

## Technical data sheet

### Throughbeam photoelectric sensor

Part no.: 50130465

LE49C.UCH1/M4-TB



Figure can vary

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## Technical data

### Basic data

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

### Special version

|                 |         |
|-----------------|---------|
| Special version | Heating |
|-----------------|---------|

### Optical data

|                       |                            |
|-----------------------|----------------------------|
| Operating range       | Guaranteed operating range |
| Operating range       | 0 ... 120 m                |
| Operating range limit | Typical operating range    |
| Operating range limit | 0.5 ... 150 m              |

### Electrical data

|                    |                                                                                 |
|--------------------|---------------------------------------------------------------------------------|
| Protective circuit | Polarity reversal protection<br>Short circuit protected<br>Transient protection |
|--------------------|---------------------------------------------------------------------------------|

### Performance data

|                             |                     |
|-----------------------------|---------------------|
| Supply voltage $U_B$        | 20 ... 250 V, AC/DC |
| Power consumption (with AC) | 1.5 V·A             |

### Outputs

|                                     |            |
|-------------------------------------|------------|
| Number of digital switching outputs | 1 Piece(s) |
|-------------------------------------|------------|

### Switching outputs

|                         |             |
|-------------------------|-------------|
| Voltage type            | AC/DC       |
| Switching current, max. | 400 mA      |
| Switching power         | 100 V·A     |
| Switching voltage       | 250 V AC/DC |

### Switching output 1

|                     |                                          |
|---------------------|------------------------------------------|
| Assignment          | Connection 1, pin 4                      |
| Switching element   | MOSFET semiconductor, NO (normally open) |
| Switching principle | Light/dark reversible                    |

### Timing

|                     |        |
|---------------------|--------|
| Switching frequency | 150 Hz |
| Response time       | 3.3 ms |
| Readiness delay     | 300 ms |

### Connection

|                    |                              |
|--------------------|------------------------------|
| Connection 1       |                              |
| Function           | Signal OUT<br>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<br>Via optional mounting device |

### Operation and display

|                                     |                                                                                                   |
|-------------------------------------|---------------------------------------------------------------------------------------------------|
| Type of display                     | LED                                                                                               |
| Number of LEDs                      | 3 Piece(s)                                                                                        |
| Operational controls                | 270° potentiometer<br>Teach button                                                                |
| Function of the operational control | Activation of the time module for dropout delay<br>Light/dark switching<br>Sensitivity adjustment |

### 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 |

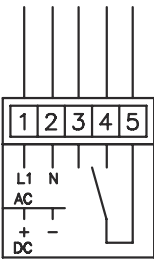
### Classification

|                       |          |
|-----------------------|----------|
| Customs tariff number | 85365080 |
| eCl@ss 8.0            | 27270901 |
| eCl@ss 9.0            | 27270901 |
| ETIM 5.0              | EC002716 |
| ETIM 6.0              | EC002716 |

All dimensions in millimeters

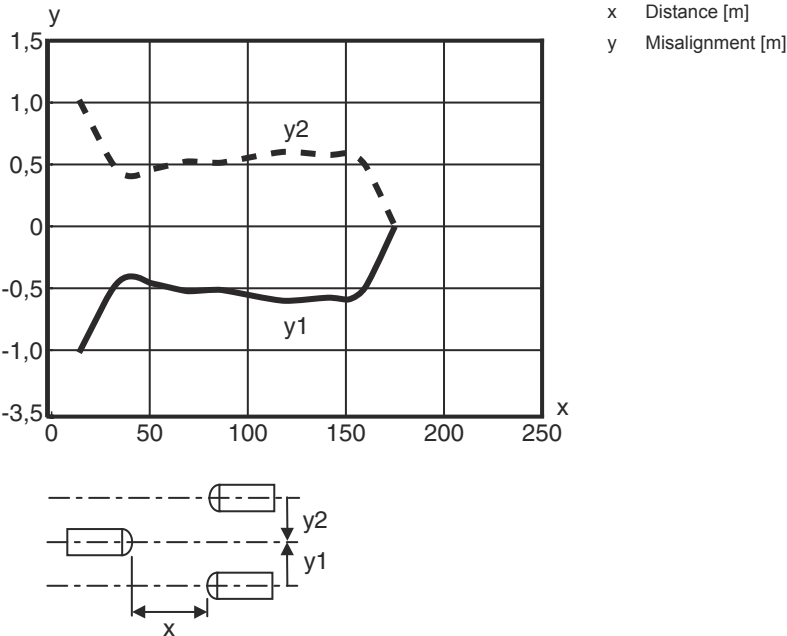
- |    |              |   |                                           |   |                                                           |
|----|--------------|---|-------------------------------------------|---|-----------------------------------------------------------|
| AA | Green LED    | D | Yellow LED                                | J | Cable entry with M16x 1.5 screw fitting for Ø 5 ... 10 mm |
| AB | Yellow LED   | E | Sensitivity adjustment                    |   |                                                           |
| B  | Optical axis | F | Teach button                              |   |                                                           |
| C  | Receiver     | G | Countersinking for SK nut M5, 4.2 mm deep |   |                                                           |

Circuit diagrams



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                                                                                                                                       |
|-----------------------------------------------------------------------------------|----------|--------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50130462 | LS49C.UCH/TB | Throughbeam photoelectric sensor transmitter | Special version: Heating<br>Operating range limit: 0 ... 150 m<br>Light source: LED, Red<br>Supply voltage: AC/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>l: 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 |
| <b>KL</b>     | <b>Electrical connection</b><br>TB: Terminal block - terminal compartment with spring terminals (5 x 1.5mm²)<br>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.

## Further information

- All-insulated, rating voltage 250 VAC
- With inductive or capacitive load, provide suitable spark extinction (snubber)

## 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.