moisture, dust and dirt.

The system, consisting of one transmitter (ST...) and one receiver (SR...), can be easily aligned even at distances of 40m (131 ft) by a large field of view. The transmitter has an input, which can be adjusted, depending upon the application or switched off, testing the transmit power for failure-free operation. The receiver has an NPN/PNP transistor output and a yellow status LED.

## Ordering table

#### Transmitter ST...

Model	M12x1 - nickel plated brass		M12x1 - sta	ainless steel	12x12x82mm - aluminium	
Connection	cable 5m	plug M12	cable 5m	plug M12	cable 5m	plug M8
Emission angle						
20°	STA-CLN-5	STA-CLN-C4	STA-CLV-5	STA-CLV-C4	STA-LLA-5	STA-LLA-B3
6°	STB-CLN-5	STB-CLN-C4	STB-CLV-5	STB-CLV-C4	STB-LLA-5	STB-LLA-B3

### Receiver SR...

	Model	M12x1 - nickel plated brass		M12x1 - stainless steel		12x12x82mm - aluminium	
Range	Connection	cable 5m	plug M12	cable 5m	plug M12	cable 5m	plug M8
STA (STB)	Switching mode						
1 m (5 m)	light	SRSL-CLN-5	SRSL-CLN-C4	SRSL-CLV-5	SRSL-CLV-C4	SRSL-LLA-5	SRSL-LLA-B3
	dark	SRSD-CLN-5	SRSD-CLN-C4	SRSD-CLV-5	SRSD-CLV-C4	SRSD-LLA-5	SRSD-LLA-B3
6 m (20 m)	light	SRHL-CLN-5	SRHL-CLN-C4	SRHL-CLV-5	SRHL-CLV-C4	SRHL-LLA-5	SRHL-LLA-B3
	dark	SRHD-CLN-5	SRHD-CLN-C4	SRHD-CLV-5	SRHD-CLV-C4	SRHD-LLA-5	SRHD-LLA-B3
15 m (4() m)	light	SRLL-CLN-5	SRLL-CLN-C4	SRLL-CLV-5	SRLL-CLV-C4	SRLL-LLA-5	SRLL-LLA-B3
	dark	SRLD-CLN-5	SRLD-CLN-C4	SRLD-CLV-5	SRLD-CLV-C4	SRLD-LLA-5	SRLD-LLA-B3

## **Safety instructions**



### Warning!

The operation of infrared photo electric system SlimLine is not authorized for applications where safety of the person depends on the device function.

Do not look into the transmitter! It's possible, that highly concentrated non visible infrared light is emitting out of the transmitter STB..., which can be hazardous to the human eye. So you have to follow the safety precautions given in IEC 60825-1.

# Photo electric system



## **SlimLine**

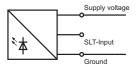
## Technical data

Transmitter	STA	STB	
Operating basis	modulated infrared light		
Supply voltage	13 V DC - 30 V DC		
Current consumption	30 mA		
Emission angle	20°	6°	
Transmit frequency	11,7 kHz		
Transmit power	external adjustable		
Sealing	IP 67		
Housing material: CLN	Nickel plated brass		
CLV	Stainless steel		
LLA	Aluminium anodized		
Power on display	LED green		
Connection: cable	3x0,14 mm², PVC		
plug -B3 / -C4	M8, 3-pole / M1	12, 4 <b>-</b> pole	
Operation temperture	-20 °C +60 °C		
Storage temperature	-40 °C +80 °C		

Receiver	SRS	SRH	SRL	
Range: Transmitter STA	1 m (3 ft)	6 m (20 ft)	15 m (49 ft)	
Transmitter STB	5 m (16 ft)	20 m (66 ft)	40 m (131ft)	
Ambient light immunity	> 60000 LUX			
Supply voltage	13 V DC - 30 V DC			
Current consumption	max. 35 mA			
Operating angle	12,5 °			
Switching mode	light or dark			
Transistor output	npn/pnp			
Output current	100 mA, short circuit proof			
Switching frequency (max.)	500 Hz	150 Hz	20 Hz	
Sealing	IP 67			
Housing material: CLN	Nickel plated brass			
CLV	Stainless steel			
LLA	Aluminium anodized			
Output status display	LED yellow			
Connection: cable	3x0,14 mm², PVC			
plug -B3 / -C4	M8, 3-pole / M12, 4-pole			
Operation temperture	-20 °C +60 °C			
Storage temperature	-40 °C +80 °C			

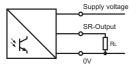
## Wiring diagram

### Transmitter ST...

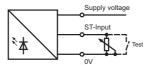


100 % transmit power

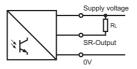
## Receiver SR...



pnp transistor output



transmit power adjustment resp. transmit power off

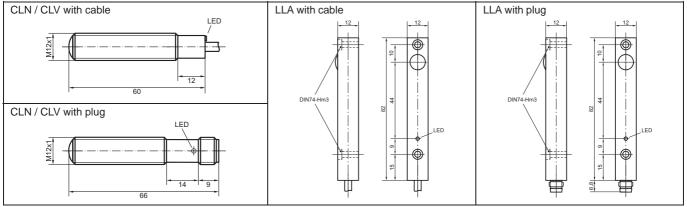


npn transistor output

	black brown blue	<b>4 3 2 2</b>	@ ① <del>()</del> ③
	Cable	Plug M12x1	Plug M8x1
Supply voltage	brown	Pin 1	Pin 1
Ground (0V)	blue	Pin 3	Pin 3
ST- Input	black	Pin 4	Pin 4
SR-Output	black	Pin 4	Pin 4

The overall length of the power supply cable may not exceed 10 m (33 ft). Otherwise the supply power must be made with a DC power supply, meet the EMC-directions.

## **Dimensions**



dimensions in millimeter