



Figure can vary

Part no.: 50117931
LE28/4P
Throughbeam photoelectric sensor receiver



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Technical data

Basic data	
Series	28
Operating principle	Throughbeam principle
Device type	Receiver
Optical data	
Operating range	Guaranteed operating range
Operating range	0 ... 10 m
Operating range limit	Typical operating range
Operating range limit	0 ... 15 m
Electrical data	
Protective circuit	Polarity reversal protection Short circuit protected
Performance data	
Supply voltage U_B	10 ... 30 V , DC , Incl. residual ripple
Residual ripple	0 ... 15 % , From U_B
Open-circuit current	0 ... 15 mA
Outputs	
Number of digital switching outputs	2 Piece(s)
Switching outputs	
Voltage type	DC
Switching current, max.	100 mA
Switching voltage	high: $\geq(U_B-2.5V)$ low: $\leq 2.5V$
Switching output 1	
Assignment	Connection 1, pin 4
Switching element	Transistor , PNP
Switching principle	Light switching
Switching output 2	
Assignment	Connection 1, pin 2
Switching element	Transistor , PNP
Switching principle	Dark switching
Timing	
Switching frequency	500 Hz
Response time	1 ms
Readiness delay	300 ms
Connection	
Connection 1	
Function	Signal OUT Voltage supply
Type of connection	Cable
Cable length	2,000 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire
Wire cross section	0.2 mm ²

Part no.: 50117931 – LE28/4P – Throughbeam photoelectric sensor receiver**Mechanical data**

Dimension (W x H x L)	15 mm x 46.5 mm
Thread size	M18
Dimension	31.8 mm
Housing material	Plastic , ABS
Lens cover material	Plastic
Net weight	75 g
Housing color	Black Red

Operation and display

Type of display	LED
Number of LEDs	2 Piece(s)

Environmental data

Ambient temperature, operation	-40 ... 60 °C
Ambient temperature, storage	-40 ... 70 °C

Certifications

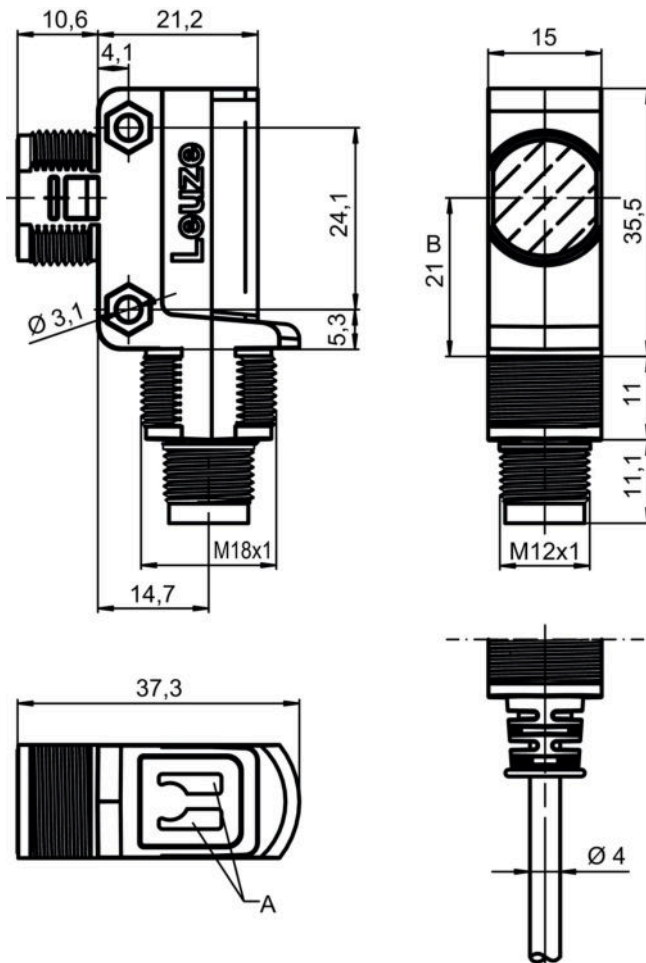
Degree of protection	IP 67
Protection class	III
Certifications	c UL US
Standards applied	IEC 60947-5-2

Classification

Customs tariff number	85365019
eCl@ss 8.0	27270901
eCl@ss 9.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716

Dimensioned drawings

All dimensions in millimeters



A Indicator diode
B Optical axis

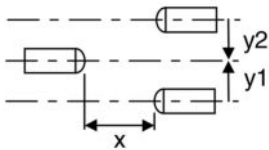
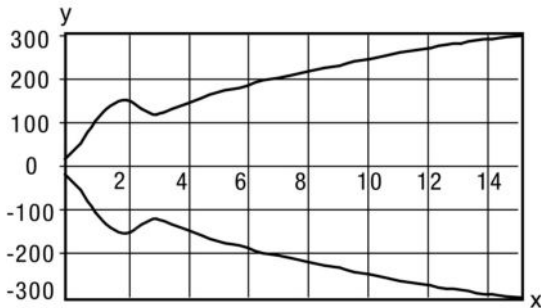
Electrical connection

Connection 1	
Function	Signal OUT Voltage supply
Type of connection	Cable
Cable length	2,000 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire
Wire cross section	0.2 mm ²

Conductor color	Conductor assignment
Brown	V+
White	OUT 2
Blue	GND
Black	OUT 1

Diagrams

Typ. response behavior





x Distance [m]
y Misalignment [mm]

Operation and display

LEDs

LED	Display	Meaning
1	Green, continuous light	Operational readiness
2	Yellow, continuous light	Light path free
	Yellow, flashing	No function reserve

Suitable transmitters

	Part no.	Designation	Article	Description
	50117929	LS28/9D	Throughbeam photoelectric sensor transmitter	Operating range limit: 0 ... 15 m Light source: LED, Red Supply voltage: DC Deactivation inputs: 2 Piece(s) Connection: Cable, 2,000 mm, 4 -wire Special design: Deactivation input
	50143792	LS28I	Throughbeam photoelectric sensor transmitter	Operating range limit: 0 ... 15 m Light source: LED, Infrared Supply voltage: DC Connection: Cable, 2,000 mm, 4 -wire

Part number code

Part designation: AAA28d.E/ ff-hh

AAA28	Operating principle / construction: LS28: throughbeam photoelectric sensor transmitter LE28: throughbeam photoelectric sensor receiver ET28: energetic diffuse reflection sensor FT28: diffuse reflection sensor with fading PRK28: retro-reflective photoelectric sensor with polarization filter
d	Light type: n/a: red light l: infrared light
E	Equipment: 3: teach-in via button
ff	Switching output / function / OUT1OUT2 (OUT1 = pin 4, OUT2 = pin 2): 2: NPN transistor output, light switching N: NPN transistor output, dark switching 4: PNP transistor output, light switching P: PNP transistor output, dark switching D: deactivation input (deactivation with low signal) 9: deactivation input (deactivation with high signal)
hh	n/a: cable, standard length 2000 mm, 4-wire 200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug)

Note

A list with all available device types can be found on the Leuze electronic website at www.leuze.com.

Notes

Observe intended use!

- 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 its intended use.

For UL applications:


- For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
- 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)

- Sum of the output currents for both outputs, 50 mA for ambient temperatures > 40 °C



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Accessories

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50124651	BT 205M-10SET	Mounting device set	Contains: 10x Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal

Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50117255	BTU 200M-D12	Mounting system	Contains: 2x M3 x 16 screw, 2 M3 x 20 screws, 2x position washers Design of mounting device: Mounting system Fastening, at system: For 12 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type, Suited for M3 screws Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117490	BTU D18M-D12	Mounting system	Design of mounting device: Mounting system Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal

Note

A list with all available accessories can be found on the Leuze electronic website in the Download tab of the article detailed page.