



ITLS 171

Throughbeam light attachment



0.35 ... 1.5m
0.35 ... 4.0m



- Throughbeam light attachment featuring dynamic switching behaviour for detection of very small objects
- Diecast aluminium housing for protection against environmental influences
- LEDs allowing display of switching state and performance reserve/alignment aid
- Warning output for increased availability
- Automatic working range adaptation through integrated control ensures safe function
- Mounting holes and M12 connector for fast installation



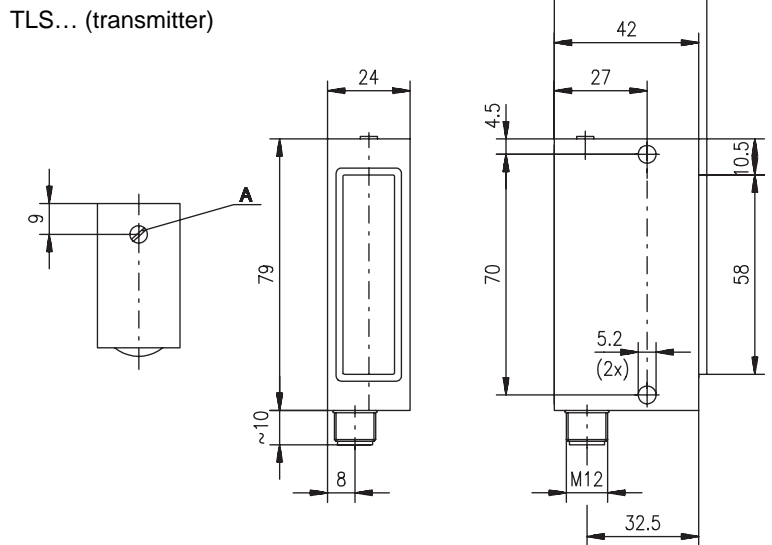
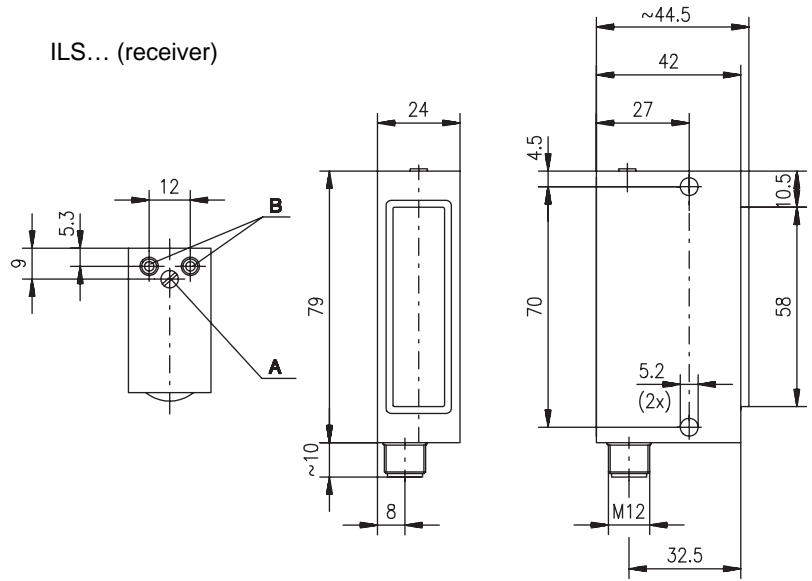
We reserve the right to make changes • ITLS171_e.fm

Accessories:

(available separately)

- M12 connectors (KD ...)
- Ready-made cables (KB ...)

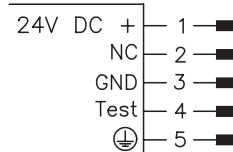
Dimensioned drawing



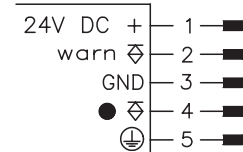
- A Sensitivity adjustment
- B Indicator LEDs

Electrical connection

TLS 171/2 Se
TLS 171/2 Se.1



ILS 171/4 E.5
ILS 171/4 E.5.1





Specifications

Optical Data

Operating range	ITLS 171/4.5	ITLS 171/4.5.1
Scanning range	0.35 ... 1.5m	0.35 ... 4.0m
Light source	58mm	
Min. object size	LED (modulated light)	
	10x10x0.5mm (length x height x width)	

Timing

Switching frequency	5 Hz
Input pulse	≥ 5ms
Delay before start-up	100ms

Electrical data

Transmitter and receiver

Operating voltage U_B	24V DC, ± 15%
Residual ripple	≤ 15 % of U_B
Current consumption	approx. 15mA
Transmitter	modulated light
Transmitting power	adjustable with 270° potentiometer
Transmitter active/not active	≤ 2V/≥ 8V/
Input resistance	10kΩ
Receiver	9 silicon pin diodes
Switching output	PNP transistor output
Function characteristics	switches at light/dark transition, ≥ 100ms transient pulse
Warning output	PNP transistor output, with time delay
Output current	max. 200mA
Sensitivity	adjustable with 270° potentiometer

Indicators

LED yellow	parallel to the output
LED red	with performance reserve
LED red flashing	without performance reserve
LED red off	out of control range, output not active

Mechanical data

Housing	aluminium, anodised
Optics	cylindrical lens, glass
Weight	approx. 110g
Connection type	M12 connector, stainless steel, 5-pin

Environmental data

Ambient temp. (operation/storage)	-20°C ... +60°C/-30°C ... +70°C
Protective circuit ¹⁾	1, 2
Protection class	IP 67
Standards applied	IEC 60947-5-2

1) 1=short-circuit and overload protection, 2=polarity reversal protection (not analogue)

Order guide

	Designation	Part No.
1.5m		
Transmitter and receiver	ITLS 171/4.5	
Transmitter	TLS 171/2 Se	500 27238
Receiver	ILS 171/4 E.5	500 26737
4.0m		
Transmitter and receiver	ITLS 171/4.5.1	
Transmitter	TLS 171/2 Se.1	500 31770
Receiver	ILS 171/4 E.5.1	500 31769

Tables

Diagrams

Remarks

- **Coarse alignment:**
 - set pot. of receiver to minimum sensitivity
 - set pot. of transmitter to maximum sensitivity
 - align until the red LED of the receiver is illuminated.
- **Fine alignment:**

turn pot. of transmitter until the red LED of the receiver starts flashing. Correct alignment until the red LED is continuously illuminated again. Set pot. of transmitter back to maximum transmitting power.
- **Sensitivity adjustment of the receiver:**

adaptation of the object size.
- **Warning output:**

is activated with time delay (2s) when performance reserve is not sufficient (red LED flashes).
- **Minimum working distance:**

the minimum working distance of 0.35m can still be decreased by reducing the transmitting power (pot. of transmitter).