

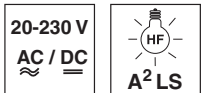
**PRK 96**

**Retro-reflective photoelectric sensors with polarization filter**

en 10-2013/05 50120810

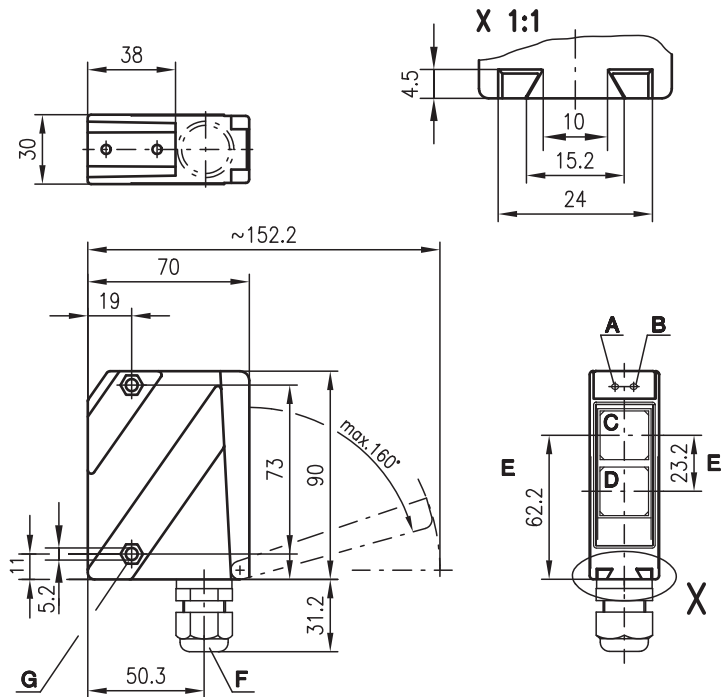


**10m  
24m**

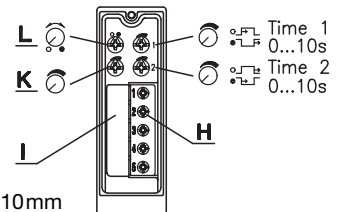


- Polarized retro-reflective photoelectric sensor with large operating range in visible red light
- Robust metal housing with glass cover or plastic housing, protection class IP 67 for industrial application
- All-mains design 20 ... 230VAC/DC with relay output
- Relay with change-over contact, sensitivity adjustment, delay before start-up and various options for optimal adaptation to the application
- Light/dark switching
- Connection via comfortable terminal compartment up to 1.5mm<sup>2</sup>

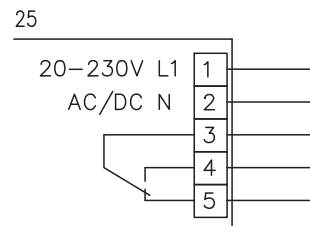
**Dimensioned drawing**



- A** Green indicator diode
- B** Yellow indicator diode
- C** Receiver
- D** Transmitter
- E** Optical axis
- F** Screwed cable gland M16x1.5 for Ø 5 ... 10mm
- G** Countersinking for SK nut M5, 4.2 deep
- H** Connection terminals
- I** Cable entry
- K** Sensitivity adjustment
- L** Light/dark switching



**Electrical connection**



**Accessories:**

(available separately)

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

We reserve the right to make changes • DS\_PRK96KR25\_en\_50120810.fm

## Specifications

### Optical data

Typ. op. range limit (TK(S) 100x100) <sup>1)</sup>	10m/24m
Operating range <sup>2)</sup>	see tables
Light spot diameter	approx. 130mm at 6m
Light source	LED (modulated light)
Wavelength	660nm (visible red light, polarized)

### Timing

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

### Electrical data

Operating voltage U <sub>B</sub>	20 ... 230VAC, 50/60Hz 20 ... 230VDC ± 10%
Power consumption	≤ 1.5VA
Switching output <sup>3)</sup>	relay, 1 change-over contact
Function	break-contact/make-contact
Switching voltage, relay	250VAC/DC
Switching current, relay	250VAC, 3A/30VDC, 3A
Switching power, relay	750VA, cosφ=1
Sensitivity	adjustable

### Indicators

Green LED	ready
Yellow LED	light path free
Yellow LED, flashing	light path free, no performance reserve

### Mechanical data

Housing	polycarbonate
Optics cover	plastic
Weight	150g
Connection type	terminals

### Environmental data

Ambient temp. (operation/storage)	-30°C ... +55°C/-40°C ... +55°C
Protective circuit <sup>4)</sup>	1, 4
VDE safety class <sup>5)</sup>	II, all-insulated
Protection class	IP 67
Light source	exempt group (in acc. with EN 62471)
Standards applied	IEC 60947-5-2

### Options

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

### ● Approved purpose:

This product may only be used by qualified personnel and must only be used for the approved purpose. This sensor is not a safety sensor and is not to be used for the protection of persons.

## Order guide

Selection table		Order code →								
Equipment ↓		PRK 96K/R-1420-25 Part no. 50025167	PRK 96K/R-1430-25 Part no. 50025168	PRK 96K/R-3428-25 Part no. 50035351	PRK 96K/R-3428.1-25 Part no. 50107216	PRK 96K/R-1420.1-25 Part no. 50106587				
Housing	metal									
	plastic	●	●	●	●	●				
Light source	red light (8m)	●	●			●				
	red light (15m)									
	red light (20m)			●	●					
Connection	terminals	●	●	●	●	●				
	M12 connector									
Features	light/dark switching				●	●				
	optics heating/low temp.									
	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

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

### 24m models

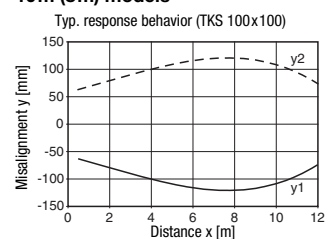
Reflectors	Operating range
1 TK(S) 100x100	0.3 ... 20m
2 MTK(S) 50x50	0.3 ... 15m
3 TK(S) 30x50	0.3 ... 10m
4 TK(S) 20x40	0.3 ... 8m
5 TK(S) 82	0.3 ... 15m

1	0.1			20	24
2	0.1			15	16
3	0.1	10	12		
4	0.1	8	9		
5	0.1			15	17

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

## Diagrams

### 10m (8m) models



### 24m (20m) models

