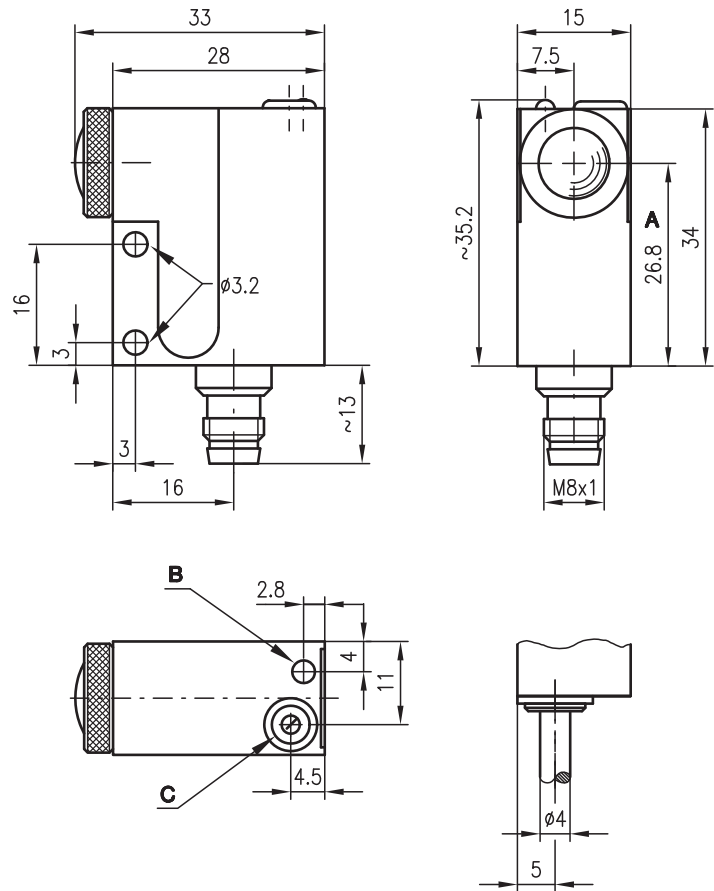




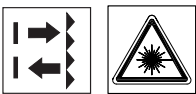
PRKL 713 Laser retro-reflective photoelectric sensors with polarisation filter



Dimensioned drawing



- A Optical axis
- B Indicator diode
- C Sensitivity adjustment

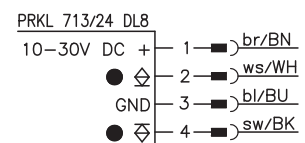
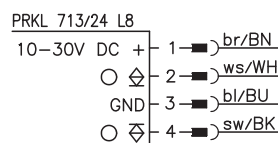
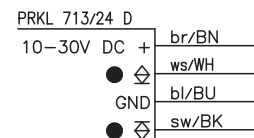
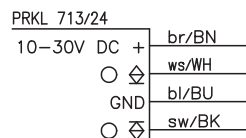
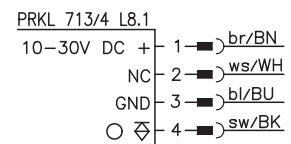
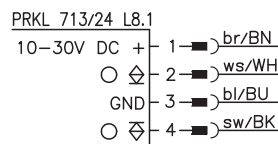


0 ... 17m
0 ... 4.5m



- Laser retro-reflective photoelectric sensor
- Adjustable laser collimator for adaptation of the light beam (focus) to the application
- Detection of smallest objects or gaps
- High switching frequency of 5 kHz

Electrical connection



Accessories:

(available separately)

- Mounting system (BT 713)
- Wobble plate (SET BT 713-66 + BT 66)
- M8 connectors (KD ...)
- Ready-made cables (KB ...)
- Reflectors
- Reflective tapes

We reserve the right to make changes • 713_b02e.fm

Specifications

Optical data

Typ. operating range limit (MTK(S) 50x50) ¹⁾ 0 ... 17m (distant focus) 0 ... 4.5m (close focus)
 Operating range ²⁾ see tables
 Light spot diameter < 1mm adjustable via collimator (see diagrams)
 Light source laser (modulated light)
 Wavelength 670nm (visible red light, polarised)
 Laser warning notice see remarks

Timing

Switching frequency 5kHz
 Response time 0.1ms
 Delay before start-up ≤ 100ms

Electrical data

Operating voltage U_B 10 ... 30VDC (incl. residual ripple)
 Residual ripple ≤ 15% of U_B
 Bias current ≤ 16mA
 Switching output PNP and NPN transistor output
 Function characteristics light/dark switching
 Signal voltage high/low ≥ (U_B-2V) ≤ 2V
 Output current max. 200mA
 Sensitivity adjustable with 270° potentiometer

Indicators

LED yellow light path free

Mechanical data

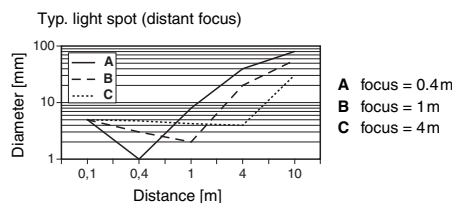
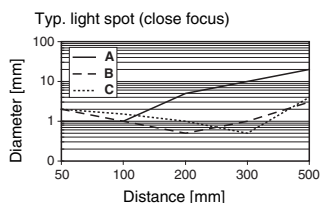
Housing metal
 Optics glass
 Weight 100g
 Connection type M8 connector (4-pin)
 cable 2000mm, 4x0.14mm²

Environmental data

Ambient temp. (operation/storage) -20°C ... +40°C/-40°C ... +80°C
 Protective circuit ³⁾ 1, 2, 3
 VDE safety class III
 Protection class IP 67
 Laser class 2 (acc. to EN 60825-1)
 Standards applied IEC 60947-5-2

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) 1=transient protection, 2=polarity reversal protection, 3=short-circuit protection for all outputs

Diagrams



Order guide

Selection table		PRKL 713/24 L8 Part No. 500 37120	PRKL 713/24 DL8 Part No. 500 37118	PRKL 713/24 Part No. 500 37119	PRKL 713/24 D Part No. 500 36954	PRKL 713/24 L8.1 Part No. 500 38541	PRKL 713/4 L8.1 Part No. 500 41352
	Order code →						
Equipment ↓							
Light source	laser	●	●	●	●	●	●
Light spot	adjustable	●	●	●	●	●	●
LED	on top	●	●	●	●	●	●
Connection	cable			●	●		
	M8 connector	●	●				●
Switching output	PNP	●	●	●	●	●	●
	PNP and NPN						
Function characteristics	light switching	●	●	●	●	●	●
	dark switching		●		●		
Features	short range focussing					●	●
	distant range focussing	●	●	●	●		

Tables

distant range focussing

Reflectors	Operating range
1 TK(S) 100x100	0 ... 11m
2 MTK(S) 50x50	0 ... 13m
3 TK(S) 30x50	0 ... 5m
4 TK(S) 20x40	0 ... 5m
5 Tape 2 100x100	0 ... 1.5m

1	0	11	14
2	0	13	17
3	0	5	7
4	0	5	7
5	0	1.5	2

short range focussing

Reflectors	Operating range
1 TK(S) 100x100	0 ... 3m
2 MTK(S) 50x50	0 ... 3.5m
3 TK(S) 30x50	0 ... 1.5m
4 TK(S) 20x40	0 ... 1.5m
5 Tape 2 100x100	0 ... 0.4m

1	0	3	4
2	0	3.5	4.5
3	0	1.5	2
4	0	1.5	2
5	0	0.4	0.5

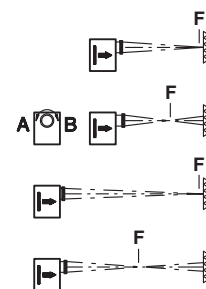
- Operating range [m] *
- Typ. operating range limit [m] *

* for focus adjusted to ∞

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

Remarks

- Use reflectors with small triple structures – MTK(S).
- A conductive connection between sensor housing and machine is to be established in order to discharge electrostatic charges.



- A close
- B distant
- F focal plane

● Laser notices

LASER LIGHT
DO NOT STARE INTO BEAM

Maximum Output:	1.2mW
Pulse duration:	12µs
Wavelength:	670nm

CLASS 2 LASER PRODUCT
EN60825-1:2003-10