



**Part no.: 50138494**  
**LE23/4X-200-M12**  
**Throughbeam photoelectric sensor receiver**



Figure can vary

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## Technical data

| <b>Basic data</b>                   |   |
|-------------------------------------|---|
| Series                              | 23  |
| Operating principle                 | Throughbeam principle                                   |
| Device type                         | Receiver  |
| <b>Optical data</b>                 |   |
| Operating range                     | Guaranteed operating range                              |
| Operating range                     | 0 ... 8 m   |
| Operating range limit               | Typical operating range                                 |
| Operating range limit               | 0 ... 10 m  |
| <b>Electrical data</b>              |   |
| Protective circuit                  | Polarity reversal protection<br>Short circuit protected |
| <b>Performance data</b>             |   |
| Supply voltage $U_B$                | 10 ... 30 V , DC , Incl. residual ripple                |
| Residual ripple                     | 0 ... 15 % , From $U_B$                                 |
| Open-circuit current                | 0 ... 15 mA   |
| <b>Outputs</b>                      |   |
| Number of digital switching outputs | 1 Piece(s)  |
| <b>Switching outputs</b>            |   |
| Voltage type                        | DC  |
| Switching current, max.             | 100 mA  |
| Switching voltage                   | High: $\geq(U_B-2V)$<br>Low: $\leq 2V$                  |
| <b>Switching output 1</b>           |   |
| Assignment                          | Connection 1, pin 4                                     |
| Switching element                   | Transistor , PNP  |
| Switching principle                 | Light switching   |
| <b>Timing</b>                       |   |
| Switching frequency                 | 500 Hz  |
| Response time                       | 1 ms  |
| Readiness delay                     | 300 ms  |
| <b>Connection</b>                   |   |

**Part no.: 50138494 – LE23/4X-200-M12 – Throughbeam photoelectric sensor**
**Connection 1**

|                      |                              |
|----------------------|------------------------------|
| Type of connection   | Cable with connector         |
| Function             | Signal OUT<br>Voltage supply |
| Cable length         | 200 mm                       |
| Sheathing material   | PUR                          |
| Cable color          | Black                        |
| Number of conductors | 4 -wire                      |
| Wire cross section   | 0.2 mm <sup>2</sup>          |
| Thread size          | M12                          |
| Type                 | Male                         |
| Material             | Plastic                      |
| No. of pins          | 4 -pin                       |
| Encoding             | A-coded                      |

**Mechanical data**

|                       |                             |
|-----------------------|-----------------------------|
| Dimension (W x H x L) | 11.4 mm x 34.2 mm x 18.3 mm |
| Housing material      | Plastic , PC-ABS            |
| Lens cover material   | Plastic / PMMA              |
| Net weight            | 20 g                        |
| Housing color         | Black<br>Red                |

**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**

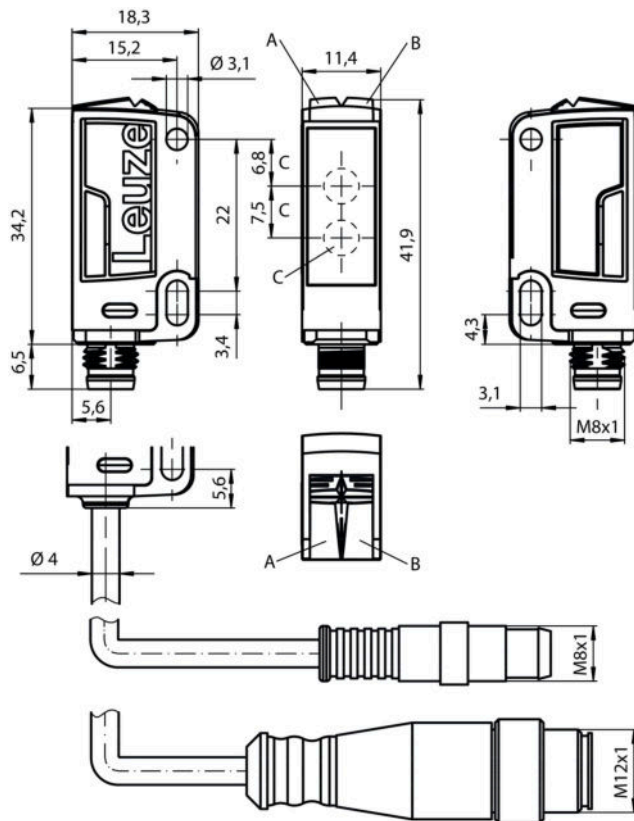
|                      |               |
|----------------------|---------------|
| Degree of protection | IP 67         |
| Protection class     | III           |
| Certifications       | c UL US       |
| Standards applied    | IEC 60947-5-2 |

**Classification**

|                       |          |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| eCl@ss 8.0            | 27270901 |
| eCl@ss 9.0            | 27270901 |
| ETIM 5.0              | EC002716 |
| ETIM 6.0              | EC002716 |

## Dimensioned drawings

All dimensions in millimeters

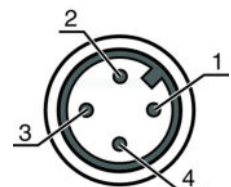


A Green LED  
B Yellow LED  
C Optical axis

## Electrical connection

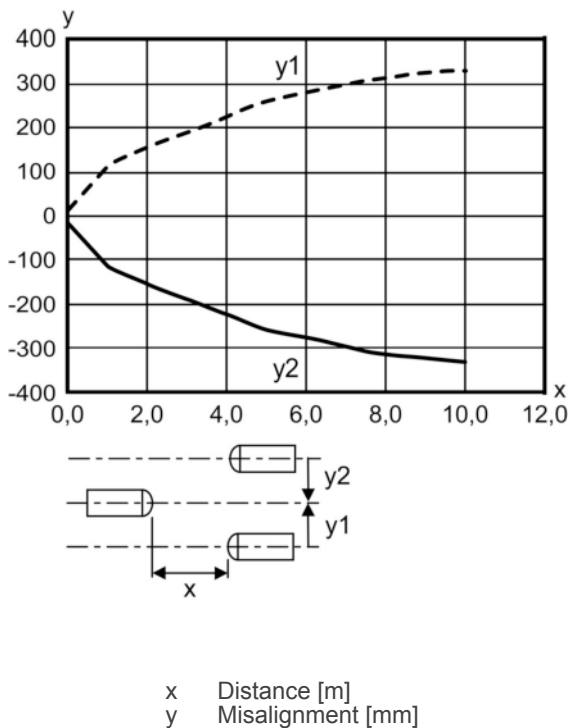
| Connection 1         |                              |
|----------------------|------------------------------|
| Type of connection   | Cable with connector         |
| Function             | Signal OUT<br>Voltage supply |
| Cable length         | 200 mm                       |
| Sheathing material   | PUR                          |
| Cable color          | Black                        |
| Number of conductors | 4 - wire                     |
| Wire cross section   | 0.2 mm <sup>2</sup>          |
| 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          |



## Diagrams

Typ. response behavior




## Operation and display

LEDs

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

## Suitable transmitters

|   | Part no. | Designation     | Article                                      | Description   |
|---|----------|-----------------|--|---|
|  | 50138492 | LS23/XX-200-M12 | Throughbeam photoelectric sensor transmitter | Operating range limit: 0 ... 15 m<br>Light source: LED, Red<br>Supply voltage: DC<br>Connection: Cable with connector, 200 mm, M12, Plastic, 4 -pin |

## Part number code

Part designation: AAA23.GJ/ ff-HH

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|       |   |
|-------|---|
| AAA23 | <b>Operating principle / construction:</b><br>HT23: diffuse reflection sensor with background suppression<br>PRK23: retro-reflective photoelectric sensor with polarization filter<br>LS23: throughbeam photoelectric sensor transmitter<br>LE23: throughbeam photoelectric sensor receiver<br>ET23: energetic diffuse reflection sensor<br>FT23: diffuse reflection sensor with fading |
| G     | <b>Equipment:</b><br>T: autocollimation principle (single lens) for highly transparent bottles without tracking   |
| J     | <b>Operating range adjustment:</b><br>3: teach-in via button  |
| ff    | <b>Switching output / function / OUT1OUT2 (OUT1 = pin 4, OUT2 = pin 2):</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  |
| HH    | <b>Electrical connection:</b><br>n/a: cable, standard length 2000 mm, 3-wire<br>M8: M8 connector, 4-pin (plug)<br>200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug)<br>M12: M12 connector, 4-pin (plug)<br>200-M8: cable, length 200 mm with M8 connector, 4-pin, axial (plug)  |

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


## Notes

|   |
|---|
| <b>Observe intended use!</b>  |
| <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> |


|   |
|---|
| <b>For UL applications:</b>   |
| <ul style="list-style-type: none"> <li>Only for use in "class 2" circuits</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> |

## 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<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PVC |



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|   | Part no. | Designation        | Article          | Description  |
|---|----------|--------------------|------------------|--|
|  | 50130690 | KD U-M12-4W-V1-050 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>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<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Screw type, Suited for M3 screws<br>Type of mounting device: Adjustable<br>Material: Stainless steel |
|  | 50124651 | BT 205M-10SET | Mounting device set | Contains: 10x<br>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                     |

**Mounting technology - Rod mounts**

|   | Part no. | Designation  | Article         | Description   |
|---|----------|--------------|-----------------|---|
|  | 50117829 | BTP 200M-D12 | Mounting system | Design of mounting device: Protection hood<br>Fastening, at system: For 12 mm rod<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Clampable, Adjustable, Turning, 360°<br>Material: Metal  |
|  | 50117255 | BTU 200M-D12 | Mounting system | Contains: 2x M3 x 16 screw, 2 M3 x 20 screws, 2x position washers<br>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 M3 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 electronic website in the Download tab of the article detailed page.