

## Technical data sheet

### Throughbeam photoelectric sensor receiver

Part no.: 50134455

LE49C/2N-TB



For illustration purposes only

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## Technical data

### Basic data

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

### Optical data

|                 |                 |
|-----------------|-----------------|
| Operating range | see transmitter |
|-----------------|-----------------|

### 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

|                         |                          |
|-------------------------|--------------------------|
| Type                    | Digital switching output |
| Voltage type            | DC                       |
| Switching current, max. | 100 mA                   |
| Switching voltage       | high: $\geq(U_B - 2V)$   |
|                         | low: $\leq 2 V$          |

#### 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      |

### Time behavior

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

### Connection

|                       |            |
|-----------------------|------------|
| Number of connections | 1 Piece(s) |
|-----------------------|------------|

#### 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                      |
| Plastic housing                                | PC                           |
| Lens cover material                            | Plastic                      |
| Net weight                                     | 150 g                        |
| Housing color                                  | Red                          |
| Type of fastening                              | Through-hole mounting        |
|                                                | Via optional mounting device |
| Recommended tightening torque for M3 fastening | 0.9 N·m                      |
| Recommended tightening torque for M4 fastening | 1.4 N·m                      |

### 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

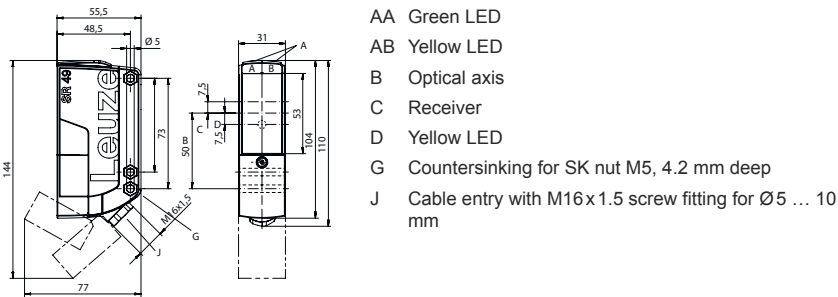
|                      |               |
|----------------------|---------------|
| Degree of protection | IP 67         |
| Protection class     | II            |
| Approvals            | c UL US       |
| Standards applied    | IEC 60947-5-2 |

### 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 |
| ECLASS 15.0           | 27270901 |
| ETIM 5.0              | EC002716 |
| ETIM 6.0              | EC002716 |
| ETIM 7.0              | EC002716 |
| ETIM 8.0              | EC002716 |
| ETIM 9.0              | EC002716 |
| ETIM 10.0             | EC002716 |

Dimensioned drawings

All dimensions in millimeters



Electrical connection

Connection 1

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

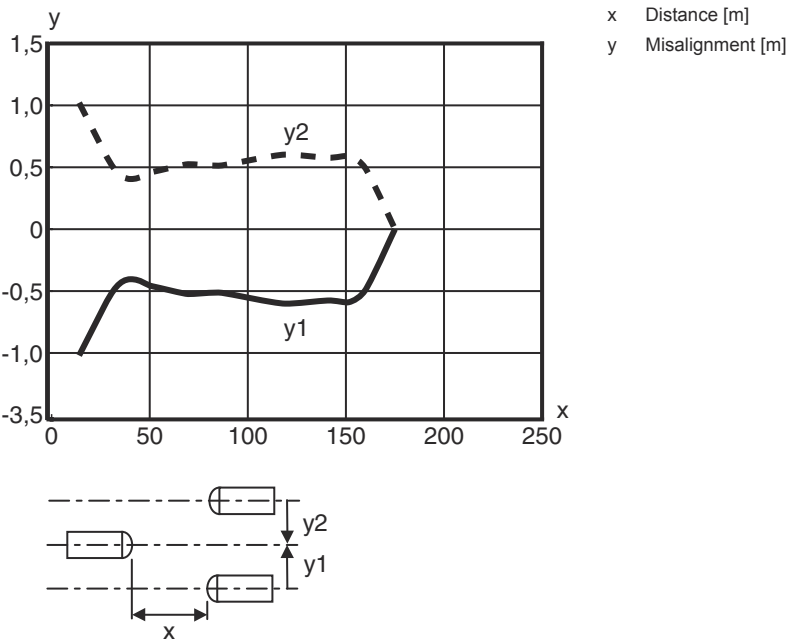
Terminal

Assignment

|   |       |
|---|-------|
| 1 | V+    |
| 2 | GND   |
| 3 | OUT 1 |
| 4 | OUT 2 |
| 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 ( <b>alignment display</b> behind lens cover) | Light path free                           |
|     | Yellow, flashing ( <b>alignment display</b> behind lens cover)         | Light path free, minimum function reserve |

Suitable transmitters

|                                                                                     | Part no. | Designation | Operating range<br>Operating range<br>limit | Description                                                                                                                                             |
|-------------------------------------------------------------------------------------|----------|-------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50134450 | LS49C-TB    | 0.5 ... 120 m<br>0 ... 150 m                | Operating range limit: 0 ... 150 m<br>Light source: LED, Red<br>Supply voltage: DC<br>Connection: Terminal, 5 -pin                                      |
|  | 50134451 | LS49C.8-TB  | 0.5 ... 120 m<br>0 ... 150 m                | Special version: Activation input<br>Operating range limit: 0 ... 150 m<br>Light source: LED, Red<br>Supply voltage: DC<br>Connection: Terminal, 5 -pin |

## Part number code

Part designation: AAA49Cd.EEfG/iJ-KL

|               |                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AAA49C</b> | <b>Operating principle / construction</b><br>PRK49C: Retro-reflective photoelectric sensor with polarization filter<br>HT49C: Diffuse reflection sensor with background suppression<br>LS49C: Throughbeam photoelectric sensor transmitter<br>LE49C: Throughbeam photoelectric sensor receiver                                                                                     |
| <b>d</b>      | <b>Light type</b><br>n/a: red light<br>I: infrared light                                                                                                                                                                                                                                                                                                                           |
| <b>EE</b>     | <b>Operating voltage</b><br>n/a: 10 ... 30 V, DC<br>UC: 20 ... 250V AC/DC (all-mains design)                                                                                                                                                                                                                                                                                       |
| <b>f</b>      | <b>Equipment</b><br>H: with heating<br>D: Depolarizing media<br>1: 270° potentiometer<br>8: activation input (activation with high signal)                                                                                                                                                                                                                                         |
| <b>iJ</b>     | <b>Switching output / Function / OUT1OUT2</b><br>2: NPN transistor output, light switching<br>N: NPN transistor output, dark switching<br>4: PNP transistor output, light switching<br>P: PNP transistor output, dark switching<br>W: warning output<br>TS: Relay, NC contact/NO contact<br>M4: Low impedance MOSFET semiconductor switching output, NO contact<br>X: pin not used |
| <b>KL</b>     | <b>Electrical connection</b><br>TB: Terminal block - terminal compartment with spring terminals (5 x 1.5mm <sup>2</sup> )<br>n/a: cable, standard length 2000 mm<br>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](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.

### 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<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Rigid<br>Material: Metal |

### Mounting technology - Rod mounts

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