



IPRK 95

Retro-reflective photoelectric sensors with polarisation filter



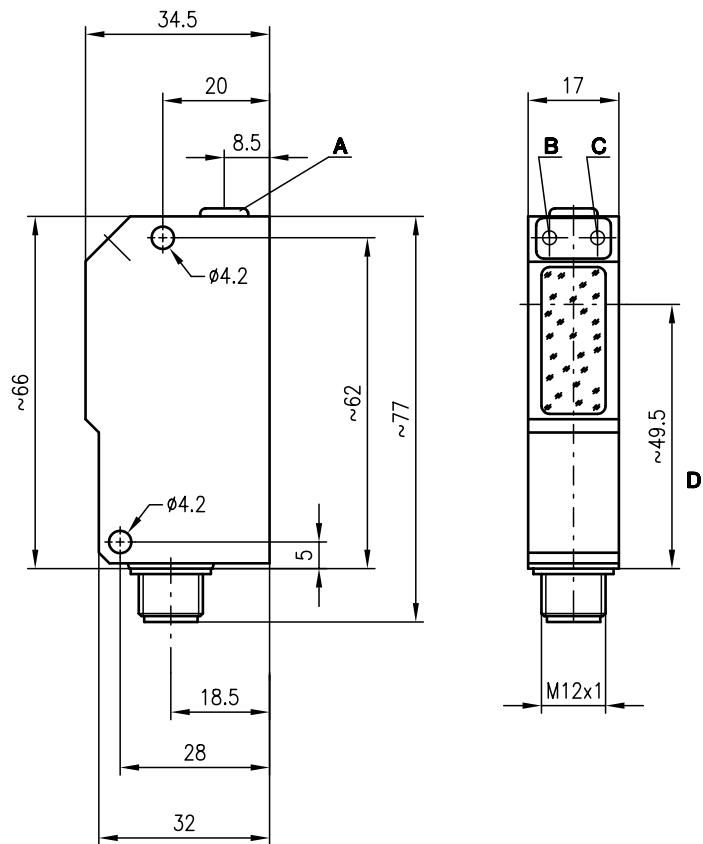
0 ... 3m
0 ... 6m



- Polarised retro-reflective photoelectric sensors with integrated AS-i slave
- The autocollimation principle used ensures that the device functions reliably over the entire range (0 ... max.)
- The retro-reflective photoelectric sensor PRK 95/A L.4 is used for the detection of transparent media (e.g. clear glass, PE, foil) within the operating range of 1.5m
- Adjustable sensitivity with high resolution allows detection of transparent objects

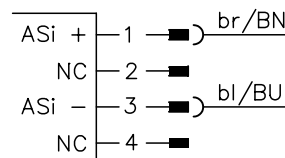


Dimensioned drawing



- A Sensitivity adjustment
- B Switching indicator yellow
- C Operation indicator green
- D Optical axis

Electrical connection



Accessories:

(available separately)

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

AS-i Accessories:

(available separately)

- Bus terminals
- AS-i ribbon cable
- Address programming device
- Coupling modules
- Intermediate cables etc.

We reserve the right to make changes * 95_b06e.fm



Specifications

Optical data

Typ. operating range limit (TK(S) 100x100) ¹⁾
Operating range ²⁾
Light beam characteristic
Light source
Wavelength

IPRK 95/A L.2

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

PRK 95/A L.4

0 ... 3m
see tables

Timing

Sensor switching frequency
Sensor response time
Delay before start-up

1000Hz
0.5ms
≤ 100ms

Electrical data

Operating voltage U_B
Bias current
Sensitivity

26.5 V ... 31.6 V (according to AS-i specification)
≤ 35mA

adjustable with 10-turn potentiometer

Indicators ³⁾

LED green
LED yellow, slowly flashing

ready
operating point 1 **clear glass**
transition from quickly flashing to slowly flashing / light path free

LED yellow, quickly flashing

operating point 2 **coloured glass**
transition from continuous light to quickly flashing / light path free

LED yellow, continuous light

operating point 3 **non transparent media**
continuous light/light path free

Mechanical data

Housing
Optics cover
Weight
Connection type

diecast zinc
glass
90g
M12 connector, stainless steel

Environmental data

Ambient temp. (operation/storage) ⁴⁾
Protective circuit ⁵⁾
VDE safety class ⁶⁾
Protection class
LED class
Standards applied

-25°C (-30°C) ... +55°C/-40°C ... +55°C
1, 4
II, all-insulated
IP 67, IP 69K ⁷⁾
1 (acc. to EN 60825-1)
IEC 60947-5-2

AS-i data

I/O code
ID code
Address

1
1
programmed by the user in the range of 1 to 31 (default=0)
5ms
S-1.1

Cycle time acc. to AS-i specification
AS-i standard according to profile

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) for IPRK 95/A L.2: LED yellow - light path free/LED yellow flashing - light path free, no performance reserve
- 4) -30°C with operating voltage continuously applied
- 5) 1=transient protection, 4=interference blanking
- 6) Rating voltage 250 VAC
- 7) 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

Assignment: data bits			Assignment: parameter bits		
	Switching output	Programming (host level)		Programming (host level)	
D ₀	∅ no reflection 1 reflection	System input	*P ₀	NC 1	System parameter
D ₁	∅ active 1 not active	System input	*P ₁	light/dark switching 1 light switching	System parameter
D ₂	∅ sensor not ready 1 sensor ready	System input	*P ₂	NC 1	System parameter
*D ₃	∅ transmitter on 1 transmitter off	System output	*P ₃	NC 1	System parameter

* default = 1

1) applies only for IPRK 95/A L.2

Order guide

Designation

IPRK 95/A L.2
PRK 95/A L.4

Part No.

500 27094
500 27095

Tables

IPRK 95/A 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

PRK 95/A L.4

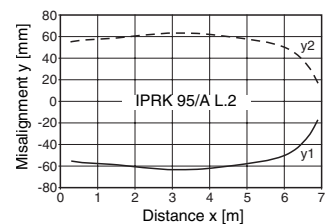
Reflectors	Operating range
1 TK(S) 100x100	0 ... 1.8m
2 MTK(S) 50x50	0 ... 1.8m
3 TK(S) 30x50	0 ... 1.1m
4 TK(S) 20x40	0 ... 1.0m
5 Tape 2 100x100	0 ... 0.4m

1	0	1.8	3
2	0	1.8	3
3	0	1.1	1.8
4	0	1.0	1.7
5	0	0.4	0.7

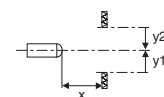
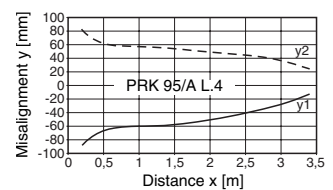
□ Operating range [m]
▒ Typ. operating range limit [m]

Diagrams

Typ. response behaviour (TK 100x100)



Typ. response behaviour (TK 100x100)



Remarks

Objects	Adjustment (indicator LED yellow)
Clear glass, PE, foil	Operating pt. 1
Coloured glass	Operating pt. 2
Opaque objects	Operating pt. 3