



PRK 96

Retro-reflective photoelectric sensors with polarisation filter



0 ... 1.85m

10 - 30 V
DC

- Retro-reflective photoelectric sensor for safe detection of transparent media (e.g. clear glass, PE, foil)
- Reliable detection of the smallest gaps between transparent objects
- User controlled sensitivity adjustment with high resolution
- The autocollimation principle used ensures that the device functions reliably over the entire range (0 ... max.)
- High switching frequency for detection of fast events
- Connection via M12 connector or terminal compartment

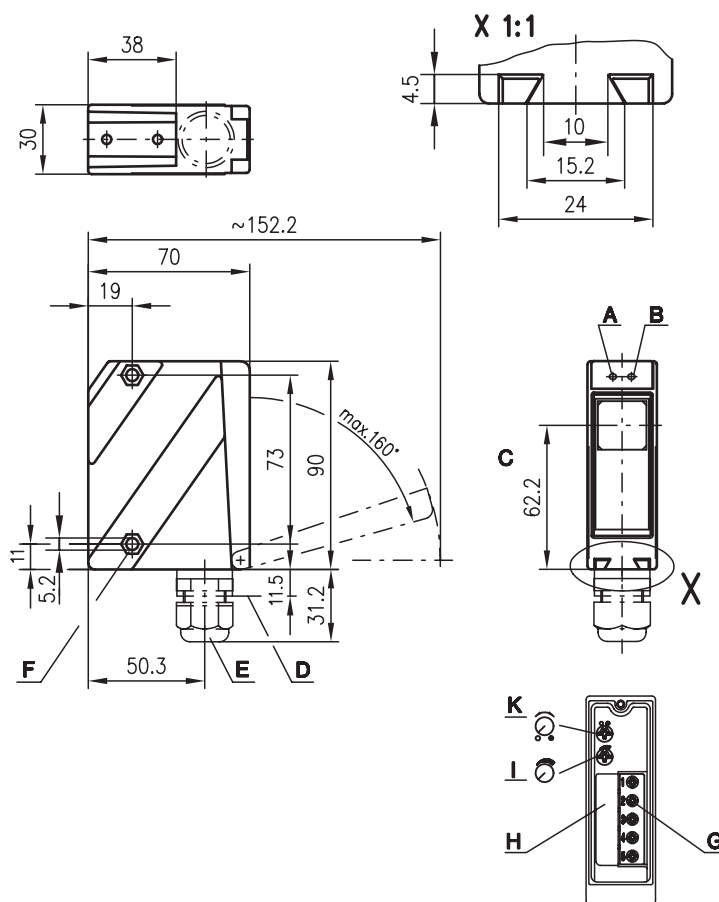


Accessories:

(available separately)

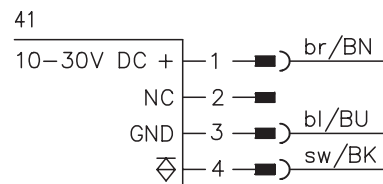
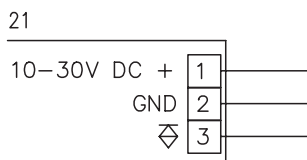
- Mounting systems (BT 96, BT 96.1, UMS 96, BT 450.1-96)
- M12 connectors (KD ...)
- Ready-made cables (K-D ...)
- Reflectors
- Reflective tapes
- Alignment aid ARH 96

Dimensioned drawing



- A** Indicator diode green
- B** Indicator diode yellow
- C** Optical axis
- D** Device plug M12x1
- E** Screwed cable gland M16x1.5 for Ø 5 ... 10mm
- F** Countersinking for SK nut M5, 4.2 deep
- G** Connection terminals
- H** Cable entry
- I** Sensitivity adjustment
- K** Light/dark switching

Electrical connection





Specifications

Optical data

Typ. operating range limit (TK(S) 50x50) ¹⁾	0 ... 1.85 m
Operating range ²⁾	0 ... 1.5 m
Light source	LED (modulated light)
Wavelength	660 nm (visible red light/polarised)

Timing

Switching frequency	1000 Hz
Response time	0.5 ms
Delay before start-up	≤ 200 ms

Electrical data

Operating voltage U_B	10 ... 30 VDC (incl. residual ripple)
Residual ripple	≤ 15% of U_B
Bias current	≤ 40 mA
Switching output	PNP transistor
Function characteristics	light/dark switching (reversible)
Signal voltage high/low	≥ ($U_B - 2V$) / ≤ 2V
Output current	max. 100 mA
Sensitivity	adjustable with 10-turn potentiometer

Indicators

LED green	ready
LED yellow	clear glass - adjustment range 1 transition from quickly flashing to slowly flashing coloured glass - adjustment range 2 transition from cont. illuminated to quickly flashing other - adjustment range 3 continuously illuminated

Mechanical data

Housing	diecast zinc
Optics cover	glass
Weight	380 g
Connection type	terminals or M12 connector

Environmental data

Ambient temp. (operation/storage)	-20°C ... +55°C / -40°C ... +55°C
Protective circuit ³⁾	1, 2, 3, 4
VDE safety class ⁴⁾	II, all-insulated
Protection class	IP 67, IP 69K ⁵⁾
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 250 VAC
5) 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 terminals	PRK 96M/P-1830-21	500 28975
With M12 connector	PRK 96M/P-1830-41	500 80469

Tables

Diagrams

Remarks

- Integrated slit diaphragm: 3.7x20 mm

Objects	Adjustment (indicator LED yellow)
Clear glass, PE, foil	Range 1 Operating pt. 1 
Coloured glass	Range 2 Operating pt. 2 
Other	Range 3 