

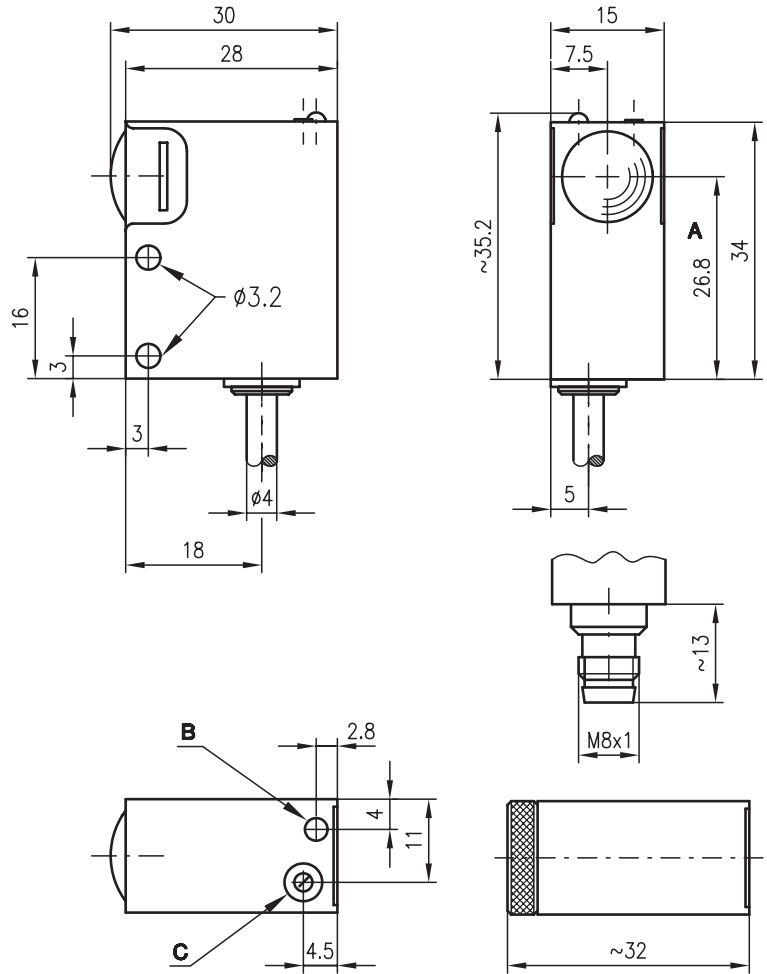


LSRL 713

Laser throughbeam photoelectric sensors



Dimensioned drawing



LSR 713/44 E

LSRL 713/2.8 Se

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

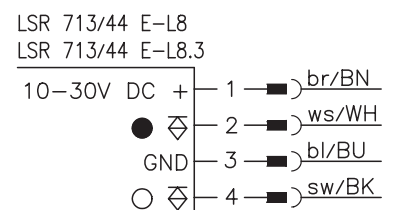
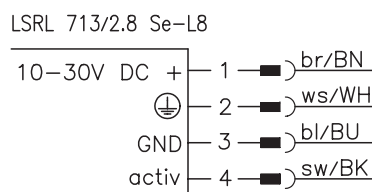
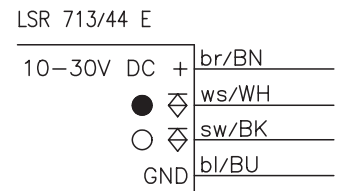
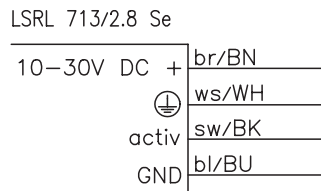


0 ... 65m



- Throughbeam photoelectric laser sensor with high performance reserve in red light
- Adjustable laser collimator for adaptation of the light beam to the application
- Detection of small objects or gaps
- High switching frequency of 5 kHz
- Activation input for interlinking a number of sensors or standby of the laser system

Electrical connection



We reserve the right to make changes • 713\_a02e.fm



Accessories:

(available separately)

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

## Specifications

### Optical data

Typ. operating range limit <sup>1)</sup>	0 ... 65m
Operating range <sup>2)</sup>	see tables
Adjustment range	focussing adjustable in the range of 200mm ... 50m
Light source	laser/pulsed (modulated light)
Wavelength	670nm (visible red light)
Laser warning notice	see remarks

### Timing

Switching frequency	1 kHz
Switching frequency limit <sup>3)</sup>	5 kHz
Response time	0.5 ms
Response time limit <sup>3)</sup>	0.1 ms
Delay before start-up	≤ 100 ms

### Electrical data

Operating voltage $U_B$	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of $U_B$
Bias current	≤ 50mA
Switching output	2 PNP transistor outputs, complementary
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
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### Mechanical data

Housing	metal
Optics	glass
Weight	100g
Connection type	M8 connector (4-pin) or cable: 2000mm, 3x0.14mm <sup>2</sup> for transmitter; 2000mm, 4x0.14mm <sup>2</sup> for receiver

### Environmental data

Ambient temp. (operation/storage)	-20°C ... +40°C / -40°C ... +70°C
Protective circuit <sup>4)</sup>	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

### Options

Activation input active	
Transmitter active/not active	≥ 8V / ≤ 2V
Activation/disable delay	≤ 0.5ms
Input resistance	10KΩ ± 10%

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) Maximum switching frequency/minimum response time with sensitivity adaptation
- 4) 1=transient protection, 2=polarity reversal protection, 3=short-circuit protection for all outputs

## Order guide

Selection table		Order code →					
Equipment ↓		LSRL 713/44.8 Part No. 500 27053 (Tr) Part No. 500 25819 (Re)	LSRL 713/44.8 L8 Part No. 500 80317 (Tr) Part No. 500 80316 (Re)	LSRL 713/44.8 L8.3 Part No. 500 80317 (Tr) Part No. 500 35150 (Re)			
Light source	laser	●	●	●			
Light spot	adjustable	●	●	●			
LED	on top	●	●	●			
Connection	cable	●					
	M8 connector		●	●			
Features	collimator short range						
	collimator distant range	●	●	●			
	slow operation			●			

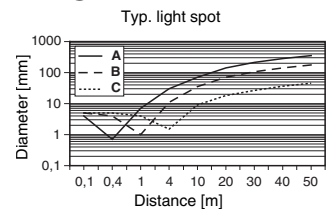
## Tables

1	0	50	65
2	0	18	22

1	w/o diaphragm
2	With BL 713 at receiver

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

## Diagrams

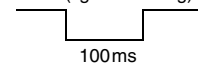


- A focus = 0.4m
- B focus = 1m
- C focus = 4m

## Remarks

- Functional earth must be connected.
- Pulse stretching for: LSR713/44 E-L8.3

Pin 4 (light switching)



- 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	