# Technical data sheet
# Light curtain receiver
Part no.: 50131319
CSL505-R12.5-188-M8



Figure can vary

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# Technical data

## Basic data

| | |
|---|---|
| **Series** | 505 |
| **Operating principle** | Throughbeam principle |
| **Device type** | Receiver |
| **Application** | Precise object detection |

## Special design

| | |
|---|---|
| **Special design** | Crossed-beam scanning |
| | Diagonal-beam scanning |
| | Parallel-beam scanning |
| | Teach input |
| | Warning output |

## Optical data

| | |
|---|---|
| **Operating range** | Guaranteed operating range |
| **Operating range** | 0.3 ... 5 m |
| **Measurement field length** | 188 mm |
| **Number of beams** | 16 Piece(s) |
| **Beam spacing** | 12.5 mm |

## Measurement data

| | |
|---|---|
| **Minimum object diameter** | 15 mm |

## Electrical data

| | |
|---|---|
| **Protective circuit** | Inductive protection |
| | Polarity reversal protection |
| | Short circuit protected |

### Performance data

| | |
|---|---|
| **Supply voltage $U_B$** | 18 ... 30 V, DC |

### Outputs

| | |
|---|---|
| **Number of digital switching outputs** | 2 Piece(s) |

#### Switching outputs

##### Switching output 1

| | |
|---|---|
| **Switching element** | Transistor, Push-pull |
| **Switching principle** | Light/dark reversible |

##### Switching output 2

| | |
|---|---|
| **Switching element** | Transistor, Push-pull |
| **Switching principle** | Light/dark reversible |

## Timing

| | |
|---|---|
| **Cycle time** | 20 ms |
| **Response time per beam** | 1,000 µs |

## Connection

| | |
|---|---|
| **Number of connections** | 1 Piece(s) |

### Connection 1

| | |
|---|---|
| **Function** | Signal OUT |
| | Teach input |
| | 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 250 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 |
| | Via pin assignment |

## Environmental data

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

## Certifications

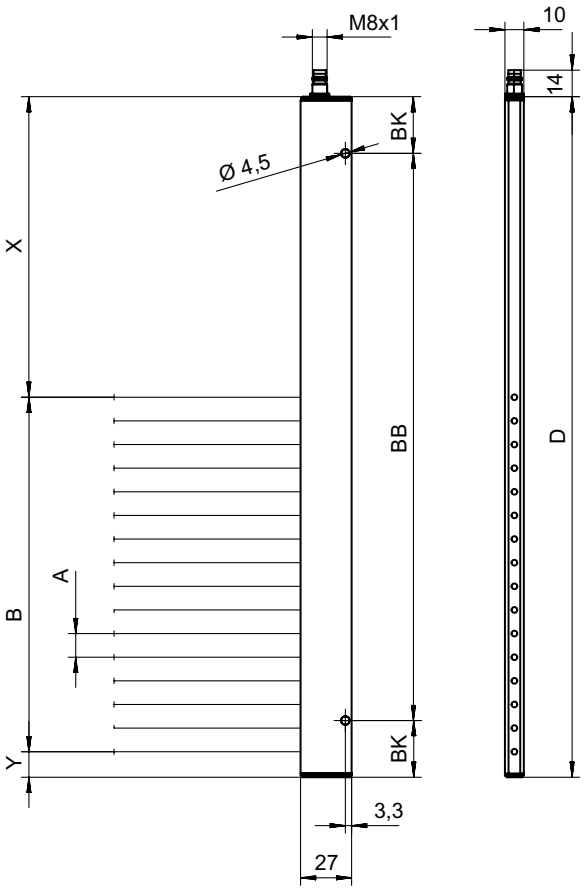
| | |
|---|---|
| **Degree of protection** | IP 65 |
| **Protection class** | III |
| **Standards applied** | EN 60947-5-2 (German version) |

## 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



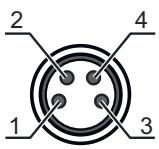

Observe the exact dimensions in the chapter "Technical data, dimensioned drawings" in the operating instructions.

# Electrical connection

## Connection 1

| | |
|---|---|
| **Function** | Signal OUT |
| | Teach input |
| | 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

| 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 |
|---|---|---|---|---|
|  | 50131376 | CSL505-T12.5-188-M8 | Light curtain transmitter | Application: Precise object detection<br>Special design: Diagonal-beam scanning, Crossed-beam scanning, Parallel-beam scanning<br>Operating range: 0.3 ... 5 m<br>Connection: Connector, M8, 4 -pin |

# Part number code

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

| | |
|---|---|
| **X** | **Operating principle**<br>T: transmitter<br>R: receiver |
| **YYY** | **Beam spacing**<br>05: 5 mm<br>12.5: 12.5 mm<br>25: 25 mm<br>50: 50 mm<br>100: 100 mm |
| **ZZZZ** | **Measurement field length**<br>Measurement field length [mm], dependent on beam spacing |
| **AA** | **Electrical connection**<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.

# 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 |

# Accessories

| | Part no. | Designation | Article | Description |
|---|---|---|---|---|
|  | 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 |

## Configuration devices

| | 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 website in the Download tab of the article detailed page. |