



PRK 3

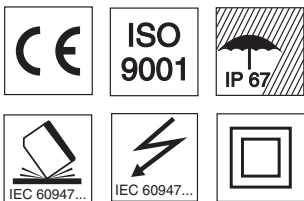
Retro-reflective photoelectric sensors with polarisation filter



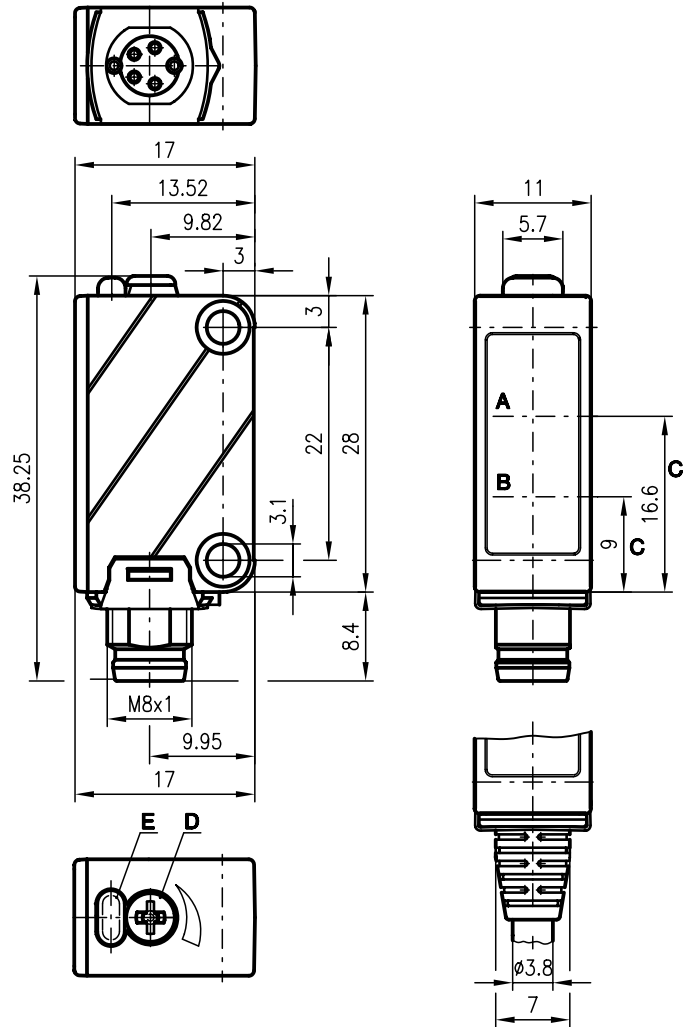
0.05 ... 4m



- Polarised retro-reflective photoelectric sensor in visible red light
- Small construction with robust plastic housing, protection class IP 67 for industrial application
- High switching frequency for detection of fast events
- Polarisation filter blocks unwanted reflections
- Complementary PNP or NPN switching outputs for light/dark switching or as a control function

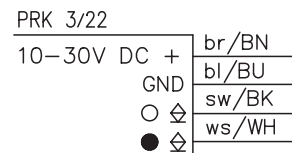
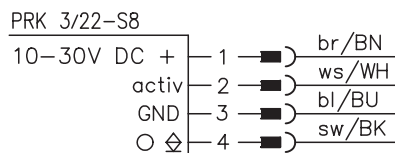
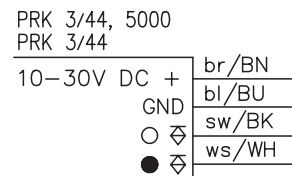
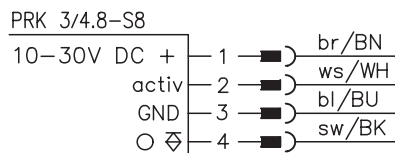
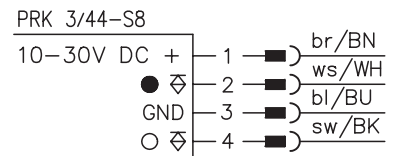
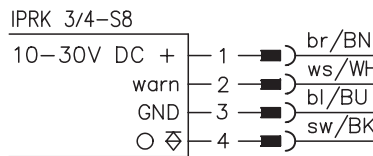


Dimensioned drawing



- A Receiver
- B Transmitter
- C Optical axis
- D Adjustment screw
- E Indicator diode

Electrical connection



We reserve the right to make changes • 3\_b01e.fm

Accessories:

(available separately)

- Mounting systems (BT 3)
- M8 connectors (KD ...)
- Ready-made cables (KB ...)
- Reflectors
- Reflective tape

### Specifications

#### Optical data

Typ. operating range limit (TK(S) 100x100) <sup>1)</sup>	<b>PRK 3/22/44...</b>	<b>PRK 3/4.8..., IPRK 3/4...</b>
Operating range <sup>2)</sup>	0.05 ... 4m	see table
Light beam characteristic	divergent	
Light source	LED (modulated light)	
Wavelength	660nm (visible red light, polarised)	

#### Timing

Switching frequency	1000Hz
Response time	0.5 ms
Delay before start-up	≤ 100ms

#### Electrical data

Operating voltage $U_B$	10 ... 30VDC (incl. residual ripple)	
Residual ripple	≤ 15% of $U_B$	
Bias current	≤ 25mA	
Switching output	2 transistor outputs, complementary	1 PNP transistor output
Function characteristics	light/dark switching	light switching
Signal voltage high/low	$\geq (U_B - 2V) \leq 2V$	
Output current	max. 100mA	
Sensitivity	adjustable with multiturn potentiometer	

#### Indicators

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

#### Mechanical data

Housing	plastic
Optics cover	plastic (PMMA)
Weight	20g
Connection type	M8 connector (4-pin) or PUR cable 2m/5m (cross section 4x0.2mm <sup>2</sup> )

#### Environmental data

Ambient temp. (operation/storage)	-25°C ... +55°C/-40°C ... +70°C
Protective circuit <sup>3)</sup>	2, 3
VDE safety class <sup>4)</sup>	II, all-insulated
Protection class	IP 67
Standards applied	IEC 60947-5-2

#### Options

<b>Activation input</b> active	
Transmitter active/not active	$\geq 8V \leq 2V$ or not connected
Activation/disable delay	≤ 1ms
Input resistance	4.7 kΩ ± 10%
<b>Warning output autoControl</b> warn	PNP transistor, counting principle
Signal voltage high/low	$\geq (U_B - 2V) \leq 2V$
Output current	max. 100mA

- 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

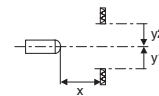
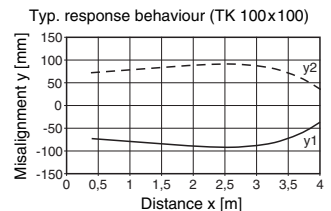
Reflectors			Operating range
1	TK(S)	100x100	0.05 ... 2.5m
2	MTK(S)	50x50	0.05 ... 1.6m
3	TK(S)	30x50	0.05 ... 1.1m
4	TK(S)	20x40	0.05 ... 0.7m
5	Tape 2	100x100	0.1 ... 0.9m

1	0.05	2.5	4.0
2	0.05	1.6	2.4
3	0.05	1.1	1.7
4	0.05	0.7	1.1
5	0.1	0.9	1.4

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

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

### Diagrams



### Order guide

Selection table		Order code →						
Equipment ↓		PRK 3/44 Part No. 500 30918	PRK 3/22 Part No. 500 32559	PRK 3/44, 5000 Part No. 500 35727	PRK 3/44-S8 Part No. 500 30917	PRK 3/22-S8 Part No. 500 32558	IPRK 3/4-S8 Part No. 500 31140	PRK 3/4-S8 Part No. 500 30919
Switching output	PNP transistor	●		●	●		●	●
	NPN transistor		●			●		
	light/dark switching	●	●	●	●	●		
	light switching						●	●
Connection	M8 connector				●	●	●	●
	cable 5000mm			●				
	cable 2000mm	●	●					
Features	activation input							●
	warning output						●	

### Remarks