SMART SENSOR BUSINESS

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Part no.: 50119501 CML720i-T10-2400.R-M12 Light curtain transmitter





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Part no.: 50119501 – CML720i-T10-2400.R-M12 – Light curtain transmitter

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 | 0.3 7 m | | |
| Operating range limit | Typical operating range | | |
| Operating range limit | 0.2 9 m | | |
| Measurement field length | 2,400 mm | | |
| Number of beams | 240 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 | | | |
| 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 con- | | |
| | sisting of transmitter and receiver. | | |
| | | | |
| Timing | | | |
| Readiness delay | 450 ms | | |
| Cycle time | 7.6 ms | | |
| | | | |
| O | | | |
| Connection | | | |
| Number of connections | 1 Piece(s) | | |
| Number of connections Plug outlet | 1 Piece(s) Rear side | | |
| Number of connections Plug outlet Connection 1 | Rear side | | |
| Number of connections Plug outlet | | | |
| Number of connections Plug outlet Connection 1 | Rear side Connection to receiver Sync-input | | |
| Number of connections Plug outlet Connection 1 Function | Rear side Connection to receiver Sync-input Voltage supply | | |
| Number of connections Plug outlet Connection 1 Function Type of connection | Rear side Connection to receiver Sync-input Voltage supply Connector | | |
| Number of connections Plug outlet Connection 1 Function Type of connection Thread size | Rear side Connection to receiver Sync-input Voltage supply Connector M12 | | |
| Number of connections Plug outlet Connection 1 Function Type of connection Thread size Type | Rear side Connection to receiver Sync-input Voltage supply Connector M12 Male | | |

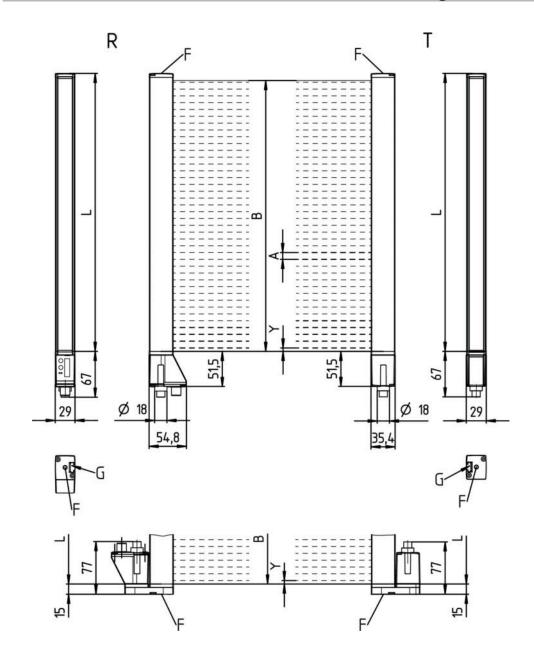
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| Mechanical data | | | |
|--------------------------------|---|--|--|
| | | | |
| Design | Cubic | | |
| Dimension (W x H x L) | 29 mm x 35.4 mm x 2,423 mm | | |
| Housing material | Metal , Aluminum | | |
| Lens cover material | Plastic | | |
| Net weight | 2,450 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

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A Beam spacing 10 mm B Measurement field length 2400 mm

F M6 thread

- G Fastening groove
- L Profile length 2408 mm
- T Transmitter
- R Receiver
- Y 5 mm

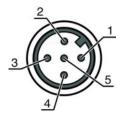


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Electrical connection

| 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 |
|----------|-----------------------------------|---------------------------|---|
| 50119955 | CML720i- R10-2400.R/CN- M12 | Light curtain receiver | Operating range: 0.3 7 m Interface: CANopen Connection: Connector, M12, Rear side, 8 -pin |
| 50120174 | CML720i- R10-2400.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 |
| 50123626 | CML720i- R10-2400.R/ D3-M12 | Light curtain receiver | Operating range: 0.3 7 m Interface: RS 485 Connection: Connector, M12, Rear side, 8 -pin |

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| Part no. | Designation | Article | Description |
|----------|-----------------------------------|---------------------------|---|
| 50120090 | CML720i- R10-2400.R/L- M12 | Light curtain receiver | Operating range: 0.3 7 m Interface: IO-Link Connection: Connector, M12, Rear side, 8 -pin |
| 50122975 | CML720i- R10-2400.R/PB- M12 | Light curtain receiver | Operating range: 0.3 7 m Interface: PROFIBUS DP Connection: Connector, M12, Rear side, 8 -pin |
| 50131933 | CML720i- R10-2400.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 | | | | |
| 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 | | | | |
| 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: | | | | |

| 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 |
|----------|---------------------------------|--------------------------|---|
| | 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 |
|-----------|----------|----------------|------------------------|--|
| 4 2 4 4 A | 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 |
|-----|----------|-------------|----------------------|--|
| ęę. | 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 |

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| 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.