

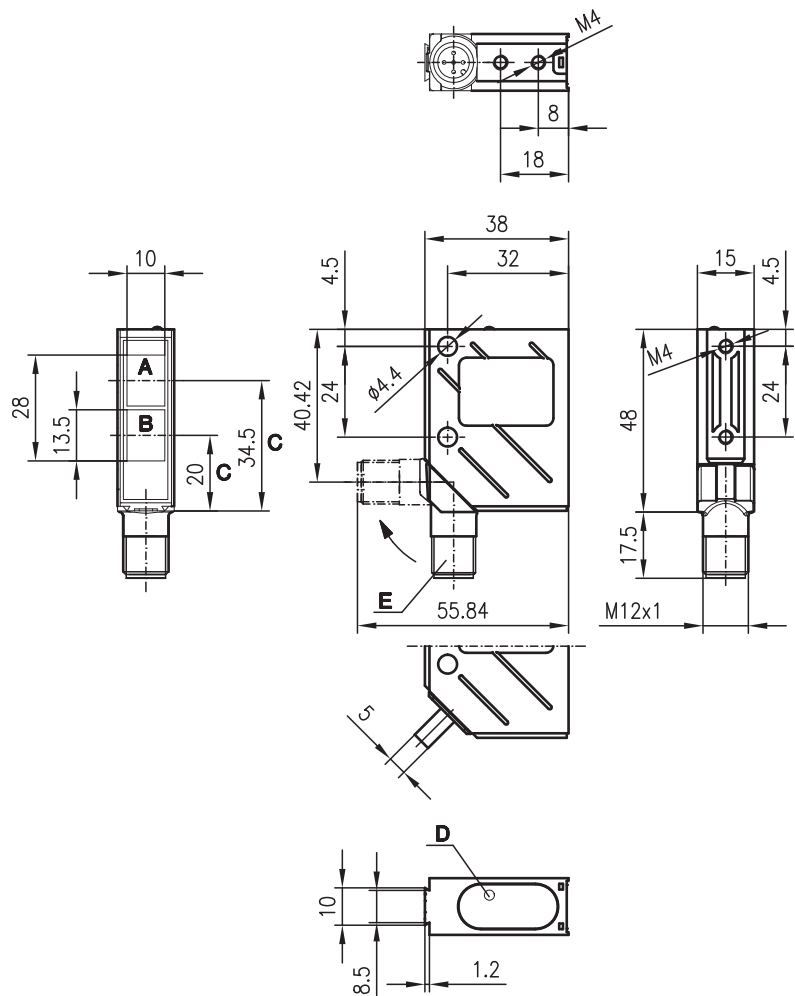
IPRK 8

Retro-reflective photoelectric sensors

en 04-2014/08 50127236

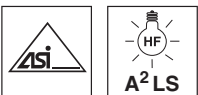


Dimensioned drawing



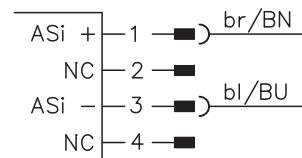
- A Receiver
- B Transmitter
- C Optical axis
- D LED yellow
- E 90° turning connector

0.05 ... 8m



- A²LS - active suppression of extraneous light
- Integrated AS-i slave
- M12 turning connector or cable connection
- Visible red light

Electrical connection



Accessories:

(available separately)

- M12 connectors (KD ...)
- Ready-made cables (K-D ...)
- Mounting systems
- Reflectors
- Reflective tapes
- Control guard

We reserve the right to make changes • DS\_IPRK8A\_en\_50127236.fm

## Specifications

### Optical data

Typ. operating range limit (TK(S) 100x100) <sup>1)</sup>	0.05 ... 8m
Operating range <sup>2)</sup>	see tables
Light source	LED (modulated light)
Wavelength	660nm (visible red light)

### Timing

Switching frequency	according to AS-i specifications (1500Hz internally)
Response time	according to AS-i specifications (0.33ms internally)
Delay before start-up	≤ 300ms

### Electrical data

Operating voltage $U_B$	26.5V ... 31.6V (according to AS-i specification)
Bias current	≤ 35mA
Sensitivity	not adjustable

### Indicators

LED yellow, receiver	light path free
LED yellow flashing, receiver	light path free, no performance reserve

### Mechanical data

Housing	metal
Optics cover	glass
Weight (plug/cable)	70g/140g
Connection type	M12 connector, 5-pin (turning), or cable: 2000mm, 5x0.25mm <sup>2</sup>

### Environmental data

Ambient temp. (operation/storage)	-40°C ... +60°C/-40°C ... +70°C
Protective circuit <sup>3)</sup>	2, 3
VDE safety class <sup>4)</sup>	II, all-insulated
Protection class <sup>5)</sup>	IP 67, IP 69K <sup>6)</sup>
Light source	exempt group (in acc. with EN 62471)
Standards applied	IEC 60947-5-2

### AS-i data

I/O code	7
ID/ID1/ID2 Code	A/7/E
Address	programmed by the user in the range of 1 to 62 (default=0)
Cycle time acc. to AS-i specification	10ms
AS-i standard according to profile	S-7.A.E (A/B-operation, user defined)

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 4) Rating voltage 250VAC
- 5) In stop position of the turning connector (turning connector locked)
- 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

## AS-i programming

### IPRK 8/A-S12

Assignment: data bits			Assignment: parameter bits		
	Host level	Sensor function		Host level	Sensor function
DI <sub>0</sub>	0 object detected	Switching output	P <sub>0</sub>	0	NC
	1 no object			1	
DI <sub>1</sub>	0 active	Warning output	P <sub>1</sub>	0 dark switching	Light/dark switching
	1 not active			1 light switching	
DI <sub>2</sub>	0 sensor not ready	Ready	P <sub>2</sub>	0	NC
	1 sensor ready			1	
DI <sub>3</sub>	0	NC	P <sub>3</sub>	0	NC
	1			1	
DO <sub>0</sub>	0	NC	DI <sub>(n)</sub> ... AS-i input DO <sub>(n)</sub> ... AS-i output		
	1				
DO <sub>1</sub>	0	NC			
	1				
DO <sub>2</sub>	0	NC			
	1				
DO <sub>3</sub>	0	NC			
	1				

## Tables

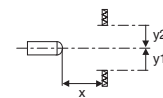
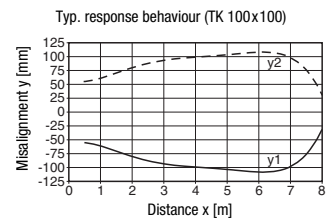
Reflectors	Operating range
1 TK(S) 100x100	0.10 ... 6.4m
2 MTK(S) 50x50	0.12 ... 4.8m
3 TK(S) 30x50	0.10 ... 2.8m
4 TK(S) 20x40	0.13 ... 2.4m
5 Tape 2 100x100	0.15 ... 2.8m

1	0.10	6.4	8
2	0.12	4.8	6
3	0.10	2.8	3.5
4	0.13	2.4	3
5	0.15	2.8	3.5

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

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

## Diagrams



## Remarks

Operate in accordance with intended use!
⚠ This product is not a safety sensor and is not intended as personnel protection.
⚠ The product may only be put into operation by competent persons.
⚠ Only use the product in accordance with the intended use.

## Order guide

	Designation	Part No.
With M12 connector	IPRK 8/A-S12	50038789