## SMART SENSOR BUSINESS

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Part no.: 50119369 CML720i-T05-160.A-M12 Light curtain transmitter



Figure can vary

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### Part no.: 50119369 – CML720i-T05-160.A-M12 – Light curtain transmitter

#### **Technical data**

| Basic data                        |   |
|-----------------------------------|---|
| Series                            | 720   |
| Operating principle               | Throughbeam principle   |
| Device type                       | Transmitter   |
| Contains                          | 2x BT-NC sliding block  |
| Application                       | Object measurement  |
|                                   |   |
| 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          | 160 mm  |
| Number of beams                   | 32 Piece(s)   |
| Beam spacing                      | 5 mm  |
| Light source                      | LED , Infrared  |
| LED light wavelength              | 940 nm  |
|                                   |   |
| Measurement data                  |   |
| Minimum object diameter           | 10 mm   |
|                                   |   |
| Electrical data                   |   |
| Protective circuit                | Polarity reversal protection<br>Short circuit protected   |
| Deufermenne dete                  | Transient protection  |
| Performance data                  | 19 20.1/ DC   |
| Supply voltage UB                 | 18 30 V , DC  |
| Residual ripple                   | 0 15 % , From U <sub>B</sub>  |
| Open-circuit current              | 0 135 mA , The specified values refer to the entire package consisting of transmitter and receiver. |
| Timing                            |   |
| Readiness delay                   | 450 ms  |
| Cycle time                        | 1.36 ms   |
|                                   |   |
| Connection                        |   |
| Number of connections             | 1 Piece(s)  |
| Plug outlet                       | Axial   |
| Connection 1<br>Function          | Connection to receiver  |
| FUNCTION                          | Connection to receiver<br>Sync-input  |
|                                   | Voltage supply  |
| Type of connection                |   |
| Type of connection<br>Thread size | Voltage supply  |
|                                   | Voltage supply<br>Connector   |
| Thread size                       | Voltage supply<br>Connector<br>M12  |
| Thread size<br>Type               | Voltage supply<br>Connector<br>M12<br>Male  |

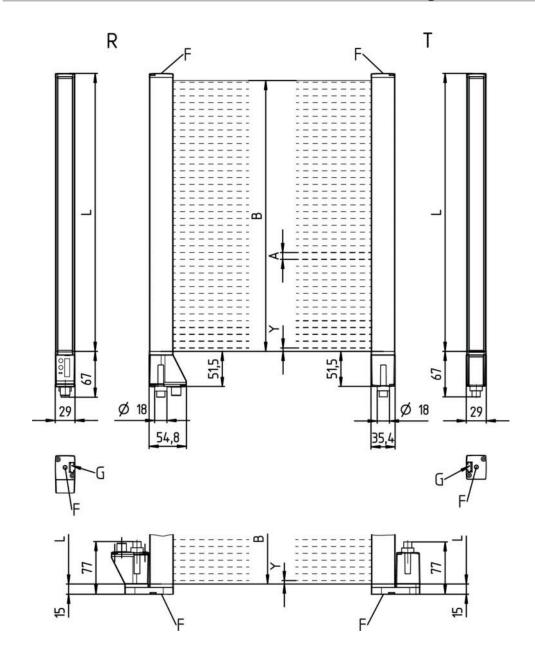
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| Mechanical data                |   |
|--------------------------------|---|
| Design                         | Cubic   |
| Dimension (W x H x L)          | 29 mm x 35.4 mm x 235 mm                        |
| Housing material               | Metal, Aluminum                                 |
| Lens cover material            | Plastic   |
| Net weight                     | 300 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               |   |
| Certifications                 | c CSA US  |
| Standards applied              | IEC 60947-5-2                                   |
|                                |   |
| 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

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A Beam spacing 5 mm B Measurement field length 160 mm

F M6 thread

G Fastening groove

L Profile length 168 mm

T Transmitter

R Receiver

Y 2.5 mm

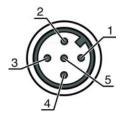


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#### **Electrical connection**

| Connection 1       |  |  |
|--------------------|--|--|
| Function           | Connection to receiver<br>Sync-input<br>Voltage supply |  |
| 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  |
|     | 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   |
|----------|----------------------------------|---------------------------|---|
| 50119607 | CML720i-<br>R05-160.A/CN-<br>M12 | Light curtain<br>receiver | Operating range: 0.1 3.5 m<br>Interface: CANopen<br>Connection: Connector, M12, Axial, 8 -pin                           |
| 50119797 | CML720i-<br>R05-160.A/CV-<br>M12 | Light curtain<br>receiver | Operating range: 0.1 3.5 m<br>Analog outputs: 2 Piece(s), Voltage, Current<br>Connection: Connector, M12, Axial, 8 -pin |
| 50123441 | CML720i-<br>R05-160.A/<br>D3-M12 | Light curtain<br>receiver | Operating range: 0.1 3.5 m<br>Interface: RS 485<br>Connection: Connector, M12, Axial, 8 -pin                            |

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|   | Part no. | Designation                      | Article                   | Description   |
|---|----------|----------------------------------|---------------------------|---|
|   | 50119716 | CML720i-<br>R05-160.A/L-M12      | Light curtain<br>receiver | Operating range: 0.1 3.5 m<br>Interface: IO-Link<br>Connection: Connector, M12, Axial, 8 -pin     |
|   | 50122894 | CML720i-<br>R05-160.A/PB-<br>M12 | Light curtain<br>receiver | Operating range: 0.1 3.5 m<br>Interface: PROFIBUS DP<br>Connection: Connector, M12, Axial, 8 -pin |
| Į | 50131856 | CML720i-<br>R05-160.A/PN-<br>M12 | Light curtain<br>receiver | Operating range: 0.1 3.5 m<br>Interface: PROFINET<br>Connection: Connector, M12, Axial, 8 -pin    |

#### Part number code

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

| CML  | Operating principle:<br>Measuring light curtain  |
|------|--|
| 7XXi | Series:<br>720i: 720i series<br>730i: 730i series  |
| Y    | Device type:<br>T: transmitter<br>R: receiver  |
| ZZ   | Beam spacing:<br>05: 5 mm<br>10: 10 mm<br>20: 20 mm<br>40: 40 mm   |
| AAAA | Measurement field length [mm], dependent on beam spacing   |
| В    | Equipment:<br>A: connector outlet, axial<br>R: rear connector outlet   |
| CCC  | Interface:<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 |
| DDD  | Special equipment:<br>-PS: Power Setting   |
| EEE  | Electrical connection:<br>M12: M12 connector   |
| FFF  | -EX: Explosion protection:   |

| Ν | ote |
|---|-----|
|   |     |

A list with all available device types can be found on the Leuze electronic website at www.leuze.com.

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#### 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 | Interconnection<br>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 - Mounting brackets

|           | Part no. | Designation    | Article                | Description  |
|-----------|----------|----------------|------------------------|--|
| 4 2 4 4 A | 50142900 | BT 700M.5-2SET | Mounting device<br>set | Contains: 2x mounting brackets, 1 teach template, 4 M6 x 10<br>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 |

### Mounting technology - Swivel mounts

|     | Part no. | Designation | Article              | Description  |
|-----|----------|-------------|----------------------|--|
| ęł. | 429046   | BT-2R1      | Mounting bracket set | Contains: 2x BT-R swivel mount, 1 cylinder for mounting on the<br>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 |

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| Part no. | Designation                     | Article         | Description  |
|----------|---------------------------------|-----------------|--|
| 50121098 | SET<br>MD12-US2-IL1.1<br>+ Zub. | Diagnostics set | Interface: USB<br>Connections: 2 Piece(s)<br>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:<br>max. 10 hours.<br>Conditions: Devices and connection cables are already<br>mounted, price not including travel costs and, if applicable,<br>accommodation expenses.<br>Restrictions: No mechanical (mounting) and electrical (wiring)<br>work performed, no changes (attachments, wiring,<br>programming) to third-party components in the nearby<br>environment. |
| S981005  | CS10-T-110  | Product training | Details: Location and content to be agreed upon, duration: max.<br>10 hours.<br>Conditions: Price not including travel costs and, if applicable,<br>accommodation expenses.<br>Restrictions: Travel costs and accommodation expenses<br>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.