



Part no.: 50127421
PRK49C.UC1/TS
Polarized retro-reflective photoelectric sensor



Figure can vary

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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
Transmitted-signal shape	Pulsed
LED group	Exempt group (in acc. with EN 62471)
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	
Switching element	Relay , NC
Switching principle	Light/dark reversible

Switching output 2	
Switching element	Relay , NO
Switching principle	Light/dark reversible

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

Connection	
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Connection 1

Function	Signal OUT Voltage supply
Type of connection	Cable
Cable length	2,000 mm
Sheathing material	PVC
Cable color	Black
Number of conductors	5 -wire
Wire cross section	0.34 mm ²

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)
Operational controls	270° potentiometer Teach button
Function of the operational control	Activation of the time module for dropout delay Light/dark switching Sensitivity adjustment

Environmental data

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

Certifications

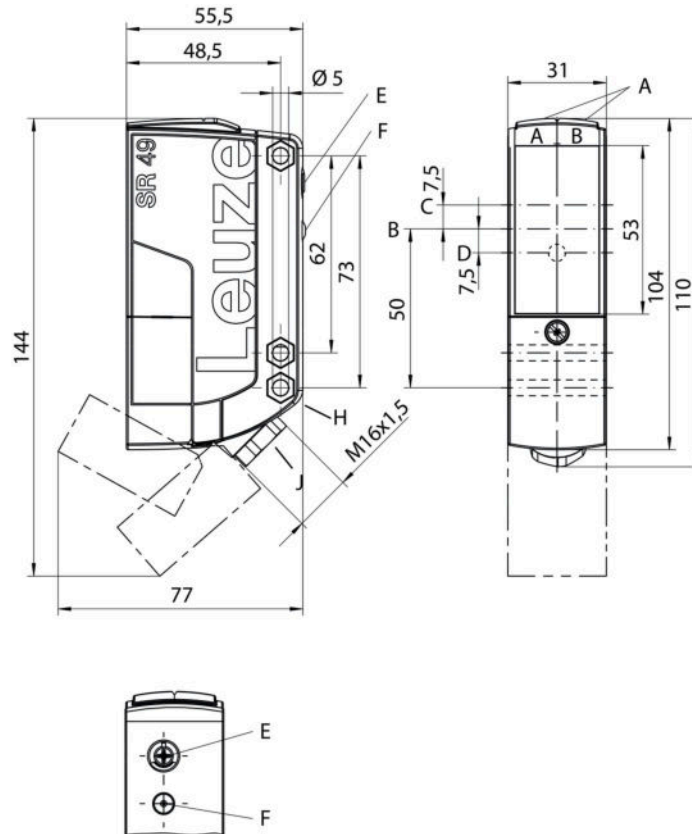
Degree of protection	IP 67
Protection class	II
Certifications	c UL US
Standards applied	IEC 60947-5-2

Classification

Customs tariff number	85365080
eCl@ss 8.0	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
- E Sensitivity adjustment
- F Teach button
- 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

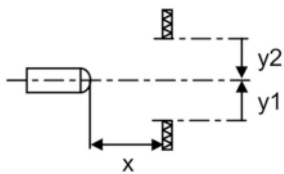
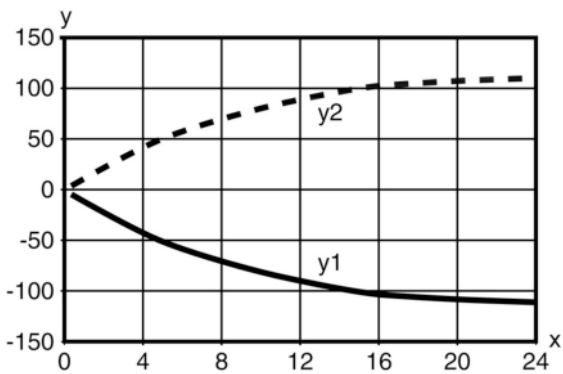
Connection 1	
Function	Signal OUT Voltage supply
Type of connection	Cable
Cable length	2,000 mm
Sheathing material	PVC
Cable color	Black
Number of conductors	5 -wire
Wire cross section	0.34 mm ²

Conductor color	Conductor assignment
Brown	+ / L1
Blue	- / N
White	OUT 1
Gray	Base point

Conductor color	Conductor assignment
Black	OUT 2

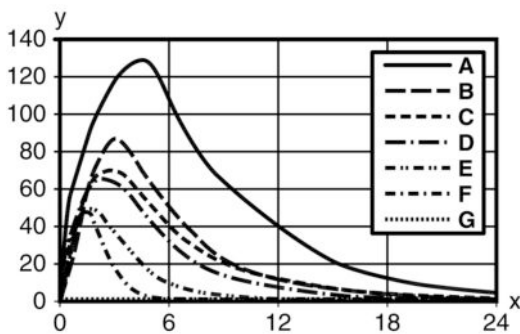
Diagrams

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

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	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

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Note

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