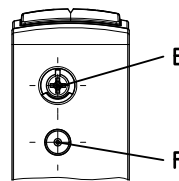
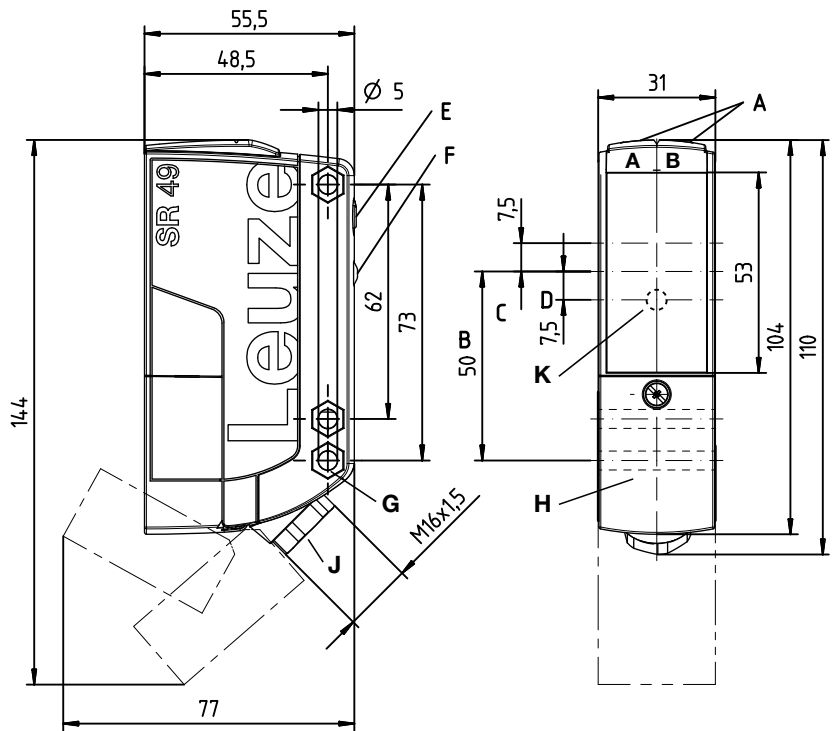


L49C MOSFET

Throughbeam photoelectric sensors

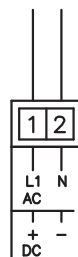
Dimensioned drawing



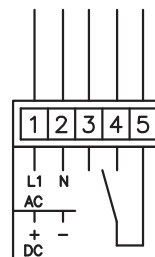
- A_A** Green indicator diode
- A_B** Yellow indicator diode
- B** Optical axis
- C** Receiver
- D** Transmitter
- E** Sensitivity adjustment
- F** Teach button for light/dark switching / time module activation
- G** Countersinking for SK nut M5, 4.2 deep
- H** Connection compartment with spring terminals
- J** Cable entry with M16x1.5 screw fitting for ∅5 ... 10mm
- K** Yellow indicator diode
Transmitter: active/not active
Receiver: signal/no signal

Electrical connection

Transmitter
DC/AC



Receiver
DC/AC



Pin 3 = nc (not connected)

Wire color of connecting cable

| Pin | Color |
|-----|---------|
| 1 | BR / BN |
| 2 | BL / BU |
| 3 | WS / WH |
| 4 | GR / GY |
| 5 | SW / BK |



150m



- Throughbeam photoelectric sensors with large operating range and high performance reserve in red light and infrared light versions
- Robust plastic housing, degree of protection IP 67 and IP 69K for universal, industrial application
- All-mains design 20 ... 250VAC/DC with MOSFET semiconductor switching output (potential-free)
- Sensitivity adjustment and delay before start-up for optimal adaptation to the application
- Light/dark switching and time module activation via teach button for time-saving integration in existing evaluation environment:
- Time-saving, exact alignment through additional, highly visible display
- Space-saving installation thanks to front access to the connection compartment
- Extremely time-saving connection by means of spring terminals (up to 1.5mm²)
- Optics heating



Accessories:

(available separately)

- Mounting systems (BTU 460, BT 96, BT 96.1, BT 450.1-96)
- Alignment aid SAT 5

en 02-2015/08 50128465-01

We reserve the right to make changes • DS_L49CUCM4_en_50128465_01.fm

Specifications

| | | |
|---|--|------------------------|
| Optical data | L49C... | L49CI... |
| Typ. operating range limit ¹⁾ | 0 ... 150m | |
| Operating range ²⁾ | 0.5 ... 120m | |
| Light source | LED (modulated light) | |
| Wavelength | 630nm (red light) | 860nm (infrared light) |
| Timing | | |
| Switching frequency | 150Hz | |
| Response time | 3.3ms | |
| Delay before start-up | ≤ 300ms | |
| Electrical data | | |
| Operating voltage U _B | 20 ... 250VAC, 50/60Hz | |
| | 20 ... 250VDC | |
| Power consumption | ≤ 1.5VA | |
| Switching output ³⁾ | MOSFET semiconductor switching output (NO) | |
| Function | NO contact | |
| MOSFET switching voltage | 250VAC/DC | |
| MOSFET switching current | 250VAC, 0.4A/30VDC, 0.4A | |
| MOSFET switching power | 100VA, cosφ=1 | |
| Sensitivity | adjustable | |
| Indicators | | |
| Green LED | ready | |
| Yellow LED | light path free | |
| Yellow LED, flashing | light path free, no performance reserve | |
| Yellow LED (behind lens cover) | transmitter: active/not active | |
| | receiver: signal/no signal | |
| Yellow LED (behind lens cover), flashing | receiver: signal, performance reserve limited | |
| Mechanical data | | |
| Housing | polycarbonate | |
| Optics cover | plastic | |
| Weight | 150g | |
| Connection type | spring terminals, max. wire cross section 1.5mm ² cable 2000mm, 3/5 x 0.5mm ² | |
| Environmental data | | |
| Ambient temp. (operation/storage) | -40°C ... +60°C/-40°C ... +70°C | |
| Protective circuit ⁴⁾ | 1, 2, 3 | |
| VDE safety class ⁵⁾ | II, all-insulated | |
| Degree of protection | IP 67, IP 69K ⁶⁾ | |
| Light source | exempt group (in acc. with EN 62471) | |
| Standards applied | IEC 60947-5-2 | |
| Options | | |
| Switching function (teach level 1) | light switching (factory setting) or dark switching | |
| Time module (teach level 2) | active: dropout delay 500ms not active:no dropout delay (factory setting) | |
| Optics heating | | |
| Current consumption | approx. 70mA at 20VDC | |

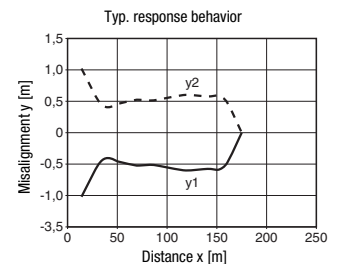
Tables

| | | |
|-------|-----|-----|
| 0/0,5 | 120 | 150 |
|-------|-----|-----|

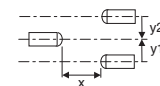
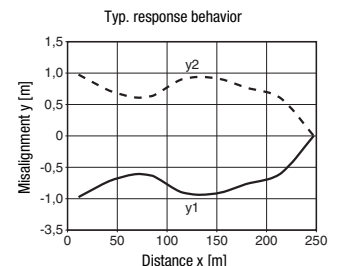
Operating range [m]
 Typ. operating range limit [m]

Diagrams

L49C... with red light



L49CI... with infrared light



Remarks

Operate in accordance with intended use!

- ⚠ This product is not a safety sensor and is not intended as personnel protection.
- ⚠ The product may only be put into operation by competent persons.
- ⚠ Only use the product in accordance with the intended use.

L49C MOSFET

Throughbeam photoelectric sensors

Part number code

| | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Transmitter | L | S | 4 | 9 | C | I | . | U | C | H | | | | | - | T | B |
| Receiver | L | E | 4 | 9 | C | I | . | U | C | H | 1 | / | M | 4 | - | T | B |

Operating principle

LS Throughbeam photoelectric sensor, transmitter

LE Throughbeam photoelectric sensor, receiver

Series

49C 49C series

Light type

I Infrared light

free Red light

Operating voltage

UC 20 ... 250VAC/DC (all-mains design)

Equipment

H Optics heating

Setting (receiver)

1 Potentiometer, teach button (light/dark switching, time module activation)

Switching output (receiver)

TS Relay, normally closed contact/normally open contact (NC/NO)

M4 Low-impedance MOSFET semiconductor switching output, normally open contact (NO)

Connection technology

TB Terminal block - terminal compartment with spring terminals (5 x 1.5mm²)

free Cable 2000mm

Order guide

The sensors listed here are preferred types; current information at www.leuze.com.

All-mains designs with MOSFET semiconductor output

Designation

Part no.

| | | Designation | Part no. | |
|--------------------------------|---|---|-----------------|----------|
| TRANSMITTER | Terminal compartment with spring terminals (5 x 1.5mm²) | | | |
| | Red light | LS49C.UC-TB | 50127437 | |
| | Infrared light | LS49CI.UC-TB | 50127439 | |
| | Red light, optics heating | LS49C.UCH-TB | 50130462 | |
| | Infrared light, optics heating | LS49CI.UCH-TB | 50130463 | |
| | Cable, cable length 2m | | | |
| | Red light | LS49C.UC | 50127438 | |
| | Infrared light | LS49CI.UC | 50127440 | |
| | RECEIVER | Terminal compartment with spring terminals (5 x 1.5mm²) | | |
| | | Red light | LE49C.UC1/M4-TB | 50127443 |
| Infrared light | | LE49CI.UC1/M4-TB | 50127447 | |
| Red light, optics heating | | LE49C.UCH1/M4-TB | 50130465 | |
| Infrared light, optics heating | | LE49CI.UCH1/M4-TB | 50130466 | |
| Cable, cable length 2m | | | | |
| Red light | | LE49C.UC1/M4 | 50127444 | |
| Infrared light | | LE49CI.UC1/M4 | 50127448 | |

| Transmitter/receiver combinations ¹⁾ | | TRANSMITTER | | RECEIVER |
|---|-------------------------------------|-------------|---|----------|
| Red light | Terminal connection | 50127437 | + | 50127443 |
| | Terminal connection, optics heating | 50130462 | + | 50130465 |
| | Connection cable | 50127438 | + | 50127444 |
| Infrared light | Terminal connection | 50127439 | + | 50127447 |
| | Terminal connection, optics heating | 50130463 | + | 50130466 |
| | Connection cable | 50127440 | + | 50127448 |

1) Combinations of red-light devices and infrared-light devices are not possible; combinations of devices with terminal connection and devices with connection cable are possible if both devices are of the same light type

Teach procedure for sensor




Note

Factory setting: **light switching, time module not active**


Light/dark switching

Setting the switching behavior of the MOSFET output

| | | |
|----------------------|---|---|
| Teach level 1 | <p>Press teach button (2 to 7s) until both LEDs (green/yellow) flash synchronously. Release teach button – switchover is complete.</p> <p>The yellow LED then indicates the current setting of the switching output for 3s:</p> <p>ON = light switching = output between pin 4 and pin 5: normally open contact (NO) OFF = dark switching = output between pin 4 and pin 5: normally closed contact (NC)</p> |  |
|----------------------|---|---|

Activation/deactivation of the time module

Setting a dropout delay for the MOSFET output

| | | |
|----------------------|--|---|
| Teach level 2 | <p>Press teach button (7 to 12s) until both LEDs (green/yellow) flash alternately. Release teach button – activation/deactivation is complete.</p> <p>The yellow LED then indicates the current setting of the dropout delay for 3s:</p> <p>ON = time module not active = no dropout delay for the MOSFET output OFF = time module active = dropout delay for the MOSFET output: 500ms ¹⁾</p> |  |
|----------------------|--|---|

1) Additional models on request

Dropout delay: if the object is no longer present, the output switches with a time delay.