

## Technical data sheet

## Throughbeam photoelectric sensor

Part no.: 50134450

LS49C-TB



Figure can vary

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## Technical data

### Basic data

Series	49C
Operating principle	Throughbeam principle
Device type	Transmitter

### Optical data

Operating range	Guaranteed operating range
Operating range	0.5 ... 120 m
Operating range limit	Typical operating range
Operating range limit	0 ... 150 m
Light source	LED, Red
LED light wavelength	630 nm
Transmitted-signal shape	Pulsed
LED group	Exempt group (in acc. with EN 62471)

### Electrical data

Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection
<b>Performance data</b>	
Supply voltage $U_B$	10 ... 30 V, DC, Incl. residual ripple
Residual ripple	0 ... 15 %, From $U_B$
Open-circuit current	0 ... 20 mA

### Timing

Readiness delay	300 ms
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### Connection

<b>Connection 1</b>	
Function	Voltage supply
Type of connection	Terminal
Type of terminal	Spring-cage terminal
No. of pins	5 -pin

### Mechanical data

Dimension (W x H x L)	31 mm x 104 mm x 55.5 mm
Housing material	Plastic, PC
Lens cover material	Plastic
Net weight	150 g
Housing color	Red
Type of fastening	Through-hole mounting
	Via optional mounting device

### Operation and display

Type of display	LED
Number of LEDs	3 Piece(s)

### Environmental data

Ambient temperature, operation	-40 ... 60 °C
Ambient temperature, storage	-40 ... 70 °C

### Certifications

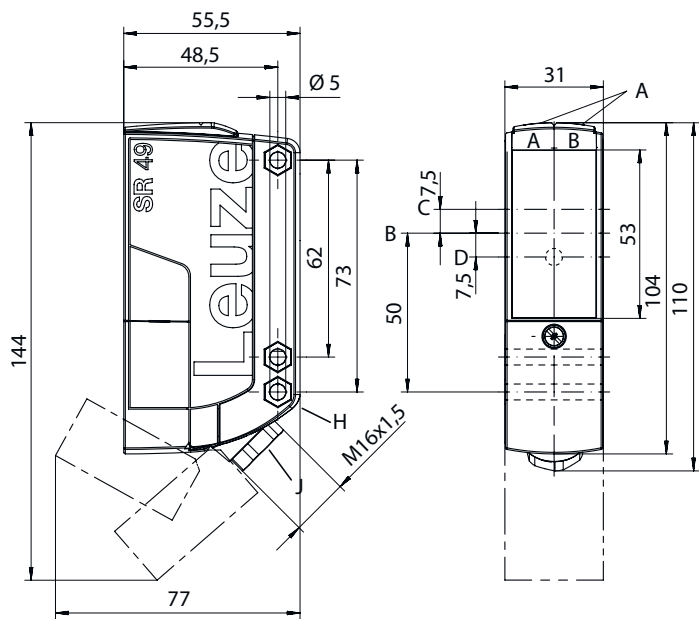
Degree of protection	IP 67
Protection class	II
Certifications	c UL US
Standards applied	IEC 60947-5-2

### Classification

Customs tariff number	85365019
eCl@ss 8.0	27270901
eCl@ss 9.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716

Dimensioned drawings

All dimensions in millimeters



- AA

Green LED
- AB

Yellow LED
- B

Optical axis
- C

Transmitter
- D

Yellow LED
- G

Countersinking for SK nut M5, 4.2 mm deep
- J

Cable entry with M16x1.5 screw fitting for Ø 5 ... 10mm

Electrical connection

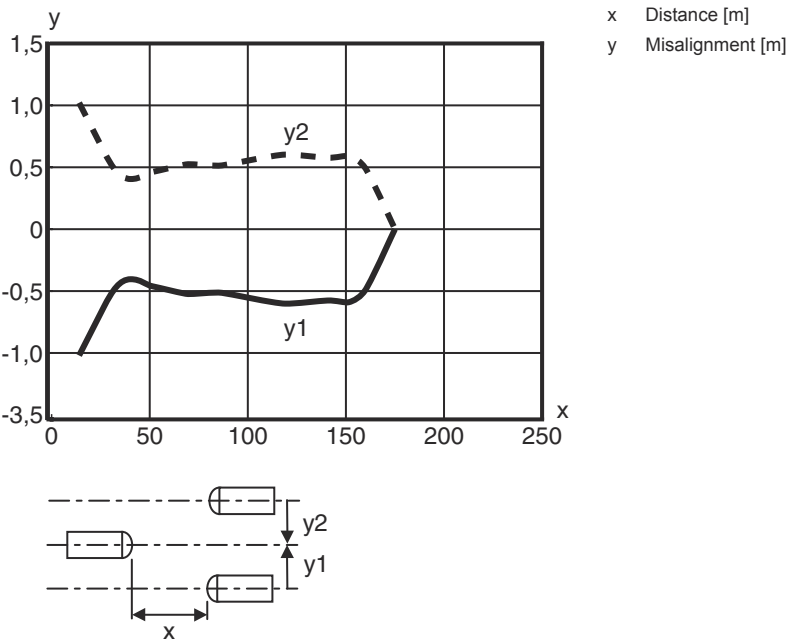
Connection 1

Function	Voltage supply
Type of connection	Terminal
Type of terminal	Spring-cage terminal
No. of pins	5 -pin

Pin	Pin assignment
	1
1	V+
	2
2	GND
	3
3	n.c.
	4
4	n.c.
	5
5	n.c.

Diagrams




Typ. response behavior




Operation and display

LED	Display	Meaning
1	Green, continuous light	Operational readiness
2	Yellow, continuous light	Operating voltage applied
3	Yellow, continuous light (behind lens cover)	Transmitted beam active

Suitable receivers

	Part no.	Designation	Article	Description
	50134456	LE49C.1/4P-TB	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 150 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching output 2: Transistor, PNP, Dark switching Switching frequency: 500 Hz Connection: Terminal, 5 -pin Operational controls: Teach button, 270° potentiometer
	50134455	LE49C/2N-TB	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 150 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, NPN, Light switching Switching output 2: Transistor, NPN, Dark switching Switching frequency: 500 Hz Connection: Terminal, 5 -pin
	50134454	LE49C/4P-TB	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 150 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching output 2: Transistor, PNP, Dark switching Switching frequency: 500 Hz Connection: Terminal, 5 -pin

## Suitable receivers

	Part no.	Designation	Article	Description
	50134457	LE49C/4W-TB	Throughbeam photoelectric sensor receiver	Special version: Warning output Operating range limit: 0 ... 150 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching output 2: Transistor, PNP, UB switching Switching frequency: 500 Hz Connection: Terminal, 5 -pin

## Part number code

Part designation: **AAA49Cd.EEfG/iJ-KL**

<b>AAA49C</b>	<b>Operating principle / construction</b> PRK49C: retro-reflective photoelectric sensor with polarization filter HT49C: diffuse reflection sensor with background suppression LS49C: throughbeam photoelectric sensor transmitter LE49C: throughbeam photoelectric sensor receiver
<b>d</b>	<b>Light type</b> n/a: red light l: infrared light
<b>EE</b>	<b>Operating voltage</b> n/a: 10 ... 30 V, DC UC: 20 ... 250V AC/DC (all-mains design)
<b>f</b>	<b>Equipment</b> H: with heating D: depolarizing media 1: 270° potentiometer 8: activation input (activation with high signal)
<b>iJ</b>	<b>Switching output / Function / OUT1OUT2</b> 2: NPN transistor output, light switching N: NPN transistor output, dark switching 4: PNP transistor output, light switching P: PNP transistor output, dark switching W: warning output TS: Relay, NC contact/NO contact M4: Low impedance MOSFET semiconductor switching output, NO contact
<b>KL</b>	<b>Electrical connection</b> TB: Terminal block - terminal compartment with spring terminals (5 x 1.5 mm²) n/a: cable, standard length 2000 mm

### Note



A list with all available device types can be found on the Leuze website at [www.leuze.com](http://www.leuze.com).

## Notes



### Observe 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 its intended use.

## Notes

### For UL applications:



- For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
- These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/ CYJV7 or PVVA/PVVA7)

## Further information

- All-insulated, rating voltage 250 VAC

## Accessories

### Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50025570	BT 96	Mounting device	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal

### Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50128380	BTU 460M-D12	Mounting system	Design of mounting device: Mounting system Fastening, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Adjustable, Turning, 360° Material: Metal

### Note



- A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.