



PRK 96

Retro-reflective photoelectric sensors with polarisation filter



10m
18m

20-230 V
AC / DC



- Polarised retro-reflective photoelectric sensor with large operating range in visible red light
- Robust metal housing with glass cover or plastic housing, protection class IP 67/ IP 69K for industrial application
- All-mains design 20 ... 230 VAC/DC with relay output
- Relay with change-over contact, sensitivity adjustment, delay before start-up and various options for optimal adaptation to the application
- Connection via comfortable terminal compartment up to 1.5mm²

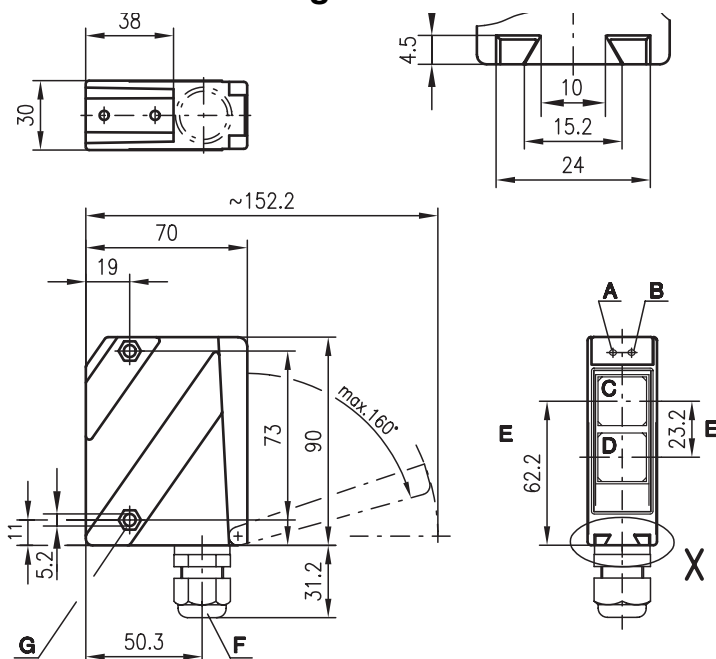


Accessories:

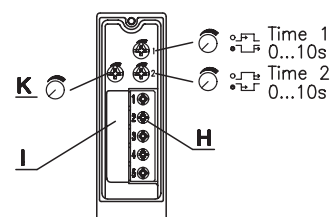
(available separately)

- Mounting systems (BT 96, BT 96.1, UMS 96, BT 450.1-96)
- Spark extinction
- Reflectors
- Reflective tapes

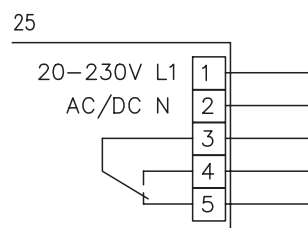
Dimensioned drawing



- A Indicator diode green
- B Indicator diode yellow
- C Receiver
- D Transmitter
- E Optical axis
- F Screwed cable gland M 16x1.5 for Ø 5 ... 10mm
- G Countersinking for SK nut M5, 4.2 deep
- H Connection terminals
- I Cable entry
- K Sensitivity adjustment



Electrical connection





Specifications

Optical data

Typ. operating range limit (TK(S) 100x100) ¹⁾	10m/18m
Operating range ²⁾	see tables
Light spot diameter	approx. 130mm at 6m
Light source	LED (modulated light)
Wavelength	660nm (visible red light, polarised)

Timing

Switching frequency	20Hz
Response time	25ms
Delay before start-up	≤ 200ms

Electrical data

Operating voltage U_B	20 ... 230VAC, 50/60Hz 20 ... 230VDC ± 10%
Power consumption	≤ 1.5VA
Switching output ³⁾	relay, 1 change-over contact
Function characteristics	break-contact/make-contact
Switching voltage, relay	250VAC/DC
Switching current, relay	250VAC, 3A/30VDC, 3A
Switching power, relay	750VA, $\cos\phi=1$
Sensitivity	adjustable

Indicators

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

Mechanical data

Housing	diecast zinc
Optics cover	glass
Weight	380g
Connection type	terminals

Environmental data

Ambient temp. (operation/storage)	-20°C ... +55°C/-40°C ... +55°C
Protective circuit ⁴⁾	1, 4
VDE safety class ⁵⁾	II, all-insulated
Protection class	IP 67, IP 69K ⁶⁾
LED class	1 (acc. to EN 60825-1)
Standards applied	IEC 60947-5-2

Options

Switching delay (slow oper./release)	0 ... 10s (separately adjustable)
--------------------------------------	-----------------------------------

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) Suitable spark extinction must be provided with inductive or capacitive loads
- 4) 1=transient protection, 4=interference blanking
- 5) Rating voltage 250VAC
- 6) 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

Order guide

Selection table		Order code →					
Equipment ↓		PRK 96M/R-3420-25 Part No. 500 82066	PRK 96M/R-3430-25 Part No. 500 61111				
Housing	metal	●	●				
	plastic						
Light source	red light (8m)						
	red light (15m)	●	●				
	red light (20m)						
Connection	terminals	●	●				
	M12 connector						
Features	optics heating/low temperature						
	switching delay		●				

Tables

10m models

Reflectors		Operating range
1	TK(S) 100x100	0.3 ... 8m
2	MTK(S) 50x50	0.3 ... 7m
3	TK(S) 30x50	0.3 ... 4.5m
4	TK(S) 20x40	0.3 ... 3m
5	TK(S) 82	0.3 ... 6m
6	Tape 2 100x100	0.3 ... 4m
1	0.1	8 10
2	0.1	7 8.5
3	0.1	4.5 5
4	0.1	3 4
5	0.1	6 7.5
6	0.1	4 5.5

18m models

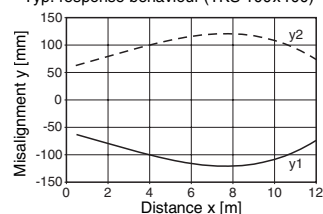
Reflectors		Operating range
1	TK(S) 100x100	0.3 ... 15m
2	MTK(S) 50x50	0.3 ... 11m
3	TK(S) 30x50	0.3 ... 6m
4	TK(S) 20x40	0.3 ... 5m
5	TK(S) 82	0.3 ... 11m
6	Tape 2 100x100	0.3 ... 6m
1	0.1	15 18
2	0.1	11 12
3	0.1	6 7.5
4	0.1	5 6
5	0.1	11 11.5
6	0.1	6 7.5

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

Diagrams

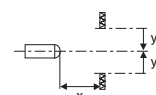
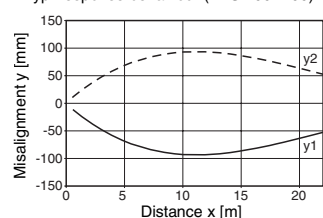
10m models

Typ. response behaviour (TKS 100x100)



18m models

Typ. response behaviour (TKS 100x100)



Remarks