



PRK 412

Retro-reflective photoelectric sensors with polarisation filter

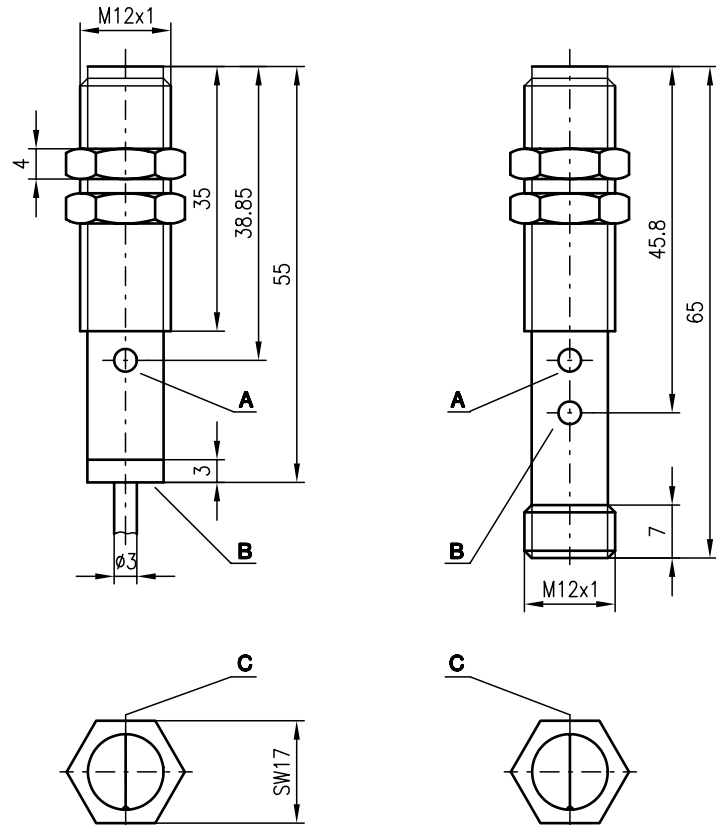


0.05 ... 1.6 m



- Retro-reflective photoelectric sensors using visible red light, with polarisation filter
- High switching frequency for detection of fast events
- Slim and short cylindrical metal housing M12x1
- Light/dark switching via control line

Dimensioned drawing



- A** Sensitivity adjustment
- B** Indicator diode
- C** Optical axis

Electrical connection

PRK 412M/P-S12

10-30V DC +	10-30V DC +	1	br/BN
GND	10-30V DC +	2	ws/WH
GND	GND	3	bl/BU
● ◊	○ ◊	4	sw/BK

PRK 412M/P

10-30V DC +	10-30V DC +	br/BN
GND	GND	bl/BU
● ◊	○ ◊	sw/BK
GND	10-30V DC +	ws/WH



Accessories:

(available separately)

- M12 connectors (KD ...)
- Ready-made cables (KB ...)
- Reflectors
- Reflective tape
- 90° deflection head

We reserve the right to make changes • 412_b01e.fm

Specifications

Optical data

Typ. operating range limit (TK(S) 100x100) ¹⁾	0.05 ... 1.6m
Operating range ²⁾	see table
Light beam characteristic	divergent
Light source	LED (modulated light)
Wavelength	660nm (visible red light, polarised)

With polarisation filter

Timing

Switching frequency	700Hz
Response time	0.7ms
Delay before start-up	≤ 25ms

Electrical data

Operating voltage U_B	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 10% of U_B
Bias current	≤ 20mA
Switching output	PNP transistor output
Function characteristics ³⁾	light/dark switching via control line
Signal voltage high/low	≥ ($U_B - 3V$) / ≤ 3V
Output current	max. 200mA
Sensitivity	adjustable

Indicators

LED yellow	switching state
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Mechanical data

Housing	nickel-faced brass
Optics cover	plastic
Weight	18g
Connection type	M12 connector 4-pin, cable 2m, 4x0.14mm ²

Environmental data

Ambient temp. (operation/storage)	-25°C ... +55°C / -40°C ... +70°C
Protective circuit ⁴⁾	2, 3
VDE safety class	III
Protection class	IP 67
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) Light switching for control line (ws/WH): not connected or connected to U_B
Dark switching for control line (ws/WH): connected to GND
- 4) 2=polarity reversal protection, 3=short-circuit protection for all outputs

Order guide

	Designation	Part No.
With M12 connector		
With polarisation filter	PRK 412M/P-S12	500 81407
With cable connection		
With polarisation filter	PRK 412M/P	500 81408

Tables

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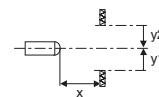
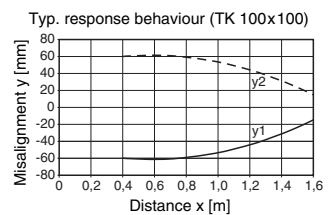
Reflectors	Operating range
1 TK(S) 100x100	0.15 ... 1.3m
2 MTK(S) 50x50	0.15 ... 0.8m
3 TK(S) 30x50	0.15 ... 0.6m
4 TK(S) 20x40	0.15 ... 0.5m
5 Tape 2 100x100	0.15 ... 0.5m

1	0.05	1.3	1.6
2	0.05	0.8	1.1
3	0.05	0.6	0.8
4	0.05	0.5	0.6
5	0.05	0.5	0.6

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

Diagrams

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Remarks

- Models with NPN transistor output on request.