



**Part no.: 50134450**  
**LS49C-TB**  
**Throughbeam photoelectric sensor**  
**transmitter**



Figure can vary

## Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Diagrams
- Operation and display
- Suitable receivers
- Part number code
- Notes
- Accessories

## Technical data

<b>Basic data</b>	
Series	49C
Operating principle	Throughbeam principle
Device type	Transmitter
<b>Optical data</b>	
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)
<b>Electrical data</b>	
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
<b>Timing</b>	
Readiness delay	300 ms
<b>Connection</b>	
<b>Connection 1</b>	
Function	Voltage supply
Type of connection	Terminal
Type of terminal	Spring-cage terminal
No. of pins	5 -pin
<b>Mechanical data</b>	
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
<b>Operation and display</b>	
Type of display	LED
Number of LEDs	3 Piece(s)
<b>Environmental data</b>	

## Part no.: 50134450 – LS49C-TB – Throughbeam photoelectric sensor transmitter

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

### Certifications

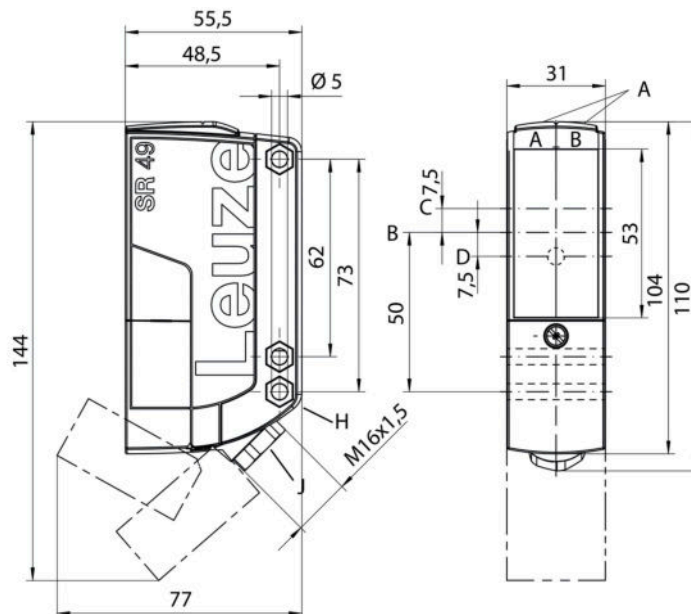
Degree of protection	IP 67
Protection class	II
Certifications	c UL US
Standards applied	IEC 60947-5-2

### 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 M16 x 1.5 screw fitting for Ø 5 ... 10 mm

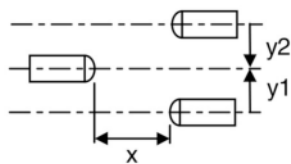
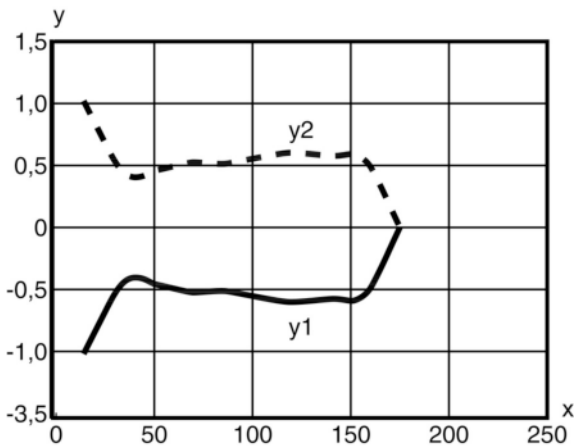
## Electrical connection

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

Terminal	Assignment
1	V+
2	GND
3	n.c.
4	n.c.
5	n.c.

## Diagrams

Typ. response behavior



x Distance [m]  
y Misalignment [m]

## Operation and display





LEDs

LED	Display	Meaning
1	Green, continuous light	Operational readiness

## Part no.: 50134450 – LS49C-TB – Throughbeam photoelectric sensor transmitter

LED	Display	Meaning
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
	50134457	LE49C/4W-TB	Throughbeam photoelectric sensor receiver	Special design: 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**

AAA49C	<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
d	<b>Light type:</b> n/a: red light l: infrared light
EE	<b>Operating voltage:</b> n/a: 10 ... 30 V, DC UC: 20 ... 250V AC/DC (all-mains design)
f	<b>Equipment:</b> H: with heating D: depolarizing media 1: 270° potentiometer 8: activation input (activation with high signal)
iJ	<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

Part no.: 50134450 – LS49C-TB – Throughbeam photoelectric sensor transmitter

KL	<b>Electrical connection:</b> TB: Terminal block - terminal compartment with spring terminals (5 x 1.5 mm <sup>2</sup> ) n/a: cable, standard length 2000 mm
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<b>Note</b>
A list with all available device types can be found on the Leuze electronic website at <a href="http://www.leuze.com">www.leuze.com</a> .

## Notes


<b>Observe intended use!</b>
<ul style="list-style-type: none"> <li>• This product is not a safety sensor and is not intended as personnel protection.</li> <li>• The product may only be put into operation by competent persons.</li> <li>• Only use the product in accordance with its intended use.</li> </ul>

<b>For UL applications:</b>
<ul style="list-style-type: none"> <li>• For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).</li> <li>• 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)</li> </ul>


- 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

Part no.: 50134450 – LS49C-TB – Throughbeam photoelectric sensor transmitter

**Note**

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