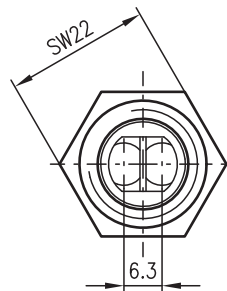
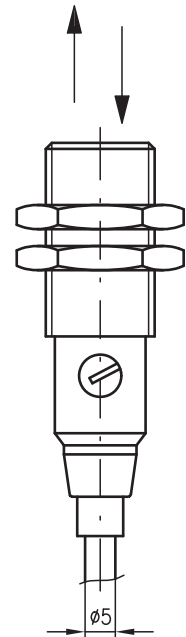
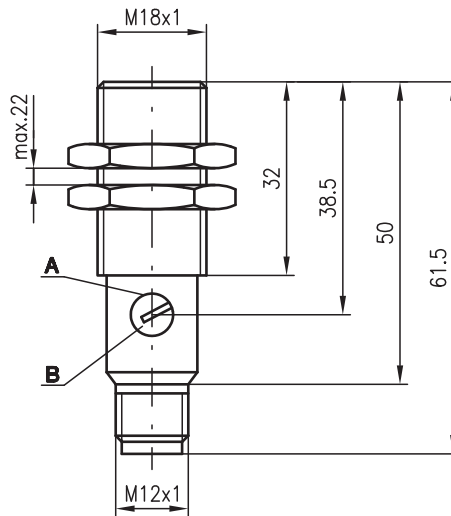


**PRK 318**

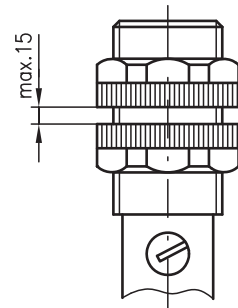
**Retro-reflective photoelectric sensors with polarisation filter**

**Dimensioned drawing**

PRK 318M/...

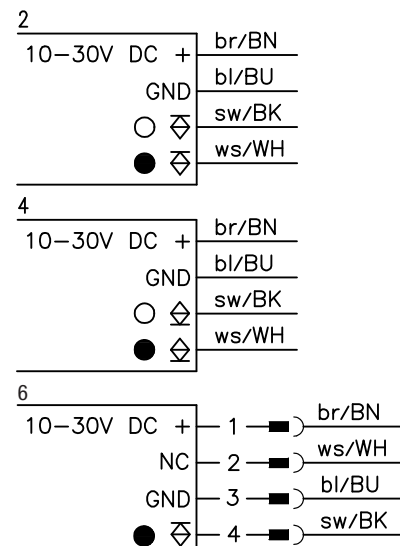
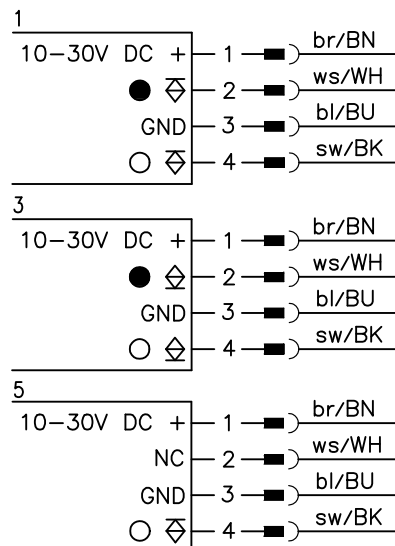


PRK 318K/...



- A** Indicator diode
- B** Sensitivity adjustment

**Electrical connection**



Part No. 501 08660



**0.02 ... 6.0m**



- Polarised retro-reflective photoelectric sensors with straight optics using visible red light
- Robust cylindrical stainless steel or plastic housing M18x1, protection class IP 67 for industrial application
- Complementary switching outputs for light/dark switching or as a control function
- Very short construction for application in limited spaces



**Accessories:**

(available separately)

- Mounting systems (BT 318, BT 318-ARH)
- M12 connectors (KD ...)
- Ready-made cables (K-D ...)
- Reflectors
- Reflective tape

We reserve the right to make changes • 318\_b01gb.fm

## Specifications

### Optical data

Typ. operating range limit (TK(S) 100x100) <sup>1)</sup>	0.02 ... 6.0m
Operating range <sup>2)</sup>	see tables
Light source	LED (modulated light)
Wavelength	660nm (visible red light, polarised)

### Timing

Switching frequency	1000Hz
Response time	0.5ms
Delay before start-up	≤ 30ms

### Electrical data

Operating voltage $U_B$	10 ... 30VDC
Residual ripple	≤ 10% of $U_B$
Bias current	≤ 15mA
Switching output	2 transistor outputs, complementary
Function characteristics	... - 81/4D ... 1 transistor switching output light/dark switching
	... - 81 ... light switching
	... 4D ... dark switching
Signal voltage high/low	≥ ( $U_B - 1.6V$ ) ≤ 1.6V
Output current	max. 100mA
Sensitivity	adjustable

### Indicators

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

### Mechanical data

Housing	polyamide 12 or stainless steel
Optics cover	acrylic
Weight	90g (cable), 20g (M12)
Connection type	M12 connector, 4-pin cable 2m, 4x0.25mm <sup>2</sup>

### Environmental data

Ambient temp. (operation/storage)	-25°C ... +65°C/-40°C ... +70°C
Protective circuit <sup>3)</sup>	1, 2, 3, 4
VDE safety class <sup>4)</sup>	II, all-insulated
Protection class	IP 67
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) 1=transient protection, 2=polarity reversal protection, 3=short circuit protection for all outputs, 4=interference blanking
- 4) Rating voltage 250VAC

## Order guide

Selection table		PRK 318K/P-S12 Part No. 500 81347	PRK 318K/P Part No. 500 81348	PRK 318M/P-S12 Part No. 500 81349	PRK 318M/P Part No. 500 81350	PRK 318K/N-S12 Part No. 500 83151	PRK 318K/N Part No. 500 82187	PRK 318M/N-S12 Part No. 500 82145	PRK 318M/N Part No. 500 83140	PRK 318K/P-81-S12 Part No. 500 89215	PRK 318M/4D-S12 Part No. 501 10932
Equipment ↓	Housing	●	●			●	●			●	
		plastic									
				●	●			●	●		●
Connection	M12 connector	●		●	●	●		●	●	●	●
	cable		●		●		●		●		
Switching output	PNP	●	●	●	●					●	●
	NPN					●	●	●	●		
Function characteristics	light switching	●	●	●	●	●	●	●	●	●	
	dark switching	●	●	●	●	●	●	●	●		●
Connection diagram		1	2	1	2	3	4	3	4	5	6

## Tables

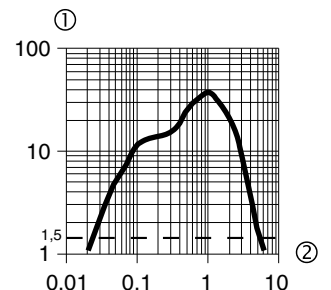
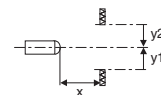
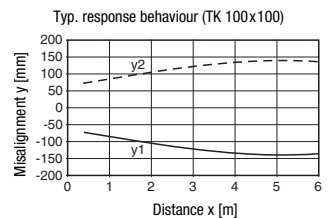
Reflectors	Operating range
1 TK(S) 100x100	0.03 ... 4.6m
2 MTK(S) 50x50	0.02 ... 3.2m
3 TK(S) 30x50	0.03 ... 2.2m
4 TK(S) 20x40	0.06 ... 1.9m
5 Tape 2 100x100	0.24 ... 2.0m

1	0.03		4.6	6.0
2	0.02		3.2	4.6
3	0.03	2.2	3.2	
4	0.06	1.9	2.9	
5	0.24	2.0	3.1	

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

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

## Diagrams



Typical behaviour reflector distance / relative intensity of received light (with reflector TK(S) 100x100)

- 1 Relative intensity of received light
- 2 Reflector distance in [m]

## Remarks

**Approved purpose:**  
 The retro-reflective photoelectric sensors are optical electronic sensors for optical, contactless detection of objects.