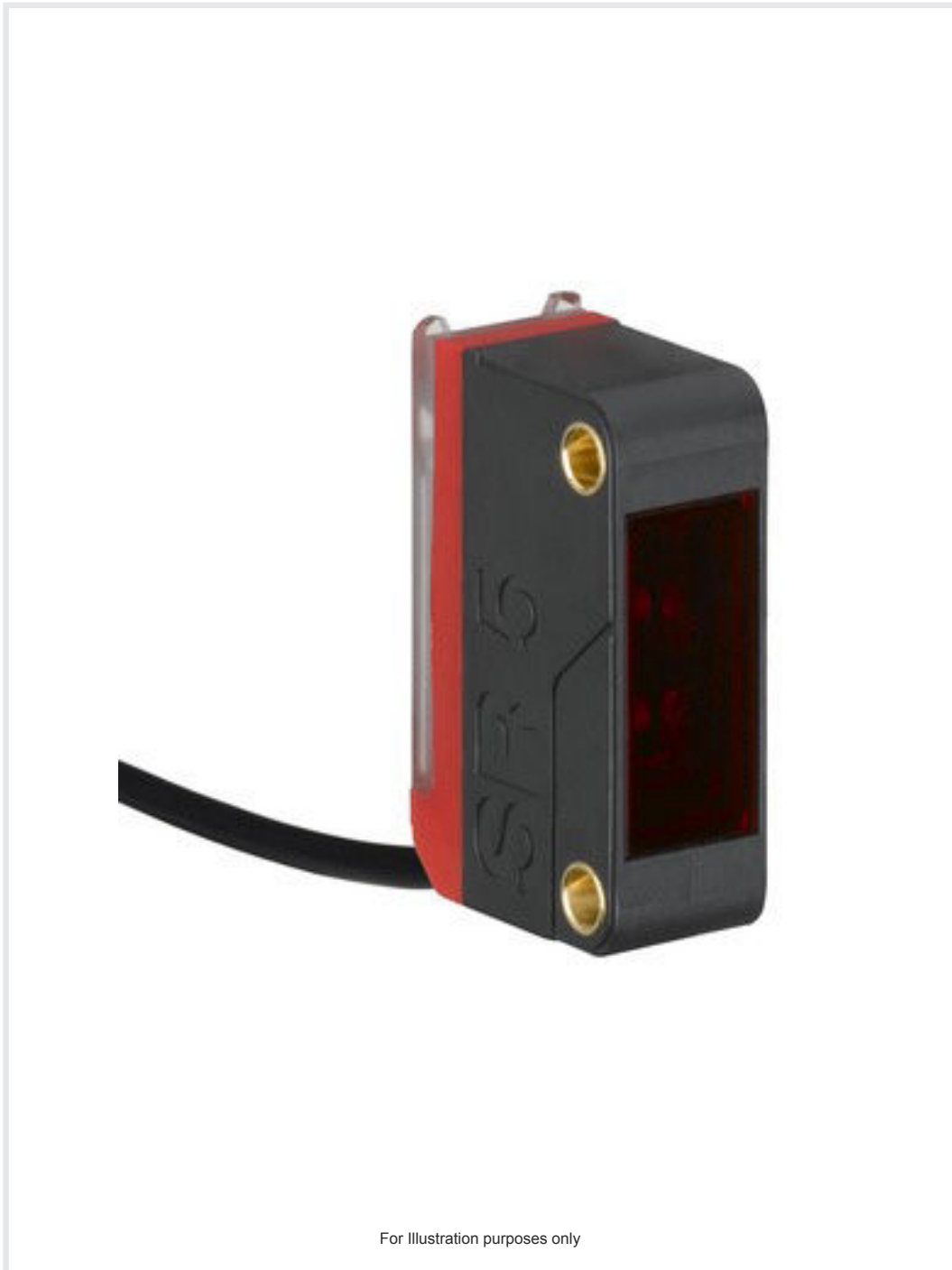


Technical data sheet

Throughbeam photoelectric sensor transmitter

Part no.: 50155510

LS5BIX



For illustration purposes only

Contents

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



Technical data

Basic data

| | |
|---------------------|-----------------------|
| Series | 5B |
| Operating principle | Throughbeam principle |
| Device type | Transmitter |

Optical data

| | |
|--------------------------|---|
| Operating range | 0 ... 15 m (guaranteed operating range) |
| Operating range limit | 0 ... 20 m (typical operating range) |
| Light source | LED, Infrared |
| Wavelength | 850 nm |
| Transmitted-signal shape | Pulsed |
| LED group | Exempt group (in acc. with EN 62471) |

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 |

Time behavior

| | |
|-----------------|--------|
| Readiness delay | 300 ms |
|-----------------|--------|

Connection

| | |
|-----------------------|------------|
| Number of connections | 1 Piece(s) |
|-----------------------|------------|

Connection 1

| | |
|----------------------|----------------------|
| Function | Voltage supply |
| Type of connection | Cable |
| Cable length | 2,000 mm |
| Sheathing material | PVC |
| Cable color | Black |
| Number of conductors | 3 -wire |
| Wire cross section | 0.14 mm ² |

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 | 44 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

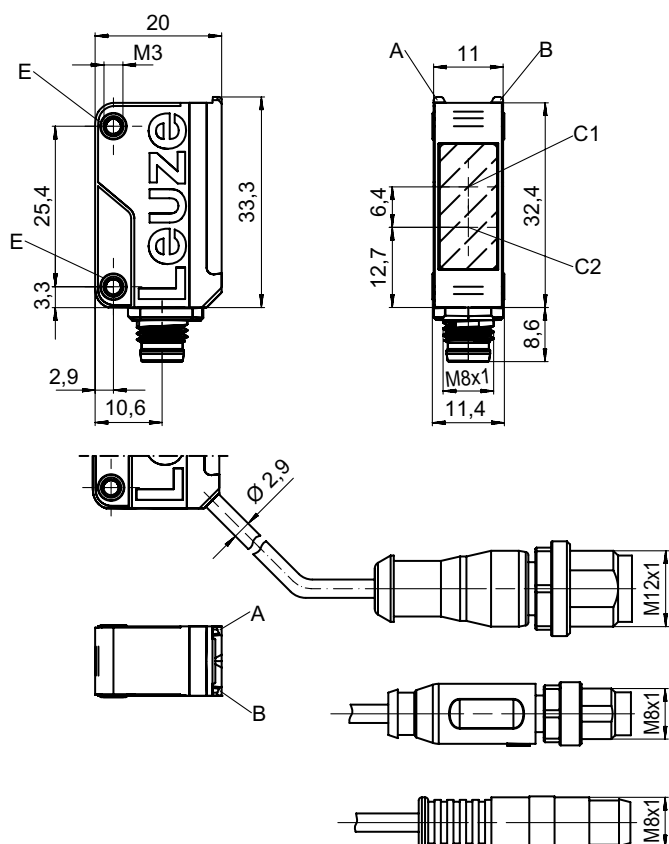
| | |
|----------------------|---------------|
| Degree of protection | IP 67 |
| Protection class | III |
| Approvals | c UL US |
| Standards applied | IEC 60947-5-2 |

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 |
| UNSPSC 26.08 | 39121528 |

Dimensioned drawings

All dimensions in millimeters



- A Green LED
- B Yellow LED
- C1 Receiver
- C2 Transmitter
- E Threaded sleeve

Electrical connection

Connection 1

| | |
|----------------------|----------------------|
| Function | Voltage supply |
| Type of connection | Cable |
| Cable length | 2,000 mm |
| Sheathing material | PVC |
| Cable color | Black |
| Number of conductors | 3 -wire |
| Wire cross section | 0.14 mm ² |

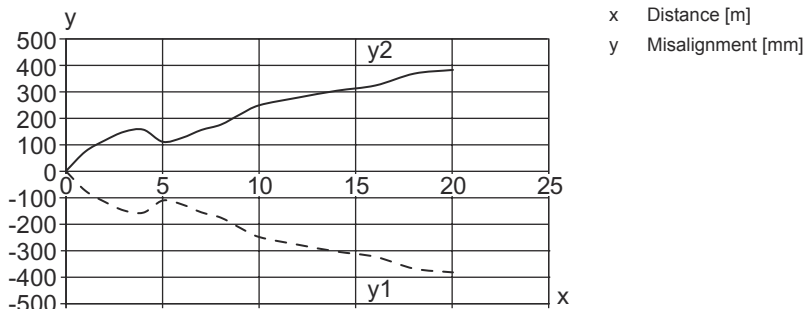
Conductor color

Conductor assignment

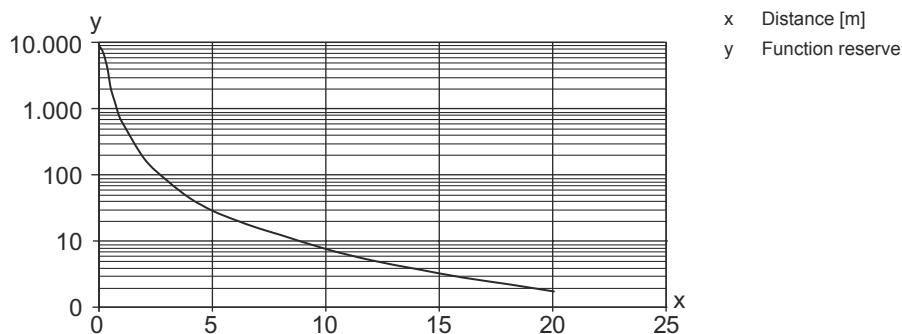
| | |
|-------|------|
| Brown | V+ |
| Black | n.c. |
| Blue | GND |

Diagrams

Typ. response behavior





Typ. function reserve





Operation and display

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

Suitable receivers

| | Part no. | Designation | Operating range Operating range limit | Description |
|--|----------|-------------|---|--|
|  | 50145231 | LE5B/2 | 0 ... 10 m 0 ... 15 m | Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Light switching (dark switching by reversing polarity of UB) Switching frequency: 900 Hz Connection: Cable, 2,000 mm, 3 -wire |
|  | 50145234 | LE5B/4 | 0 ... 10 m 0 ... 15 m | Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Light switching (dark switching by reversing polarity of UB) Switching frequency: 900 Hz Connection: Cable, 2,000 mm, 3 -wire |

Suitable receivers

| | Part no. | Designation | Operating range Operating range limit | Description |
|--|----------|-------------|---|---|
|  | 50145228 | LE5B/N | 0 ... 10 m 0 ... 15 m | Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Dark switching (light switching by reversing polarity of UB) Switching frequency: 900 Hz Connection: Cable, 2,000 mm, 3 -wire |
|  | 50145229 | LE5B/P | 0 ... 10 m 0 ... 15 m | Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Dark switching (light switching by reversing polarity of UB) Switching frequency: 900 Hz Connection: Cable, 2,000 mm, 3 -wire |

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 X: Long range xxxF: Preset range [mm] |
| FF | Equipment 1: 270° potentiometer D: Detection of stretch-wrapped objects M: Detection of semi-transparent media and transparent films X: Long range 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



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)

Accessories

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 |

Accessories

Note



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