

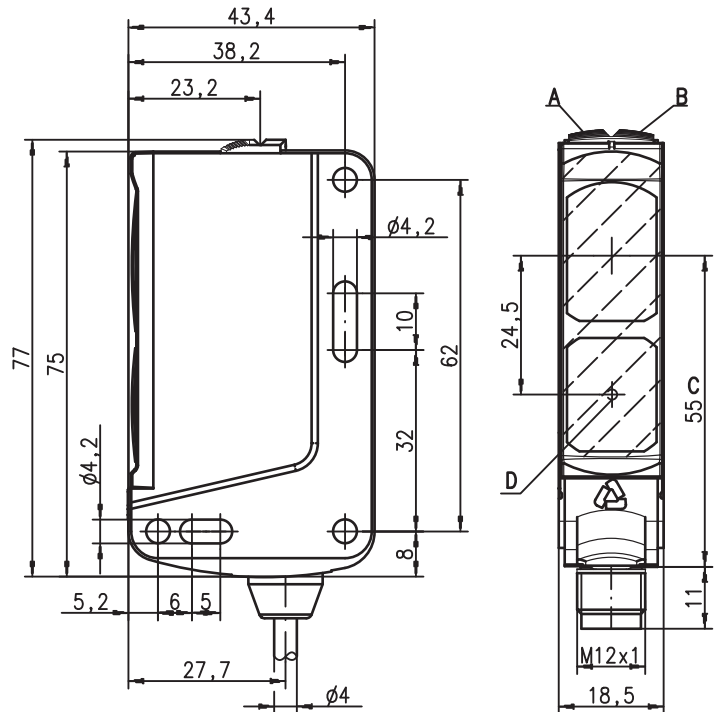
**LSR 46B "S"**

**Throughbeam photoelectric sensor with alignment indicator**

en 01-2010/01 50111616



**Dimensioned drawing**



- A Green indicator diode
- B Yellow indicator diode
- C Optical axis
- D Alignment indicator diode



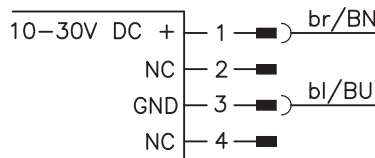
**44m**



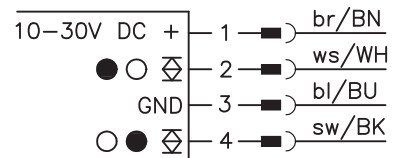
- Throughbeam photoelectric sensor with visible red light
- Fast alignment through *brightVision*<sup>®</sup>
- Narrow light beam for preventing reflections caused by shiny objects
- Indicator for fast, precise alignment
- Push-pull switching outputs

**Electrical connection**

**Transmitter:**



**Receiver:**



**Accessories:**

(available separately)

- Mounting systems (BT 46, BT 46.1, BT 46.1.5, BT 46.2)
- M12 connectors (KD ...)
- Ready-made cables (K-D ...)
- Alignment aid (SAT 5)

We reserve the right to make changes • 46B\_a04en.fm

## Specifications

### Optical data

Typ. operating range limit <sup>1)</sup>	44 m
Operating range <sup>2)</sup>	40 m
Light source <sup>3)</sup>	LED (modulated light)
Wavelength	620nm (visible red light, polarised)

### Timing

Switching frequency	100Hz
Response time	5ms
Delay before start-up	≤ 300ms

### Electrical data

#### With transistor switching outputs

Operating voltage $U_B$ <sup>4)</sup>	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of $U_B$
Open-circuit current	≤ 15mA (respectively transmitter and receiver)
Switching output <sup>5)</sup>	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	≥ ( $U_B - 2V$ ) / ≤ 2V
Output current	max. 100mA

### Indicators

Green LED	ready
Yellow LED	light path free
Yellow LED, flashing	light path free, no performance reserve
Yellow LED front	alignment indicator <sup>6)</sup>

### Mechanical data

Housing	plastic (PC-ABS)
Optics cover	plastic (PMMA)
Weight	50g
Connection type	M12 connector, or cable with M12 connector, cable length: 200mm

### Environmental data

Ambient temp. (operation/storage)	-30°C ... +60°C / -30°C ... +70°C
Protective circuit <sup>7)</sup>	2, 3
VDE safety class <sup>8)</sup>	II, all-insulated
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>

- 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 only
- 5) The push-pull switching outputs must not be connected in parallel
- 6) LED display featuring excellent visibility for alignment control
- 7) 2=polarity reversal protection, 3=short-circuit protection for all transistor outputs
- 8) Rating voltage 50V

## Order guide

### Transmitter and receiver

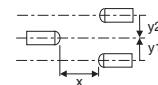
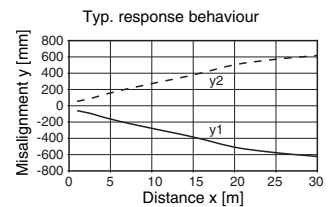
Transmitter	<b>LSR 46B/66-S-S12</b>	
Receiver	LSSR 46B-S-S12	501 10929
	LSER 46B/66-S-S12	501 10930

## Tables

0	40	44
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<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Operating range [m]
<span style="border: 1px dashed black; display: inline-block; width: 10px; height: 10px;"></span> Typ. operating range limit [m]

## Diagrams



## Remarks

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

<b>LSR</b>	= complete light axis
<b>LSSR</b>	= transmitter
<b>LSER</b>	= receiver

- **Approved purpose:**  
The photoelectric sensors are optical electronic sensors for optical, contactless detection of objects. This product may only be used by qualified personnel and must only be used for the approved purpose. This sensor is not a safety sensor and is not to be used for the protection of persons.
- **Alignment indicator:**  
(“D” see dimensioned drawing)  
**Yellow LED** = light path free - with reserve  
**Yellow LED, flashing** = light path free - no performance reserve