

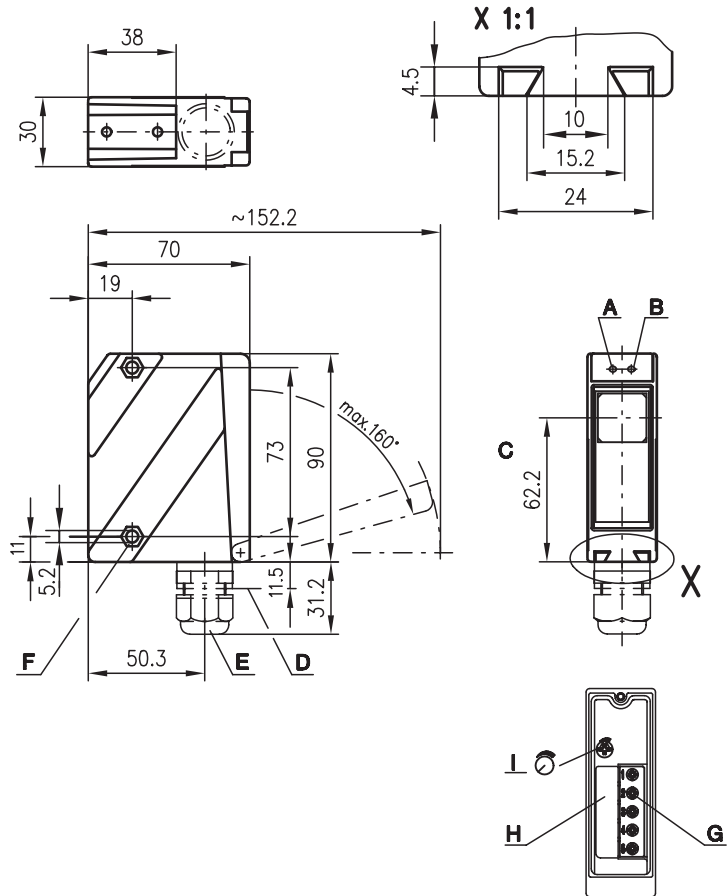


PRK 96

Retro-reflective photoelectric sensors with polarisation filter

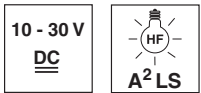


Dimensioned drawing



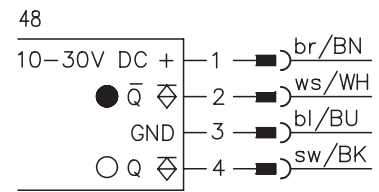
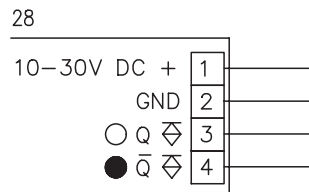
- A Indicator diode green
- B Indicator diode yellow
- C Optical axis
- D Device plug M12x1
- E Screwed cable gland M16x1.5 for Ø 5 ... 10mm
- F Countersinking for SK nut M5, 4.2 deep
- G Connection terminals
- H Cable entry
- I Sensitivity adjustment

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) 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 ≤ 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 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

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

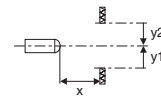
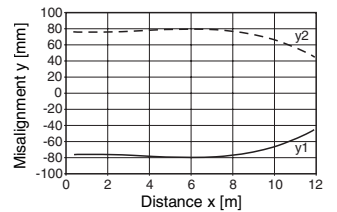
1	0.1	7	8.5
2	0.1	6	7.5
3	0.1	4	5
4	0.1	3.5	4
5	0.1	5	6
6	0.1	3	3.5

- 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