

Technical data sheet

Light curtain transmitter

Part no.: 50126404

CML720i-T20-450.A-M12-EX

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Figure can vary



Technical data

Basic data

| | |
|---------------------|------------------------|
| Series | 720 |
| Operating principle | Throughbeam principle |
| Device type | Transmitter |
| Contains | 2x BT-NC sliding block |
| Application | Object measurement |

Special version

| | |
|-----------------|------------------------|
| Special version | Crossed-beam scanning |
| | Diagonal-beam scanning |
| | Ex-protected |
| | Parallel-beam scanning |

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 | 450 mm |
| Number of beams | 23 Piece(s) |
| Beam spacing | 20 mm |
| Light source | LED, Infrared |
| LED light wavelength | 940 nm |

Measurement data

| | |
|-------------------------|-------|
| Minimum object diameter | 30 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 ... 165 mA, The specified values refer to the entire package consisting of transmitter and receiver. |

Timing

| | |
|-----------------|---------|
| Readiness delay | 450 ms |
| Cycle time | 1.12 ms |

Connection

| | |
|-----------------------|------------|
| Number of connections | 1 Piece(s) |
| Plug outlet | Axial |

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) | 30.7 mm x 40.3 mm x 503 mm |
| Housing material | Metal |
| Metal housing | Aluminum |
| Lens cover material | Plastic |
| 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 |

Ex specification

| | |
|-----------------|----|
| Ex-zone | 2 |
| | 22 |
| Ex device group | II |

Certifications

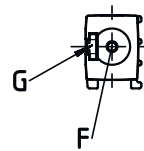
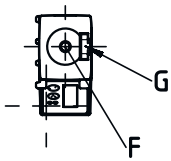
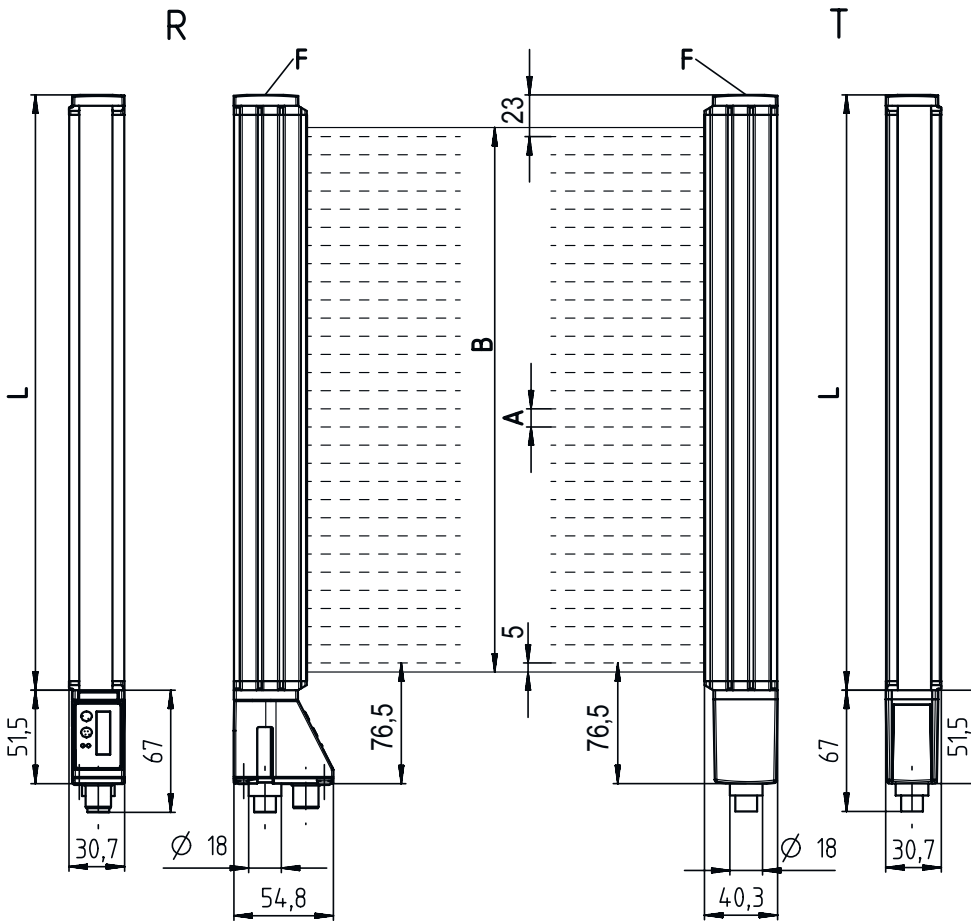
| | |
|----------------------|---------------|
| Degree of protection | IP 65 |
| Protection class | III |
| Standards applied | IEC 60947-5-2 |

Classification

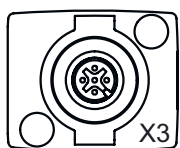
| | |
|-----------------------|----------|
| Customs tariff number | 90314990 |
| eCl@ss 5.1.4 | 27270910 |
| eCl@ss 8.0 | 27270910 |
| eCl@ss 9.0 | 27270910 |
| eCl@ss 10.0 | 27270910 |
| eCl@ss 11.0 | 27270910 |
| ETIM 5.0 | EC002549 |
| ETIM 6.0 | EC002549 |
| ETIM 7.0 | EC002549 |

Dimensioned drawings

All dimensions in millimeters



- | | | | |
|---|---------------------------------|---|-----------------------|
| A | Beam spacing 20 mm | L | Profile length 488 mm |
| B | Measurement field length 450 mm | T | Transmitter |
| F | M6 thread | R | Receiver |
| G | Fastening groove | | |



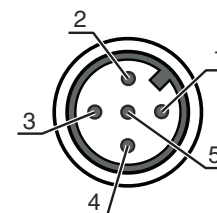
- | | |
|---|-------------------|
| A | PWR / SW IN / OUT |
| B | BUS IN / OUT |

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

| 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 |
|---|----------|---------------------------------|------------------------|--|
|  | 50126373 | CML720i-R20-450.A/ CN-M12-EX | Light curtain receiver | Operating range: 0.3 ... 7 m Interface: CANopen, IO-Link Connection: Connector, M12, Axial, 8 -pin |

Part number code

Part designation: **CML7XXi-YZZ-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 |

Part number code

| | |
|------------|--|
| 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

| | |
|--|---|
| | <ul style="list-style-type: none"> A list with all available device types can be found on the Leuze website at www.leuze.com. |
|--|---|

Notes

Observe intended use!

| | |
|--|---|
| | <ul style="list-style-type: none"> 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:

| | |
|--|---|
| | <ul style="list-style-type: none"> 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 |

Accessories


Mounting technology - Mounting brackets

| | Part no. | Designation | Article | Description |
|--|----------|----------------|---------------------|---|
|  | 50142900 | BT 700M.5-2SET | Mounting device set | 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 | Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic |

Configuration devices

| | 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 website in the Download tab of the article detailed page.