

# Technical data sheet Throughbeam photoelectric sensor receiver

Part no.: 50134470

LE5/4X-200-M12



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## **Technical data**



#### Basic data

Series	5	
Operating principle	Throughbeam principle	
Device type	Receiver	

#### **Optical data**

Operating range see transmitter
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#### **Electrical data**

Protective circuit	Polarity reversal protection
	Short circuit protected

#### Performance data

Supply voltage U <sub>B</sub>	10 30 V, DC, Incl. residual ripple	
Residual ripple	0 15 %, From U <sub>B</sub>	
Open-circuit current	0 15 mA	

#### Outputs

Number of digital switching outputs 1 Piece(s)

#### **Switching outputs**

Туре	Digital switching output
Voltage type	DC
Switching current, max.	100 mA
Switching voltage	high: ≥(U <sub>B</sub> -2V)
	low: ≤ 2 V

#### Switching output 1

Assignment	Connection 1, pin 4
Switching element	Transistor, PNP
Switching principle	Light switching

#### Time behavior

Switching frequency	500 Hz	
Response time	1 ms	
Readiness delay	300 ms	

#### Connection

Number of connections	1 Piece(s)
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Connection 1	
Function	Signal OUT
	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PUR
Cable color	Black
Wire cross section	0.2 mm <sup>2</sup>
Thread size	M12
Туре	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

#### **Mechanical data**

Dimension (W x H x L)	14 mm x 32.5 mm x 20.2 mm
Housing material	Plastic
Plastic housing	ABS
Lens cover material	Plastic
Net weight	40 g
Housing color	Black
	Red
Recommended tightening torque for M3 fastening	0.9 N·m

#### **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
Approvals	c UL US
Standards applied	IEC 60947-5-2

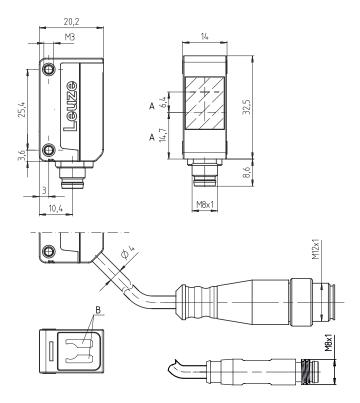
#### Classification

Customs tariff number	85365019
ECLASS 5.1.4	27270901
ECLASS 8.0	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ECLASS 13.0	27270901
ECLASS 14.0	27270901
ECLASS 15.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
ETIM 9.0	EC002716
ETIM 10.0	EC002716

# **Dimensioned drawings**

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All dimensions in millimeters



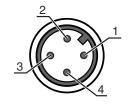
- Optical axis
- Indicator diode

# **Electrical connection**

#### **Connection 1**

Function	Signal OUT
	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PUR
Cable color	Black
Wire cross section	0.2 mm <sup>2</sup>
Thread size	M12
Туре	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

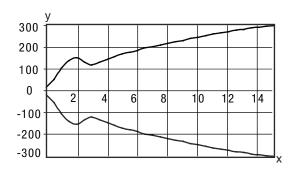
Pin	Pin assignment
1	V+
2	n.c.
3	GND
4	OUT 1



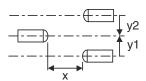
# **Diagrams**



## Typ. response behavior



- Distance [m]
- Misalignment [mm]



# **Operation and display**

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

# Suitable transmitters

Part no.	Designation	Operating range Operating range limit	Description
50117693	LS5/9D-200-M12	0 10 m 0 15 m	Special version: Deactivation input Operating range limit: 0 15 m Light source: LED, Red Supply voltage: DC Deactivation inputs: 2 Piece(s) Connection: Cable with connector, 200 mm, M12, Plastic, 4 -pin

## Part number code

Part designation: AAA5d.EE/ ff-GG-hh-l

AAA5	Operating principle / construction HT5: diffuse reflection sensor with background suppression LS5: throughbeam photoelectric sensor transmitter LE5: throughbeam photoelectric sensor receiver ET5: energetic diffuse reflection sensor FT5: diffuse reflection sensor with fading PRK5: retro-reflective photoelectric sensor with polarization filter
d	Light type n/a: red light I: infrared light

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## Part number code



EE	Equipment 1: adjustable range M: for semi-transparent objects H: For the detection of transparent films X: reinforced fading 3: teach-in via button R: combination product for reflector DTKS 30x50
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 X: pin not used 9: deactivation input (deactivation with high signal) D: Deactivation input (deactivation with low signal)
GG	Version P1: narrow light beam
hh	Electrical connection n/a: cable, standard length 2000 mm, 4-wire M8: M8 connector, 4-pin (plug) M8.3: M8 connector, 3-pin (plug) 200-M8: cable, length 200 mm with M8 connector, 4-pin, axial (plug) 200-M8.3: cable, length 200 mm with M8 connector, 3-pin, axial (plug) 200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug) M8.1: Snap-in, M8 connector, 4-pin (plug)
I	Parameterization P1: different configuration

#### Note



 $\$  A list with all available device types can be found on the Leuze 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:



- ♦ Only for use in "class 2" circuits
- 🖖 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)

# **Further information**

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

## **Accessories**



# Connection technology - Connection cables

	Part no.	Designation	Article	Description
W 0	50130652	KD U-M12-4A-V1- 050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC
V	50130690	KD U-M12-4W-V1- 050	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4-pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC

# Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
5.	50118542	BT 200M.5	Mounting bracket	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type, Suited for M3 screws Type of mounting device: Adjustable Material: Stainless steel
	50124651	BT 205M-10SET	Mounting device set	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
00	50117829	BTP 200M-D12	Mounting system	Design of mounting device: Protection hood Fastening, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117255	BTU 200M-D12	Mounting system	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

# **Accessories**



Note



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