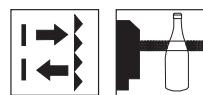


PRK 96

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



IEC 60947...

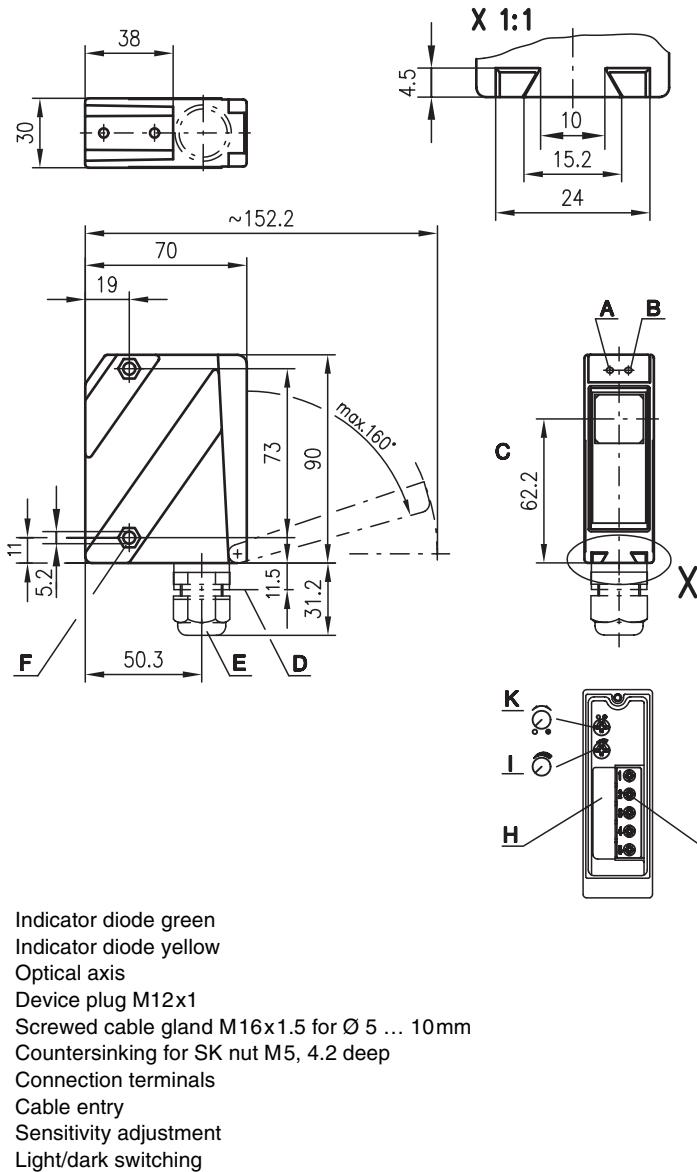
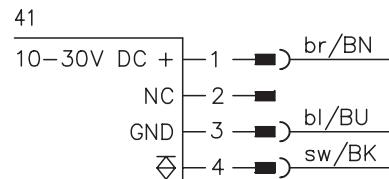
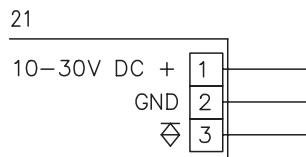


IEC 60947...

IP 69K
IP 67**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**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

With terminals	Designation	Part No.
	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
2	MTKS	50x50
3	TK(S)	30x50
4	TK(S)	20x40
5	TK(S)	82
6	Tape 2	100x100

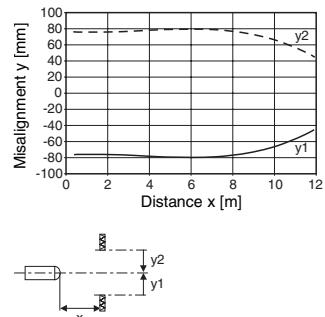
1	0.1	7	8.5
2	0.1	6	7.5
3	0.1	4	5
4	0.1	3.5	4
5	0.1	5	6
6	0.1	3	3.5

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

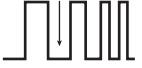
TK ... = adhesive
TKS ... = screw type
Tape 2 = adhesive

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 