

Technical data sheet

Throughbeam photoelectric sensor

Part no.: 50138586

LS15/XX



Figure can vary

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Technical data

Basic data

| | |
|---------------------|-----------------------|
| Series | 15 |
| Operating principle | Throughbeam principle |
| Device type | Transmitter |

Optical data

| | |
|--------------------------|--------------------------------------|
| Operating range | Guaranteed operating range |
| Operating range | 0 ... 25 m |
| Operating range limit | Typical operating range |
| Operating range limit | 0 ... 30 m |
| Light source | LED, Red |
| LED light wavelength | 640 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 |

Timing

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

Connection

Connection 1

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

Mechanical data

| | |
|-----------------------|---|
| Dimension (W x H x L) | 15 mm x 42.7 mm x 30 mm |
| Housing material | Plastic |
| Plastic housing | ABS |
| Lens cover material | Plastic |
| Net weight | 37 g |
| Housing color | Black |
| Type of fastening | Through-hole mounting Via optional mounting device |

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

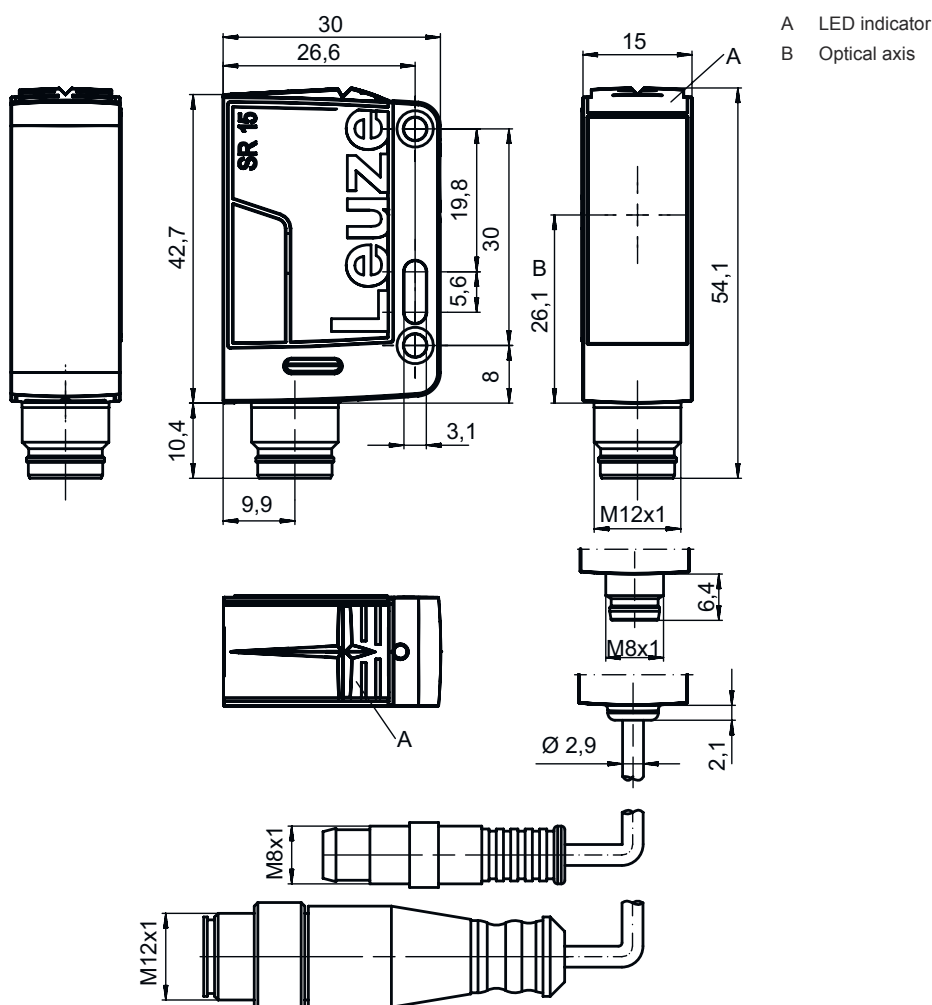
| | |
|----------------------|---------------|
| Degree of protection | IP 67 |
| Protection class | III |
| Certifications | c UL US |
| Standards applied | IEC 60947-5-2 |

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

All dimensions in millimeters



Electrical connection

Connection 1

| | |
|----------------------|----------------------|
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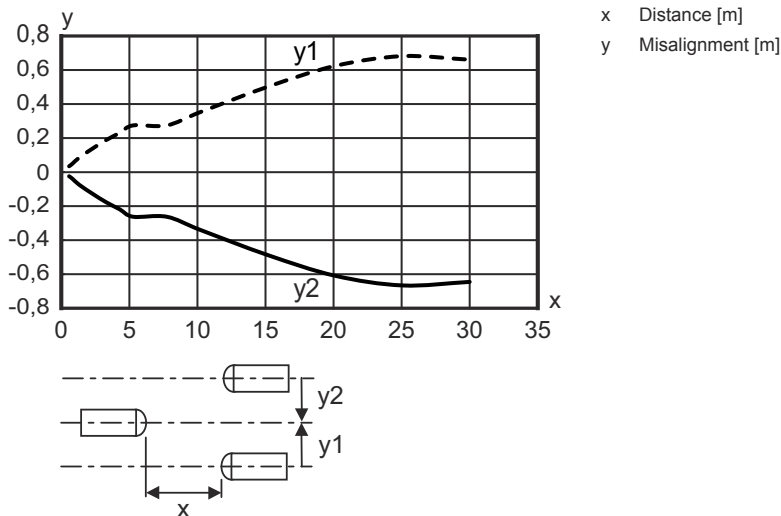
Conductor color

Conductor assignment

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

Diagrams



Typ. response behavior



Operation and display

| LED | Display | Meaning |
|-----|--------------------------|-----------------------|
| 1 | Yellow, continuous light | Object detected |
| 2 | Green, continuous light | Operational readiness |

Suitable receivers

| | Part no. | Designation | Article | Description |
|---|----------|-------------|---|---|
|  | 50138591 | LE15/2X | Throughbeam photoelectric sensor receiver | Operating range limit: 0 ... 30 m Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Light switching Switching frequency: 500 Hz Connection: Cable, 2,000 mm, 4 -wire |
|  | 50138590 | LE15/4X | Throughbeam photoelectric sensor receiver | Operating range limit: 0 ... 30 m Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching frequency: 500 Hz Connection: Cable, 2,000 mm, 4 -wire |

Part number code


Part designation: AAA15d.EE/ ff-HH

| | |
|--------------|--|
| AAA15 | Operating principle / construction HT15: diffuse reflection sensor with background suppression PRK15: retro-reflective photoelectric sensor with polarization filter LS15: throughbeam photoelectric sensor transmitter LE15: throughbeam photoelectric sensor receiver |
| d | Light type n/a: red light l: infrared light |

Part number code

| | |
|-----------|---|
| EE | Equipment 1: adjustable range D: detection of stretch-wrapped objects |
| 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 |
| HH | Electrical connection n/a: cable, standard length 2000 mm, 4-wire M8: M8 connector, 4-pin (plug) 200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug) M12: M12 connector, 4-pin (plug) |


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



- Light source: Average life expectancy 100,000 h at an ambient temperature of 25 °C

Accessories

Mounting technology - Mounting brackets

| | Part no. | Designation | Article | Description |
|---|----------|-------------|-----------------|--|
|  | 50040269 | BT 25 | Mounting device | 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 |

Note



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