



Figure can vary

Part no.: 50119473
CML720i-T05-2000.R-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 | 720 |
| Operating principle | Throughbeam principle |
| Device type | Transmitter |
| Contains | Accessories for the use of the BT-2R1 |
| 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 | 2,000 mm |
| Number of beams | 400 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 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 ... 435 mA , The specified values refer to the entire package consisting of transmitter and receiver. |
| Timing | |
| Readiness delay | 450 ms |
| Cycle time | 12.4 ms |
| Connection | |
| Number of connections | 1 Piece(s) |
| Plug outlet | Rear side |
| 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 2,023 mm |
| Housing material | Metal , Aluminum |
| Lens cover material | Plastic |
| Net weight | 2,100 g |
| Housing color | Silver |
| 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 |
| 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 5 mm
- B Measurement field length 2000 mm
- F M6 thread
- G Fastening groove
- L Profile length 2008 mm
- T Transmitter
- R Receiver
- Y 2.5 mm



Electrical connection

| 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 |

| 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 |
|---|----------|---------------------------|------------------------|---|
|  | 50119928 | CML720i-R05-2000.R/CN-M12 | Light curtain receiver | Operating range: 0.1 ... 3.5 m Interface: CANopen Connection: Connector, M12, Rear side, 8 -pin |
|  | 50120146 | CML720i-R05-2000.R/CV-M12 | Light curtain receiver | Operating range: 0.1 ... 3.5 m Analog outputs: 2 Piece(s), Voltage, Current Connection: Connector, M12, Rear side, 8 -pin |
|  | 50123599 | CML720i-R05-2000.R/D3-M12 | Light curtain receiver | Operating range: 0.1 ... 3.5 m Interface: RS 485 Connection: Connector, M12, Rear side, 8 -pin |

Part no.: 50119473 – CML720i-T05-2000.R-M12 – Light curtain transmitter

| | Part no. | Designation | Article | Description |
|---|----------|---------------------------|------------------------|---|
|  | 50120063 | CML720i-R05-2000.R/L-M12 | Light curtain receiver | Operating range: 0.1 ... 3.5 m Interface: IO-Link Connection: Connector, M12, Rear side, 8 -pin |
|  | 50122907 | CML720i-R05-2000.R/PB-M12 | Light curtain receiver | Operating range: 0.1 ... 3.5 m Interface: PROFIBUS DP Connection: Connector, M12, Rear side, 8 -pin |
|  | 50131869 | CML720i-R05-2000.R/PN-M12 | Light curtain receiver | Operating range: 0.1 ... 3.5 m Interface: PROFINET Connection: Connector, M12, Rear side, 8 -pin |

Part number code

Part designation: **CML7XXi-YYZ-AAAA.BCCDDDD-EEEEFF**

| | |
|------|---|
| CML | Operating principle: Measuring light curtain |
| 7XXi | Series: 720i: 720i series 730i: 730i series |
| Y | 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 |
| B | 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-M12-5A-P3-050 | Interconnection cable | Suitable for interface: IO-Link, DeviceNet, CANopen Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable length: 5,000 mm 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 |
|---|----------|-------------|----------------------|---|
|  | 429046 | BT-2R1 | Mounting bracket 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 |

Part no.: 50119473 – CML720i-T05-2000.R-M12 – Light curtain transmitter

| | Part no. | Designation | Article | Description |
|---|----------|---------------------------------|-----------------|--|
|  | 50121098 | SET MD12-US2-IL1.1 + 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.