

Technical data sheet

Throughbeam photoelectric sensor receiver

Part no.: 50134470

LE5/4X-200-M12

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For illustration purposes only



Technical data

Basic data

| | |
|---------------------|-----------------------|
| Series | 5 |
| 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 ... 15 mA |

Outputs

| | |
|-------------------------------------|------------|
| Number of digital switching outputs | 1 Piece(s) |
|-------------------------------------|------------|

Switching outputs

| | |
|-------------------------|---|
| Type | Digital switching output |
| Voltage type | DC |
| Switching current, max. | 100 mA |
| Switching voltage | high: $\geq(U_B-2V)$ low: $\leq 2 V$ |

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) |
|-----------------------|------------|

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 ² |
| Thread size | M12 |
| Type | 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

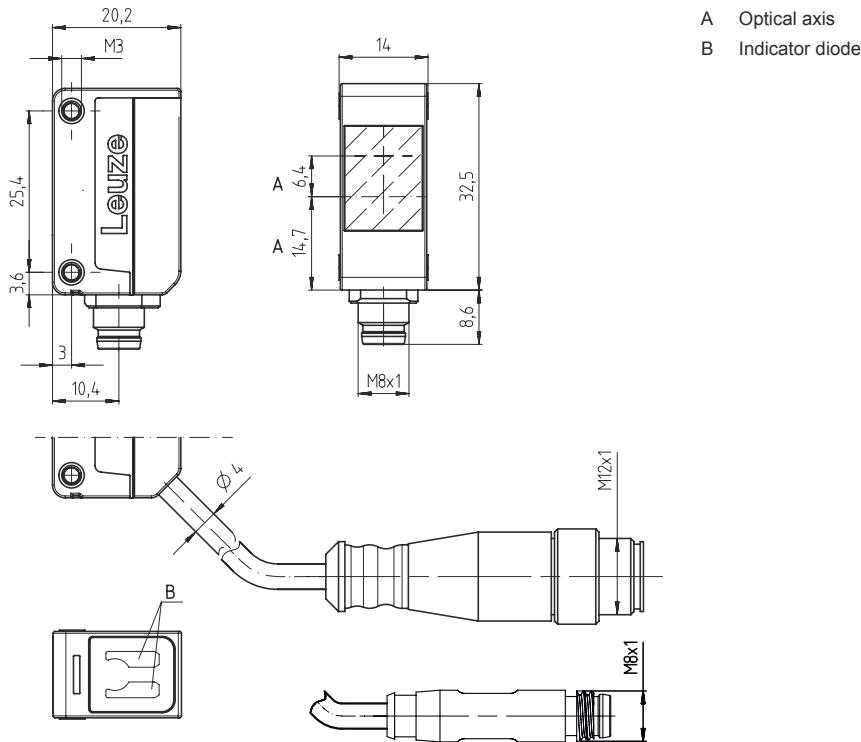
| | |
|----------------------|---------------|
| Degree of protection | IP 67 |
| Protection class | III |
| Approvals | c UL US |
| Standards applied | IEC 60947-5-2 |

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

All dimensions in millimeters



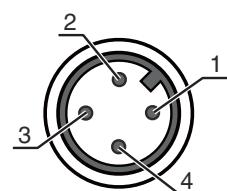
Electrical connection

Connection 1

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

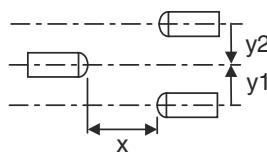
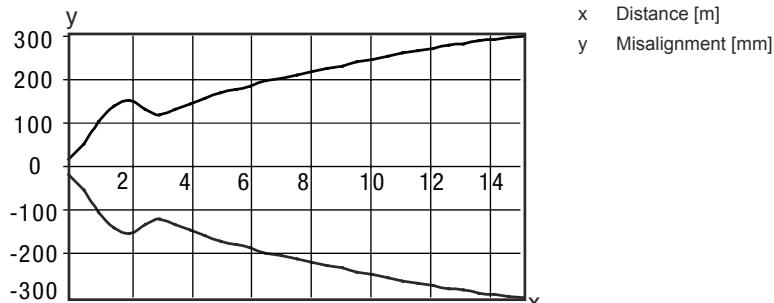
Pin Pin assignment

| | |
|---|-------|
| 1 | V+ |
| 2 | n.c. |
| 3 | GND |
| 4 | OUT 1 |



Diagrams

Typ. response behavior



Operation and display

| LED | Display | Meaning |
|-----|--|--|
| 1 | Yellow, continuous light 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 |
|----------|----------------|---|---|
| 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

| | |
|-----|--|
| AAA | 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 l: infrared light |

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! | |
|  | <ul style="list-style-type: none"> ↳ 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: | |
|  | <ul style="list-style-type: none"> ↳ 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 |
|---|-------------|--------------------|--|
|  | 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 |
|  | 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 |
|--|-------------|---------------|---|
|  | 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 |
|  | 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.