



the sensor people





Figure can vary

Part no.: 50119492 CML720i-T10-960.R-M12 Light curtain transmitter





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Technical data

| Basic data | |
|-------------------------------|---|
| Series Series | 720 |
| Operating principle | Throughbeam principle |
| Device type | Transmitter |
| Contains | Accessories for the use of the BT-2R1 |
| Application | Object measurement |
| h h - s - s - | - . |
| 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 | 960 mm |
| Number of beams | 96 Piece(s) |
| Beam spacing | 10 mm |
| Light source | LED , Infrared |
| LED light wavelength | 940 nm |
| | |
| Measurement data | |
| Minimum object diameter | 20 mm |
| | |
| Electrical data | |
| Protective circuit | Polarity reversal protection Short circuit protected Transient protection |
| Performance data | Transient protection |
| Supply voltage U _B | 18 30 V , DC |
| | 0 15 % , From U _B |
| Residual ripple | |
| Open-circuit current | 0 270 mA , The specified values refer to the entire package consisting of transmitter and receiver. |
| | |
| Timing | |
| Readiness delay | 450 ms |
| Cycle time | 3.28 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 |
| Туре | Male |
| Material | Metal |
| No. of pins | 5 -pin |
| | |



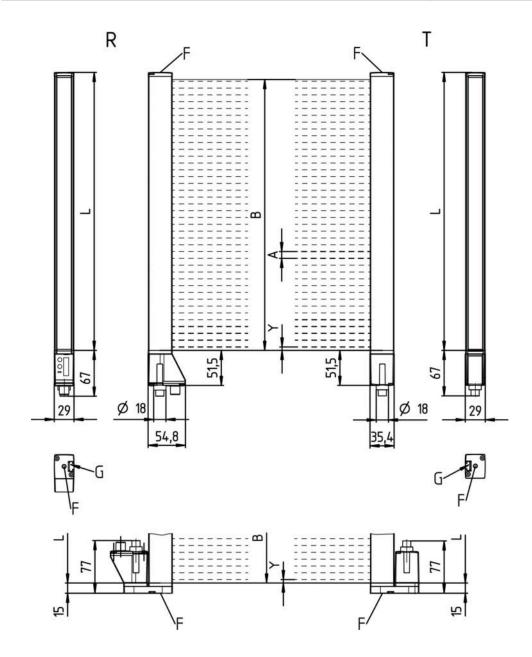
| Mechanical data | |
|--------------------------------|---|
| Design | Cubic |
| Dimension (W x H x L) | 29 mm x 35.4 mm x 983 mm |
| Housing material | Metal , Aluminum |
| Lens cover material | Plastic |
| Net weight | 1,150 g |
| Housing color | Silver |
| Type of fastening | Groove mounting Via 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 |

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 960 mm
- F M6 thread
- G Fastening groove
- L Profile length 968 mm
- T Transmitter
- R Receiver
- Y 5 mm

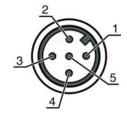




Electrical connection

| 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 | 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 |
|----------|----------------------------------|------------------------|---|
| 50119946 | CML720i- R10-960.R/CN- M12 | Light curtain receiver | Operating range: 0.3 7 m Interface: CANopen Connection: Connector, M12, Rear side, 8 -pin |
| 50120165 | CML720i- R10-960.R/CV- M12 | Light curtain receiver | Operating range: 0.3 7 m Analog outputs: 2 Piece(s), Voltage, Current Connection: Connector, M12, Rear side, 8 -pin |
| 50123617 | CML720i- R10-960.R/ D3-M12 | Light curtain receiver | Operating range: 0.3 7 m Interface: RS 485 Connection: Connector, M12, Rear side, 8 -pin |



| | Part no. | Designation | Article | Description |
|---|----------|----------------------------------|------------------------|---|
| 1 | 50120081 | CML720i- R10-960.R/L-M12 | Light curtain receiver | Operating range: 0.3 7 m Interface: IO-Link Connection: Connector, M12, Rear side, 8 -pin |
| 1 | 50122999 | CML720i- R10-960.R/PB- M12 | Light curtain receiver | Operating range: 0.3 7 m Interface: PROFIBUS DP Connection: Connector, M12, Rear side, 8 -pin |
| | 50131949 | CML720i- R10-960.R/PN- M12 | Light curtain receiver | Operating range: 0.3 7 m Interface: PROFINET Connection: Connector, M12, Rear side, 8 -pin |

Part number code

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

| CML | Operating principle: Measuring light curtain |
|------|--|
| 7XXi | Series: 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- 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 |
|-----|----------|-------------|---------|---|
| 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 |

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| | Part no. | Designation | Article | Description |
|-----|----------|---------------------------------|-----------------|--|
| 165 | 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.