



PRK 96

Retro-reflective photoelectric sensors with polarisation filter



0 ... 8.5m

10 - 30 V
DC

- Retro-reflective photoelectric sensor for safe detection of transparent media (e.g. clear glass, PE, foil)
- 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

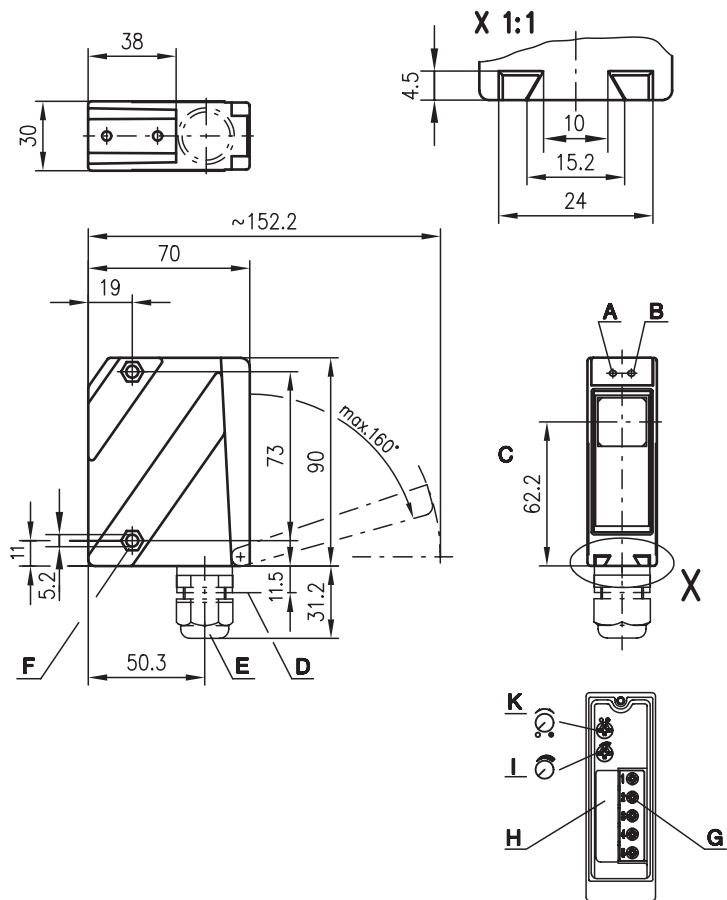


Accessories:

(available separately)

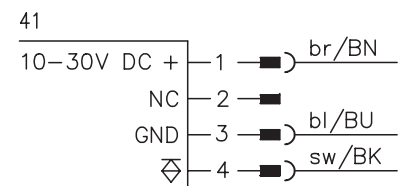
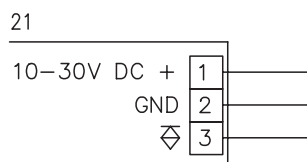
- Mounting systems (BT 96, BT 96.1, UMS 96, BT 450.1-96)
- M12 connectors (KD ...)
- Ready-made cables (K-D ...)
- Spark extinction
- Reflectors
- Reflective tapes
- Alignment aid ARH 96

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 ... 8.5m
 Operating range ²⁾ see tables
 Light source LED (modulated light)
 Wavelength 660nm (visible red light/polarised)

Timing

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

Electrical data

Operating voltage U_B 10 ... 30VDC (incl. residual ripple)
 Residual ripple ≤ 15% of U_B
 Bias current ≤ 40mA
 Switching output PNP transistor
 Function characteristics light/dark switching (reversible)
 Signal voltage high/low ≥ ($U_B - 2V$) / ≤ 2V
 Output current max. 100mA
 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 380g
 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 250VAC
- 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-1838-21	500 29880
With M12 connector	PRK 96M/P-1838-41	500 80760

Tables

Reflectors	Operating range
1 TK(S) 100x100	0 ... 7m
2 MTK(S) 50x50	0 ... 6m
3 TK(S) 30x50	0 ... 4m
4 TK(S) 20x40	0 ... 3.5m
5 TK(S) 82	0 ... 5m
6 Tape 2 100x100	0 ... 3m

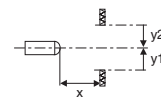
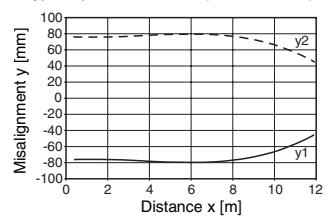
1	0.1	7	8.5
2	0.1	6	7.5
3	0.1	4	5
4	0.1	3.5	4
5	0.1	5	6
6	0.1	3	3.5

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

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

Diagrams

Typ. response behaviour (TKS 100x100)



Remarks

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