



## Specifications

### Optical data

Typ. op. range limit (TK(S) 100x100) <sup>1)</sup>	0.02 ... 6m
Operating range <sup>2)</sup>	see tables
Light source <sup>3)</sup>	LED (modulated light)
Wavelength	620nm (visible red light, polarised)

### Timing

Switching frequency	1000Hz
Response time	0.5ms
Delay before start-up	≤ 300ms

### Electrical data

Operating voltage $U_B$ <sup>4)</sup>	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of $U_B$
Open-circuit current	≤ 14mA
Switching output <sup>5)</sup>	.../66 2 push-pull switching outputs pin 2: PNP dark switching, NPN light switching pin 4: PNP light switching, NPN dark switching
Function characteristics	light/dark switching
Signal voltage high/low	$\geq (U_B - 2V) / \leq 2V$
Output current	max. 100mA
Operating range	fixed setting

### Indicators

Green LED	ready
Yellow LED	light path free
Flashing yellow LED	light path free, no performance reserve

### Mechanical data

Housing	AISI 316L stainless steel, DIN X2CrNiMo17132, W.No1.4404
Housing design	WASH-DOWN-Design
Housing roughness <sup>6)</sup>	$R_a \leq 2.5$
Connector	AISI 316L stainless steel, DIN X2CrNiMo17132, W.No1.4404
Optics cover	coated plastic (PMMA), scratch resistant and non-diffusive
Operation	plastic (TPV - PE), non-diffusive
Weight	with M8 connector: 40g with 200mm cable and M12 connector: 60g
Connection type	M8 connector, 4-pin 0.2m cable with M12 connector, 4-pin

### Environmental data

Ambient temp. (operation/storage) <sup>7)</sup>	-30°C ... +70°C / -30°C ... +70°C
Protective circuit <sup>8)</sup>	2, 3
VDE safety class <sup>9)</sup>	III
Protection class	IP 67, IP 69K
Environmentally tested acc. to	ECOLAB, CleanProof+
LED class	1 (acc. to EN 60825-1)
Standards applied	IEC 60947-5-2
Certifications	UL 508 <sup>4)</sup>
Chemical resistance	tested in acc. with ECOLAB and CleanProof+ (see remarks)

### Options

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) Average life expectancy 100.000h at an ambient temperature of 25°C
- 4) For UL applications: for use in class 2 circuits according to NEC only
- 5) The push-pull switching outputs must not be connected in parallel
- 6) Typical value for the stainless steel housing
- 7) Operating temperatures of +70°C permissible only briefly (≤ 15min)
- 8) 2=polarity reversal protection, 3=short-circuit protection for all transistor outputs
- 9) Rating voltage 50V

## Order guide

Selection table		Order code E:		
Equipment ↓		PRK 55/66-S8 Part No. 501 05804	PRK 55/66, 200-S12 Part No. 501 05805	PRK 55/6-S8.3 Part No. 501 07600
Switching output	1 x Push-pull switching output			●
	2 x Push-pull switching output	●	●	
Switching function	1 PNP light switching and NPN dark switching output	●	●	●
	1 PNP dark switching and NPN light switching output	●	●	
Connection	M8 connector, metal, 4-pin	●		
	M8 connector, metal, 3-pin			●
	cable 200mm with M12 connector, 4-pin		●	
Indicators	green LED: ready	●	●	●
	yellow LED: switching output	●	●	●

## Tables

Reflectors			Operating range
1	TK(S)	100x100	0.02 ... 5.0m
2	TK	40x60	0.02 ... 3.0m
3	TK	20x40	0.02 ... 1.5m
4	Tape 4	50x50	0.02 ... 1.2m

1	0.02			5	6
2	0.02		3	3.6	
3	0.02	1.5		2	
4	0.02	1.2	1.6		

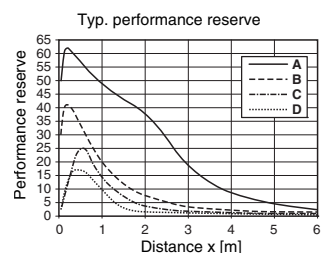
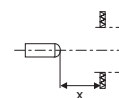
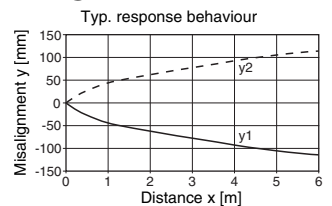
Pharmaceutical reflectors			Operating range
1	TK(S)	40x60.P	0.02 ... 2.4m
2	TK(S)	20x40.P	0.02 ... 1.6m
3	TK(S)	20.P	0.02 ... 1.1m
4	MTK(S)	14x23.P	0.02 ... 0.7m
5	TK	10.P	0.02 ... 0.4m

1	0.02			2.4	2.8
2	0.02			1.6	2.0
3	0.02	1.1		1.3	
4	0.02	0.7	0.8		
5	0.02	0.4	0.5		

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

TK ... = adhesive  
TKS ... = screw type

## Diagrams



- A TK 100x100
- B TKS 40x60
- C TKS 20x40
- D Tape 4: 50x50

## Remarks

A list of tested chemicals can be found in the first part of the product description.

### Intended use

The photoelectric sensors are optical electronic sensors for optical, contactless detection of objects.