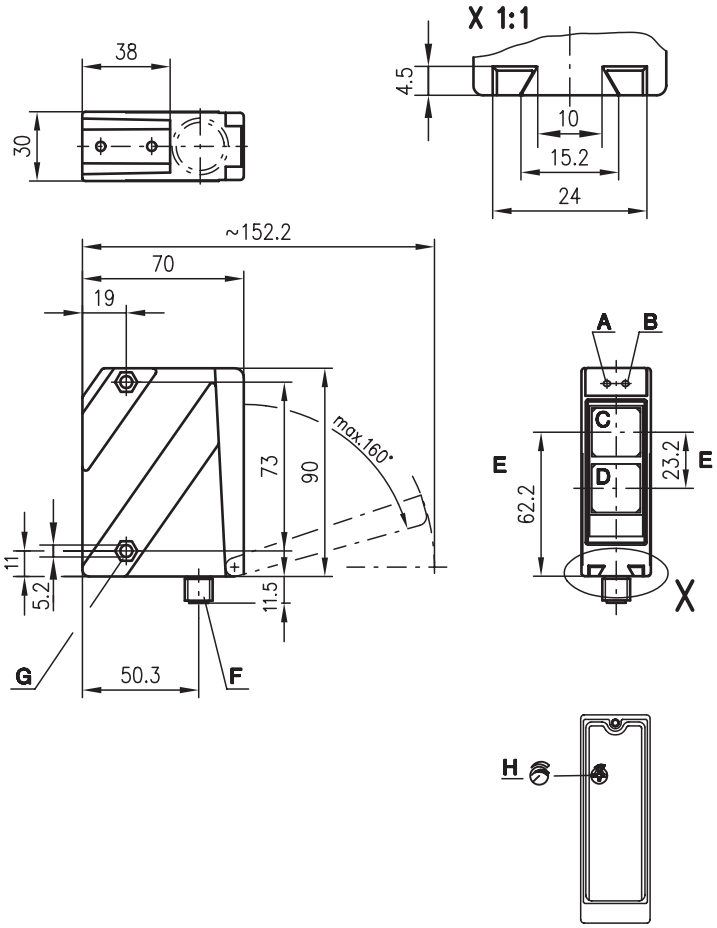
PRK 96 Retro-reflective photoelectric sensors with polarisation filter



18m

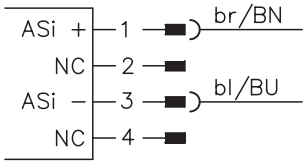
- Metal housing with glass cover, protection class IP 67/IP 69K for industrial application
- Access to all sensor functions via an AS-interface without additional wiring
- Sensitivity adjustment and ready indicator for optimal adaptation to the application
- Common conductor for both power and data reduces installation work

Dimensioned drawing



A Indicator diode green
B Indicator diode yellow
C Receiver
D Transmitter
E Optical axis
F Device plug M12x1
G Countersinking for SK nut M5, 4.2 deep
H Sensitivity adjustment

Electrical connection



Accessories:

(available separately)

- Mounting systems (BT 96, BT 96.1, UMS 96, BT 450.1-96)
- M12 connectors (KD …)
- Ready-made cables (K-D …)
- Spark extinction
- Reflectors and 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 • 96_b10e.fm

Specifications

Optical data

Typ. operating range limit (TK(S) 100x100) [1]	18m
Operating range [2]	see tables
Light source	LED (modulated light)
Wavelength	660nm (visible red light, polarised)

Timing

Sensor switching frequency	1000Hz
Sensor response time	0.5ms
Delay before start-up	≤ 200ms

Electrical data

Operating voltage U_B	26.5 … 31.6V (according to AS-i specification)
Bias current	≤ 40mA per sensor

Indicators

LED green	ready
LED yellow	light path free
LED yellow flashing	light path free, no performance reserve

Mechanical data

	Metal housing
Housing	diecast zinc
Optics cover	glass
Weight	380g
Connection type	M12 connector

Environmental data

Ambient temp. (operation/storage)	-20°C … +55°C/-40°C … +55°C
Protective circuit [3]	1, 4
VDE safety class [4]	II, all-insulated
Protection class	IP 67, IP 69K [5]
LED class	1 (acc. to EN 60825-1)
Standards applied	IEC 60947-5-2

AS-i data for receiver

I/O code	1
ID code	1
Address	programmed by the user in the range of 1 to 31 (default=0)
Cycle time acc. to AS-i specification	5ms
AS-i standard according to profile	S-1.1

1) Typ. operating range limit: max. attainable range without performance reserve
2) Operating range: recommended range with performance reserve
3) 1=transient protection, 4=interference blanking
4) Rating voltage 250VAC
5) 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

		Programming (host level)	
D_0	**Switching output**	Ø no reflection	System input
		1 reflection	
D_1	**Warning output autoControl**	Ø active	System input
		1 not active	
D_2	**Ready output**	Ø sensor not ready	System input
		1 sensor ready	
*D_3	**Activation input**	Ø transmitter on	System output
		1 transmitter off	

Assignment: parameter bits

		Programming (host level)	
*P_0	**NC**	Ø	System parameter
		1	
*P_1	**Light/dark switching**	Ø dark switching	System parameter
		1 light switching	
*P_2	**NC**	Ø	System parameter
		1	
*P_3	**NC**	Ø	System parameter
		1	

* default = 1

Order guide

	Designation	Part No.
18m	PRK 96M/A-3410-44	500 82067

Tables

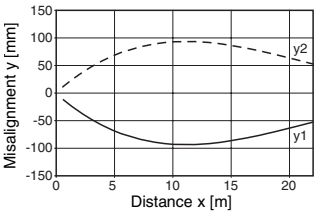
	Reflectors		Operating range
1	TK(S)	100x100	0.3 … 15m
2	MTK(S)	50x50	0.3 … 11m
3	TK(S)	30x50	0.3 … 6m
4	TK(S)	20x40	0.3 … 5m
5	TK(S)	82	0.3 … 11m
6	Tape 2	100x100	0.3 … 6m

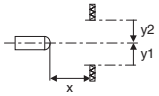
1	0.1						15	18
2	0.1					11		12
3	0.1				6		7.5	
4	0.1			5		6		
5	0.1					11		11.5
6	0.1				6		7.5	

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

Diagrams

Typ. response behaviour (TKS 100x100)





Remarks