

PRK 25

Retro-reflective photoelectric sensors

Part No. 501 089 18



0 ... 5m



- Polarised retro-reflective photoelectric sensor using visible red light
- A²LS - Active Ambient Light Suppression
- Push-pull switching outputs
- Reliable function over the entire range (0 ... max.) due to the autocollimation principle used

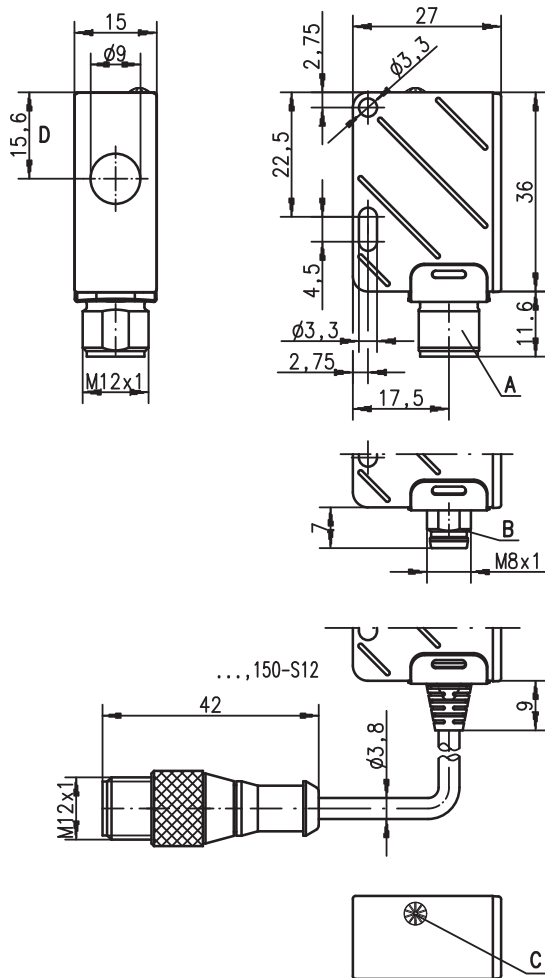


Accessories:

(available separately)

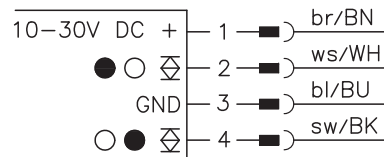
- M12 connectors (KD ...)
- Ready-made cables (K-D ...)
- Mounting systems
- Reflectors
- Reflective tapes

Dimensioned drawing



- A** M12 connector
- B** M8 connector
- C** Indicator diode
- D** Optical axis

Electrical connection



Specifications

Optical data

Typ. operating range limit (TK(S) 100x100) ¹⁾ 0 ... 5m
 Operating range ²⁾ see tables
 Light source LED (modulated light)
 Wavelength 620nm (visible red light)

Timing

Switching frequency 500Hz
 Response time 1ms
 Delay before start-up ≤ 100ms

Electrical data

Operating voltage U_B 10 ... 30VDC (incl. residual ripple)
 Residual ripple ≤ 15% of U_B
 Bias current ≤ 20mA
 Switching output/function 2 push-pull switching outputs ³⁾
 pin 2: PNP dark switching, NPN light switching
 pin 4: PNP light switching, NPN dark switching
 $\geq (U_B - 2V) / \leq 2V$
 max. 100mA

Signal voltage high/low
 Output current

Indicators

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

Mechanical data

Housing plastic
 Optics cover plastic
 Weight (plug/cable) 15g/55g
 Connection type M8 or M12 connector, 4-pin, or cable with M12 connector, cable length: 150mm

Environmental data

Ambient temp. (operation/storage) -20°C ... +55°C/-40°C ... +70°C
 Protective circuit ⁴⁾ 2, 3
 VDE safety class ⁵⁾ II, all-insulated
 Protection class IP 67, IP 69K ⁶⁾
 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) 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) 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

Tables

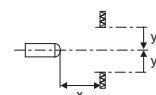
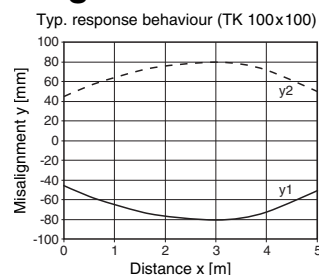
Reflectors			Operating range
1	TK(S)	100x100	0 ... 4.5m
2	MTK(S)	50x50	0 ... 3.0m
3	TK(S)	30x50	0 ... 1.7m
4	TK(S)	20x40	0 ... 1.5m
5	Tape 4	100x100	0 ... 0.7m
6	TK(S)	50x100	0 ... 3.0m
7	TK(S)	82.2	0 ... 2.5m

1	0	4,5	5,0
2	0	3,0	3,5
3	0	1,7	2,0
4	0	1,5	1,7
5	0	0,7	0,9
6	0	3,0	3,5
7	0	2,5	3,0

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

TK ... = adhesive
 TKS ... = screw type
 Tape 4 = adhesive

Diagrams



Order guide

	Designation	Part No.
With M12 connector	PRK 25/66.2-S12	500 41395
With M8 connector	PRK 25/66.2-S8	500 41394
Cable with M12 connector, cable length: 150mm	PRK 25/66.2-150-S12	500 41396
With 2m cable	PRK 25/66.2	501 04202

Remarks

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