



Figure can vary

**Part no.: 50137187**  
**LE3C/6G-200-M12**  
**Throughbeam photoelectric sensor receiver**



## Contents

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

## Technical data

| <b>Basic data</b>                   |   |
|-------------------------------------|---|
| Series                              | 3C  |
| Operating principle                 | Throughbeam principle                                   |
| Device type                         | Receiver  |
| <b>Optical data</b>                 |   |
| Operating range                     | Guaranteed operating range                              |
| Operating range                     | 0.05 ... 8.5 m  |
| Operating range limit               | Typical operating range                                 |
| Operating range limit               | 0.05 ... 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 ... 20 mA   |
| <b>Outputs</b>                      |   |
| Number of digital switching outputs | 2 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 , Push-pull                                  |
| Switching principle                 | Light switching (PNP)/dark switching (NPN)              |
| <b>Switching output 2</b>           |   |
| Assignment                          | Connection 1, pin 2                                     |
| Switching element                   | Transistor , Push-pull                                  |
| Switching principle                 | Dark switching (PNP)/light switching (NPN)              |
| <b>Timing</b>                       |   |
| Switching frequency                 | 1,000 Hz  |
| Response time                       | 0.5 ms  |
| Readiness delay                     | 300 ms  |
| <b>Connection</b>                   |   |

**Part no.: 50137187 – LE3C/6G-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                        |
| Wire cross section | 0.2 mm <sup>2</sup>          |
| Thread size        | M12                          |
| Type               | Male                         |
| Material           | Metal                        |
| 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              | Red   |
| Type of fastening          | Through-hole mounting<br>Via optional mounting device |
| 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<br>IP 69K |
| 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 |

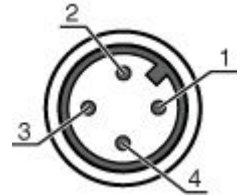
## Dimensioned drawings

All dimensions in millimeters



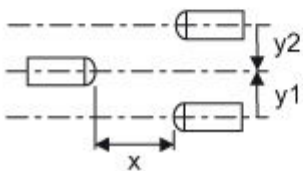
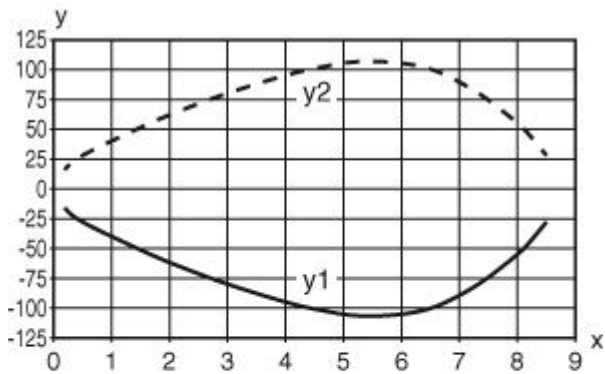
| Connection 1       |                     |
|--------------------|---------------------|
| Cable length       | 200 mm              |
| Sheathing material | PUR                 |
| Cable color        | Black               |
| Wire cross section | 0.2 mm <sup>2</sup> |
| Thread size        | M12                 |
| Type               | Male                |
| Material           | Metal               |
| No. of pins        | 4 -pin              |
| Encoding           | A-coded             |

| Pin | Pin assignment |
|-----|----------------|
| 1   | V+             |
| 2   | OUT 2          |
| 3   | GND            |
| 4   | OUT 1          |



## Diagrams

### Typ. response behavior





x Distance [m]  
y Misalignment [mm]

## Operation and display

### LEDs

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

### Suitable transmitters

|  | Part no. | Designation         | Article  | Description  |
|--|----------|---------------------|--|--|
|   | 50137179 | LS3C/<br>8X-200-M12 | Throughbeam<br>photoelectric<br>sensor transmitter | Special design: Activation input<br>Operating range limit: 0.05 ... 10 m<br>Light source: LED, Red<br>Supply voltage: DC<br>Connection: Cable with connector, 200 mm, M12, Metal, 4 -pin |
|  | 50137178 | LS3C/<br>XX-200-M12 | Throughbeam<br>photoelectric<br>sensor transmitter | Operating range limit: 0.05 ... 10 m<br>Light source: LED, Red<br>Supply voltage: DC<br>Connection: Cable with connector, 200 mm, M12, Metal, 4 -pin                                     |

### Part number code

Part designation: AAA 3C d EE-f.GG H/i J-K

|       |   |
|-------|---|
| AAA3C | <b>Operating principle / construction:</b><br>HT3C: diffuse reflection sensor with background suppression<br>LS3C: throughbeam photoelectric sensor transmitter<br>LE3C: throughbeam photoelectric sensor receiver<br>PRK3C: retro-reflective photoelectric sensor with polarization filter   |
| d     | <b>Light type:</b><br>n/a: red light<br>l: infrared light   |
| EE    | <b>Light source:</b><br>n/a: LED<br>L1: laser class 1<br>L2: laser class 2  |
| f     | <b>Pre-set range (optional):</b><br>n/a: operating range acc. to data sheet<br>XXXX: pre-set range [mm]   |
| GG    | <b>Equipment:</b><br>n/a: standard<br>A: autocollimation principle (single lens) for positioning tasks<br>B: housing model with two M3 threaded sleeves, brass<br>F: permanently set range<br>L: long light spot<br>S: small light spot<br>T: autocollimation principle (single lens) for highly transparent bottles without tracking<br>TT: autocollimation principle (single lens) for highly transparent bottles with tracking<br>V: V-optics<br>XL: extra long light spot |
| H     | <b>Operating range adjustment:</b><br>n/a with HT: range adjustable via 8-turn potentiometer<br>n/a with retro-reflective photoelectric sensors (PRK): operating range not adjustable<br>1: 270° potentiometer<br>3: teach-in via button<br>6: auto-teach   |

Part no.: 50137187 – LE3C/6G-200-M12 – Throughbeam photoelectric sensor

|   |   |
|---|---|
| i | <b>Switching output/function OUT 1/IN: Pin 4 or black conductor:</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>6: push-pull switching output, PNP light switching, NPN dark switching<br>G: push-pull switching output, PNP dark switching, NPN light switching<br>/L: IO-Link<br>8: activation input (activation with high signal)<br>X: pin not used   |
| J | <b>Switching output / function OUT 2/IN: pin 2 or white conductor:</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>6: push-pull switching output, PNP light switching, NPN dark switching<br>G: push-pull switching output, PNP dark switching, NPN light switching<br>W: warning output<br>X: pin not used<br>8: activation input (activation with high signal)<br>9: deactivation input (deactivation with high signal)<br>T: teach-in via cable |
| K | <b>Electrical connection:</b><br>n/a: cable, standard length 2000 mm, 4-wire<br>5000: cable, standard length 5000 mm, 4-wire<br>M8: M8 connector, 4-pin (plug)<br>M8.3: M8 connector, 3-pin (plug)<br>200-M8: cable, length 200 mm with M8 connector, 4-pin, axial (plug)<br>200-M8.3: cable, length 200 mm with M8 connector, 3-pin, axial (plug)<br>200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug)   |

**Note**

A list with all available device types can be found on the Leuze electronic website at [www.leuze.com](http://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:**

- For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
- 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)

- The push-pull switching outputs must not be connected in parallel.
- Response time: For short decay times, an ohmic load of approx. 5 kOhm is recommended
- Sum of the output currents for both outputs, 50 mA for ambient temperatures > 40 °C



Part no.: 50137187 – LE3C/6G-200-M12 – Throughbeam photoelectric sensor

## 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  |
|  | 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 - 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, 2x M3 x 20 screw, 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<br>Type of mounting device: Clampable, Adjustable, Turning, 360°<br>Material: Metal |