



**Part no.: 50131349**  
**CSL505-R25-2375-M8**  
**Light curtain receiver**



Figure can vary



## Contents

- Technical data
- Dimensioned drawings
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- Operation and display
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## Technical data

| <b>Basic data</b>                   |  |
|-------------------------------------|--|
| Series                              | 505  |
| Operating principle                 | Throughbeam principle  |
| Device type                         | Receiver   |
| Application                         | Precise object detection   |
| <b>Special design</b>               |  |
| Special design                      | Crossed-beam scanning<br>Diagonal-beam scanning<br>Parallel-beam scanning<br>Teach input<br>Warning output |
| <b>Optical data</b>                 |  |
| Operating range                     | Guaranteed operating range   |
| Operating range                     | 0.3 ... 5 m  |
| Measurement field length            | 2,375 mm   |
| Number of beams                     | 96 Piece(s)  |
| Beam spacing                        | 25 mm  |
| <b>Measurement data</b>             |  |
| Minimum object diameter             | 27.5 mm  |
| <b>Electrical data</b>              |  |
| Protective circuit                  | Inductive protection<br>Polarity reversal protection<br>Short circuit protected                            |
| <b>Performance data</b>             |  |
| Supply voltage $U_B$                | 18 ... 30 V , DC   |
| <b>Outputs</b>                      |  |
| Number of digital switching outputs | 2 Piece(s)   |
| <b>Switching outputs</b>            |  |
| <b>Switching output 1</b>           |  |
| Switching element                   | Transistor , Push-pull   |
| Switching principle                 | Light/dark reversible  |
| <b>Switching output 2</b>           |  |
| Switching element                   | Transistor , Push-pull   |
| Switching principle                 | Light/dark reversible  |
| <b>Timing</b>                       |  |
| Cycle time                          | 100 ms   |
| Response time per beam              | 1,000 $\mu$ s  |
| <b>Connection</b>                   |  |
| Number of connections               | 1 Piece(s)   |

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**Connection 1**

|                    |   |
|--------------------|---|
| Function           | Signal OUT<br>Teach input<br>Voltage supply |
| Type of connection | Connector                                   |
| Thread size        | M8  |
| Type               | Male  |
| Material           | Metal                                       |
| No. of pins        | 4 -pin                                      |
| Encoding           | A-coded                                     |

**Mechanical data**

|                       |                          |
|-----------------------|--------------------------|
| Design                | Cubic                    |
| Dimension (W x H x L) | 10 mm x 2,450 mm x 27 mm |
| Housing material      | Metal , Aluminum         |
| Lens cover material   | Plastic                  |
| Housing color         | Silver                   |
| Type of fastening     | Through-hole mounting    |

**Operation and display**

|                       |                                |
|-----------------------|--------------------------------|
| Type of display       | LED                            |
| Number of LEDs        | 2 Piece(s)                     |
| Type of configuration | Software<br>Via pin assignment |

**Environmental data**

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -30 ... 50 °C |
| Ambient temperature, storage   | -40 ... 65 °C |

**Certifications**

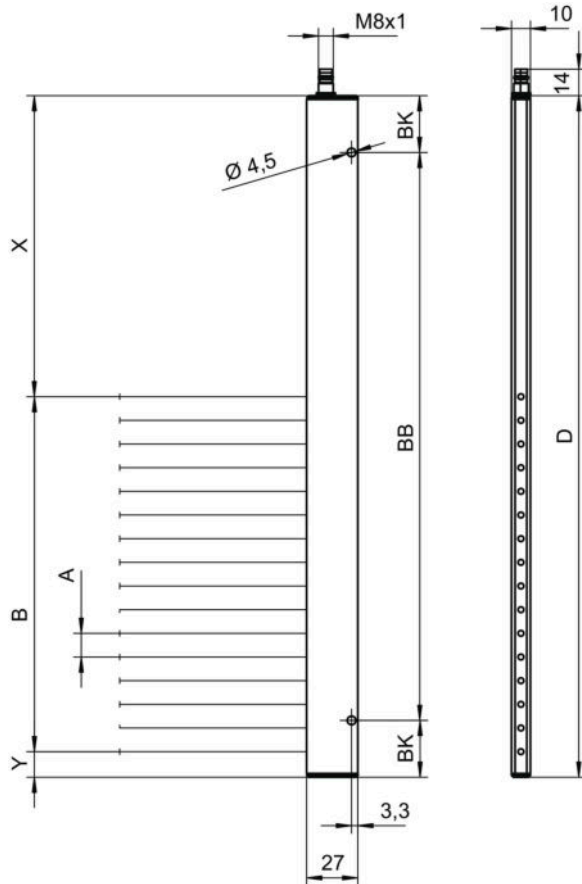
|                      |                               |
|----------------------|-------------------------------|
| Degree of protection | IP 65                         |
| Protection class     | III                           |
| Standards applied    | EN 60947-5-2 (German version) |

**Classification**

|                       |          |
|-----------------------|----------|
| Customs tariff number | 90314990 |
| eCl@ss 8.0            | 27270910 |
| eCl@ss 9.0            | 27270910 |
| ETIM 5.0              | EC002549 |
| ETIM 6.0              | EC002549 |

## Dimensioned drawings

All dimensions in millimeters

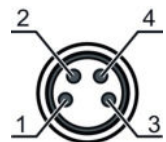


Observe the exact dimensions in the chapter "Technical data, dimensioned drawings" in the operating instructions.

## Electrical connection

| Connection 1       |   |
|--------------------|---|
| Function           | Signal OUT<br>Teach input<br>Voltage supply |
| Type of connection | Connector                                   |
| Thread size        | M8  |
| Type               | Male  |
| Material           | Metal                                       |
| No. of pins        | 4 -pin                                      |
| Encoding           | A-coded                                     |

| Pin | Pin assignment                    |
|-----|-----------------------------------|
| 1   | V+                                |
| 2   | OUT 1 / Teach-in / Warning output |
| 3   | GND                               |
| 4   | OUT 2                             |




## Operation and display

### LEDs

| Display LED 1              | Display LED 2              | Meaning                          |
|----------------------------|----------------------------|----------------------------------|
| Off                        | Off                        | Off                              |
| Red, continuous light      | Red, continuous light      | Operational readiness            |
| Red, continuous light      | Off                        | Object detected                  |
| Red, flashing              | Red, continuous light      | Ready with minor error           |
| Red, flashing              | Off                        | Object detected with minor error |
| Red, double flash          | Off                        | Configuration error              |
| Red, flashing in phase     | Red, flashing in phase     | Serious error A                  |
| Red, flashing out of phase | Red, flashing out of phase | Serious error B                  |
| Red, continuous light      | Red, double flash          | Teach event successful           |

## Suitable transmitters

|  | Part no. | Designation        | Article                   | Description   |
|--|----------|--------------------|---------------------------|---|
|  | 50131405 | CSL505-T25-2375-M8 | Light curtain transmitter | Application: Precise object detection<br>Special design: Parallel-beam scanning, Crossed-beam scanning, Diagonal-beam scanning<br>Operating range: 0.3 ... 5 m<br>Connection: Connector, M8, 4 -pin |

## Part number code

 Part designation: **CSL505-XXXX-ZZZZ-AA**

|      |  |
|------|--|
| X    | <b>Operating principle:</b><br>T: transmitter<br>R: receiver                                 |
| YYY  | <b>Beam spacing:</b><br>05: 5 mm<br>12.5: 12.5 mm<br>25: 25 mm<br>50: 50 mm<br>100: 100 mm   |
| ZZZZ | <b>Measurement field length:</b><br>Measurement field length [mm], dependent on beam spacing |
| AA   | <b>Electrical connection:</b><br>M8: M8 connector, 4-pin (plug)                              |



### Note


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

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## Accessories

### Connection technology - Connection cables

|   | Part no. | Designation       | Article          | Description  |
|---|----------|-------------------|------------------|--|
|  | 50130850 | KD U-M8-4A-V1-050 | Connection cable | Connection 1: Connector, M8, Axial, Female, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PVC  |
|  | 50130871 | KD U-M8-4W-V1-050 | Connection cable | Connection 1: Connector, M8, Angled, Female, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PVC |

|   | Part no. | Designation      | Article | Description   |
|---|----------|------------------|---------|---|
|  | 50132069 | CSL505-Interface | Module  | Connection: Sub-D<br>Functions: Configuration and test device |

#### Note

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