# Technical data sheet
# Light curtain transmitter
Part no.: 50129029
CSL710-T10-2720.A-M12

For Illustration purposes only

**Contents**

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

# Technical data

## Basic data

| | |
|---|---|
| **Series** | 710 |
| **Operating principle** | Throughbeam principle |
| **Device type** | Transmitter |
| **Application** | Precise object detection |

## Special version

| | |
|---|---|
| **Special version** | Crossed-beam scanning |
| | Diagonal-beam scanning |
| | Parallel-beam scanning |

## Characteristic parameters

## Optical data

| | |
|---|---|
| **Operating range** | 0.3 ... 7 m, Guaranteed operating range |
| **Operating range limit** | 0.2 ... 9 m |
| **Operating range limit** | Typical operating range |
| **Measurement field length** | 2,720 mm |
| **Number of beams** | 272 Piece(s) |
| **Beam spacing** | 10 mm |
| **Light source** | LED, Infrared |
| **Wavelength** | 940 nm |
| **Transmitted-signal shape** | Pulsed |

## Measurement data

| | |
|---|---|
| **Minimum object diameter** | 20 mm |

## Electrical data

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

### Performance data

| | |
|---|---|
| **Supply voltage $U_B$** | 18 ... 30 V, DC |
| **Residual ripple** | 0 ... 15 %, From $U_B$ |
| **Open-circuit current** | 0 ... 435 mA, The specified values refer to the entire package consisting of transmitter and receiver. |

## Time behavior

| | |
|---|---|
| **Readiness delay** | 400 ms |
| **Cycle time** | 82 ms |

## Connection

| | |
|---|---|
| **Number of connections** | 1 Piece(s) |
| **Plug outlet** | Axial |

### Connection 1

| | |
|---|---|
| **Function** | Connection to receiver |
| | Sync-input |
| | Voltage supply |
| **Type of connection** | Connector |
| **Thread size** | M12 |
| **Type** | Male |
| **Material** | Metal |
| **No. of pins** | 5 -pin |
| **Encoding** | A-coded |

## Mechanical data

| | |
|---|---|
| **Design** | Cubic |
| **Dimension (W x H x L)** | 29 mm x 35.4 mm x 2,793 mm |
| **Housing material** | Metal |
| **Metal housing** | Aluminum |
| **Lens cover material** | Plastic / PMMA |
| **Net weight** | 2,700 g |
| **Housing color** | Red |
| **Type of fastening** | Groove mounting |
| | Via optional mounting device |

## Operation and display

| | |
|---|---|
| **Type of display** | LED |
| **Number of LEDs** | 1 Piece(s) |

## Environmental data

| | |
|---|---|
| **Ambient temperature, operation** | -30 ... 60 °C |
| **Ambient temperature, storage** | -40 ... 70 °C |

## Certifications

| | |
|---|---|
| **Degree of protection** | IP 65 |
| **Protection class** | III |
| **Approvals** | c UL US |
| **Standards applied** | IEC 60947-5-2 |

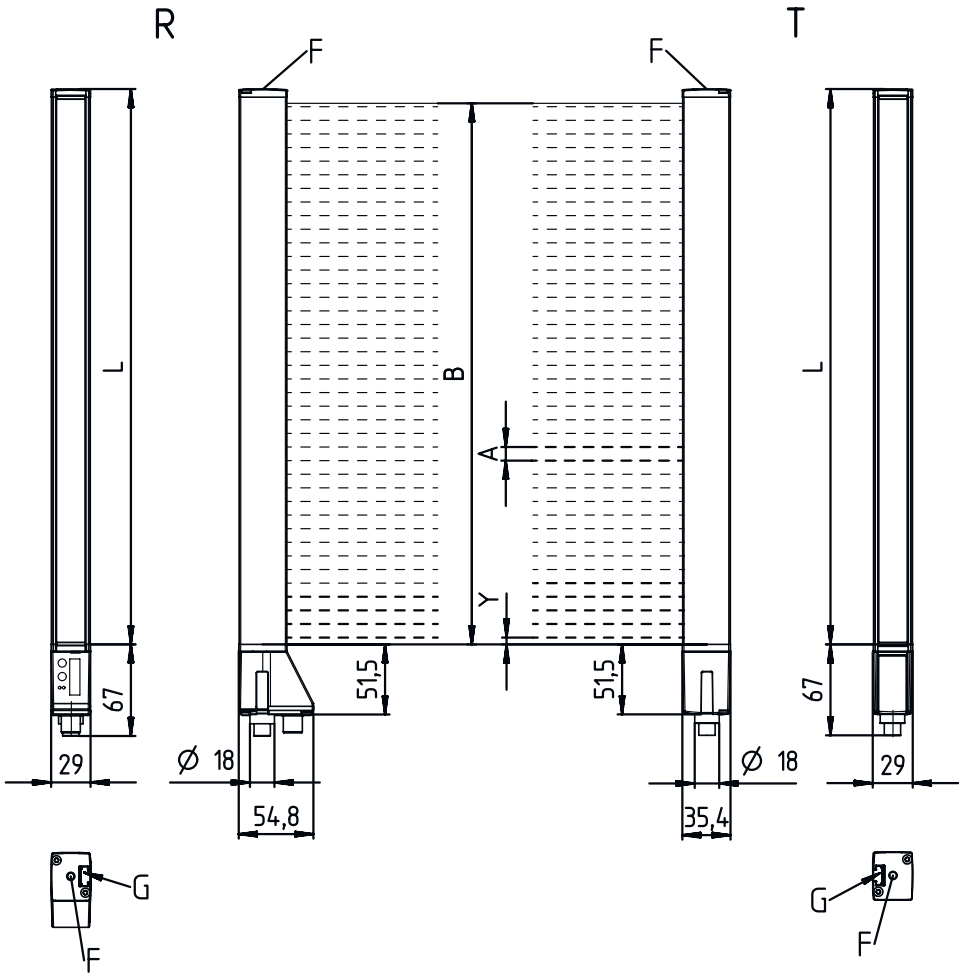
## Classification

| | |
|---|---|
| **Customs tariff number** | 90314990 |
| **ECLASS 5.1.4** | 27270910 |
| **ECLASS 8.0** | 27270910 |
| **ECLASS 9.0** | 27270910 |
| **ECLASS 10.0** | 27270910 |
| **ECLASS 11.0** | 27270910 |
| **ECLASS 12.0** | 27270910 |
| **ECLASS 13.0** | 27270910 |
| **ECLASS 14.0** | 27270910 |
| **ECLASS 15.0** | 27270910 |
| **ETIM 5.0** | EC002549 |
| **ETIM 6.0** | EC002549 |
| **ETIM 7.0** | EC002549 |
| **ETIM 8.0** | EC002549 |
| **ETIM 9.0** | EC002549 |
| **ETIM 10.0** | EC002549 |

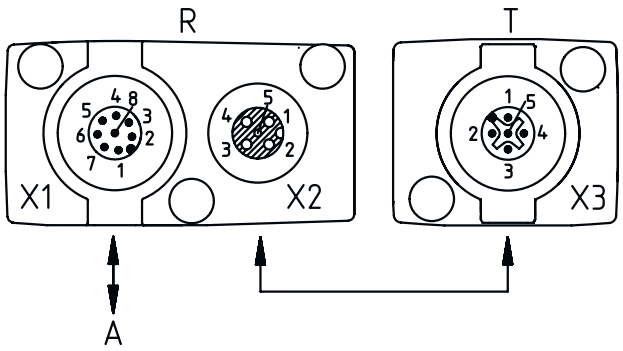
# Dimensioned drawings

AbN automation Leuze

All dimensions in millimeters




A Beam spacing 10 mm
B Measurement field length 2720 mm
F M6 thread
G Fastening groove
L Profile length 2728 mm
T Transmitter
R Receiver
Y



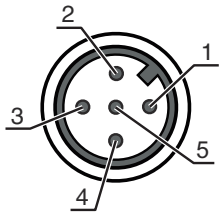

A PWR / SW IN / OUT

# Electrical connection

## Connection 1

| | |
|---|---|
| **Function** | Connection to receiver |
| | Sync-input |
| | Voltage supply |
| **Type of connection** | Connector |
| **Thread size** | M12 |
| **Type** | Male |
| **Material** | Metal |
| **No. of pins** | 5 -pin |
| **Encoding** | A-coded |

| Pin | Pin assignment |
|---|---|
| **1** | FE/SHIELD |
| **2** | V+ |
| **3** | GND |
| **4** | RS 485 Tx+ |
| **5** | RS 485 Tx- |




# Operation and display

| LED | Display | Meaning |
|---|---|---|
| **1** | Green, continuous light | Continuous mode |
| | Off | No communication with the receiver / waiting for trigger |
| | green, flashing in sync with the measurement | Measurement frequency display |

# Suitable receivers

| | Part no. | Designation | Operating range<br>Operating range limit | Description |
|---|---|---|---|---|
| | 50128945 | CSL710-R10-2720.A/L-M12 | 0.3 ... 7 m<br>0.2 ... 9 m | Application: Precise object detection<br>Special version: Parallel-beam scanning, Crossed-beam scanning, Diagonal-beam scanning<br>Operating range: 0.3 ... 7 m<br>Selectable inputs/outputs: 4 Piece(s)<br>Service interface: IO-Link<br>Connection: Connector, M12, 8 -pin |

# Part number code

Part designation: **CSL710-XYY-ZZZZ.A/B-CCC**

| | |
|---|---|
| **CSL710** | **Operating principle**<br>CSL: switching light curtain of the 710 series |
| **X** | **Function classes**<br>T: transmitter<br>R: receiver |
| **YY** | **Beam spacing**<br>05: 5 mm<br>10: 10 mm<br>20: 20 mm<br>40: 40 mm |
| **ZZZZ** | **Measurement field length [mm], dependent on beam spacing**<br>Value, see technical data |

# Part number code

AbN automation Leuze

| | |
|---|---|
| **A** | **Equipment**<br>A: Axial connector outlet |
| **B** | **Interface**<br>L: IO-Link |
| **CCC** | **Electrical connection**<br>M12: M12 connector |

**Note**

- A list with all available device types can be found on the Leuze website at 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)

# Accessories

## Connection technology - Interconnection cables

| | Part no. | Designation | Article | Description |
|---|---|---|---|---|
| | 50129781 | KDS DN-M12-5A-M12-5A-P3-050 | Interconnection cable | Suitable for interface: DeviceNet, CANopen<br>Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin<br>Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin<br>Shielded: Yes<br>Cable length: 5,000 mm<br>Sheathing material: PUR |

## Mounting technology - Mounting brackets

| | Part no. | Designation | Article | Description |
|---|---|---|---|---|
| | 429393 | BT-2HF | Mounting bracket set | Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Clampable<br>Type of mounting device: Turning, 360°<br>Material: Metal, Plastic |

# Accessories

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