

Throughbeam photoelectric sensors

- Mounting systems (BT 3)
- M8 connectors (KD ...)
- Ready-made cables (KB ...)

- A** Optical axis
B Adjustment screw only receiver
C Indicator diode only receiver

10-30V	DC	+	br/BN
		● ⊕	bl/BU
	GND		sw/BK
		○ ⊕	ws/WH

Specifications

Optical data

Typ. operating range limit ¹⁾	0 ... 8.5m
Operating range ²⁾	0 ... 6m
Light source	LED (modulated light)
Wavelength	660nm (visible red light)

Timing

Switching frequency	1000Hz
Response time	0.5ms
Delay before start-up	≤ 100ms

Electrical data

Operating voltage U_B	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U_B
Bias current	≤ 25mA
Switching output	2 transistor outputs, complementary
Function characteristics	light/dark switching
Signal voltage high/low	≥ ($U_B - 2V$) / ≤ 2V
Output current	max. 100mA
Sensitivity	adjustable with multiturn potentiometer

Indicators

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

Mechanical data

Housing	plastic
Optics cover	plastic (PMMA)
Weight	20g
Connection type	M8 connector (4-pin) or PUR cable 2m and 5m (cross section 4x0.2mm ²)

Environmental data

Ambient temp. (operation/storage)	-25 °C ... +55 °C / -40 °C ... +70 °C
Protective circuit ³⁾	2, 3
VDE safety class ⁴⁾	II, all-insulated
Protection class	IP 67
Standards applied	IEC 60947-5-2

Options

Activation input active	
Transmitter active/not active	≥ 8V / ≤ 2V or not connected
Activation/disable delay	≤ 1ms
Input resistance	4.7kΩ ± 10%
Warning output autoControl warn	PNP transistor, counting principle
Signal voltage high/low	≥ ($U_B - 2V$) / ≤ 2V
Output current	max. 100mA

- 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

Order guide

Selection table		Order code →						
Equipment ↓		LSR 3/44.8 Part No. 500 30996 (Se) Part No. 500 31276 (Re)	LSR 3/44.8, 5000 Part No. 500 33654 (Tr) Part No. 500 33653 (Re)	LSR 3/44.8-S8 Part No. 500 30995 (Tr) Part No. 500 31275 (Re)	ILSR 3/4.8-S8 Part No. 500 30995 (Tr) Part No. 500 30915 (Re)	LSR 3/22.8-S8 Part No. 500 30995 (Tr) Part No. 500 37975 (Re)	ILSR 3/4.8 Part No. 500 30996 (Tr) Part No. 500 30916 (Re)	
Switching output	2xPNP transistor (Re)	●	●	●				
	2xNPN transistor (Re)					●		
	1xPNP transistor (Re)				●		●	
	light/dark switching	●	●	●		●		
	light switching				●		●	
Connection	M8 connector			●	●	●		
	cable 5000mm		●					
	cable 2000mm	●					●	
Features	activation input (Tr)	●	●	●	●	●	●	
	warning output				●		●	

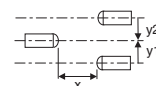
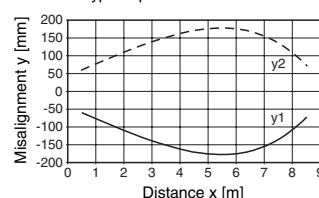
Tables

0	6.0	8.5
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Operating range [m]
Typ. operating range limit [m]

Diagrams

Typ. response behaviour



Remarks

- [I]LSR = Pair consisting of
LSSR = Transmitter
[II]LSR = Receiver

LSR 3/44.8

LSSR 3.8
LSER 3/44

LSR 3/44.8, 5000

LSSR 3.8, 5000
LSER 3/44, 5000

LSR 3/44.8-S8

LSSR 3.8-S8
LSER 3/44-S8

ILSR 3/4.8-S8

LSSR 3.8-S8
ILSER 3/4-S8

LSR 3/22.8-S8

LSSR 3.8-S8
LSER 3/22-S8

ILSR 3/4.8

LSSR 3.8
ILSER 3/4