

## Technical data sheet Light curtain transmitter

Part no.: 50128981

CSL710-T05-480.A-M12

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Figure can vary



## Technical data

### Basic data

|                     |                          |
|---------------------|--------------------------|
| Series              | 710                      |
| Operating principle | Throughbeam principle    |
| Device type         | Transmitter              |
| Contains            | 2x BT-NC sliding block   |
| Application         | Precise object detection |

### Special version

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

### Optical data

|                          |                            |
|--------------------------|----------------------------|
| Operating range          | Guaranteed operating range |
| Operating range          | 0.1 ... 3.5 m              |
| Operating range limit    | Typical operating range    |
| Operating range limit    | 0.1 ... 4.5 m              |
| Measurement field length | 480 mm                     |
| Number of beams          | 96 Piece(s)                |
| Beam spacing             | 5 mm                       |
| Light source             | LED, Infrared              |
| Wavelength               | 940 nm                     |

### Measurement data

|                         |       |
|-------------------------|-------|
| Minimum object diameter | 10 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 ... 165 mA, The specified values refer to the entire package consisting of transmitter and receiver. |

### Time behavior

|                 |         |
|-----------------|---------|
| Readiness delay | 400 ms  |
| Cycle time      | 3.28 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 553 mm     |
| Housing material      | Metal                        |
| Metal housing         | Aluminum                     |
| Lens cover material   | Plastic / PMMA               |
| Net weight            | 650 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           |
| Certifications       | c CSA 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 |
| ETIM 5.0              | EC002549 |
| ETIM 6.0              | EC002549 |
| ETIM 7.0              | EC002549 |
| ETIM 8.0              | EC002549 |

# Dimensioned drawings

All dimensions in millimeters



- |   |                                 |   |                       |
|---|---------------------------------|---|-----------------------|
| A | Beam spacing 5 mm               | L | Profile length 488 mm |
| B | Measurement field length 480 mm | T | Transmitter           |
| F | M6 thread                       | R | Receiver              |
| G | Fastening groove                | Y |                       |



## Electrical connection

### Connection 1

|                    |  |
|--------------------|--|
| Function           | Connection to receiver<br>Sync-input<br>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            | Article                | Description  |
|---|----------|------------------------|------------------------|--|
|  | 50128893 | CSL710-R05-480.A/L-M12 | Light curtain receiver | Application: Precise object detection<br>Special version: Parallel-beam scanning, Crossed-beam scanning, Diagonal-beam scanning<br>Operating range: 0.1 ... 3.5 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-XXY-ZZZZ.A/B-CCC**

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

## Part number code

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

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

## Notes

| ⚠ Observe intended use! |   |
|-------------------------|---|
|                         | <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> |

| For UL applications: |   |
|----------------------|---|
|                      | <ul style="list-style-type: none"> <li>For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).</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 - 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 |

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