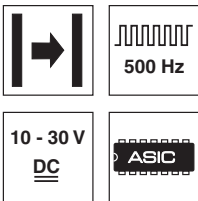


## LSR 25B

## Throughbeam photoelectric sensor

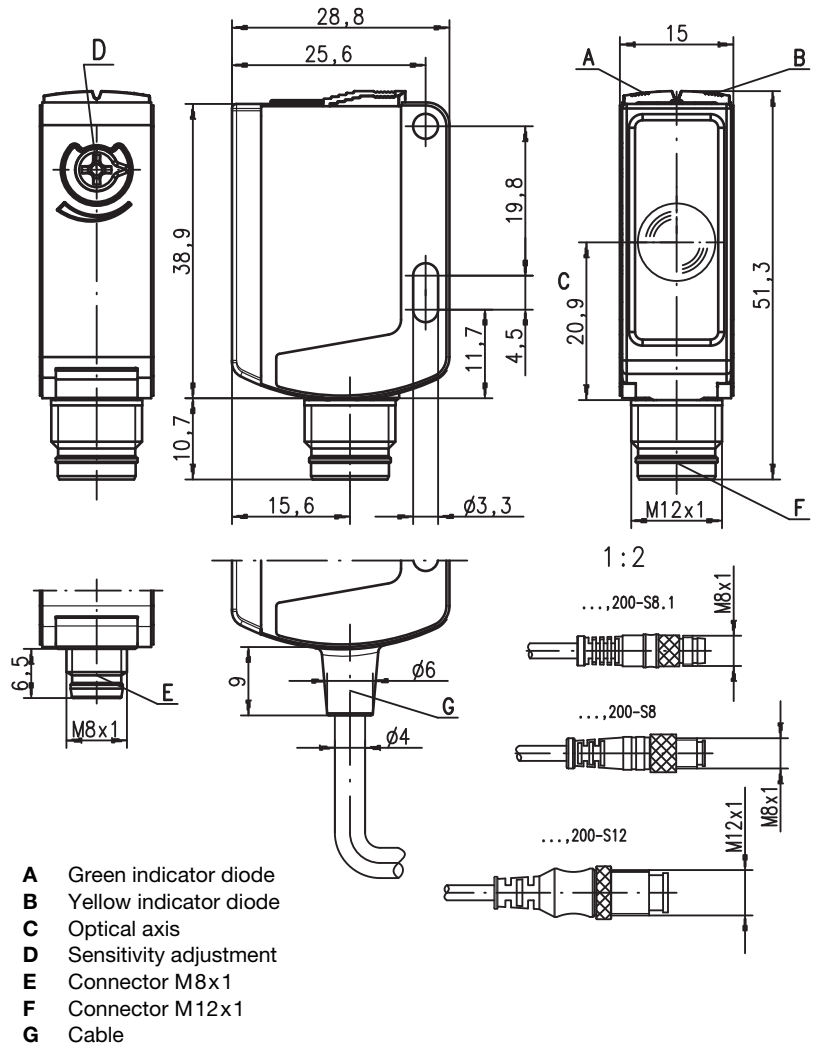
Part No. 501 09622



24m

- Throughbeam photoelectric sensor with visible red light
- High performance reserve
- Small and compact construction with robust plastic housing, protection class IP 67/IP 69K for industrial application
- Fast alignment through *brightVision*®
- Push-pull switching outputs
- High switching frequency for detection of fast events
- Warning output for increased availability
- Sensitivity adjustment
- Further options for adapting to the respective application
- Snap-locking connector for time-saving installation

### Dimensioned drawing

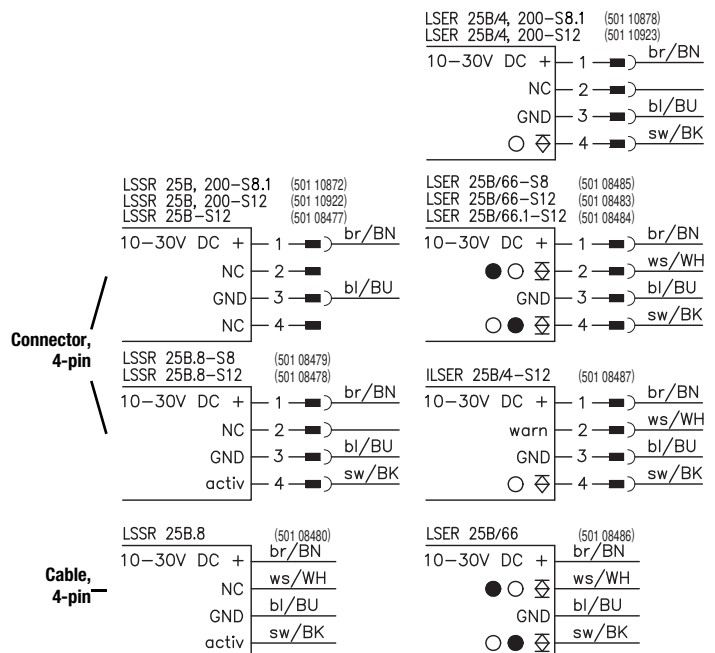


- A Green indicator diode
- B Yellow indicator diode
- C Optical axis
- D Sensitivity adjustment
- E Connector M8x1
- F Connector M12x1
- G Cable

### Electrical connection

#### Transmitter:

#### Receiver:



We reserve the right to make changes • 25B\_a01gb.fm



### Accessories:

(available separately)

- Mounting systems (BT 25, UMS 25...)
- Cable with M8 or M12 connector (K-D ...)
- Alignment aid (SAT 5)

## Specifications

### Optical data

Typ. operating range limit <sup>1)</sup>	24 m
Operating range <sup>2)</sup>	20 m
Light source <sup>3)</sup>	LED (modulated light)
Wavelength	620 nm (visible red light, polarised)

### Timing

Switching frequency	500 Hz
Response time	1 ms
Delay before start-up	≤ 300 ms

### Electrical data

Operating voltage $U_B$ <sup>4)</sup>	10 ... 30 VDC (incl. residual ripple)
Residual ripple	≤ 15% of $U_B$
Open-circuit current	≤ 20 mA
Switching output <sup>5)</sup>	LSR .../66 LSR .../66.1 ILSR .../4 ILSR .../4.8 LSR .../4
Function characteristics	2 push-pull switching outputs pin 2: PNP dark switching, NPN light switching pin 4: PNP light switching, NPN dark switching
Signal voltage high/low	1 warning output pin 2: PNP
Output current	pin 4: PNP light-switching pin 4: PNP light switching, pin 2: NC <sup>6)</sup>
Operating range	light/dark switching $\geq (U_B - 2V) / \leq 2V$ max. 100 mA fixed setting, adjustable with potentiometer for ".1 types"

### Indicators

Green LED	ready
Yellow LED	light path free
Yellow LED, flashing	light path free, no performance reserve

### Mechanical data

Housing	plastic (PC-ABS)
Optics cover	plastic (PMMA)
Weight	with connector: 15 g with 2 m cable: 55 g
Connection type	cable 2 m (cross section 4x0.21 mm <sup>2</sup> ), M8 or M12 connector

### Environmental data

Ambient temp. (operation/storage)	-35°C ... +55°C / -30°C ... +60°C
Protective circuit <sup>7)</sup>	2, 3
VDE safety class <sup>8)</sup>	II
Protection class	IP 67, IP 69K
LED class	1 (acc. to EN 60825-1)
Standards applied	IEC 60947-5-2
Certifications	UL 508 <sup>4)</sup>



### Options

<b>Warning output autoControl warn</b>	PNP transistor, counting principle
Signal voltage high/low	$\geq (U_B - 2V) / \leq 2V$
Output current	max. 100 mA
<b>Activation input active</b>	
Transmitter active/not active	$\geq 8V / \leq 2V$
Activation/disable delay	≤ 1 ms
Input resistance	10 kΩ ± 10%

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) Average life expectancy 100,000 h at an ambient temperature of 25°C
- 4) For UL applications: for use in class 2 circuits according to NEC only
- 5) The push-pull switching outputs must not be connected in parallel
- 6) Pin 2: unassigned, hence especially suitable for the connection to AS-interface I/O coupling modules
- 7) 2=polarity reversal protection, 3=short-circuit protection for all transistor outputs
- 8) Rating voltage 50 V

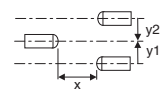
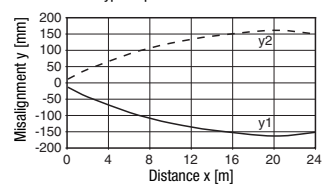
## Tables

0	20	24
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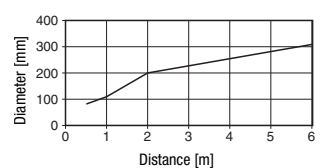
	Operating range [m]
	Typ. operating range limit [m]

## Diagrams

Typ. response behaviour



Typ. light spot



## Remarks

A light axis consists of a transmitter and a receiver with the following designations:

(I)LSR	= complete light axis
LSSR	= transmitter
(I)LSER	= receiver

- **Approved purpose:**  
The photoelectric sensors are optical electronic sensors for optical, contactless detection of objects.

**LSR 25B**
**Throughbeam photoelectric sensor**
**Order guide**

Selection table		Order code →									
Equipment ↓		LSR 25B/66-S12 Part No. 501 08477 (Tr) Part No. 501 08483 (Re)	LSR 25B/66.8-S12 Part No. 501 08478 (Tr) Part No. 501 08483 (Re)	ILSR 25B/4-S12 Part No. 501 08477 (Tr) Part No. 501 08487 (Re)	ILSR 25B/4.8-S12 Part No. 501 08478 (Tr) Part No. 501 08487 (Re)	LSR 25B/66.1-S12 Part No. 501 08477 (Tr) Part No. 501 08484 (Re)	LSR 25B/66.8-S8 Part No. 501 08479 (Tr) Part No. 501 08488 (Re)	LSR 25B/66.8 Part No. 501 08480 (Tr) Part No. 501 08486 (Re)	LSR 25B/4, 200-S12 Part No. 501 10922 (Tr) Part No. 501 10923 (Re)	LSR 25B/4, 200-S8.1 Part No. 501 10872 (Tr) Part No. 501 10873 (Re)	
Switching output	2 x Push-pull switching output	●	●			●	●	●			
	1 x PNP output			●	●				●	●	
Switching function	PNP light switching and NPN dark switching output	●	●	●	●	●	●	●			
	PNP dark switching and NPN light switching output	●	●			●	●	●			
	1 x PNP light switching output								●	●	
	1 warning output, PNP light switching			●	●						
Connection	M8 connector, 4-pin						●				
	M12 connector, 4-pin	●	●	●	●	●					
	cable 2,000mm							●			
	cable 200mm with M12 connector, 4-pin								●		
	cable 200mm with M8 connector, 4-pin <sup>1)</sup>									●	
Indicators	green LED: ready	●	●	●	●	●	●	●	●	●	
	yellow LED: light path free	●	●	●	●	●	●	●	●	●	
Options	sensitivity adjustment via potentiometer					●					
	activation input		●		●		●	●			
	high performance reserve	●	●	●	●	●	●	●	●	●	

1) Acc. to IEC 61076-2-101, NM construction with snap locking

