

**PRK 8**

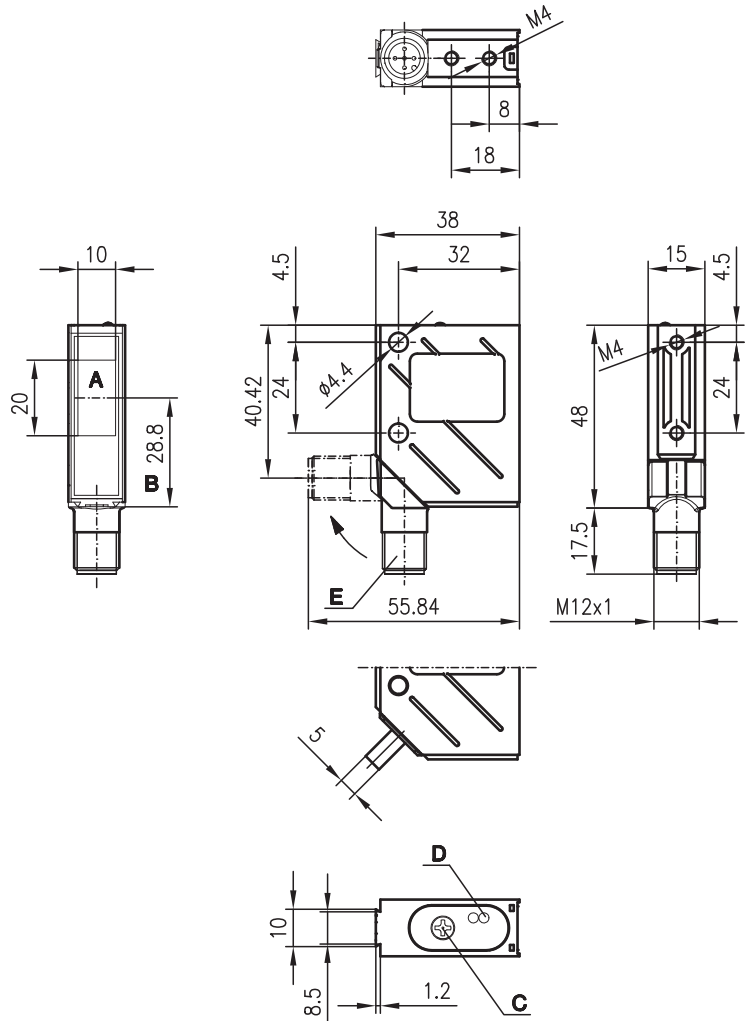
**Retro-reflective photoelectric sensors**

en 06-2014/04 50125970



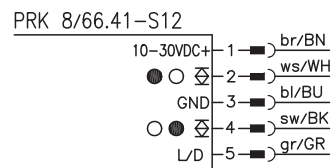
- Detection of transparent media (e. g. clear glass, PE, foil)
- The autocollimation principle used ensures that the device functions reliably over the entire range (0 ... max.)
- Push-pull switching outputs
- M12 turning connector
- Visible red light
- Square light spot

**Dimensioned drawing**

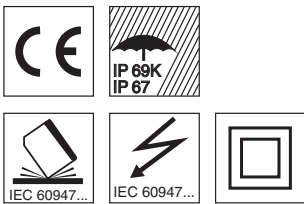


- A** Transmitter/receiver
- B** Optical axis
- C** Operational control
- D** LED yellow
- E** 90° turning connector

**Electrical connection**



We reserve the right to make changes • DS\_PRK8\_6641\_en\_50125970.fm



**Accessories:**

(available separately)

- M12 connectors (KD ...)
- Ready-made cables (K-D ...)
- Mounting systems
- Reflectors
- Reflective tapes
- Control guard

## Specifications

### Optical data

Typ. operating range limit (TK(S) 100x100) <sup>1)</sup>	0 ... 2.4m
Operating range <sup>2)</sup>	see tables
Recommended reflector	MTK(S) 50x50
Light source	LED (modulated light)
Wavelength	660nm (visible red light)
Light spot	square, focussed at 200mm

### Timing

Switching frequency	1500Hz
Response time	0.33ms
Delay before start-up	≤ 650ms

### Electrical data

Operating voltage $U_B$	10 ... 30VDC
Residual ripple	≤ 15% of $U_B$
Bias current	≤ 35mA
Switching output/function	2 push-pull switching outputs <sup>3)</sup> pin 2: PNP dark switching, NPN light switching pin 4: PNP light switching, NPN dark switching
Signal voltage high/low	≥ ( $U_B - 2V$ ) / ≤ 2V
Output current	max. 100mA
Sensitivity	adjustable with 12-turn potentiometer

### Indicators

LED yellow	light path free operating point of tape, PE – transition from flashing to continuous light
LED yellow flashing	light path free, no performance reserve

### Mechanical data

Housing	metal
Optics cover	glass
Weight	70g
Connection type	M12 connector, 5-pin (turning)

### Environmental data

Ambient temp. (operation/storage)	-40°C ... +60°C / -40°C ... +70°C
Protective circuit <sup>4)</sup>	2, 3
VDE safety class <sup>5)</sup>	II, all-insulated
Protection class <sup>6)</sup>	IP 67, IP 69K <sup>7)</sup>
Light source	free group (in acc. with EN 62471)
Standards applied	IEC 60947-5-2

### Options

<b>L/D input</b>	
Dark switching/light switching	$U_B/0V$ or not connected
L/D delay	< 0.5ms

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) The push-pull switching outputs must not be connected in parallel
- 4) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 5) Rating voltage 250VAC
- 6) In stop position of the turning connector (turning connector locked)
- 7) 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

	Designation	Part No.
With M12 connector	PRK 8/66.41-S12	50037134

## Tables

Reflectors		Operating range
1	TK(S) 100x100	0 ... 2.0m
2	MTK(S) 50x50.1	0 ... 1.5m
3	TK(S) 30x50	0 ... 0.6m
4	TK(S) 20x40	0 ... 0.6m
5	Tape 6 50x50	0 ... 1.0m

1	0	2.0	2.4
2	0	1.5	1.8
3	0	0.6	0.8
4	0	0.6	0.8
5	0	1.0	1.2

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

\*) For sensitivity set to operating point 3

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

## Diagrams

## Remarks

- **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.
- **Reflectors:**  
The light spot may not extend beyond the reflector. Preferably use MTK(S) reflectors or reflective tape 6.
- Note the light spot geometry and installation conditions