

IPRK 95

Retro-reflective photoelectric sensors with polarisation filter



0 ... 6.0m
0 ... 0.3m

10 - 30 V
DC

- Polarised retro-reflective photoelectric sensor using visible red light
- The autocollimation principle used ensures that the device functions reliably over the entire range (0 ... max.)
- Polarisation filter blocks unwanted reflections
- Complementary switching outputs for light/dark switching or as a control function
- IPRK 95/44 L.3 uses a focussed light beam for maximum switching and positioning accuracy
- IPRK 95/44 L.21 with potentiometer for detection of:
shrink-wrapped packing drums

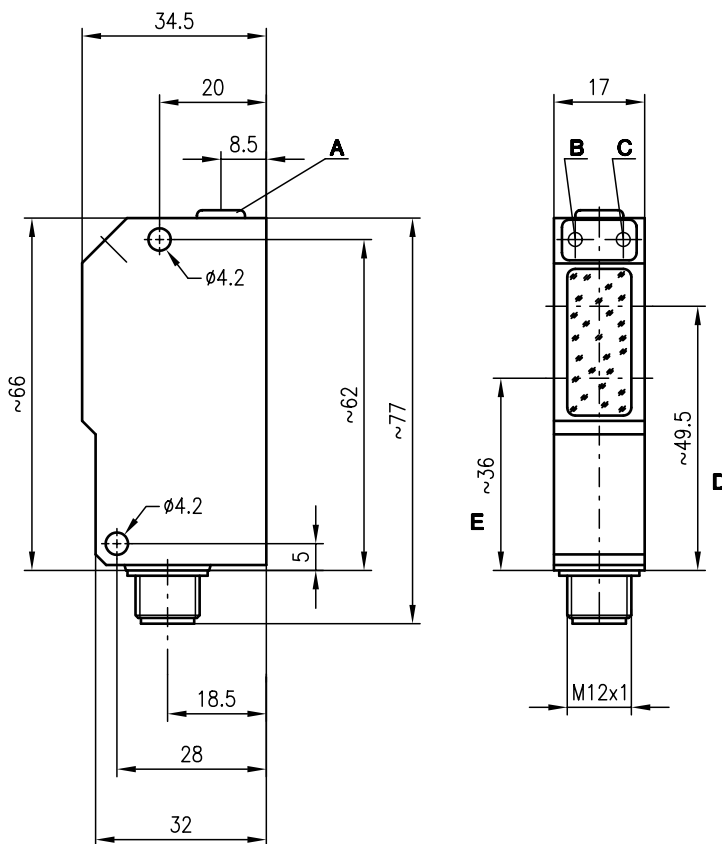


Accessories:

(available separately)

- Mounting systems (BT 95, UMS 1)
- M12 connectors (KD ...)
- Reflectors
- Reflective tapes

Dimensioned drawing



- A** Sensitivity adjustment (for IPRK 95/44 L.21)
- B** Switching indicator yellow
- C** Operation indicator green
- D** Optical axis receiver
- E** Optical axis transmitter

Electrical connection

IPRK 95/44 L.21
IPRK 95/44 L.2
IPRK 95/44 L.3

Terminal	Pin	Color	Label
10-30V DC	1	Black	br/BN
● ◇	2	Black	ws/WH
GND	3	Black	bl/BU
○ ◇	4	Black	sw/BK
warn	5	Black	gr/GR

Specifications

Optical data

Typ. operating range limit ¹⁾
Operating range ²⁾
Light beam characteristic
Light source
Wavelength

IPRK 95/... L.2 (L.21)

0 ... 6m (TK(S) 100x100)
see tables
divergent
LED (modulated light)
660nm (visible red light, polarised)

IPRK 95/44 L.3

0 ... 0.3m (tape 2)
see tables
focussed at 100mm

Timing

Switching frequency
Response time
Delay before start-up

1000Hz
0.5ms
≤ 100ms

Electrical data

Operating voltage U_B
Residual ripple
Bias current
Switching output
Function characteristics
Signal voltage high/low
Output current
Sensitivity

10 ... 30VDC (incl. residual ripple)
≤ 15% of U_B
≤ 35mA
2 PNP transistor outputs, complementary
light/dark switching
≥ ($U_B - 2V$) / ≤ 2V
max. 100mA
adjustable via multiturn potentiometer

Indicators

LED green
LED yellow
LED yellow flashing

ready
light path free
light path free, no performance reserve

Mechanical data

Housing
Optics cover
Weight
Connection type

diecast zinc
glass
90g
M12 connector, stainless steel, 5-pin

Environmental data

Ambient temp. (operation/storage) ³⁾
Protective circuit ⁴⁾
VDE safety class ⁵⁾
Protection class
LED class
Standards applied

-25°C (-30°C) ... +55°C/-40°C ... +55°C
2,3
II, all-insulated
IP 67, IP 69K ⁶⁾
1 (acc. to EN 60825-1)
IEC 60947-5-2

Options

Warning output autoControl warn
Signal voltage high/low
Output current

PNP transistor, counting principle
≥ ($U_B - 2V$) / ≤ 2V
max. 100mA

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) -30°C with operating voltage continuously applied
- 4) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 5) Rating voltage 250VAC
- 6) 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

	Designation	Part No.	UL
With PNP switching output 0 ... 6.0m	IPRK 95/44 L.2	500 22680	●
With PNP switching output 0 ... 0.3m	IPRK 95/44 L.3	500 22681	●
With PNP switching output 0 ... 6.0m adjustable sensitivity	IPRK 95/44 L.21	501 02613	

Tables

IPRK 95/... L.2

Reflectors	Operating range
1 TK(S) 100x100	0 ... 4.2m
2 MTK(S) 50x50	0 ... 3.2m
3 TK(S) 30x50	0 ... 1.8m
4 TK(S) 20x40	0 ... 1.7m
5 Tape 2 100x100	0 ... 1.2m

1	0	4.2	6
2	0	3.2	5.4
3	0	1.8	3.0
4	0	1.7	2.9
5	0	1.2	1.7

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

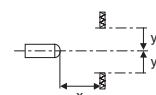
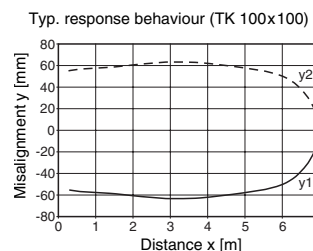
IPRK 95/44 L.3

Reflectors	Operating range
Tape 2 10x10	0 ... 0.3m

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

Diagrams

IPRK 95/... L.2



Remarks

- The retro-reflective photoelectric sensor with 3m operating range is also available with an integrated AS-i chip for direct connection to the AS-i system.