

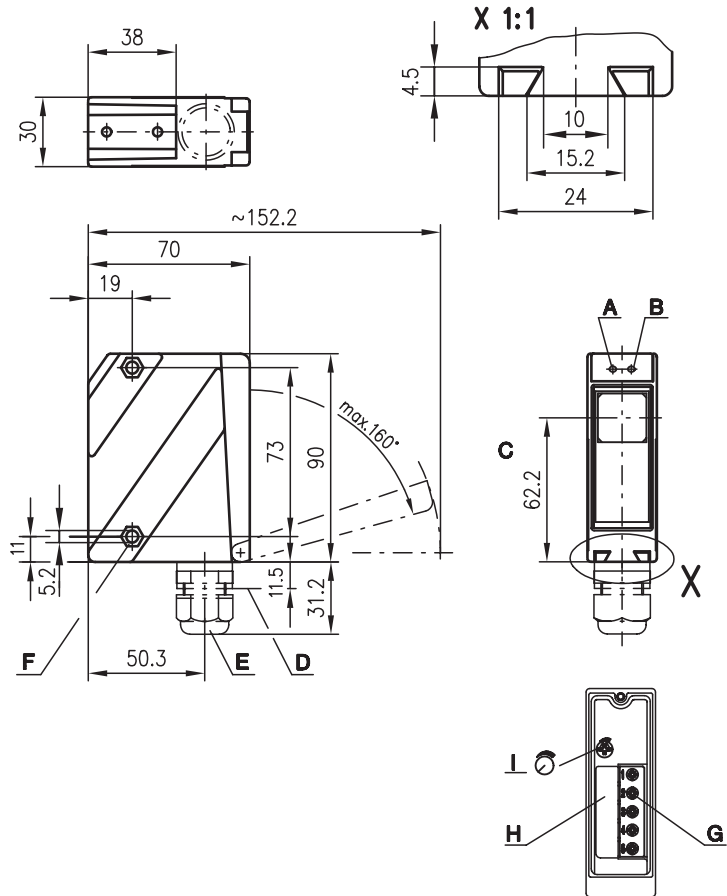


PRK 96

Retro-reflective photoelectric sensors with polarisation filter

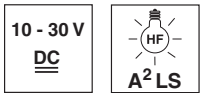


Dimensioned drawing



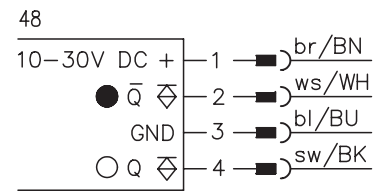
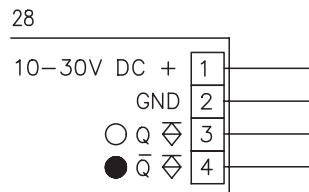
- A Indicator diode green
- B Indicator diode yellow
- C Optical axis
- D Device plug M12x1
- E Screwed cable gland M16x1.5 for Ø 5 ... 10mm
- F Countersinking for SK nut M5, 4.2 deep
- G Connection terminals
- H Cable entry
- I Sensitivity adjustment

0 ... 8.5m



- Retro-reflective photoelectric sensor for detection of transparent media
- Robust metal housing with glass cover, protection class IP 67/IP 69K for industrial application
- Sensitivity adjustment
- 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

Electrical connection



Accessories:

(available separately)

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

We reserve the right to make changes • 96\_b12e.fm

## Specifications

### Optical data

Typ. operating range limit (TK(S) 100x100) <sup>1)</sup>	0 ... 8.5m
Operating range <sup>2)</sup>	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	≤ 30mA
Switching output	2 PNP transistor outputs, complementary
Function characteristics	light/dark switching
Signal voltage high/low	≥ ( $U_B - 2V$ ) / ≤ 2V
Output current	max. 100mA
Sensitivity	adjustable with potentiometer

### Indicators

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

### 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 <sup>3)</sup>	1, 2, 3, 4
VDE safety class <sup>4)</sup>	II, all-insulated
Protection class	IP 67, IP 69K <sup>5)</sup>
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

## 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

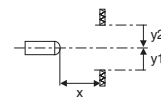
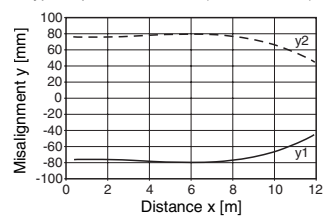
1	0.1			7	8.5
2	0.1			6	7.5
3	0.1		4		5
4	0.1	3.5		4	
5	0.1			5	6
6	0.1	3		3.5	

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

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

## Diagrams

Typ. response behaviour (TKS 100x100)



## Order guide

	Designation	Part No.
With terminals	PRK 96M/P-2838-28	500 82060
With M12 connector	PRK 96M/P-2838-48	(optional)

## Remarks