

Specifications

Optical data

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

Timing

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

Electrical data

Operating voltage U_B ⁴⁾	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U_B
Open-circuit current	≤ 20mA
Switching output ⁵⁾	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 ⁶⁾
Operating range	light/dark switching $\geq (U_B - 2V) / \leq 2V$ max. 100mA 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: 15g with 2m cable: 55g
Connection type	cable 2m (cross section 4x0.21 mm ²), M8 or M12 connector

Environmental data

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



Options

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

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) Average life expectancy 100,000h 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 50V

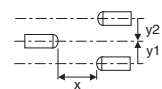
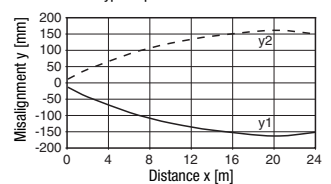
Tables

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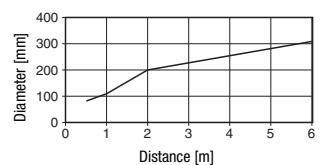
	Operating range [m]
	Typ. operating range limit [m]

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 ¹⁾																●		
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

