



PRK 96

Retro-reflective photoelectric sensors with polarisation filter

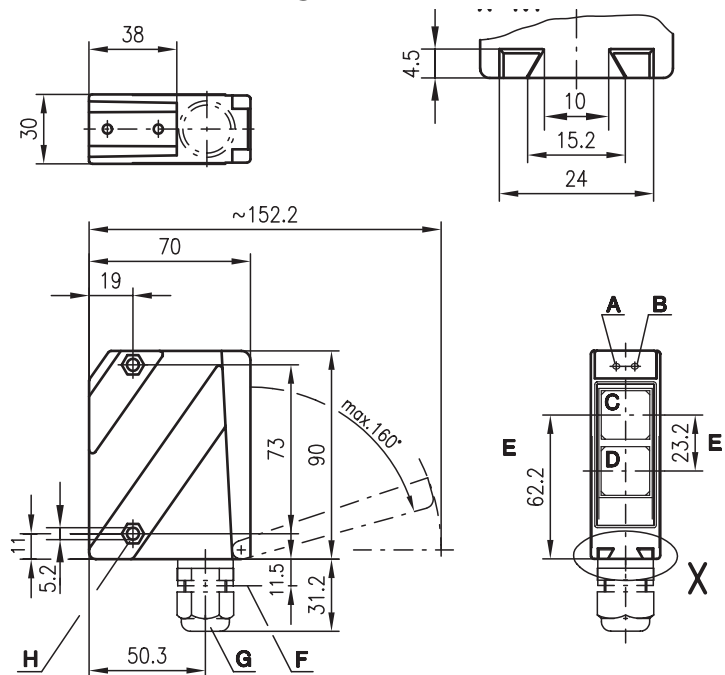


10m

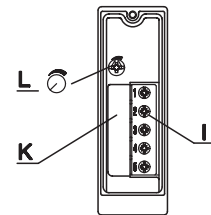


- Polarised retro-reflective photoelectric sensor with large operating range in visible red light
- Robust metal housing with glass cover or plastic housing, protection class IP 67/ IP 69K for industrial application
- Sensitivity adjustment and delay before start-up for optimal adaptation to the application
- Connection via M12 connector or terminal compartment
- Activation input for e.g. muting applications

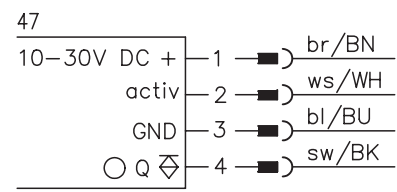
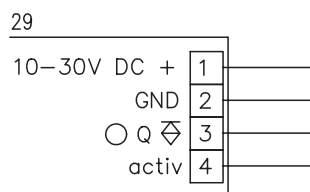
Dimensioned drawing



- 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\_b04e.fm



### Specifications

#### Optical data

Typ. operating range limit (TK(S) 100x100) <sup>1)</sup>	10 m
Operating range <sup>2)</sup>	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 <sub>B</sub>	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U <sub>B</sub>
Bias current	≤ 40mA
Switching output	PNP transistor
Function characteristics	light switching
Signal voltage high/low	≥ (U <sub>B</sub> -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	Plastic housing	polycarbonate
Optics cover	glass		plastic
Weight	380g		150g
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

#### Options

Activation input activ	
Transmitter active/not active	≥ 8V/≤ 2V (≥ 2V/≤ 2V) <sup>6)</sup>
Activation/disable delay	≤ 0.5ms
Input resistance	47KΩ ± 10%

- 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
- 6) Active low

### Order guide

Selection table		Order code →	PRK 96K/P-1361-29 Part No. 500 80476	PRK 96M/P-1361-47 Part No. 500 82092	PRK 96K/P-1363-29 Part No. 500 80656	PRK 96M/P-1362-47 Part No. 500 80477
Equipment ↓	metal		●			●
	plastic		●		●	
Light source	red light (8m)		●	●	●	●
Connection	terminals		●		●	
	M12 connector			●		●
Features	activation input		●	●	● <sup>6)</sup>	●
	optics heating/low temperature					●

### Tables

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

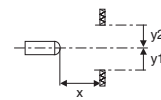
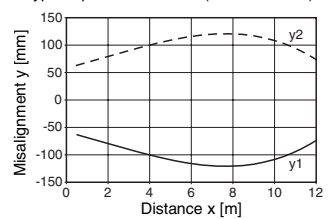
1	0.1	8	10
2	0.1	7	8.5
3	0.1	4.5	5
4	0.1	3	4
5	0.1	6	7.5
6	0.1	4	5.5

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

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

### Diagrams

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.
- **PRK 96K/P-1363-29**  
Activation via active low signal