

Technical data sheet Light curtain receiver Part no.: 50119828 CML720i-R05-2640.A/CV-M12



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Technical data

Basic data

| Basic data | |
|---|--|
| Series | 720 |
| Operating principle | Throughbeam principle |
| Device type | Receiver |
| Contains | 2x BT-NC sliding block |
| Application | Object measurement |
| Special version | |
| Special version | Crossed-beam scanning |
| | Diagonal-beam scanning |
| | Parallel-beam scanning |
| Optical data | C C |
| Operating range | 0.1 3.5 m |
| · · · · | |
| Operating range Operating range limit | Guaranteed operating range 0.1 4.5 m |
| Operating range limit | |
| | Typical operating range |
| Measurement field length Number of beams | 2,640 mm 528 Piece(s) |
| | 528 Piece(s) 5 mm |
| Beam spacing | 5 mm |
| Measurement data | |
| Minimum object diameter | 10 mm |
| Electrical data | |
| Protective circuit | Polarity reversal protection |
| | Short circuit protected |
| | Transient protection |
| | ransient 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 trans- mitter and receiver. |
| Outpute | |
| Outputs Number of analog outputs | 2 Piece(s) |
| Number of analog outputs | 2 1 1000(0) |
| Analog outputs | |
| Туре | Analog output |
| Current | 0 24 mA |
| Voltage | 0 11 V |
| | |
| Analog output 1 | |
| Туре | Voltage |
| | |
| Analog output 2 | Querent |
| Туре | Current |
| Inputs/outputs coloctable | |
| Inputs/outputs selectable Output current, max. | 100 mA |
| Input resistance | 6,000 Ω |
| Number of inputs/outputs selectable | |
| | |
| Type | Inputs/outputs selectable |
| Voltage type, outputs | |
| Switching voltage, outputs | Typ. U _B / 0 V |
| Voltage type, inputs | DC |
| Switching voltage, inputs | high: ≥6V |
| | low: ≤ 4 V |
| | |

| | Input/output 1 Activation/disable delay | 1 ms |
|-------|--|--|
| | Activation/disable delay | 1 ms |
| Time | e behavior | |
| Read | iness delay | 450 ms |
| Cycle | e time | 16.24 ms |
| Resp | onse time per beam | 30 µs |
| Serv | ice interface | |
| Туре | | IO-Link |
| | | |
| | -Link nction | Configuration via software |
| гu | liction | Service |
| Con | nection | |
| Numl | ber of connections | 2 Piece(s) |
| Plug | outlet | Axial |
| 0 | | |
| | onnection 1 | |
| Fu | nction | Configuration interface |
| | | Signal IN |
| | | Signal OUT |
| | | Voltage supply |
| Ту | pe of connection | Connector |
| Th | read size | M12 |
| Ту | ре | Male |
| Ma | aterial | Metal |
| No | o. of pins | 8 -pin |
| En | coding | A-coded |
| | | |
| Co | onnection 2 | |
| Fu | nction | Connection to transmitter |
| Ту | pe of connection | Connector |
| Th | read size | M12 |
| Ту | ре | Female |
| Ma | aterial | Metal |
| No | o. of pins | 5 -pin |
| En | coding | A-coded |
| Mec | hanical data | |
| Desig | | Cubic |
| | nsion (W x H x L) | 29 mm x 35.4 mm x 2,715 mm |
| | sing material | Metal |
| | I housing | Aluminum |
| | cover material | Plastic |
| | veight | |
| | 0 | 2,700 g Silver |
| | ing color | |
| Type | of fastening | Groove mounting Via optional mounting device |
| Ope | ration and display | |
| | | |
| туре | of display | LED |
| | | OLED display |
| | ber of LEDs | 2 Piece(s) |
| Туре | of configuration | Software |
| | | Teach-in |
| | ational controls | Membrane keyboard |

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 We reserve the right to make technical changes

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Technical data

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Environmental data

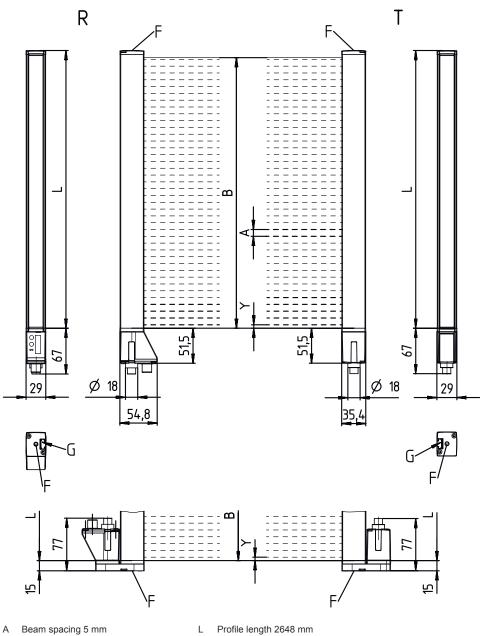
| Ambient temperature, operation | -30 60 °C |
|--------------------------------|-----------|
| Ambient temperature, storage | -40 70 °C |
| Certifications | |

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

| Customs tariff number 90314990 ECLASS 5.1.4 27270910 ECLASS 8.0 27270910 ECLASS 9.0 27270910 | |
|--|--|
| ECLASS 8.0 27270910 ECLASS 9.0 27270910 | |
| ECLASS 9.0 27270910 | |
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| ECLASS 10.0 27270910 | |
| ECLASS 11.0 27270910 | |
| ECLASS 12.0 27270910 | |
| ECLASS 13.0 27270910 | |
| ECLASS 14.0 27270910 | |
| ETIM 5.0 EC002549 | |
| ETIM 6.0 EC002549 | |
| ETIM 7.0 EC002549 | |
| ETIM 8.0 EC002549 | |
| ETIM 9.0 EC002549 | |

Dimensioned drawings

All dimensions in millimeters



Beam spacing 5 mm А

Fastening groove

- В Measurement field length 2640 mm
- F M6 thread

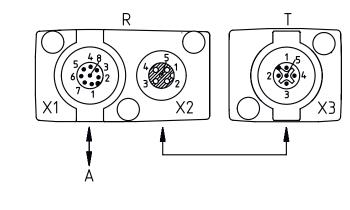
G

- Transmitter Т
- R Receiver
- 2.5 mm Υ

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Dimensioned drawings





A PWR / SW IN / OUT

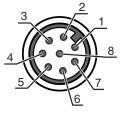
Electrical connection

Connection 1

| Function | Configuration interface |
|--------------------|-------------------------|
| | Signal IN |
| | Signal OUT |
| | Voltage supply |
| Type of connection | Connector |
| Thread size | M12 |
| Туре | Male |
| Material | Metal |
| No. of pins | 8 -pin |
| Encoding | A-coded |
| | |

Pin Pin assignment

| 1 | V+ |
|---|---------|
| 2 | I/O 1 |
| 3 | GND |
| 4 | IO-Link |
| 5 | I/O 2 |
| 6 | OUT V |
| 7 | OUT mA |
| 8 | AGND |
| | |

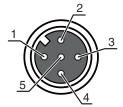


Connection 2

| Function | Connection to transmitter |
|--------------------|---------------------------|
| Type of connection | Connector |
| Thread size | M12 |
| Туре | Female |
| 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

LE 1

2

| 1 | | | |
|----|--------------------------|--|--|
| ED | Display | Meaning | |
| | Green, continuous light | Operational readiness | |
| | Green, flashing | Teach / error | |
| | Yellow, continuous light | Light path free, with function reserve | |
| | Yellow, flashing | No function reserve | |
| | Off | Object detected | |
| | | | |

Suitable transmitters

| Part no. | Designation | Article | Description |
|--------------|----------------------------|------------------------------|---|
| 50119400 | CML720i-T05- 2640.A-M12 | Light curtain transmitter | Operating range: 0.1 3.5 m Connection: Connector, M12, Axial, 5 -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: Axial connector outlet 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 wi | th all available device types can be found on the Leuze 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.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$ The product may only be put into operation by competent persons.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$ Only use the product in accordance with its intended use.

| | For UL applications: |
|---|---|
| A | 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 - Connection cables

| | Part no. | Designation | Article | Description |
|--|----------|--------------------|------------------|--|
| | 50135128 | KD S-M12-8A-P1-050 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5.000 mm Sheathing material: PUR |

Connection technology - Interconnection cables

| | Part no. | Designation | Article | Description |
|--|----------|---------------------------------|-----------------------|--|
| | 50129781 | KDS DN-M12-5A- M12-5A-P3-050 | Interconnection cable | Suitable for interface: 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 |
|---|----------|----------------|---------------------|---|
| 1 + 1 + + + + + + + + + + + + + + + + + | 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 |

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Accessories

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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 |
|----|----------|-------------|------------------|--|
| ц. | 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. |
| | 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. |

| | Note |
|---|--|
| A | Solution A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page. |