



Part no.: 50127422
PRK49C.UC/TS-TB
Polarized retro-reflective photoelectric sensor



Figure can vary

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Diagrams
- Operation and display
- Reflectors & reflective tapes
- Part number code
- Notes
- Accessories

Technical data

| Basic data | |
|---------------------|----------------------|
| Series | 49C |
| Operating principle | Reflection principle |

| Optical data | |
|--------------------------------------|---|
| Operating range | Guaranteed operating range |
| Operating range | 0.1 ... 24 m , With reflector TK(S) 100x100 |
| Operating range limit | Typical operating range |
| Operating range limit | 0.1 ... 30 m , With reflector TK(S) 100x100 |
| Beam path | Divergent |
| Light source | LED , Red |
| LED light wavelength | 630 nm |
| LED group | Exempt group (in acc. with EN 62471) |
| Transmitted-signal shape | Pulsed |
| Light spot size [at sensor distance] | 130 mm [6,000 mm] |
| Type of light spot geometry | Round |

| Electrical data | |
|------------------------|---|
| Protective circuit | Interference blanking 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 | 2 Piece(s) |

| Switching outputs | |
|--------------------------|-------------|
| Voltage type | AC/DC |
| Switching current, max. | 2,500 mA |
| Switching voltage | 250 V AC/DC |

| Switching output 1 | |
|---------------------------|-----------------------|
| Assignment | Connection 1, pin 3 |
| Switching element | Relay , NC |
| Switching principle | Light/dark reversible |

| Switching output 2 | |
|---------------------------|-----------------------|
| Assignment | Connection 1, pin 5 |
| Switching element | Relay , NO |
| Switching principle | Light/dark reversible |

| Timing | |
|---------------------|--------|
| Switching frequency | 25 Hz |
| Response time | 20 ms |
| Readiness delay | 300 ms |

| Connection | |
|-------------------|--|
|-------------------|--|

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 | 2 Piece(s) |

Environmental data

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

Certifications

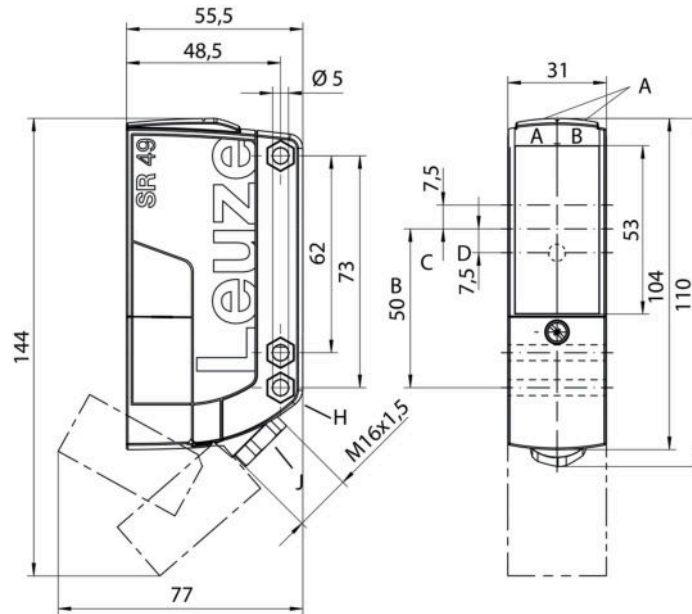
| | |
|----------------------|---------------|
| Degree of protection | IP 67 |
| Protection class | II |
| Certifications | c UL US |
| Standards applied | IEC 60947-5-2 |

Classification

| | |
|-----------------------|----------|
| Customs tariff number | 85365080 |
| eCl@ss 8.0 | 27270902 |
| eCl@ss 9.0 | 27270902 |
| ETIM 5.0 | EC002717 |
| ETIM 6.0 | EC002717 |

Dimensioned drawings

All dimensions in millimeters



- AA Green LED
- AB Yellow LED
- B Optical axis
- C Receiver
- D Transmitter
- H Countersinking for SK nut M5, 4.2 mm deep
- J Cable entry with M16 x 1.5 screw fitting for Ø 5 ... 10 mm

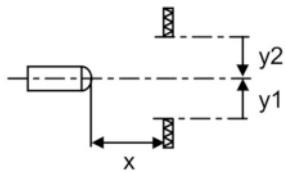
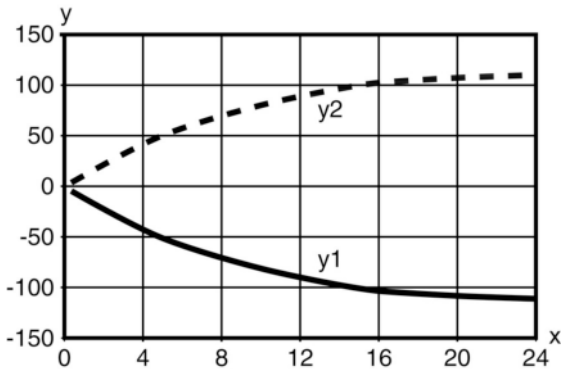
Electrical connection

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

| Terminal | Assignment |
|----------|------------|
| 1 | + / L1 |
| 2 | - / N |
| 3 | OUT 1 |
| 4 | Base point |
| 5 | OUT 2 |

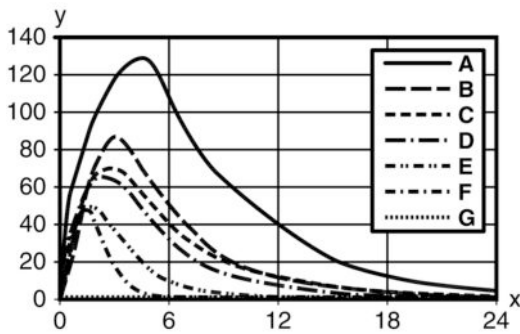
Diagrams

Typ. response behavior (TKS100x100)



x Distance [m]
y Misalignment [mm]

Typ. function reserve









x Distance [m]
y Misalignment [mm]
A TKS 100x100
B TK 82.2
C MTKS 50x50.1
D TKS 40x60
E TKS 20x40
F Film REF 4-A-50x50
G Switching point

Operation and display



LEDs

| LED | Display | Meaning |
|-----|--------------------------|--------------------------------------|
| 1 | Green, continuous light | Operational readiness |
| 2 | Yellow, continuous light | Light path free |
| | Yellow, flashing | Light path free, no function reserve |

Reflectors & reflective tapes

| | Part no. | Designation | Operating range/ Operating range limit | Description |
|---|----------|---------------|---|--|
|  | 50117583 | MTKS 50x50.1 | 0.3 ... 15 m 0.1 ... 18 m | Design: Rectangular Reflective surface: 50 mm x 50 mm Triple reflector size: 1.2 mm Material: Plastic Base material: Plastic Chemical designation of the material: PMMA8N Fastening: Through-hole mounting, Adhesive |
|  | 50108300 | REF 4-A-50x50 | 0.3 ... 4 m 0.1 ... 5 m | Design: Rectangular Reflective surface: 50 mm x 50 mm Material: Plastic Chemical designation of the material: PMMA Fastening: Self-adhesive |
|  | 50003192 | TK 100x100 | 0.3 ... 24 m 0.1 ... 30 m | Design: Rectangular Reflective surface: 96 mm x 96 mm Triple reflector size: 4 mm Material: Plastic Base material: Plastic Chemical designation of the material: PMMA8N Fastening: Adhesive |
|  | 50003189 | TK 30x50 | 0.3 ... 12 m 0.1 ... 15 m | Design: Rectangular Reflective surface: 29 mm x 45 mm Triple reflector size: 4 mm Material: Plastic Base material: Plastic Chemical designation of the material: PMMA8N Fastening: Adhesive |
|  | 50024127 | TK 82.2 | 0.3 ... 15 m 0.1 ... 18 m | Design: Round Triple reflector size: 4 mm Reflection surface diameter: 79 mm Material: Plastic Base material: Plastic Chemical designation of the material: PMMA8N Fastening: Through-hole mounting, Adhesive |
|  | 50022816 | TKS 100X100 | 0.3 ... 24 m 0.1 ... 30 m | Design: Rectangular Reflective surface: 96 mm x 96 mm Triple reflector size: 4 mm Material: Plastic Base material: Plastic Chemical designation of the material: PMMA8N Fastening: Through-hole mounting, Adhesive |

Part no.: 50127422 – PRK49C.UC/TS-TB – Polarized retro-reflective

| | Part no. | Designation | Operating range/ Operating range limit | Description |
|---|----------|-------------|---|--|
|  | 50081283 | TKS 20X40 | 0.3 ... 8 m 0.1 ... 10 m | Design: Rectangular Reflective surface: 16 mm x 38 mm Triple reflector size: 2.3 mm Material: Plastic Base material: Plastic Chemical designation of the material: PMMA8N Fastening: Through-hole mounting, Adhesive |
|  | 50023525 | TKS 30X50 | 0.3 ... 12 m 0.1 ... 15 m | Design: Rectangular Reflective surface: 27 mm x 44 mm Triple reflector size: 3 mm Material: Plastic Base material: Plastic Chemical designation of the material: PMMA8N Fastening: Through-hole mounting, Adhesive |

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 |
| 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 electronic 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.


- 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 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 |

Standard reflectors

| | Part no. | Designation | Article | Description |
|---|----------|-------------|-----------|--|
|  | 50024127 | TK 82.2 | Reflector | Design: Round Triple reflector size: 4 mm Reflection surface diameter: 79 mm Material: Plastic Base material: Plastic Chemical designation of the material: PMMA8N Fastening: Through-hole mounting, Adhesive |
|  | 50022816 | TKS 100X100 | Reflector | Design: Rectangular Reflective surface: 96 mm x 96 mm Triple reflector size: 4 mm Material: Plastic Base material: Plastic Chemical designation of the material: PMMA8N Fastening: Through-hole mounting, Adhesive |

Part no.: 50127422 – PRK49C.UC/TS-TB – Polarized retro-reflective

Note

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