



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

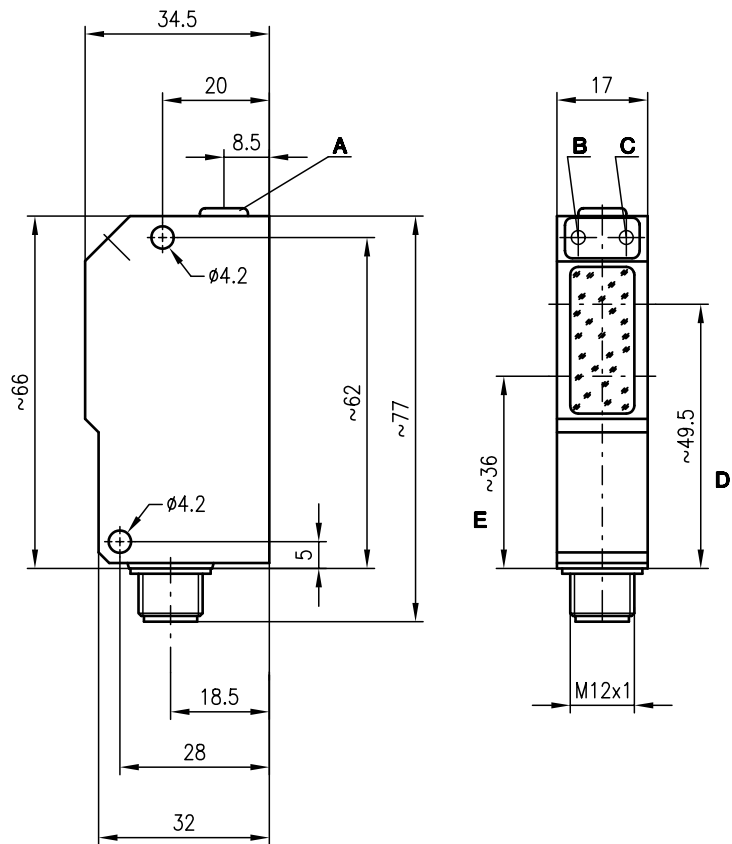


Accessories:

(available separately)

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

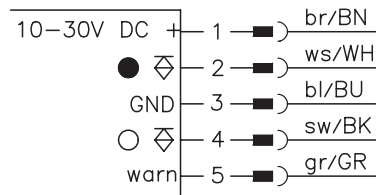
Dimensioned drawing



- 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



We reserve the right to make changes • 95_b04e.fm

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
 $\geq (U_B - 2V) / \leq 2V$
 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
 $\geq (U_B - 2V) / \leq 2V$
 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 250 VAC
- 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]

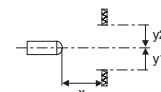
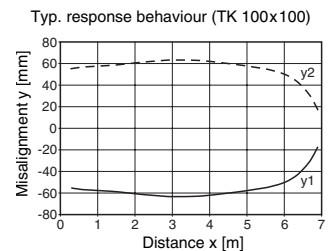
IPRK 95/44 L.3

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.