



LS 46

Throughbeam photoelectric sensors

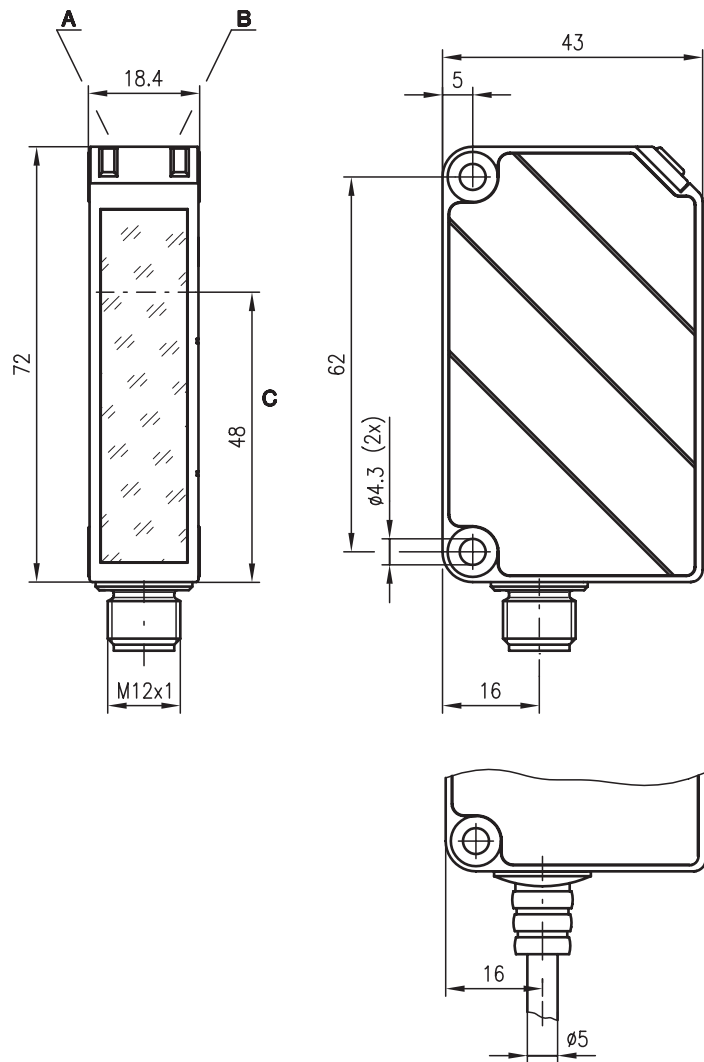


50m

10 - 30 V  
DC

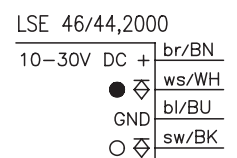
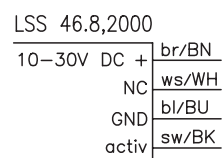
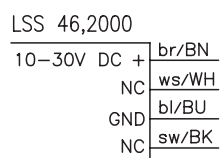
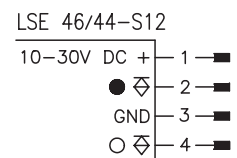
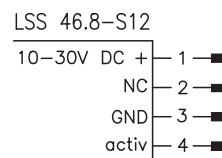
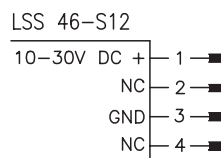
- Throughbeam photoelectric sensors with high performance reserve in infrared light
- Solid plastic housing, protection class IP 67 for industrial application
- Wide voltage range 10 ... 30V with PNP switching output for PLC applications
- Activation input for testing and interlinking

Dimensioned drawing



- A Indicator diode green
- B Indicator diode yellow
- C Optical axis

Electrical connection



Accessories:

(available separately • see page 314)

- Mounting systems (BT 46.1, BT 46.1.5, BT 46.2)
- M12 connectors (KD ...)
- Ready-made cables (KB ...)

We reserve the right to make changes • 46\_a01e.fm



### Specifications

#### Optical data

Typ. operating range limit <sup>1)</sup>	0 ... 50m
Operating range <sup>2)</sup>	0 ... 30m
Light source	LED (modulated light)
Wavelength	880nm

#### Timing

Switching frequency	200Hz
Response time	2.5ms
Delay before start-up	≤ 100ms

#### Electrical data

Operating voltage U <sub>B</sub>	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U <sub>B</sub>
Bias current	≤ 30mA
Switching output	PNP transistor
Function characteristics	light/dark switching (complementary)
Signal voltage high/low	≥ (U <sub>B</sub> -2V)/≤ 2V
Output current	max. 100mA

#### Indicators

<b>Receiver</b>	
LED green	ready
LED yellow	light path free
LED yellow flashing	light path free, no performance reserve
<b>Transmitter</b> LSS 46.8-S12 (2000)	
LED yellow	transmitter active

#### Mechanical data

Housing	plastic
Optics cover	plastic
Weight	100g
Connection type	M12 connector, or cable, cable length: 2000mm, PVC

#### Environmental data

Ambient temp. (operation/storage)	-20°C ... +60°C/-40°C ... + 70°C
Protective circuit <sup>3)</sup>	2, 3
VDE safety class <sup>4)</sup>	II, all-insulated
Protection class	IP 67
Standards applied	IEC 60947-5-2

#### Options

<b>Activation input</b> active	
Transmitter active/not active	≥ 8V/≤ 2V
Activation/disable delay	≤ 1ms/≤ 2ms
Input resistance	10KΩ ± 10%

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 4) Rating voltage 250VAC

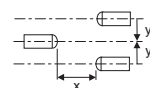
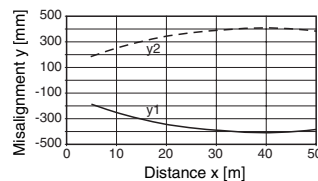
### Tables

0	30	50
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- Operating range [m]
- Typ. operating range limit [m]

### Diagrams

Typ. response behaviour



### Order guide

	Designation	Part No.
<b>with M12 connector</b>		
Transmitter and receiver	LS 46/44-S12	
Transmitter without activation input	LSS 46-S12	500 81246
Receiver	LSE 46/44-S12	500 81248
Transmitter and receiver	LS 46/44.8-S12	
Transmitter with activation input	LSS 46.8-S12	500 81245
Receiver	LSE 46/44-S12	500 81248
<b>with 2m cable</b>		
Transmitter and receiver	LS 46/44, 2000	
Transmitter without activation input	LSS 46, 2000	500 81929
Receiver	LSE 46/44, 2000	500 81932
Transmitter and receiver	LS 46/44.8, 2000	
Transmitter with activation input	LSS 46.8, 2000	500 81928
Receiver	LSE 46/44, 2000	500 81932

### Remarks

**Asia**

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