



PRK 97

Retro-reflective photoelectric sensors with polarisation filter

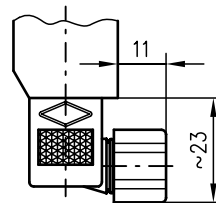
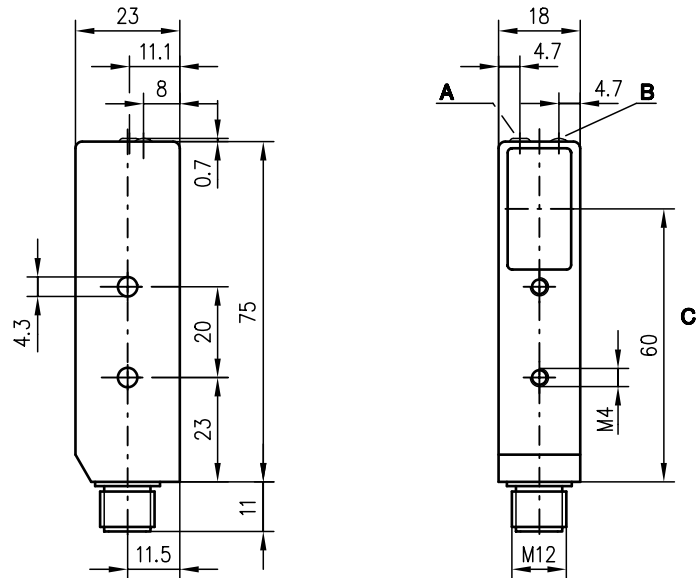


0.1 ... 6m

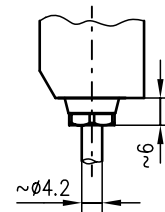


- Polarised retro-reflective photoelectric sensors with visible red light
- Small construction with glass cover and robust metal housing for protection against environmental influences
- Adjustable sensitivity with high resolution allows detection of transparent objects
- Connection via M12 connector, plug or cable
- Activation input for testing and interlinking

Dimensioned drawing



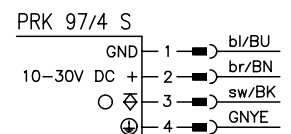
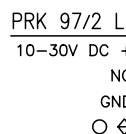
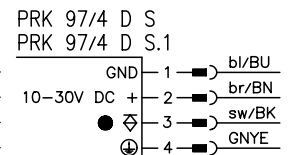
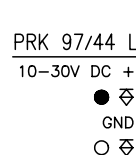
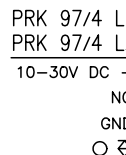
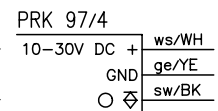
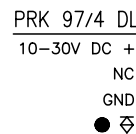
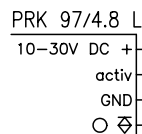
PRK 97/4 D S.1
PRK 97/4 S



PRK 97/4

- A** Sensitivity adjustment (only PRK 97/4 L.1)
- B** Indicator diode
- C** Optical axis

Electrical connection



Accessories:

(available separately)

- Mounting systems (BT 92, UMS 1, UMS 96-95)
- Diaphragm (BL 97.1)
- M12 connectors (KD ...)
- Ready-made cables (KB ...)
- Reflectors
- Reflective tapes

We reserve the right to make changes • 97_b02e.fm



Specifications

Optical data

Typ. operating range limit (TK(S) 100x100) ¹⁾	0.1 ... 6m
Operating range ²⁾	see table
Light source	LED (modulated light)
Wavelength	660nm (visible red light, polarised)

Timing

Switching frequency	200Hz
Response time	2.5ms
Delay before start-up	≤ 100ms

Electrical data

Operating voltage U_B	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U_B
Bias current	≤ 30mA
Switching output	PNP or NPN transistor output
Function characteristics	light/dark switching (PRK 97/44 L with complementary outputs)
Signal voltage high/low	≥ ($U_B - 2V$) / ≤ 2V
Output current	max. 100mA
Sensitivity	adjustable with 12-turn potentiometer for PRK 97/4 L.1

Indicators

LED yellow	light path free
LED yellow flashing	light path free, no performance reserve

Mechanical data

Housing	diecast zinc
Optics cover	glass
Weight	85g
Connection type	M12 connector 4-pin, stainless steel, connector 4-pin or cable 2m (cross section 3x0.25mm ²)

Environmental data

Ambient temp. (operation/storage)	-20°C ... +60°C / -30°C ... +70°C
Protective circuit ³⁾	2, 3
VDE safety class ⁴⁾	I (for S types) II, all-insulated (for all L and cable types)
Protection class	IP 67/IP 65 (for all S types)
LED class	1 (acc. to EN 60825-1)
Standards applied	IEC 60947-5-2

Options

Activation input active	
Transmitter active/not active	≥ 8V / ≤ 2V or not connected

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 4) Rating voltage 250VAC

Tables

Reflectors			Operating range	
1	TK(S)	100x100	0.1 ... 4m	
2	MTK(S)	50x50	0.1 ... 3m	
3	TK(S)	30x50	0.1 ... 1.7m	
4	TK(S)	20x40	0.1 ... 1.4m	
5	Tape 2	100x100	0.15 ... 1.4m	

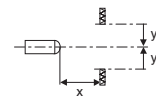
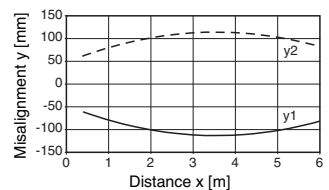
1	0.1		4	6
2	0.1		3	4.5
3	0.1	1.7	2.6	
4	0.1	1.4	2.1	
5	0.15	1.4	2.4	

Operating range [m]
 Typ. operating range limit [m]

TK ... = adhesive
 TKS ... = screw type
 Tape 2 = adhesive

Diagrams

Typ. response behaviour (TK 100x100)



Order guide

Selection table		Order code →									
Equipment ↓		PRK 97/4.8 L Part No. 500 80474	PRK 97/4 L Part No. 500 19663	PRK 97/4 S Part No. 500 17092	PRK 97/4 DS.1 Part No. 500 25686	PRK 97/4 DL Part No. 500 29642	PRK 97/4 Part No. 500 80994	PRK 97/4 L.1 Part No. 500 25324	PRK 97/2 L Part No. 500 29641	PRK 97/44 L Part No. 500 35301	PRK 97/4 DS Part No. 500 81305
Switching output	PNP transistor	●	●	●	●	●	●	●		●	●
	NPN transistor								●		
Switching	light switching	●	●	●			●	●	●		
	dark switching				●	●					●
	compl. switch. outputs									●	
Connection	M12 connector	●	●			●		●	●	●	
	cable			●	●						●
	plug						●				
Features	activation input	●									
	sensitivity							●			
	UL	●	●	●	●	●	?	●	?	●	●

Remarks

- PRK 97/4 S and PRK 97/4 DS are shipped with cable connector.