SMART SENSOR BUSINESS

Leuze electronic
the sensor people

Part no.: 50117695

LS5/9D-M8

Throughbeam photoelectric sensor transmitter

CE   c UL us LISTED   IP 67

Figure can vary

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Diagrams
- Operation and display
- Suitable receivers
- Part number code
- Notes
- Accessories

Part no.: 50117695 – LS5/9D-M8 – Throughbeam photoelectric sensor

Technical data

Basic data	
Series	5
Operating principle	Throughbeam principle
Device type	Transmitter

Special design	
Special design	Deactivation input

Optical data	
Operating range	Guaranteed operating range
Operating range	0 ... 10 m
Operating range limit	Typical operating range
Operating range limit	0 ... 15 m
Light source	LED , Red
LED light wavelength	620 nm
LED group	Exempt group (in acc. with EN 62471)
Transmitted-signal shape	Pulsed

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
Inputs		
Number of deactivation inputs		2 Piece(s)
Deactivation inputs		
Deactivation input 1		
Assignment		Connection 1, pin 4
Active switching state		Low
Deactivation input 2		
Assignment		Connection 1, pin 2
Active switching state		High

Timing	
Readiness delay	300 ms

Connection		
Connection 1		
Type of connection		Connector
Function		Signal IN Voltage supply
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 , ABS
Lens cover material	Plastic
Net weight	20 g
Housing color	Black Red

Operation and display	
Type of display	LED
Number of LEDs	1 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

Leuze electronic GmbH + Co. KG, In der Braike 1, 73277 Owen
Phone: +49 7021 573-0, Fax: +49 7021 573-199

info@leuze.com • www.leuze.com
We reserve the right to make technical changes • eng 2019-05-10
3 / 8
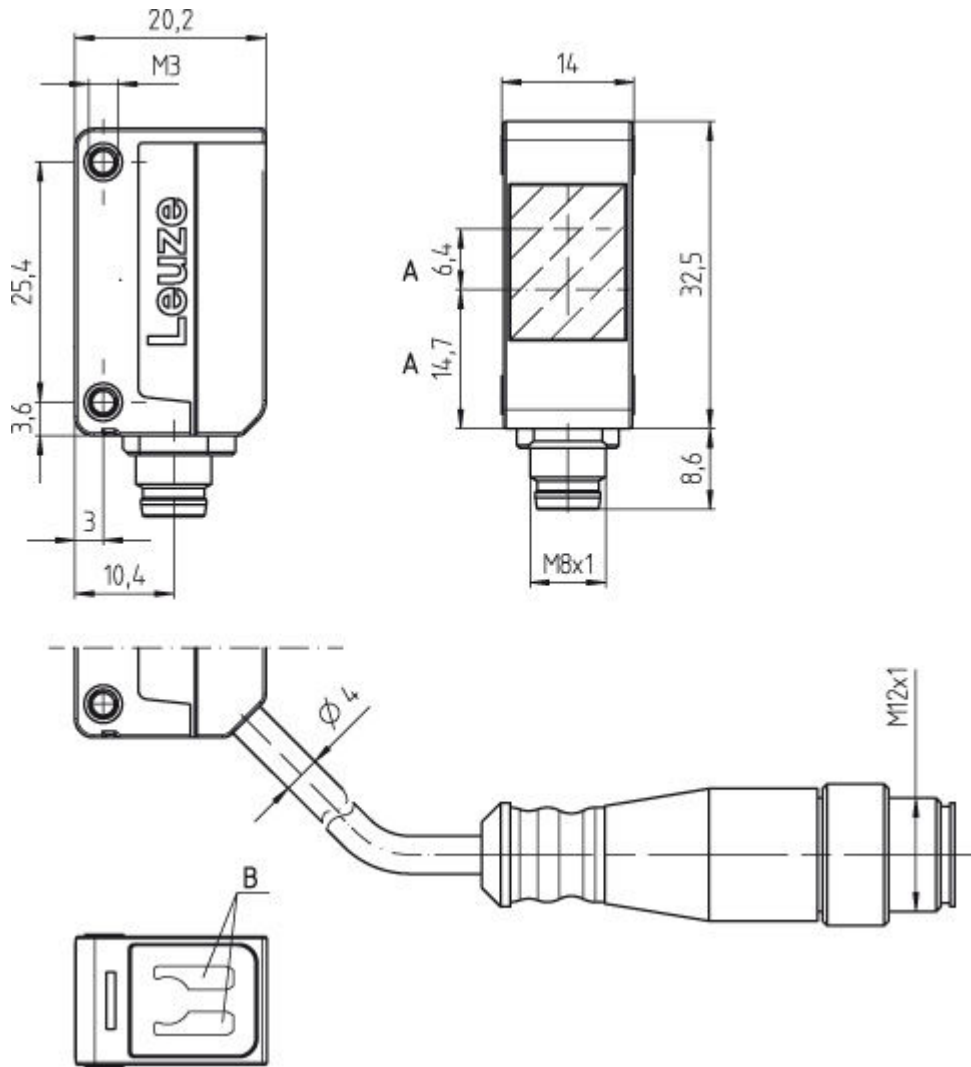
A Optical axis
B Indicator diode

Electrical connection

Connection 1	
Type of connection	Connector
Function	Signal IN Voltage supply
Thread size	M8
Type	Male
Material	Plastic
No. of pins	4 -pin
Encoding	

Pin	Pin assignment
1	V+
2	In2
3	GND
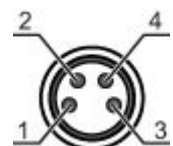
Pin	Pin assignment
4	In1

Diagrams

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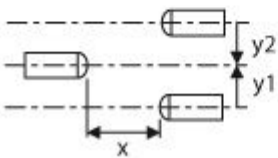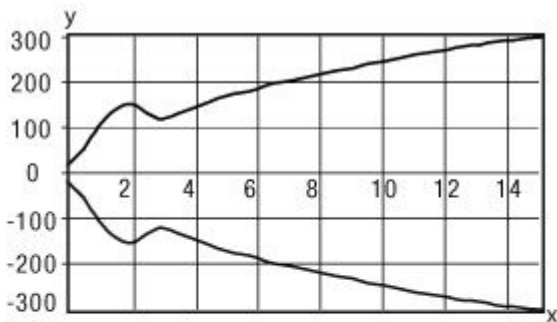
x   Distance [m]
y   Misalignment [mm]

Operation and display

LEDs

LED	Display	Meaning
1	Green, continuous light	Operational readiness
2	Yellow, continuous light	Transmitted beam active

Suitable receivers

	Part no.	Designation	Article	Description
	50134596	LE5/2-M8.3	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 15 m Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Light switching Switching frequency: 500 Hz Connection: Connector, M8, Plastic, 3 -pin

Leuze electronic GmbH + Co. KG, In der Braike 1, 73277 Owen
Phone: +49 7021 573-0, Fax: +49 7021 573-199
info@leuze.com • www.leuze.com
We reserve the right to make technical changes • eng 2019-05-10
5 / 8

	Part no.	Designation	Article	Description
	50117689	LE5/2N-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 15 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, NPN, Light switching Switching output 2: Transistor, NPN, Dark switching Switching frequency: 500 Hz Connection: Connector, M8, Plastic, 4 -pin
	50134593	LE5/2X-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 15 m Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Light switching Switching frequency: 500 Hz Connection: Connector, M8, Plastic, 4 -pin
	50134595	LE5/4-M8.3	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 15 m Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching frequency: 500 Hz Connection: Connector, M8, Plastic, 3 -pin
	50117692	LE5/4P-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 15 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching output 2: Transistor, PNP, Dark switching Switching frequency: 500 Hz Connection: Connector, M8, Plastic, 4 -pin
	50134592	LE5/4X-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 15 m Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching frequency: 500 Hz Connection: Connector, M8, Plastic, 4 -pin

Part number code

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	**Design:** 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: configuration for label detection

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:

- 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)

- 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

Leuze electronic GmbH + Co. KG, In der Braike 1, 73277 Owen
Phone: +49 7021 573-0, Fax: +49 7021 573-199

info@leuze.com • www.leuze.com
We reserve the right to make technical changes • eng 2019-05-10
7 / 8

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 Type of mounting device: Adjustable Material: Stainless steel
	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
	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	Contains: 2x M3 x 16 screw, 2x M3 x 20 screw, 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 Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal

Leuze electronic GmbH + Co. KG, In der Braike 1, 73277 Owen
Phone: +49 7021 573-0, Fax: +49 7021 573-199

info@leuze.com • www.leuze.com
We reserve the right to make technical changes • eng 2019-05-10
8 / 8