

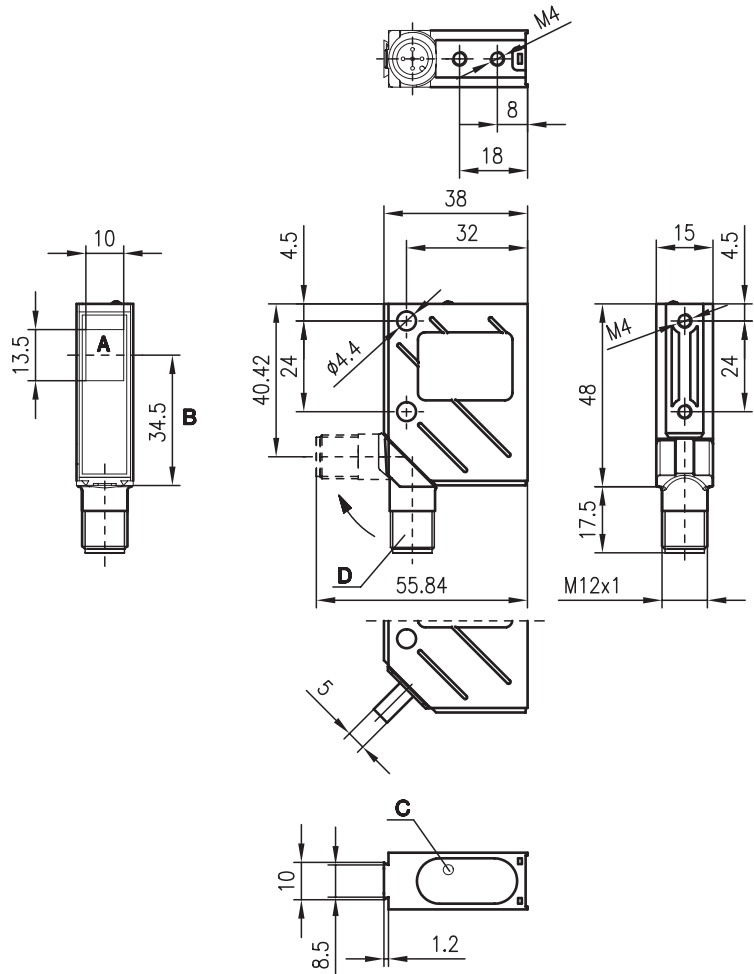


LSR 8

Throughbeam photoelectric sensors



Dimensioned drawing



- A Transmitter/receiver
- B Optical axis
- C LED yellow
- D 90° turning connector

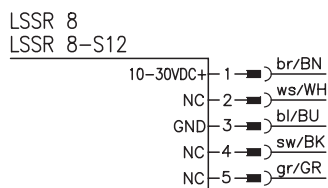
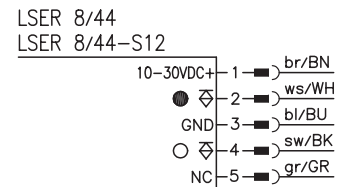
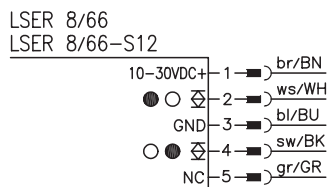


20m



- A²LS - active suppression of extraneous light
- Push-pull switching outputs
- M12 turning connector or cable connection
- Visible red light

Electrical connection



Accessories:

(available separately • see page 74)

- M12 connectors (KD ...)
- Ready-made cables (K-D ...)
- Mounting systems
- Diaphragms
- Control guard

We reserve the right to make changes • 8_a01e.fm



Specifications

Optical data

Typ. operating range limit ¹⁾	20 m
Operating range ²⁾	12 m
Light source	LED (modulated light)
Wavelength	660 nm (visible red light)

Timing

Switching frequency	1500 Hz
Response time	0.33 ms
Delay before start-up	≤ 100 ms

Electrical data

Operating voltage U_B	10 ... 30 VDC
Residual ripple	≤ 15% of U_B
Bias current	≤ 35 mA
Switching output/function	.../66 2 push-pull switching outputs ³⁾ pin 2: PNP dark switching, NPN light switching pin 4: PNP light switching, NPN dark switching
	.../44 2 PNP switching outputs pin 2: dark switching pin 4: light switching
Signal voltage high/low	≥ ($U_B - 2V$) / ≤ 2V
Output current	max. 100 mA
Sensitivity	not adjustable

Indicators

LED yellow, receiver	light path free
LED yellow flashing, receiver	light path free, no performance reserve

Mechanical data

Housing	metal
Optics cover	glass
Weight (plug/cable)	70 g/140 g
Connection type	M 12 connector, 5-pin (turning), or cable: 2000 mm, 5x0.25 mm ²

Environmental data

Ambient temp. (operation/storage)	-40°C ... +60°C / -40°C ... +70°C
Protective circuit ⁴⁾	2, 3
VDE safety class ⁵⁾	II, all-insulated
Protection class ⁶⁾	IP 67, IP 69K ⁷⁾
LED class	1 (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) The push-pull switching outputs must not be connected in parallel
- 4) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 5) Rating voltage 250 VAC
- 6) In stop position of the turning connector (turning connector locked)
- 7) IP 69K test acc. to DIN 40050 part 9 simulated, high pressure cleaning conditions without the use of additives, acids and bases are not part of the test

Order guide

	Designation	Part No.
With M 12 connector		
Transmitter and receiver	LSR 8/44-S12	
Transmitter	LSSR 8-S12	500 36354
Receiver	LSER 8/44-S12	500 36356
With 2 m cable		
Transmitter and receiver	LSR 8/44	
Transmitter	LSSR 8	500 36355
Receiver	LSER 8/44	500 36357
With M 12 connector		
Transmitter and receiver	LSR 8/66-S12	
Transmitter	LSSR 8-S12	500 36354
Receiver	LSER 8/66-S12	500 36569
With 2 m cable		
Transmitter and receiver	LSR 8/66	
Transmitter	LSSR 8	500 36355
Receiver	LSER 8/66	500 36570

Tables

without diaphragm:

0	12	20
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with pin diaphragm in front of receiver¹⁾:

0	1.8	2
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with pin diaphragm in front of transmitter and receiver¹⁾:

0	0.5	0.6
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with slit diaphragm in front of receiver¹⁾:

0	4.5	5
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with slit diaphragm in front of transmitter and receiver¹⁾:

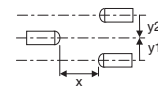
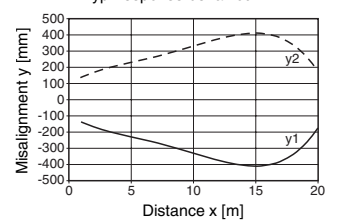
0	2.5	3
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<input type="checkbox"/>	Operating range [m]
<input type="checkbox"/>	Typ. operating range limit [m]

1) see remarks

Diagrams

Typ. response behaviour



Remarks

- Smallest object for the complete operating range with
 - pin diaphragm: $\varnothing=0.7$ mm,
 - slit diaphragm: $\varnothing=1.5$ mm