

Technical data sheet

Throughbeam photoelectric sensor

Part no.: 50134455

LE49C/2N-TB



Figure can vary

Contents

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



Technical data

Basic data

Series	49C
Operating principle	Throughbeam principle
Device type	Receiver

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

Electrical data

Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection

Performance data

Supply voltage U_B	10 ... 30 V, DC, Incl. residual ripple
Residual ripple	0 ... 15 %, From U_B
Open-circuit current	0 ... 20 mA

Outputs

Number of digital switching outputs	2 Piece(s)
-------------------------------------	------------

Switching outputs

Voltage type	DC
Switching current, max.	100 mA
Switching voltage	high: $\geq(U_B - 2V)$
	Low: $\leq 2V$

Switching output 1

Assignment	Connection 1, pin 3
Switching element	Transistor, NPN
Switching principle	Light switching

Switching output 2

Assignment	Connection 1, pin 4
Switching element	Transistor, NPN
Switching principle	Dark switching

Timing

Switching frequency	500 Hz
Response time	1 ms
Readiness delay	300 ms

Connection 1

Function	Signal OUT
	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

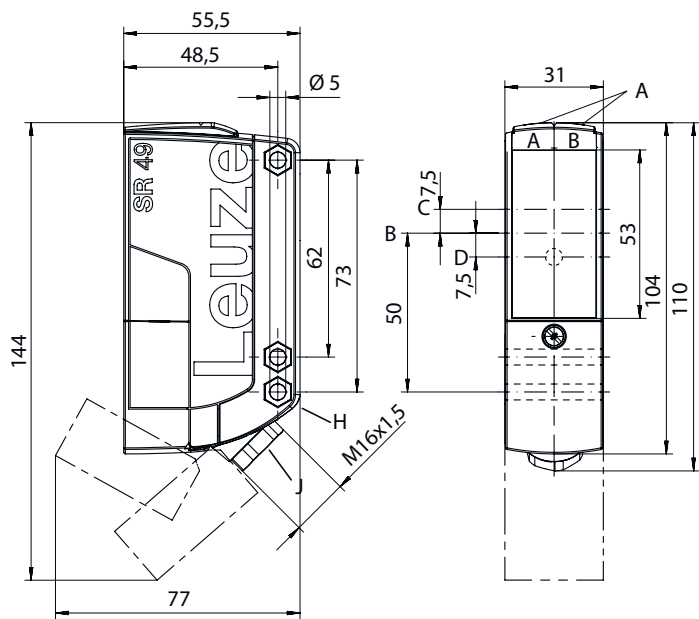
Degree of protection	IP 67
Protection class	II
Certifications	c UL US
Standards applied	IEC 60947-5-2

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

Receiver
- D

Yellow LED
- G

Countersinking for SK nut M5, 4.2 mm deep
- J

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

Electrical connection

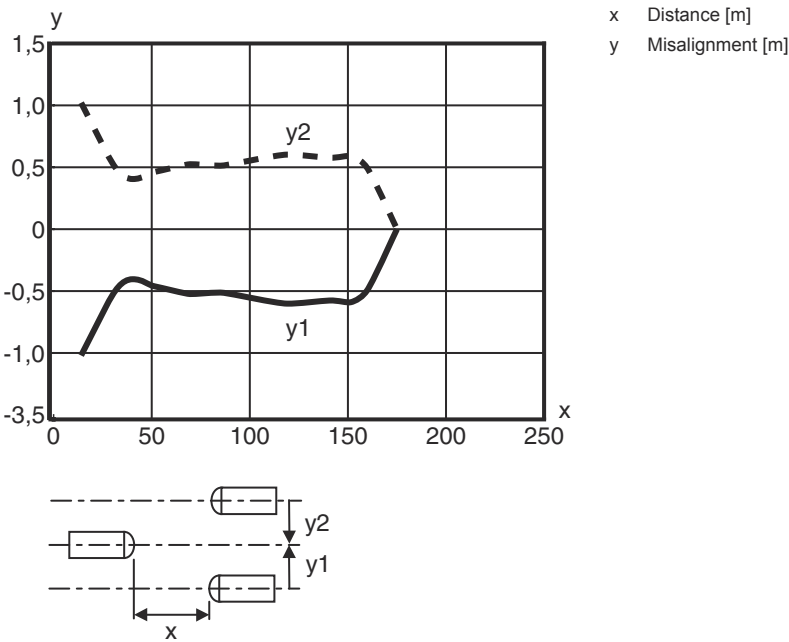
Connection 1

Function	Signal OUT
	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	OUT 1
	4
4	OUT 2
	5
5	n.c.

Diagrams

Typ. response behavior



Operation and display

LED	Display	Meaning
1	Green, continuous light	Operational readiness
2	Yellow, continuous light	Light path free
	Yellow, flashing	Light path free, no function reserve
3	Yellow, continuous light (behind lens cover)	Light path free
	Yellow, flashing (behind lens cover)	Light path free, minimum function reserve

Suitable transmitters

	Part no.	Designation	Article	Description
	50134450	LS49C-TB	Throughbeam photoelectric sensor transmitter	Operating range limit: 0 ... 150 m Light source: LED, Red Supply voltage: DC Connection: Terminal, 5 -pin
	50134451	LS49C.8-TB	Throughbeam photoelectric sensor transmitter	Special version: Activation input Operating range limit: 0 ... 150 m Light source: LED, Red Supply voltage: DC Connection: Terminal, 5 -pin

Part number code

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

AAA49C	Operating principle / construction 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	Light type n/a: red light I: infrared light
EE	Operating voltage n/a: 10 ... 30 V, DC UC: 20 ... 250V AC/DC (all-mains design)
f	Equipment H: with heating D: depolarizing media 1: 270° potentiometer 8: activation input (activation with high signal)
iJ	Switching output / Function / OUT1OUT2 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
KL	Electrical connection TB: Terminal block - terminal compartment with spring terminals (5 x 1.5 mm ²) 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.

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.

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.