

Technical data sheet

Throughbeam photoelectric sensor transmitter

Part no.: 50134451

LS49C.8-TB



For illustration purposes only

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Technical data

Basic data

| | |
|---------------------|-----------------------|
| Series | 49C |
| Operating principle | Throughbeam principle |
| Device type | Transmitter |

Special version

| | |
|-----------------|------------------|
| Special version | Activation input |
|-----------------|------------------|

Optical data

| | |
|--------------------------|--------------------------------------|
| Operating range | 0.5 ... 120 m |
| Operating range | Guaranteed operating range |
| Operating range limit | Typical operating range |
| Operating range limit | 0 ... 150 m |
| Light source | LED, Red |
| 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 |

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 |

Inputs

| | |
|-----------------------------|------------|
| Number of activation inputs | 1 Piece(s) |
|-----------------------------|------------|

Activation inputs

| | |
|--------------------------|------------------------|
| Voltage type | DC |
| Switching voltage | high: $\geq 8V$ |
| | low: $\leq 2 V$ |
| Activation/disable delay | 1 ms |
| Input resistance | 10,000 Ω , 10 % |

Activation input 1

| | |
|------------------------|---------------------|
| Assignment | Connection 1, pin 3 |
| Active switching state | High |

Time behavior

| | |
|-----------------|--------|
| Readiness delay | 300 ms |
|-----------------|--------|

Connection

Connection 1

| | |
|--------------------|----------------------|
| Function | Signal IN |
| | 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 |
| Plastic housing | 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

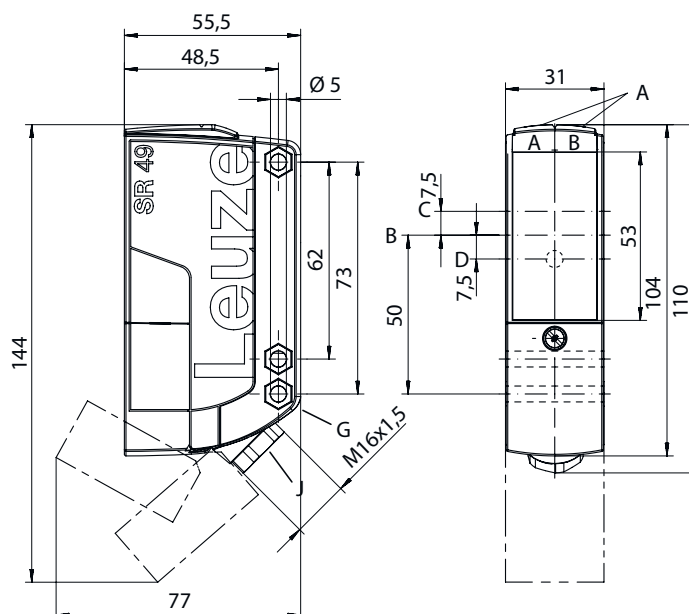
| | |
|----------------------|---------------|
| Degree of protection | IP 67 |
| Protection class | II |
| Certifications | c UL US |
| Standards applied | IEC 60947-5-2 |

Classification

| | |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| ECLASS 5.1.4 | 27270901 |
| ECLASS 8.0 | 27270901 |
| ECLASS 9.0 | 27270901 |
| ECLASS 10.0 | 27270901 |
| ECLASS 11.0 | 27270901 |
| ECLASS 12.0 | 27270901 |
| ECLASS 13.0 | 27270901 |
| ECLASS 14.0 | 27270901 |
| ETIM 5.0 | EC002716 |
| ETIM 6.0 | EC002716 |
| ETIM 7.0 | EC002716 |
| ETIM 8.0 | EC002716 |
| ETIM 9.0 | 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 \varnothing 5 ... 10 mm

Electrical connection

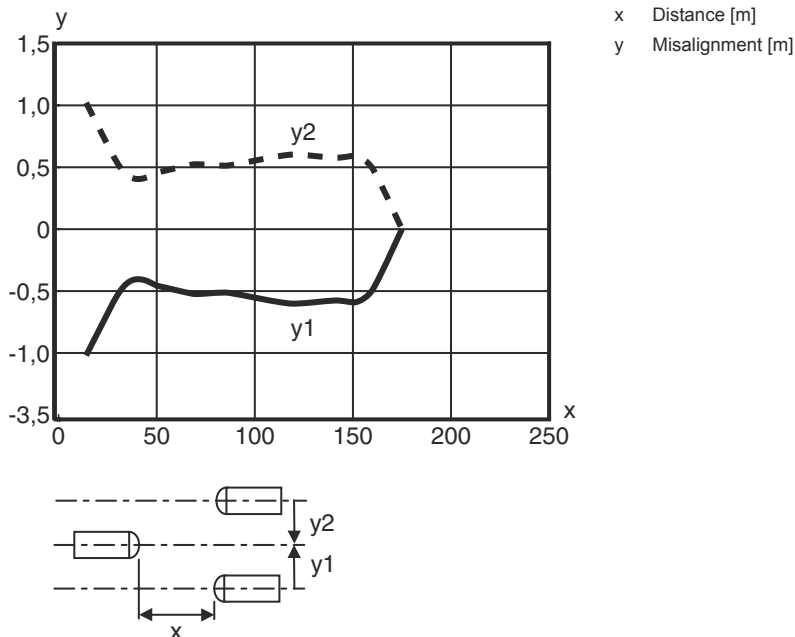
Connection 1

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

| Terminal | Assignment |
|----------|------------|
| 1 | V+ |
| 2 | GND |
| 3 | IN 1 |
| 4 | n.c. |
| 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 (alignment display 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

| | |
|---------------|--|
| 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 l: 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 X: pin not used |
| KL | Electrical connection TB: Terminal block - terminal compartment with spring terminals (5 x 1.5mm ²) n/a: cable, standard length 2000 mm M12: M12 connector, 4-pin (plug) |

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.

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.