

RK 97
Retro-reflective photoelectric sensors

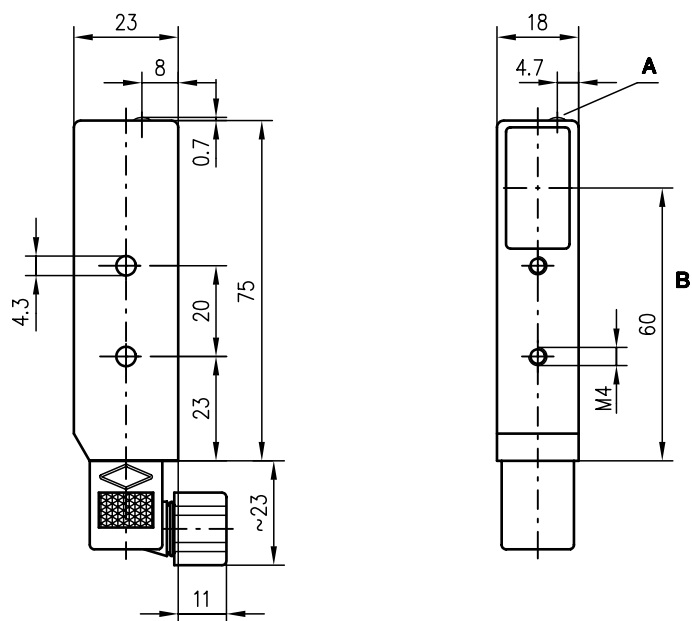
0.1 ... 6m


- Retro-reflective photoelectric sensors with infrared light
- Small construction with glass cover and robust metal housing for protection against environmental influences
- Connection via plug

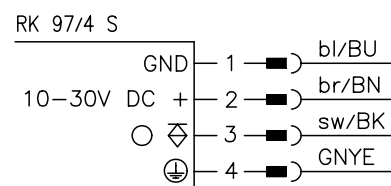
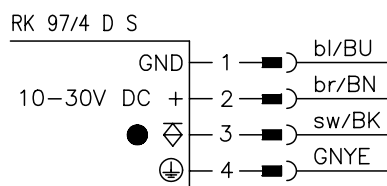

Accessories:

(available separately)

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

Dimensioned drawing


- A** Indicator diode
B Optical axis

Electrical connection


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	880nm (infrared)

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 transistor output
Function characteristics	light/dark switching
Signal voltage high/low	≥ ($U_B - 2V$) / ≤ 2V
Output current	max. 100mA

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	connector 4-pin

Environmental data

Ambient temp. (operation/storage)	-20°C ... +60°C / -30°C ... +70°C
Protective circuit ³⁾	2, 3
VDE safety class	I
Protection class	IP 65
LED class	1 (acc. to EN 60825-1)
Standards applied	IEC 60947-5-2

- 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

Tables

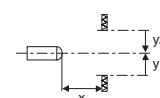
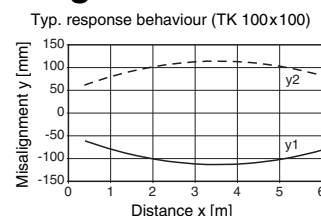
Reflectors			Operating range
1	TK(S)	100x100	0.1 ... 4m
2	MTK(S)	50x50	0.1 ... 3m
3	TK(S)	30x50	0.1 ... 1.7m
4	TK(S)	20x40	0.1 ... 1.5m
5	Tape 2	100x100	0.15 ... 1.4m

1	0.1		4	6
2	0.1		3	4.5
3	0.1	1.7	2.6	
4	0.1	1.5	2.4	
5	0.15	1.4	2.4	

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

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

Diagrams



Order guide

	Designation	Part No.
light switching	RK 97/4 S	500 00556
dark switching	RK 97/4 DS	500 00557

Remarks

- The devices are shipped with connectors.