



PRK 96

Retro-reflective photoelectric sensors with polarisation filter

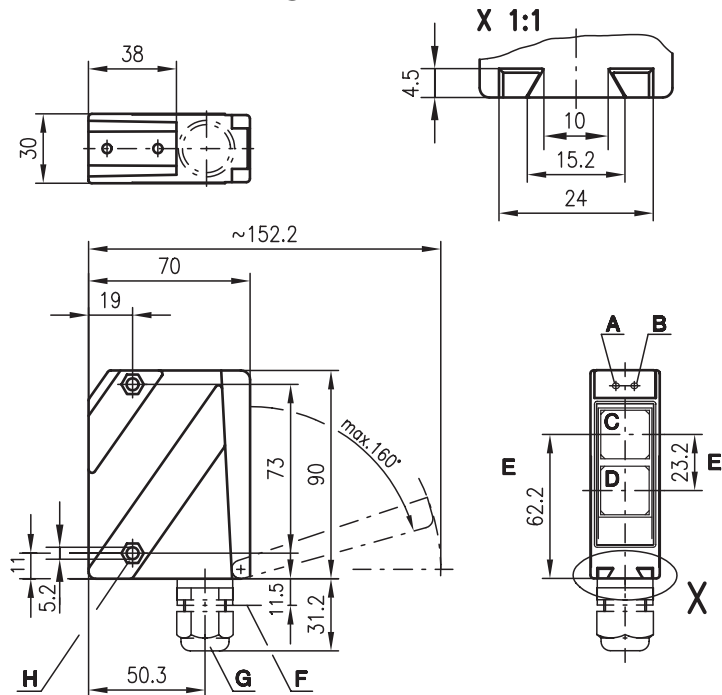


10m
18m

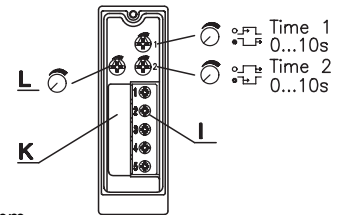


- Polarised retro-reflective photoelectric sensor with large operating range in visible red light
- Robust metal housing with glass cover or plastic housing, protection class IP 67/ IP 69K for industrial application
- Complementary outputs, sensitivity adjustment and delay before start-up for optimal adaptation to the application
- Connection via M12 connector or terminal compartment
- Multiple options with warning output, activation input, switching delays and optics heating for use at low temperatures

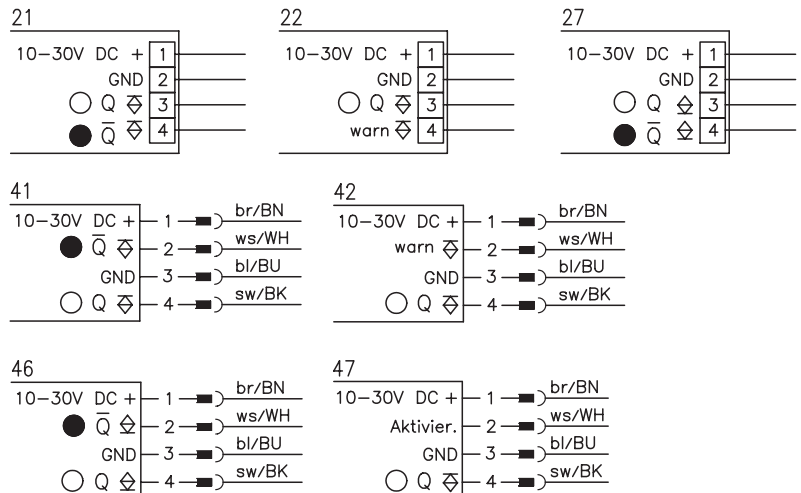
Dimensioned drawing



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



Electrical connection



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

We reserve the right to make changes • 96_b03e.fm

Specifications

Optical data

Typ. operating range limit (TK(S) 100x100) ¹⁾ 10m/18m
 Operating range ²⁾ see tables
 Light spot diameter approx. 130mm at 6m
 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, ≤ 75mA with optics heating
 Switching output PNP or NPN transistor
 Function characteristics light/dark switching
 Signal voltage high/low ≥ ($U_B - 2V$) / ≤ 2V
 Output current max. 100mA
 Sensitivity adjustable

Indicators

LED green ready
 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

Options

Warning output autoControl warn PNP transistor, 100mA, counting principle for temperature changes, prevents fogging to -35°C
Optics heating
Low temperature
Switching delay (slow oper./release) 0 ... 10s (separately adjustable)

- 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

Selection table		Order code →							
Equipment ↓		PRK 96M/P-1370-22 Part No. 500 25182	PRK 96M/P-1370-42 Part No. 500 25186	PRK 96M/P-1400-22 Part No. 500 25178	PRK 96M/P-1400-42 Part No. 500 31549	PRK 96M/P-3360-21 Part No. 500 82065	PRK 96M/N-3366-27 Part No. 501 02379	PRK 96M/P-3380-41 Part No. 500 61452	PRK 96M/P-1361.1-47 Part No. 501 04279
Housing	metal	●	●	●	●	●	●	●	●
	plastic								
Light source	red light (8m)	●	●	●	●				●
	red light (15m)					●	●	●	
Connection	terminals	●		●		●	●		
	M12 connector		●		●			●	●
Features	optics heating/low temp.			●	●		●		
	switching delay			●	●			●	
	warning output	●	●	●	●				
	activation input								●
	NPN switching output						●		
	Light/dark switching								●

Tables

10m models

Reflectors	Operating range
1 TK(S) 100x100	0.3 ... 8m
2 MTK(S) 50x50	0.3 ... 7m
3 TK(S) 30x50	0.3 ... 4.5m
4 TK(S) 20x40	0.3 ... 3m
5 TK(S) 82	0.3 ... 6m
6 Tape 2 100x100	0.3 ... 4m

1	0.1	8	10
2	0.1	7	8.5
3	0.1	4.5	5
4	0.1	3	4
5	0.1	6	7.5
6	0.1	4	5.5

18m models

Reflectors	Operating range
1 TK(S) 100x100	0.3 ... 15m
2 MTK(S) 50x50	0.3 ... 11m
3 TK(S) 30x50	0.3 ... 6m
4 TK(S) 20x40	0.3 ... 5m
5 TK(S) 82	0.3 ... 11m
6 Tape 2 100x100	0.3 ... 6m

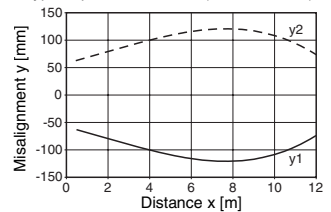
1	0.1	15	18
2	0.1	11	12
3	0.1	6	7.5
4	0.1	5	6
5	0.1	11	11.5
6	0.1	6	7.5

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

Diagrams

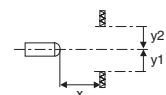
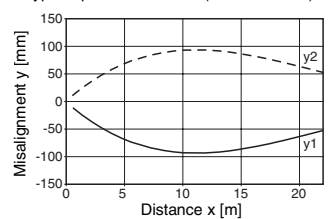
10m models

Typ. response behaviour (TKS 100x100)



18m models

Typ. response behaviour (TKS 100x100)



Remarks

- The polarised retro-reflective photoelectric sensor is also available with an integrated AS-i chip for direct connection to the AS-i system.