

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 - stainless steel | | 12x12x82mm - aluminium | |
|-----------------------|-----------------------------|------------|-------------------------|------------|------------------------|------------|
| | 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...

| Range STA... (STB...) | Model | M12x1 - nickel plated brass | | M12x1 - stainless steel | | 12x12x82mm - aluminium | |
|--------------------------|-----------------------|-----------------------------|-------------|-------------------------|-------------|------------------------|-------------|
| | | cable 5m | plug M12 | cable 5m | plug M12 | cable 5m | plug M8 |
| 1 m (5 m) | Switching mode | | | | | | |
| | light | SRSL-CLN-5 | SRSL-CLN-C4 | SRSL-CLV-5 | SRSL-CLV-C4 | SRSL-LLA-5 | SRSL-LLA-B3 |
| 6 m (20 m) | dark | SRSD-CLN-5 | SRSD-CLN-C4 | SRSD-CLV-5 | SRSD-CLV-C4 | SRSD-LLA-5 | SRSD-LLA-B3 |
| | light | SRHL-CLN-5 | SRHL-CLN-C4 | SRHL-CLV-5 | SRHL-CLV-C4 | SRHL-LLA-5 | SRHL-LLA-B3 |
| 15 m (40 m) | dark | SRHD-CLN-5 | SRHD-CLN-C4 | SRHD-CLV-5 | SRHD-CLV-C4 | SRHD-LLA-5 | SRHD-LLA-B3 |
| | light | SRLN-CLN-5 | SRLN-CLN-C4 | SRLN-CLV-5 | SRLN-CLV-C4 | SRLN-LLA-5 | SRLN-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.

SlimLine

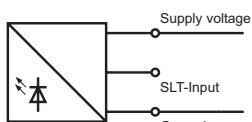
Technical data

| 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 mm ² , PVC | |
| plug -B3 / -C4 | M8, 3-pole / M12, 4-pole | |
| Operation temperature | -20 °C ... +60 °C | |
| Storage temperature | -40 °C ... +80 °C | |

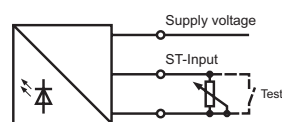
| Receiver | SRS... | SRH... | SRL... |
|----------------------------|------------------------------|--------------|--------------|
| Range: Transmitter STA... | 1 m (3 ft) | 6 m (20 ft) | 15 m (49 ft) |
| Transmitter STB... | 5 m (16 ft) | 20 m (66 ft) | 40 m (131ft) |
| Ambient light immunity | > 60000 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/npn | | |
| 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 mm ² , PVC | | |
| plug -B3 / -C4 | M8, 3-pole / M12, 4-pole | | |
| Operation temperature | -20 °C ... +60 °C | | |
| Storage temperature | -40 °C ... +80 °C | | |

Wiring diagram

Transmitter ST...

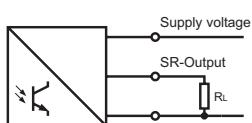


100 % transmit power

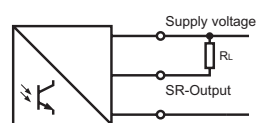


transmit power adjustment
resp. transmit power off

Receiver SR...



npn transistor output



npn transistor output

| | 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

| CLN / CLV with cable | LLA with cable | LLA with plug |
|----------------------|----------------|---------------|
| | | |
| | | |

dimensions in millimeter