Retro-reflective photoelectric sensors with polarization filter PRK49C depol RELAIS















- Polarized retro-reflective photoelectric sensor with large operating range and high performance reserve in visible red light
- Highest functional reliability, even for depolarizing media (e.g., foil packaging, shrinkwrapped packages)
- Robust plastic housing, degree of protection IP 67 and IP 69K for industrial application
- All-mains design 20 ... 250VAC/DC with relay output (potential-free)
- Sensitivity adjustment and delay before start-up for optimal adaptation to the application
- Light/dark switching and time module activation via teach button for time-saving integration in existing evaluation environment:
- Space-saving installation thanks to front access to the connection compartment
- Extremely time-saving connection by means of spring terminals (up to 1.5 mm²)









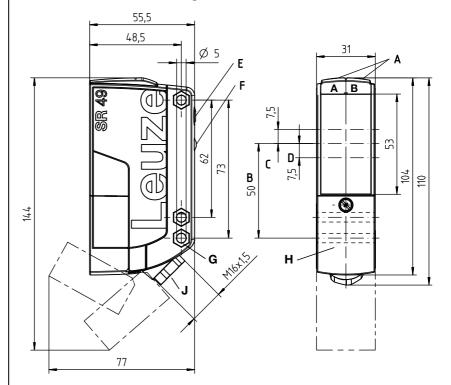


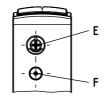
Accessories:

(available separately)

- Mounting systems (BTU 460, BT 96, BT 96.1, BT 450.1-96)
- Spark extinction
- Reflectors/reflective tapes

Dimensioned drawing





Green indicator diode $\mathbf{A}_{\mathbf{A}}$ $\mathbf{A}_{\mathbf{B}}$

Yellow indicator diode

Optical axis В С Receiver

D Transmitter

Sensitivity adjustment E

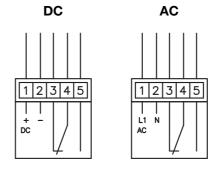
Teach button for light/dark switching / F time module activation

G Countersinking for SK nut M5, 4.2 deep Н

Connection compartment with spring terminals

Cable entry with M16x1.5 screw fitting for \emptyset 5 ... 10mm J

Electrical connection



Wire color of connecting cable

Pin	Color	
1	BR / BN	
2	BL / BU	
3	WS / WH	
4	GR / GY	
5	SW / BK	

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Specifications

Optical data

Typ. op. range limit (TK(S) 100x100) ¹⁾ Operating range ²⁾ Operating range adjustment Light spot diameter Light source Wavelength Polarization filter

Timing

Switching frequency Response time Delay before start-up

Electrical data

Operating voltage U_B

Power consumption Switching output Function

Switching voltage, relay Switching current, relay Switching power, relay

Sensitivity

Indicators Green LED Yellow LED

Yellow LED, flashing

Mechanical data

Housing Optics cover Weight Connection type

Environmental data

Ambient temp. (operation/storage) Protective circuit VDE safety class 5) Degree of protection Light source Standards applied

Switching function (teach level 1)

Time module (teach level 2)

Optics heating

Typ. operating range limit: max. attainable range without performance reserve

Operating range: recommended range with performance reserve

Suitable spark extinction (snubber) must be provided with inductive or capacitive loads

1=transient protection, 4=interference blanking

Rating voltage 250VAC

IP 69K test acc. to DIN 40050 part 9 simulated, high pressure cleaning conditions without the use of additives, acids and bases are not part of the test

see tables 225° potentiometer (PRK49C.UCD1... only)

approx. 130mm at 6m LED (modulated light) 630nm (visible red light)

ves

25Hz 20ms ≤ 300 ms

20 ... 250VAC, 50/60Hz 20 ... 250VDC

≤ 1.5VA

relay, 1 change-over contact break-contact/make-contact 250VAC/DC

250VAC, 2.5A/30VDC, 2.5A

625VA, cosφ=1 adjustable

ready

light path free

light path free, no performance reserve

polycarbonate plastic 150g

spring terminals, max. wire cross section 1.5 mm²

cable 2000mm, 5 x 0.5mm

-40°C ... +60°C/-40°C ... +70°C

1, 4 II, all-insulated

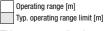
IP 67, IP 69K exempt group (in acc. with EN 62471) IEC 60947-5-2

light switching (factory setting) or dark switching active: dropout delay 500ms not active:no dropout delay (factory setting)

on request

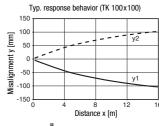
Tables

Reflectors		Operating range	
1	TK(S)	100x100	0.1 16m
2	TK	82.2	0.4 10 m
3	MTKS	50x50.1	0.1 10 m
4	TK(S)	40x60	0.1 8m
5	TK(S)	20x40	0.1 4m
6	Tape 4	50x50	0.3 2m
1	0.1		16 20
2	0.4	10	12
3	0.1	10	12
4	0.1	8 10	
5	0.1 4	5	
6	0.3 2	3	

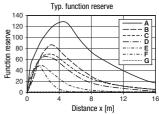


= adhesive TKS. = screw type Tape 4 = adhesive

Diagrams







- TK 100x100
- TK 82.2
- MTKS 50x50.1
- TKS 40x60
- Ε TKS 20x40 Tape 4 50x50
- Switching point

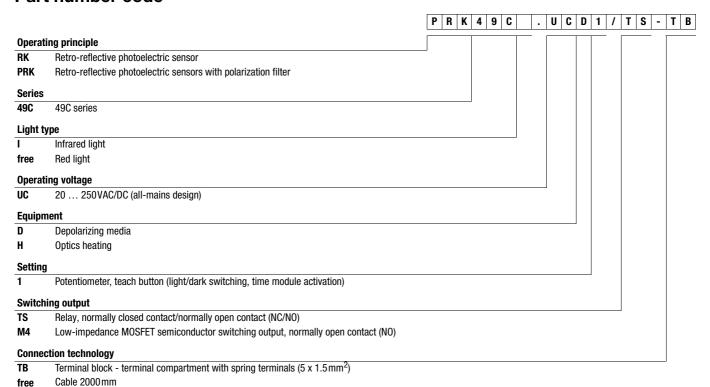
Remarks

Operate in accordance with 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 the intended use.

PRK49C depol RELAIS Retro-reflective photoelectric sensors with polarization filter

Part number code



Order guide

The sensors listed here are preferred types; current information at www.leuze.com.

	All-mains designs with relay output	Designation	Part no.
Terminal compartment with spring terminals (5 x 1.5 mm ²)			
	Red light, polarization filter, depolarizing media, potentiometer, teach button	PRK49C.UCD1/TS-TB	50127426
	Cable, cable length 2m		
	Red light, polarization filter, depolarizing media, potentiometer, teach button	PRK49C.UCD1/TS	50127427

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Teach procedure for sensor

O Note

Factory setting: light switching,

time module not active

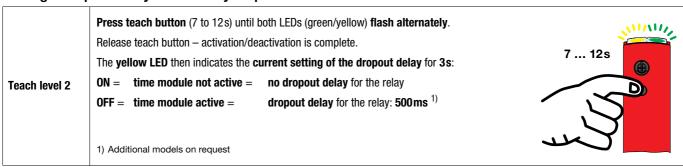
Light/dark switching

Setting the switching behavior of the relay output

	Press teach button (2 to 7s) u Release teach button – switcho The yellow LED then indicates	2 7s	
Teach level 1	ON = light switching =	output between pin 4 and pin 3: normally closed contact (NC) output between pin 4 and pin 5: normally open contact (NO)	
	OFF = dark switching =	output between pin 4 and pin 3 : normally open contact (NO) output between pin 4 and pin 5 : normally closed contact (NC)	

Activation/deactivation of the time module

Setting a dropout delay for the relay output



Dropout delay: if the object is no longer present, the output switches with a time delay.

PRK49C.UCD1/TS... - 01 2015/07