# **Technical data sheet** Light curtain transmitter Part no.: 50129056 CSL710-T40-2530.A-M12



Leuze

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## **Technical data**

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| Basic data                          |  |  |  |
|-------------------------------------|--|--|--|
| Series                              | 710  |  |  |
| Operating principle                 | Throughbeam principle  |  |  |
| Device type                         | Transmitter  |  |  |
| Application                         | Precise object detection   |  |  |
| Special design                      |  |  |  |
| Special design                      | Crossed-beam scanning  |  |  |
|                                     | Diagonal-beam scanning   |  |  |
|                                     | Parallel-beam scanning   |  |  |
| Optical data                        |  |  |  |
| Operating range                     | Guaranteed operating range   |  |  |
| Operating range                     | 0.3 7 m  |  |  |
| Operating range limit               | Typical operating range  |  |  |
| Operating range limit               | 0.2 9 m  |  |  |
| Measurement field length            | 2,530 mm   |  |  |
| lumber of beams                     | 64 Piece(s)  |  |  |
| Beam spacing                        | 40 mm  |  |  |
| light source                        | LED, Infrared  |  |  |
| ED light wavelength                 | 940 nm   |  |  |
| Measurement data                    |  |  |  |
| Minimum object diameter             | 50 mm  |  |  |
| Electrical data                     |  |  |  |
| Protective circuit                  | Polarity reversal protection   |  |  |
|                                     | Short circuit protected  |  |  |
|                                     | Transient protection   |  |  |
| Performance data                    |  |  |  |
| Supply voltage U <sub>B</sub>       | 18 30 V, DC  |  |  |
| Residual ripple                     | 0 15 %, From U <sub>B</sub>  |  |  |
| Open-circuit current                | 0 435 mA, The specified values refer<br>to the entire package consisting of trans-<br>mitter and receiver. |  |  |
| Timing                              |  |  |  |
| Readiness delay                     | 400 ms   |  |  |
| Cycle time                          | 2.32 ms  |  |  |
|                                     |  |  |  |
| Connection                          |  |  |  |
| Connection<br>Number of connections | 1 Piece(s)   |  |  |
|                                     | 1 Piece(s)<br>Axial  |  |  |

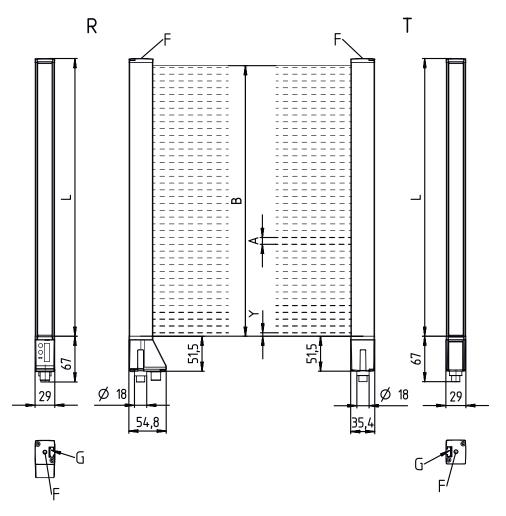
| Connection 1  |  |
|---|--|
| Function  | Connection to receiver   |
| - unouon  | Sync-input   |
|   | Voltage supply   |
| Type of connection  | Connector  |
| Thread size   | M12  |
|   | Mile   |
| Type<br>Material  | Mate   |
| No. of pins   | 5 -pin   |
|   | A-coded  |
| Encoding  | A-coded  |
| Mechanical data   |  |
| Design  | Cubic  |
| Dimension (W x H x L)   | 29 mm x 35.4 mm x 2,633 mm   |
| Housing material  | Metal, Aluminum  |
| Lens cover material   | Plastic / PMMA   |
| Net weight  | 2,550 g  |
| Housing color   | Red  |
| Type of fastening   | Groove mounting  |
|   |  |
|   | Via optional mounting device   |
| Operation and display   | Via optional mounting device   |
| Operation and display<br>Type of display  | Via optional mounting device   |
|   |  |
| Type of display<br>Number of LEDs   | LED  |
| Type of display<br>Number of LEDs<br>Environmental data   | LED  |
| Type of display   | LED<br>1 Piece(s)  |
| Type of display<br>Number of LEDs<br>Environmental data<br>Ambient temperature, operation<br>Ambient temperature, storage   | LED<br>1 Piece(s)<br>-30 60 °C   |
| Type of display<br>Number of LEDs<br>Environmental data<br>Ambient temperature, operation<br>Ambient temperature, storage<br>Certifications   | LED<br>1 Piece(s)<br>-30 60 °C   |
| Type of display<br>Number of LEDs<br>Environmental data<br>Ambient temperature, operation   | LED<br>1 Piece(s)<br>-30 60 °C<br>-40 70 °C  |
| Type of display<br>Number of LEDs<br>Environmental data<br>Ambient temperature, operation<br>Ambient temperature, storage<br>Certifications<br>Degree of protection<br>Protection class   | LED<br>1 Piece(s)<br>-30 60 °C<br>-40 70 °C<br>IP 65   |
| Type of display<br>Number of LEDs<br>Environmental data<br>Ambient temperature, operation<br>Ambient temperature, storage<br>Certifications<br>Degree of protection<br>Protection class<br>Certifications   | LED<br>1 Piece(s)<br>-30 60 °C<br>-40 70 °C<br>IP 65<br>III  |
| Type of display<br>Number of LEDs<br>Environmental data<br>Ambient temperature, operation<br>Ambient temperature, storage<br>Certifications<br>Degree of protection<br>Protection class<br>Certifications<br>Standards applied  | LED<br>1 Piece(s)<br>-30 60 °C<br>-40 70 °C<br>IP 65<br>III<br>c CSA US  |
| Type of display Number of LEDs Environmental data Ambient temperature, operation Ambient temperature, storage Certifications Degree of protection Protection class Certifications Standards applied Classification  | LED<br>1 Piece(s)<br>-30 60 °C<br>-40 70 °C<br>IP 65<br>III<br>c CSA US  |
| Type of display<br>Number of LEDs<br>Environmental data<br>Ambient temperature, operation<br>Ambient temperature, storage<br>Certifications<br>Degree of protection   | LED<br>1 Piece(s)<br>-30 60 °C<br>-40 70 °C<br>IP 65<br>III<br>c CSA US<br>IEC 60947-5-2                         |
| Type of display<br>Number of LEDs<br>Environmental data<br>Ambient temperature, operation<br>Ambient temperature, storage<br>Certifications<br>Degree of protection<br>Protection class<br>Certifications<br>Standards applied<br>Classification<br>Customs tariff number               | LED<br>1 Piece(s)<br>-30 60 °C<br>-40 70 °C<br>IP 65<br>III<br>c CSA US<br>IEC 60947-5-2<br>90314990             |
| Type of display<br>Number of LEDs<br>Environmental data<br>Ambient temperature, operation<br>Ambient temperature, storage<br>Certifications<br>Degree of protection<br>Protection class<br>Certifications<br>Standards applied<br>Classification<br>Customs tariff number<br>eCl@ss 8.0 | LED<br>1 Piece(s)<br>-30 60 °C<br>-40 70 °C<br>IP 65<br>III<br>c CSA US<br>IEC 60947-5-2<br>90314990<br>27270910 |

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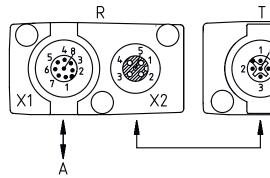
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### **Dimensioned drawings**

All dimensions in millimeters



- A Beam spacing 40 mm
- B Measurement field length 2530 mm
- F M6 thread
- G Fastening groove
- L Profile length 2568 mm
- T Transmitter
- R Receiver
- Y





#### A PWR / SW IN/OUT

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### **Electrical connection**

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#### **Connection 1**

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

#### **Pin assignment**

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

## **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

| <br>Part no. | Designation                 | Article                | Description   |
|--------------|-----------------------------|------------------------|---|
| 50128974     | CSL710-R40-2530.A/<br>L-M12 | Light curtain receiver | Application: Precise object detection<br>Special design: Parallel-beam scanning, Crossed-beam scanning, Diagonal-<br>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                       |
| 7777   | Measurement field length [mm], dependent on beam spacing<br>Value, see technical data |

### Part number code



| Α   | Equipment<br>A: connector outlet, axial     |
|-----|---|
| В   | 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!  |
|--|
| b 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:

b 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-<br>M12-5A-P3-050 | Interconnection cable | Suitable for interface: IO-Link, 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 - Swivel mounts

|     | Part no. | Designation | Article              | Description   |
|-----|----------|-------------|----------------------|---|
| ęę. | 429046   | BT-2R1      | 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





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