



the sensor people





Figure can vary

Part no.: 50118616 CML730i-T10-800.A-M12 Light curtain transmitter





# **Contents**

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



### **Technical data**

| Basic data                         |   |  |  |  |
|------------------------------------|---|--|--|--|
| Series                             | 730   |  |  |  |
| Operating principle                | Throughbeam principle   |  |  |  |
| Device type                        | Transmitter   |  |  |  |
| Contains                           | 2x BT-NC sliding block  |  |  |  |
| Application                        | Detection of transparent objects Object measurement   |  |  |  |
| Optical data                       |   |  |  |  |
| Operating range                    | Guaranteed operating range  |  |  |  |
| Operating range                    | 0.3 9.5 m   |  |  |  |
| Operating range, transparent media | 0.3 3.5 m   |  |  |  |
| Operating range limit              | Typical operating range   |  |  |  |
| Operating range limit              | 0.2 12 m  |  |  |  |
| Measurement field length           | 800 mm  |  |  |  |
| Number of beams                    | 80 Piece(s)   |  |  |  |
| Beam spacing                       | 10 mm   |  |  |  |
| Light source                       | LED , Infrared  |  |  |  |
| .ED light wavelength               | 940 nm  |  |  |  |
| Measurement data                   |   |  |  |  |
| Minimum object diameter            | 20 mm   |  |  |  |
| Protective circuit                 | Polarity reversal protection Short circuit protected Transient protection                           |  |  |  |
| Performance data                   |   |  |  |  |
| Supply voltage U <sub>B</sub>      | 18 30 V , DC  |  |  |  |
| Residual ripple                    | $0 \dots 15~\%$ , From $U_B$  |  |  |  |
| Open-circuit current               | 0 215 mA , The specified values refer to the entire package consisting of transmitter and receiver. |  |  |  |
| Timing                             |   |  |  |  |
| Readiness delay                    | 450 ms  |  |  |  |
| Cycle time                         | 1 ms  |  |  |  |
| Connection                         |   |  |  |  |
| Number of connections              | 1 Piece(s)  |  |  |  |
| Plug outlet                        | Axial   |  |  |  |
| Connection 1                       |   |  |  |  |
| Function                           | Connection to receiver  |  |  |  |
| Type of connection                 | Connector   |  |  |  |
| Thread size                        | M12   |  |  |  |
|                                    | Male  |  |  |  |
| Туре                               |   |  |  |  |
| Material                           | Metal   |  |  |  |
|                                    | Metal<br>5 -pin   |  |  |  |



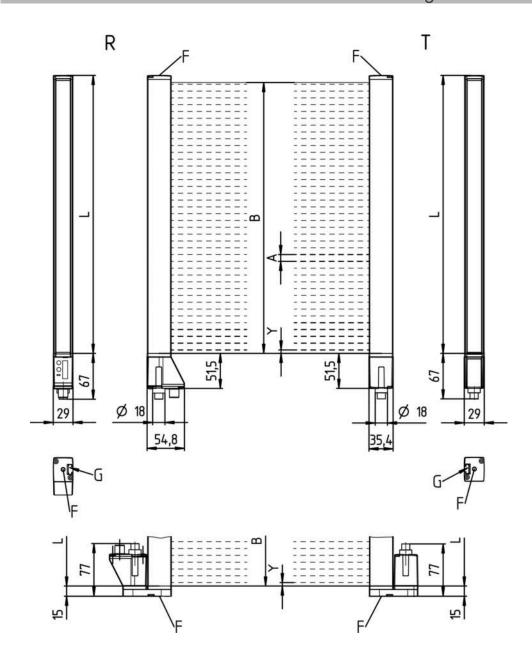
| Mechanical data                |   |
|--------------------------------|---|
| Design                         | Cubic   |
| Dimension (W x H x L)          | 29 mm x 35.4 mm x 875 mm                        |
| Housing material               | Metal , Aluminum                                |
| Lens cover material            | Plastic   |
| Net weight                     | 950 g   |
| Housing color                  | Silver  |
| Type of fastening              | Groove mounting<br>Via optional mounting device |
| Onevation and disular          |   |
| Operation and display          | LED   |
| Type of display                |   |
| 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                 |   |
| Out to the siff of the siff    | 00044000  |

| 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





- A Beam spacing 10 mm B Measurement field length 800 mm
- F M6 thread
- G Fastening groove
- L Profile length 808 mm
- T Transmitter
- R Receiver
- Y 5 mm

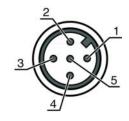




### **Electrical connection**

| Connection 1       |                        |
|--------------------|------------------------|
| Function           | Connection to receiver |
| Type of connection | Connector              |
| Thread size        | M12                    |
| Туре               | 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**

#### **LEDs**

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

### Suitable receivers

| Part no. | Designation                      | Article                | Description   |
|----------|----------------------------------|------------------------|---|
| 50118697 | CML730i-<br>R10-800.A/CN-<br>M12 | Light curtain receiver | Operating range: 0.3 9.5 m<br>Interface: CANopen<br>Connection: Connector, M12, Axial, 8 -pin                           |
| 50118872 | CML730i-<br>R10-800.A/CV-<br>M12 | Light curtain receiver | Operating range: 0.3 9.5 m<br>Analog outputs: 2 Piece(s), Voltage, Current<br>Connection: Connector, M12, Axial, 8 -pin |
| 50123312 | CML730i-<br>R10-800.A/<br>D3-M12 | Light curtain receiver | Operating range: 0.3 9.5 m<br>Interface: RS 485<br>Connection: Connector, M12, Axial, 8 -pin                            |



| Part no. | Designation                      | Article                | Description   |
|----------|----------------------------------|------------------------|---|
| 50118778 | CML730i-<br>R10-800.A/L-M12      | Light curtain receiver | Operating range: 0.3 9.5 m<br>Interface: IO-Link<br>Connection: Connector, M12, Axial, 8 -pin     |
| 50123173 | CML730i-<br>R10-800.A/PB-<br>M12 | Light curtain receiver | Operating range: 0.3 9.5 m<br>Interface: PROFIBUS DP<br>Connection: Connector, M12, Axial, 8 -pin |
| 50131784 | CML730i-<br>R10-800.A/PN-<br>M12 | Light curtain receiver | Operating range: 0.3 9.5 m<br>Interface: PROFINET<br>Connection: Connector, M12, Axial, 8 -pin    |

### Part number code

Part designation: CML7XXi-YZZ-AAAA.BCCCDDD-EEEFFF

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

| Note  |
|---|
| A list with all available device types can be found on the Leuze electronic 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-<br>M12-5A-P3-050 |         | 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 - Mounting brackets

| Part no. | Designation    | Article             | Description  |
|----------|----------------|---------------------|--|
| 50142900 | BT 700M.5-2SET | Mounting device set | Contains: 2x mounting brackets, 1 teach template, 4 M6 x 10 screws Design of mounting device: Bracket mounting Fastening, at system: Through-hole mounting, T slotted hole Mounting bracket, at device: Screw type, Sliding block Type of mounting device: Rigid Material: Steel |

## Mounting technology - Swivel mounts

|     | Part no. | Designation | Article | Description   |
|-----|----------|-------------|---------|---|
| EE. | 429046   | BT-2R1      | set     | Contains: 2x BT-R swivel mount, 1 cylinder for mounting on the light curtain Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic |

Leuze electronic GmbH + Co. KG, In der Braike 1, 73277 Owen Phone: +49 7021 573-0, Fax: +49 7021 573-199



|     | Part no. | Designation                     | Article         | Description  |
|-----|----------|---------------------------------|-----------------|--|
| 165 | 50121098 | SET<br>MD12-US2-IL1.1<br>+ Zub. | Diagnostics set | Interface: USB Connections: 2 Piece(s) Degree of protection: IP 20 |

### Services

| Part no. | Designation | Article          | Description   |
|----------|-------------|------------------|---|
| S981001  | CS10-S-110  | Start-up support | Details: Performed at location of customer's choosing, duration: max. 10 hours.  Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses.  Restrictions: No mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment. |
| S981005  | CS10-T-110  | Product training | Details: Location and content to be agreed upon, duration: max. 10 hours. Conditions: Price not including travel costs and, if applicable, accommodation expenses. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure.   |

#### Note

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