

## Technical data sheet

### Light curtain transmitter

Part no.: 50118585

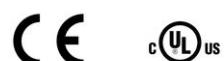
CML730i-T05-800.A-M12



For illustration purposes only

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## Technical data

### Basic data

|                     |  |
|---------------------|--|
| Series              | 730  |
| Operating principle | Throughbeam principle                                  |
| Device type         | Transmitter  |
| Contains            | 2x BT-NC sliding block                                 |
| Application         | Detection of transparent objects<br>Object measurement |

### Special version

|                 |   |
|-----------------|---|
| Special version | Crossed-beam scanning<br>Diagonal-beam scanning<br>Parallel-beam scanning |
|-----------------|---|

### Optical data

|                                    |                |
|------------------------------------|----------------|
| Operating range                    | 0.1 ... 4 m    |
| Operating range, transparent media | 0.1 ... 1.75 m |
| Operating range limit              | 0.1 ... 6 m    |
| Measurement field length           | 800 mm         |
| Number of beams                    | 160 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<br>Short circuit protected<br>Transient protection |
|--------------------|---|

### Performance data

|                      |  |
|----------------------|--|
| Supply voltage $U_B$ | 18 ... 30 V, DC  |
| Residual ripple      | 0 ... 15 %, From $U_B$   |
| Open-circuit current | 0 ... 215 mA, The specified values refer to the entire package consisting of transmitter and receiver. |

### Time behavior

|                 |        |
|-----------------|--------|
| Readiness delay | 450 ms |
| Cycle time      | 1.8 ms |

### Connection

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

### Connection 1

|                    |                        |
|--------------------|------------------------|
| Function           | Connection to receiver |
| 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 875 mm                        |
| Housing material      | Metal   |
| Metal housing         | Aluminum  |
| Lens cover material   | Plastic   |
| Net weight            | 950 g   |
| Housing color         | Silver  |
| Type of fastening     | Groove mounting<br>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

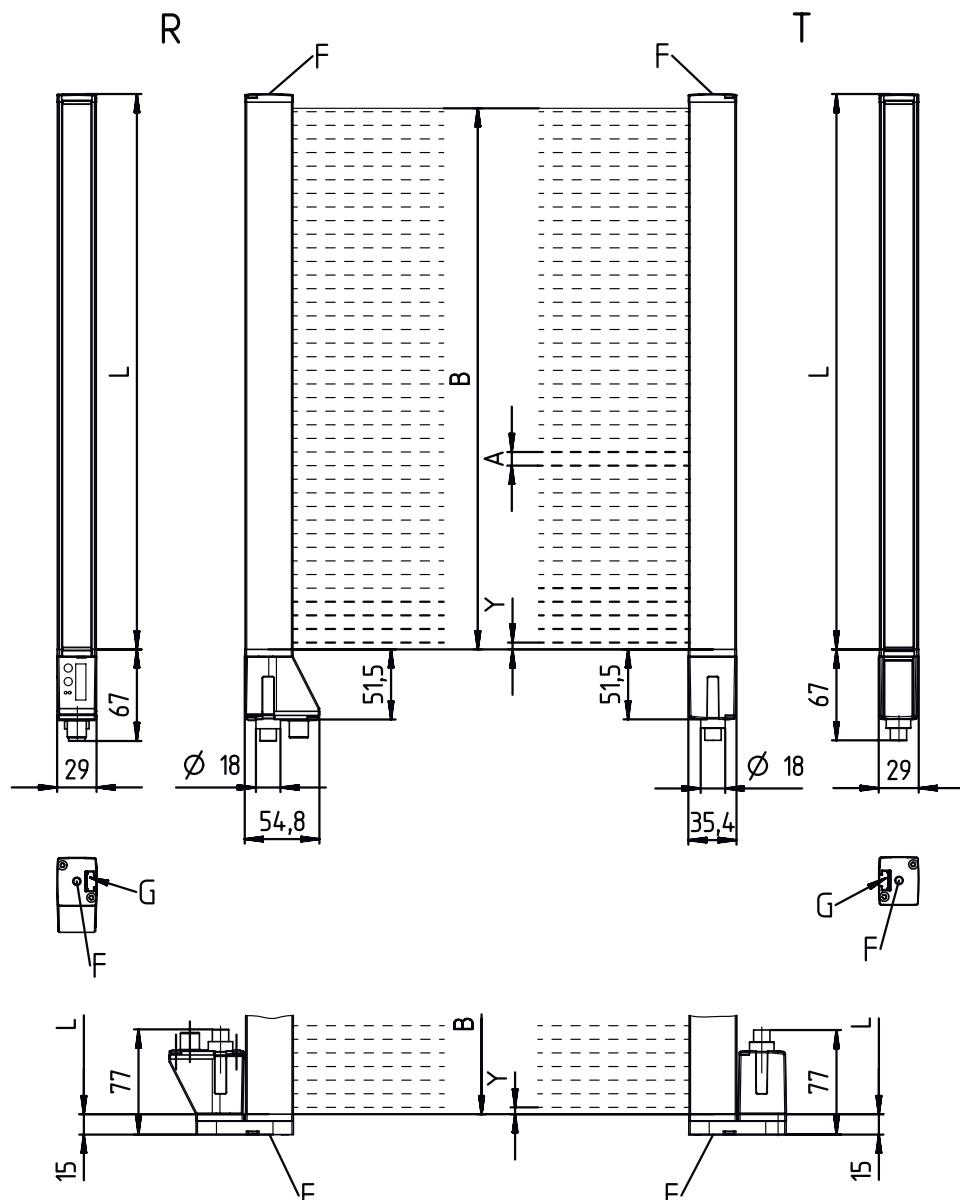
|                      |               |
|----------------------|---------------|
| Degree of protection | IP 65         |
| Protection class     | III           |
| Approvals            | c UL US       |
| Standards applied    | IEC 60947-5-2 |

### 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 |

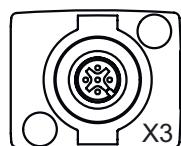
## Dimensioned drawings

All dimensions in millimeters



A Beam spacing 5 mm  
 B Measurement field length 800 mm  
 F M6 thread  
 G Fastening groove

L Profile length 808 mm  
 T Transmitter  
 R Receiver  
 Y 2.5 mm

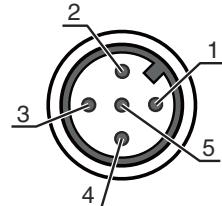


## Electrical connection

### Connection 1

|                    |                        |
|--------------------|------------------------|
| Function           | Connection to receiver |
| 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<br>limit | Description   |
|----------|------------------------------|---|---|
| 50118664 | CML730i-R05-800.A/<br>CN-M12 | 0.1 ... 4 m<br>0.1 ... 6 m                  | Operating range: 0.1 ... 4.5 m<br>Interface: CANopen<br>Connection: Connector, M12, Axial, 8 -pin                           |
| 50118827 | CML730i-R05-800.A/<br>CV-M12 | 0.1 ... 4 m<br>0.1 ... 6 m                  | Operating range: 0.1 ... 4.5 m<br>Analog outputs: 2 Piece(s), Voltage, Current<br>Connection: Connector, M12, Axial, 8 -pin |
| 50123279 | CML730i-R05-800.A/<br>D3-M12 | 0.1 ... 4 m<br>0.1 ... 6 m                  | Operating range: 0.1 ... 4.5 m<br>Interface: RS 485 Modbus<br>Connection: Connector, M12, Axial, 8 -pin                     |
| 50118746 | CML730i-R05-800.A/<br>L-M12  | 0.1 ... 4 m<br>0.1 ... 6 m                  | Operating range: 0.1 ... 4.5 m<br>Interface: IO-Link<br>Connection: Connector, M12, Axial, 8 -pin                           |

## Suitable receivers

| Part no.  | Designation                           | Operating range<br>Operating range<br>limit | Description   |
|---|---------------------------------------|---|---|
|  | 50123130 CML730i-R05-800.A/<br>PB-M12 | 0.1 ... 4 m<br>0.1 ... 6 m                  | Operating range: 0.1 ... 4.5 m<br>Interface: PROFIBUS DP<br>Connection: Connector, M12, Axial, 8 -pin |
|  | 50131746 CML730i-R05-800.A/<br>PN-M12 | 0.1 ... 4 m<br>0.1 ... 6 m                  | Operating range: 0.1 ... 4.5 m<br>Interface: PROFINET<br>Connection: Connector, M12, Axial, 8 -pin    |

## Part number code

Part designation: **CML7XXi-YZZ-AAAA.BCCCCDD-EEEFFF**

|             |  |
|-------------|--|
| <b>CML</b>  | <b>Operating principle</b><br>Measuring light curtain  |
| <b>7XXi</b> | <b>Series</b><br>720i: 720i series<br>730i: 730i series  |
| <b>Y</b>    | <b>Device type</b><br>T: transmitter<br>R: receiver  |
| <b>ZZ</b>   | <b>Beam spacing</b><br>05: 5 mm<br>10: 10 mm<br>20: 20 mm<br>40: 40 mm   |
| <b>AAAA</b> | Measurement field length [mm], dependent on beam spacing   |
| <b>B</b>    | <b>Equipment</b><br>A: Axial connector outlet<br>R: Rear connector outlet  |
| <b>CCC</b>  | <b>Interface</b><br>L: IO-Link<br>/CN: CANopen<br>/PB: PROFIBUS<br>/PN: PROFINET<br>/CV: Analog current and voltage output<br>/D3: RS 485 Modbus |
| <b>DDD</b>  | <b>Special equipment</b><br>-PS: Power Setting   |
| <b>EEE</b>  | <b>Electrical connection</b><br>M12: M12 connector   |
| <b>FFF</b>  | <b>-EX: Explosion protection</b>   |

### Note



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

## Notes

|   |   |
|---|---|
|  | <b>Observe intended use!</b>  |
|   | <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> |

|  |  |
|--|--|
|  | <b>For UL applications:</b>  |
|  | <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 | <p>Interconnection cable</p> <p>Application: Oil and lubricant resistant<br/>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</p> |

## Mounting technology - Mounting brackets

| Part no.   | Designation | Article        | Description  |
|--|-------------|----------------|--|
|  | 50142900    | BT 700M.5-2SET | <p>Mounting device set</p> <p>Contains: 2x mounting brackets, 1 teach template, 4 M6 x 10 screws<br/>Design of mounting device: Bracket mounting<br/>Fastening, at system: Through-hole mounting, T slotted hole<br/>Mounting bracket, at device: Screw type, Sliding block<br/>Type of mounting device: Rigid<br/>Material: Steel</p> |
|  | 429393      | BT-2HF         | <p>Mounting bracket set</p> <p>Contains: 2x BT-HF swivel mount, 1 cylinder for mounting on the light curtain<br/>Fastening, at system: Through-hole mounting<br/>Mounting bracket, at device: Clampable<br/>Type of mounting device: Turning, 360°<br/>Material: Metal, Plastic</p>  |

## Configuration devices

| Part no.   | Designation | Article                   | Description   |
|--|-------------|---------------------------|---|
|  | 50121098    | SET MD12-US2-IL1.1 + Zub. | <p>Diagnostics set</p> <p>Supply voltage: DC<br/>Interface: USB<br/>Connections: 2 Piece(s)<br/>Degree of protection: IP 20</p> |

## Accessories

### Services

| Part no.   | Designation | Article    | Description  |
|--|-------------|------------|--|
|  | S981001     | CS10-S-110 | Start-up support<br><br>Details: Performed at location of customer's choosing, duration: max. 10 hours.<br>Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses. |
|  | S981005     | CS10-T-110 | Product training<br><br>Details: Location and content to be agreed upon, duration: max. 10 hours.<br>Conditions: Price not including travel costs and, if applicable, accommodation expenses.  |

**Note**

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