

LSR 8

Throughbeam photoelectric sensors



20 m



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

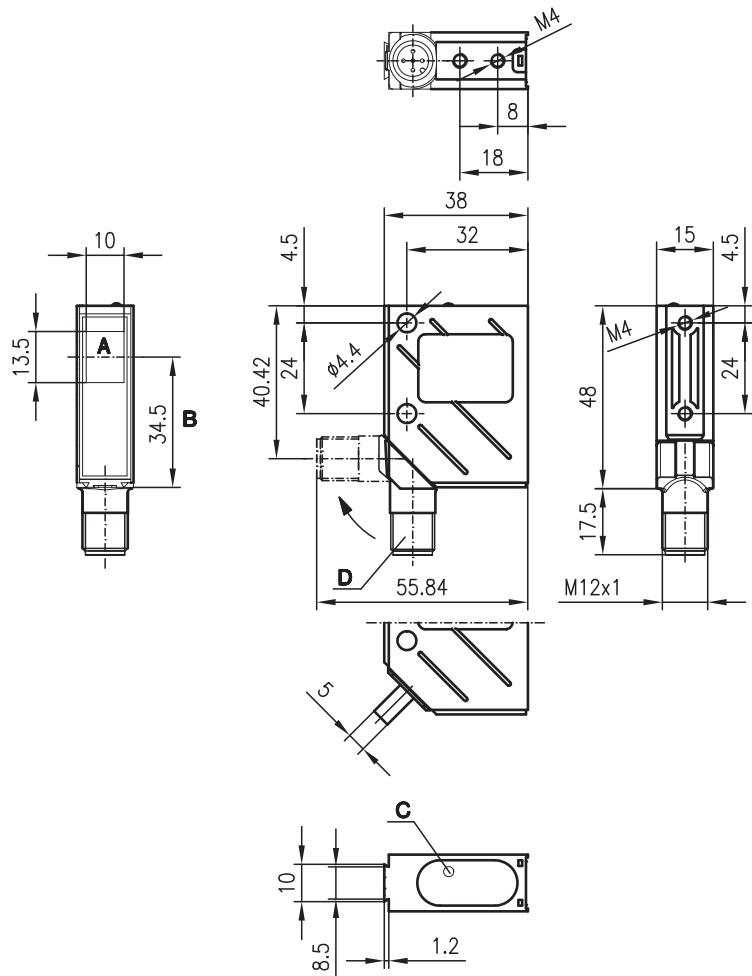


Accessories:

(available separately)

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

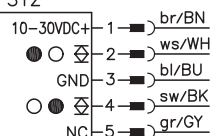
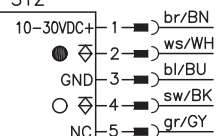
Dimensioned drawing



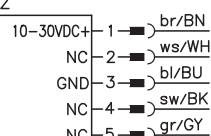
- A** Transmitter/receiver
B Optical axis
C LED yellow
D 90° turning connector

Electrical connection

LSER 8/66
LSER 8/66-S12

LSER 8/44
LSER 8/44-S12

LSSR 8
LSSR 8-S12



Specifications

Optical data

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

Timing

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

Electrical data

Operating voltage U_B ³⁾	10 ... 30VDC
Residual ripple	≤ 15% of U_B
Bias current	≤ 35mA
Switching output/function	.../66 2 push-pull switching outputs ⁴⁾ 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. 100mA
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)	70g/140g
Connection type	M12 connector, 5-pin (turning), or cable: 2000mm, 5x0.25mm ²

Environmental data

Ambient temp. (operation/storage)	-40°C ... +60°C / -40°C ... +70°C
Protective circuit ⁵⁾	2, 3
VDE safety class ⁶⁾	II, all-insulated
Protection class ⁷⁾	IP 67, IP 69K ⁸⁾
Light source	exempt group (in acc. with EN 62471)
Standards applied	IEC 60947-5-2
Certifications	UL 508, C22.2 No.14-13 ³⁾ ⁹⁾

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) For UL applications: for use in class 2 circuits according to NEC only
- 4) The push-pull switching outputs must not be connected in parallel
- 5) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 6) Rating voltage 250VAC
- 7) In stop position of the turning connector (turning connector locked)
- 8) 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
- 9) These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/CYJV7 or PVVA/PVVA7)

Order guide

	Designation	Part No.
With M12 connector		
Transmitter and receiver	LSR 8/44-S12	
Transmitter	LSSR 8-S12	50036354
Receiver	LSER 8/44-S12	50036356
With 2m cable		
Transmitter and receiver	LSR 8/44	
Transmitter	LSSR 8	50036355
Receiver	LSER 8/44	50036357
With M12 connector		
Transmitter and receiver	LSR 8/66-S12	
Transmitter	LSSR 8-S12	50036354
Receiver	LSER 8/66-S12	50036569
With 2m cable		
Transmitter and receiver	LSR 8/66	
Transmitter	LSSR 8	50036355
Receiver	LSER 8/66	50036570

Tables

without diaphragm:

0	12	20
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with pin diaphragm in front of receiver ¹⁾:

0	1.8	2
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with pin diaphragm in front of transmitter and receiver ¹⁾:

0	0.5	0.6
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with slit diaphragm in front of receiver ¹⁾:

0	4.5	5
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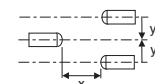
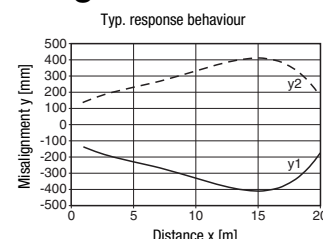
with slit diaphragm in front of transmitter and receiver ¹⁾:

0	2.5	3
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	Operating range [m]
	Typ. operating range limit [m]

1) see remarks

Diagrams



Remarks

Operate in accordance with intended use!
<ul style="list-style-type: none"> ⚠ This product is not a safety sensor and is not intended as personnel protection. ⚠ The product may only be put into operation by competent persons. ⚠ Only use the product in accordance with the intended use.

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