

## Technical data sheet

### Throughbeam photoelectric sensor receiver

Part no.: 50147141

LE36.1/N



For illustration purposes only

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## Technical data

### Basic data

|                     |                       |
|---------------------|-----------------------|
| Series              | 36                    |
| Operating principle | Throughbeam principle |
| Device type         | Receiver              |

### Optical data

|                       |                            |
|-----------------------|----------------------------|
| Operating range       | 0.5 ... 80 m               |
| Operating range       | Guaranteed operating range |
| Operating range limit | Typical operating range    |
| Operating range limit | 0 ... 100 m                |

### Electrical data

|                    |                              |
|--------------------|------------------------------|
| Protective circuit | Polarity reversal protection |
|                    | Short circuit protected      |
|                    | Transient protection         |

### 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

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

### Switching output 1

|                     |                 |
|---------------------|-----------------|
| Switching element   | Transistor, NPN |
| Switching principle | Dark switching  |

### Time behavior

|                     |         |
|---------------------|---------|
| Switching frequency | 300 Hz  |
| Response time       | 1.66 ms |
| Readiness delay     | 300 ms  |

### Connection

#### Connection 1

|                      |                      |
|----------------------|----------------------|
| Function             | Signal OUT           |
|                      | 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 <sup>2</sup> |

### Mechanical data

|                       |                              |
|-----------------------|------------------------------|
| Dimension (W x H x L) | 20.5 mm x 76.3 mm x 44 mm    |
| Housing material      | Plastic                      |
| Plastic housing       | PC-PBT                       |
| Lens cover material   | Plastic / PMMA               |
| Net weight            | 100 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)         |
| Operational controls | 270° potentiometer |

### Environmental data

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -40 ... 60 °C |
| Ambient temperature, storage   | -40 ... 70 °C |

### Certifications

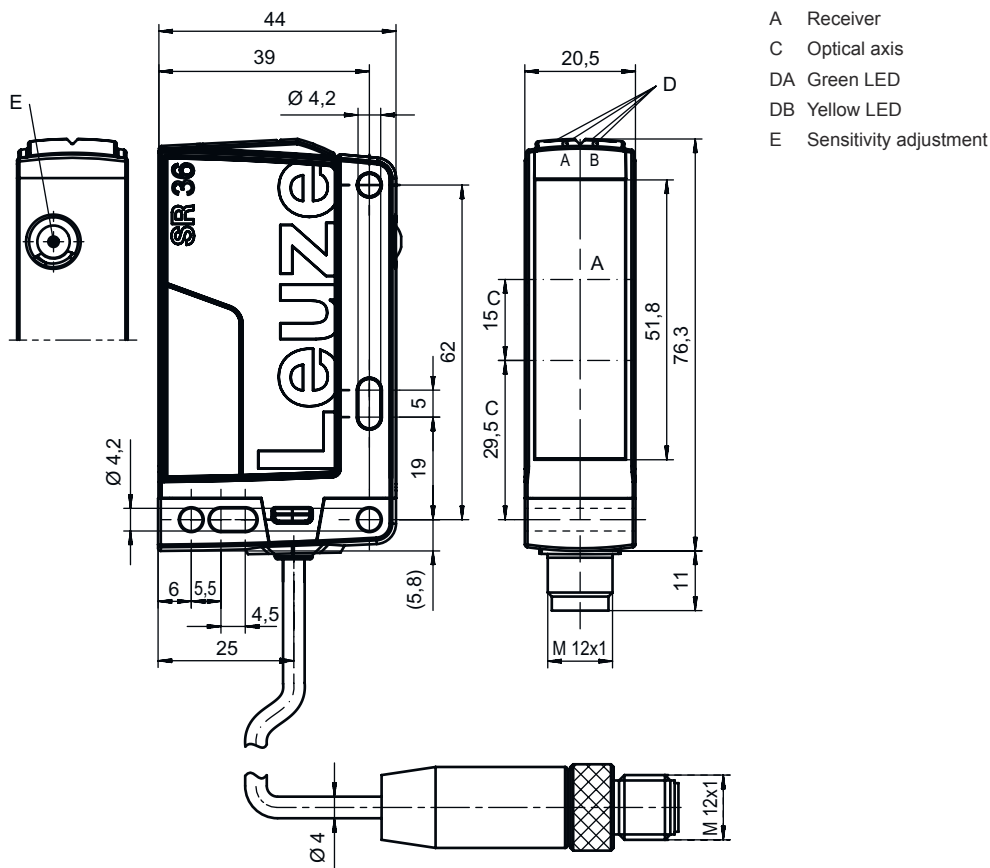
|                      |               |
|----------------------|---------------|
| Degree of protection | IP 67         |
| Protection class     | III           |
| Certifications       | c UL US       |
| Standards applied    | IEC 60947-5-2 |

### Classification

|                       |          |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| 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 |
| ETIM 5.0              | EC002716 |
| ETIM 6.0              | EC002716 |
| ETIM 7.0              | EC002716 |
| ETIM 8.0              | EC002716 |
| ETIM 9.0              | EC002716 |

# Dimensioned drawings

All dimensions in millimeters



## Electrical connection

### Connection 1

|                      |                      |
|----------------------|----------------------|
| Function             | Signal OUT           |
|                      | 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 <sup>2</sup> |

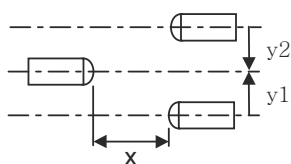
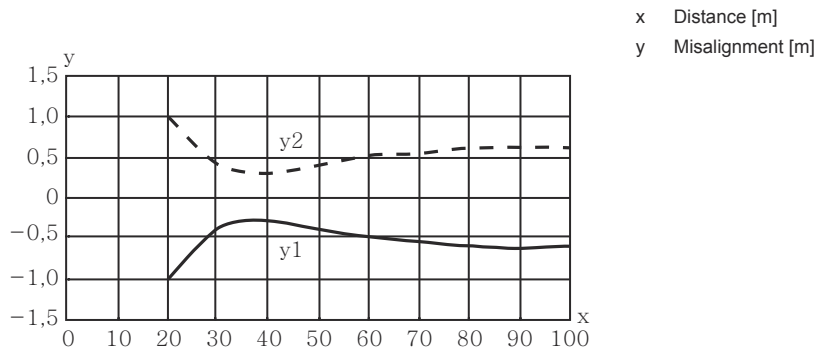
### Conductor color

### Conductor assignment

|       |       |
|-------|-------|
| Brown | V+    |
| Blue  | GND   |
| Black | OUT 1 |

# Diagrams


## Typ. response behavior



## Operation and display

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

## Suitable transmitters

|   | Part no. | Designation | Article                                      | Description  |
|---|----------|-------------|--|--|
|  | 50147129 | LS36/XX     | Throughbeam photoelectric sensor transmitter | Operating range limit: 0 ... 100 m<br>Light source: LED, Red<br>Supply voltage: DC<br>Connection: Cable, 2,000 mm, 3 -wire |

## Part number code

Part designation: AAA36 D.E/FG-K

|       |  |
|-------|--|
| AAA36 | <b>Operating principle / construction</b><br>HT36: Diffuse reflection sensor with background suppression<br>LS36: Throughbeam photoelectric sensor transmitter<br>LE36: Throughbeam photoelectric sensor receiver<br>PRK36: Retro-reflective photoelectric sensor with polarization filter |
| D     | <b>Light type</b><br>n/a: red light<br>I: infrared light   |
| E     | <b>Equipment</b><br>n/a: standard<br>1: 270° potentiometer<br>D: Depolarizing media  |

## Part number code


|           |   |
|-----------|---|
| <b>FG</b> | <b>Switching output / Function</b><br>2: NPN transistor output, light switching<br>N: NPN transistor output, dark switching<br>4: PNP transistor output, light switching<br>P: PNP transistor output, dark switching<br>X: pin not used                         |
| <b>K</b>  | <b>Electrical connection</b><br>n/a: cable, standard length 2000 mm, 3-wire<br>200-M8: cable, length 200 mm with M8 connector, 4-pin, axial (plug)<br>200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug)<br>M12: M12 connector, 4-pin (plug) |

### Note


|  |  |
|--|--|
|  | ↪ A list with all available device types can be found on the Leuze website at <a href="http://www.leuze.com">www.leuze.com</a> . |
|--|--|

## Notes

### Observe intended use!

|   |   |
|---|---|
|  | <ul style="list-style-type: none"> <li>↪ This product is not a safety sensor and is not intended as personnel protection.</li> <li>↪ The product may only be put into operation by competent persons.</li> <li>↪ Only use the product in accordance with its intended use.</li> </ul> |
|---|---|

### For UL applications:


|  |   |
|--|---|
|  | <ul style="list-style-type: none"> <li>↪ For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).</li> <li>↪ 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)</li> </ul> |
|--|---|

## Further information

- Response time: For short decay times, an ohmic load of approx. 5kOhm is recommended


## Accessories

### Mounting technology - Mounting brackets

|   | Part no. | Designation | Article         | Description  |
|---|----------|-------------|-----------------|--|
|  | 50105315 | BT 46       | Mounting device | Design of mounting device: Angle, L-shape<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Rigid<br>Material: Metal |

## Accessories

### Mounting technology - Rod mounts

|   | Part no. | Designation  | Article         | Description  |
|---|----------|--------------|-----------------|--|
|  | 50117252 | BTU 300M-D12 | Mounting system | Design of mounting device: Mounting system<br>Fastening, at system: For 12 mm rod, Sheet-metal mounting<br>Mounting bracket, at device: Screw type, Suited for M4 screws<br>Type of mounting device: Clampable, Adjustable, Turning, 360°<br>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.