



IPRK 95

Retro-reflective photoelectric sensors with polarisation filter

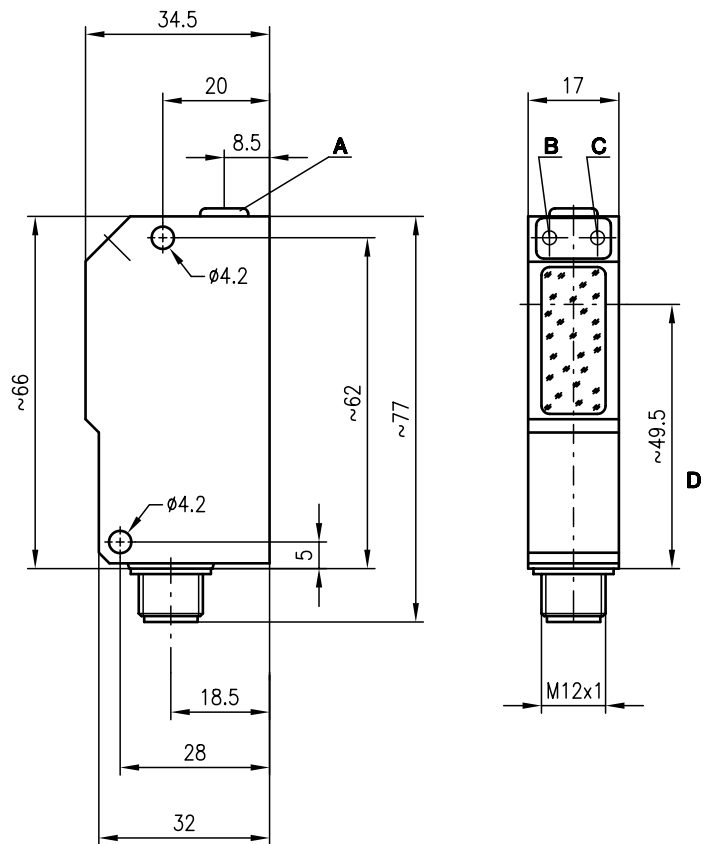


0 ... 3m  
0 ... 6m



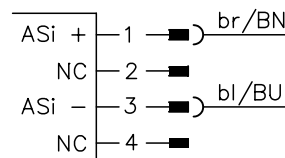
- Polarised retro-reflective photoelectric sensors with integrated AS-i slave
- The autocollimation principle used ensures that the device functions reliably over the entire range (0 ... max.)
- The retro-reflective photoelectric sensor PRK 95/A L.4 is used for the detection of transparent media (e.g. 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) <sup>1)</sup>  
 Operating range <sup>2)</sup>  
 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 <sup>3)</sup>

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) <sup>4)</sup>  
 Protective circuit <sup>5)</sup>  
 VDE safety class <sup>6)</sup>  
 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 <sup>7)</sup>  
 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 <sub>0</sub>	∅ no reflection 1 reflection	System input	*P <sub>0</sub>	NC ∅ 1	System parameter
D <sub>1</sub>	Warning output autoControl <sup>1)</sup> ∅ active 1 not active	System input	*P <sub>1</sub>	light/dark switching ∅ dark switching 1 light switching	System parameter
D <sub>2</sub>	Ready output ∅ sensor not ready 1 sensor ready	System input	*P <sub>2</sub>	NC ∅ 1	System parameter
*D <sub>3</sub>	Activation input ∅ transmitter on 1 transmitter off	System output	*P <sub>3</sub>	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

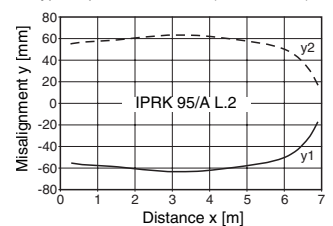
1	0	1.8	3
2	0	1.8	3
3	0	1.1	1.8
4	0	1.0	1.7
5	0	0.4	0.7

□ Operating range [m]

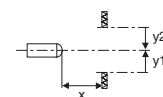
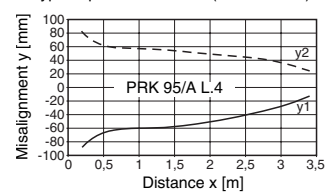
▒ Typ. operating range limit [m]

## 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 