Technical data sheet

Throughbeam photoelectric sensor

Part no.: 50134592

LE5/4X-M8

Figure can vary

Contents

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Technical data

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Basic data

Series	5
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	1 Piece(s)

Switching outputs

Voltage type	DC
Switching current, max.	100 mA
Switching voltage	high: ≥(U_B-2V)
	Low: ≤2V

Switching output 1

Assignment	Connection 1, conductor 4
Switching element	Transistor, PNP
Switching principle	Light 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	Connector
Thread size	M8
Type	Male
Material	Plastic
No. of pins	4 -pin

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	70 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 5.1.4	27270901
eCl@ss 8.0	27270901
eCl@ss 9.0	27270901
eCl@ss 10.0	27270901
eCl@ss 11.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716

Dimensioned drawings

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All dimensions in millimeters

A   Optical axis

B   Indicator diode
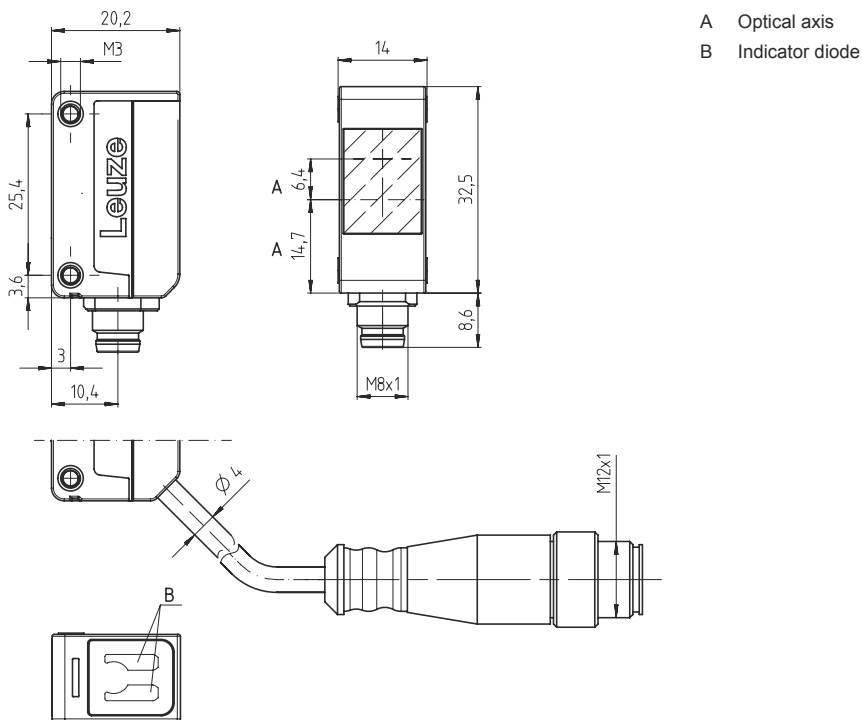
Electrical connection

Connection 1

Function	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M8
Type	Male
Material	Plastic
No. of pins	4 -pin

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

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Diagrams

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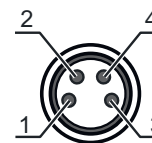
Typ. response behavior
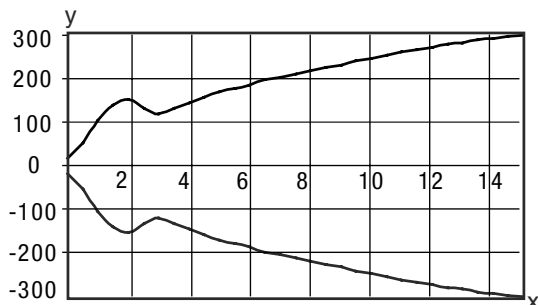
x   Distance [m]
y   Misalignment [mm]
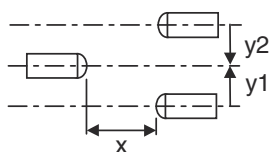
Operation and display

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	Article	Description
	50117695	LS5/9D-M8	Throughbeam photoelectric sensor transmitter	Special version: Deactivation input Operating range limit: 0 ... 15 m Light source: LED, Red Supply voltage: DC Deactivation inputs: 2 Piece(s) Connection: Connector, M8, Plastic, 4 -pin
	50134594	LS5/X-M8.3	Throughbeam photoelectric sensor transmitter	Operating range limit: 0 ... 15 m Light source: LED, Red Supply voltage: DC Connection: Connector, M8, Plastic, 3 -pin
	50134585	LS5/XX-M8	Throughbeam photoelectric sensor transmitter	Operating range limit: 0 ... 15 m Light source: LED, Red Supply voltage: DC Connection: Connector, M8, Plastic, 4 -pin

Part number code

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Part designation: **AAA5d.EE/ ff-GG-hh-I**

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	
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	**Configuration**	
	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

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- 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
	50130850	KD U-M8-4A-V1-050	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
	50130871	KD U-M8-4W-V1-050	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	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
	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

Accessories

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Part no.	Designation	Article	Description
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

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