Technical data sheet

Throughbeam photoelectric sensor receiver

Part no.: 50149740

LE5B/PX-200-M12

For Illustration purposes only

Contents

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

Technical data

Leuze

Basic data

Series	5B
Operating principle	Throughbeam principle
Device type	Receiver

Optical data

Operating range	see transmitter

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 ... 20 mA

Outputs

Number of digital switching outputs	1 Piece(s)

Switching outputs

Type	Digital switching output
Voltage type	DC
Switching current, max.	50 mA
Switching voltage	high: ≥(U_B-2.5V)
	low: ≤ 2.5 V

Switching output 1

Switching element	Transistor, PNP
Switching principle	Dark switching (light switching by reversing polarity of U_B)

Time behavior

Switching frequency	900 Hz
Response time	0.56 ms
Readiness delay	300 ms

Connection

Number of connections	1 Piece(s)

Connection 1

Function	Signal OUT
	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PVC
Cable color	Black
Number of conductors	3 -wire
Wire cross section	0.14 mm²
Thread size	M12
Type	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

Mechanical data

Dimension (W x H x L)	11 mm x 32.4 mm x 20 mm
Housing material	Plastic
Plastic housing	PC-ABS
Lens cover material	Plastic
Net weight	40 g
Housing color	Black
	Red
Type of fastening	Two M3 threaded sleeves
	Via optional mounting device
Recommended tightening torque for M3 fastening	0.9 N·m
Compatibility of materials	ECOLAB

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
ECLASS 16.0	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

The Sensor People Leuze electronic GmbH + Co. KG
In der Braike 1, D-73277 Owen/Germany

info@leuze.com • www.leuze.com
Phone: +49 7021 573-0 • Fax: +49 7021 573-199

We reserve the right to make technical changes
eng • 2026-02-12

2/7

Dimensioned drawings

Leuze

All dimensions in millimeters
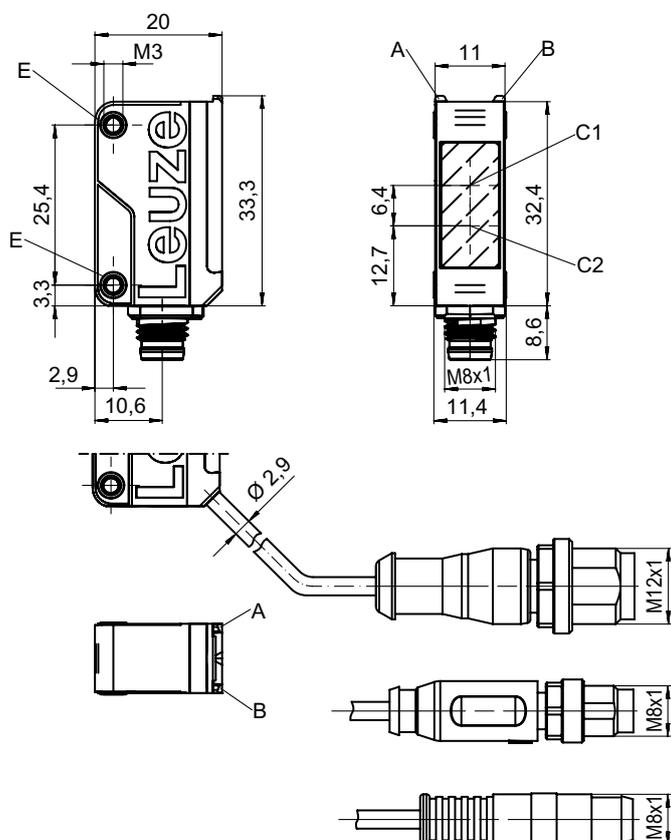
A   Green LED
B   Yellow LED
C1 Receiver
C2 Transmitter
E   Threaded sleeve

Electrical connection

Function	Signal OUT
	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PVC
Cable color	Black
Number of conductors	3 -wire
Wire cross section	0.14 mm²
Thread size	M12
Type	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

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

We reserve the right to make technical changes
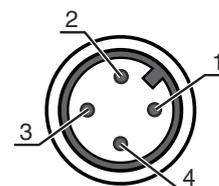
Diagrams

Typ. response behavior

x   Distance [m]

y   Misalignment [mm]

Typ. function reserve

x   Distance [m]
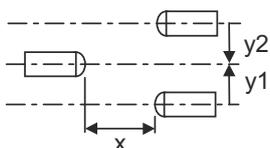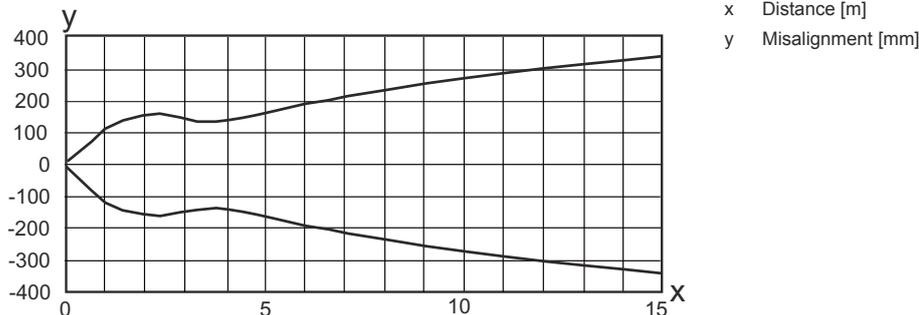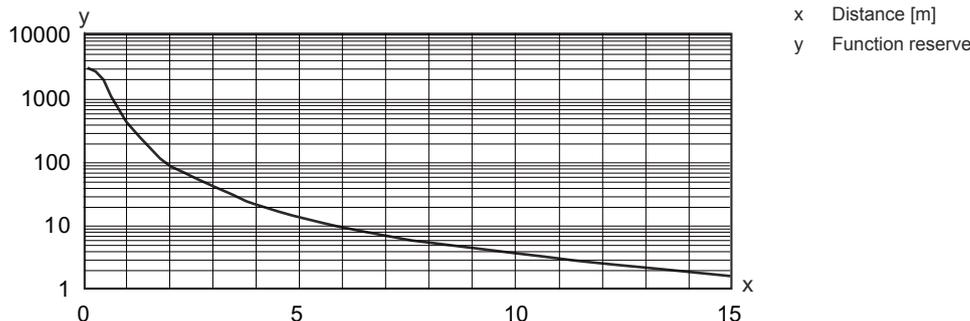
y   Function reserve

Operation and display

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

Suitable transmitters

	Part no.	Designation	Operating range Operating range limit	Description
	50145240	LS5B/9X-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: 1 Piece(s) Connection: Cable with connector, 200 mm, M12, Plastic, 3 -wire, 4 -pin

Suitable transmitters

Leuze

	Part no.	Designation	Operating range Operating range limit	Description
	50149741	LS5B/XX-200-M12	0 ... 10 m 0 ... 15 m	Operating range limit: 0 ... 15 m Light source: LED, Red Supply voltage: DC Connection: Cable with connector, 200 mm, M12, Plastic, 3 -wire, 4 -pin
	50153000	LS5BPP/XX-200-M12	0 ... 12.5 m 0 ... 17.5 m	Operating range limit: 0 ... 17.5 m Light source: Power PinPoint® LED, Red Supply voltage: DC Connection: Cable with connector, 200 mm, M12, Plastic, 3 -wire, 4 -pin

Part number code

Part designation: **AAA5B D-E.FF/GG.HH-JJ**

AAA5B	**Operating principle / construction** LS5B: Throughbeam photoelectric sensor transmitter LE5B: Throughbeam photoelectric sensor receiver PRK5B: Retro-reflective photoelectric sensor with polarization filter HT5B: Diffuse reflection sensor with background suppression ET5B: Energetic diffuse reflection sensor	
D	**Light type** n/a: red light I: infrared light PP: Power PinPoint® LED	
E	**Preset range (optional)** n/a: operating range acc. to data sheet xxxF: Preset range [mm]	
FF	**Equipment** 1: 270° potentiometer D: Detection of stretch-wrapped objects M: Detection of semi-transparent media and transparent films XL: Extra long light spot n/a with retro-reflective photoelectric sensors (PRK): operating range not adjustable n/a with ET / HT: range adjustable via 8-turn potentiometer	
GG	**Switching output / Function** 2: NPN transistor output, light switching N: NPN transistor output, dark switching 4: PNP transistor output, light switching P: PNP transistor output, dark switching 9: deactivation input (deactivation with high signal) X: pin not used	
HH	**Electrical connection** n/a: cable, standard length 2000 mm, 3-wire M8: M8 connector, 4-pin (plug) 200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (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-M8.1: Cable, length 200 mm with snap-in M8 connector, 4-pin (plug) M8.3: M8 connector, 3-pin (plug)	
JJ	**Version** Y1: mounting holes without threaded sleeve	

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

Notes

Leuze

⚠	**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.

ℹ	**For UL applications:**
ℹ	↳ 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)

Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50130652	KD U-M12-4A-V1-050	Connection cable	Application: Chemical resistant 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
	50130690	KD U-M12-4W-V1-050	Connection cable	Application: Chemical resistant 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
	50130850	KD U-M8-4A-V1-050	Connection cable	Application: Chemical resistant Connection 1: Connector, M8, Axial, Female, 4 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
	50130871	KD U-M8-4W-V1-050	Connection cable	Application: Chemical resistant Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

Accessories

Leuze

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	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, 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

Note

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

The Sensor People — Leuze electronic GmbH + Co. KG, In der Braike 1, D-73277 Owen/Germany • info@leuze.com • www.leuze.com • Phone: +49 7021 573-0 • Fax: +49 7021 573-199 • We reserve the right to make technical changes • eng • 2026-02-12 • 7/7