SMART SENSOR BUSINESS

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Part no.: 50123620 CML720i-R10-1440.R/D3-M12 Light curtain receiver



Figure can vary

Contents

- Technical data
- · Dimensioned drawings
- Electrical connection
- · Operation and display
- Suitable transmitters
- Part number code
- Notes
- Accessories

Part no.: 50123620 – CML720i-R10-1440.R/D3-M12 – Light curtain receiver

Technical data

| Basic data | | | |
|-------------------------------------|---|--|--|
| Series | 720 | | |
| Operating principle | Throughbeam principle | | |
| Device type | Receiver | | |
| Contains | Accessories for the use of the BT-2R1 | | |
| Application | Object measurement | | |
| | | | |
| Special design | | | |
| Special design Special design | Crossed-beam scanning | | |
| | Diagonal-beam scanning 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 | 1,440 mm | | |
| Number of beams | 144 Piece(s) | | |
| Beam spacing | 10 mm | | |
| | | | |
| Measurement data | | | |
| Minimum object diameter | 20 mm | | |
| | | | |
| Electrical data | Delerity reversel protection | | |
| Protective circuit | Polarity reversal protection Short circuit protected Transient protection | | |
| Performance data | | | |
| Supply voltage UB | 18 30 V , DC | | |
| Residual ripple | 0 15 % , From U _B | | |
| Open-circuit current | 0 350 mA , The specified values refer to the entire package consisting of transmitter and receiver. | | |
| Inputs/outputs selectable | | | |
| Output current, max. | 100 mA | | |
| Input resistance | 6,000 Ω | | |
| Number of inputs/outputs selectable | 2 Piece(s) | | |
| Туре | Inputs/outputs selectable | | |
| Voltage type, outputs | DC | | |
| Switching voltage, outputs | Typ. U _B / 0 V | | |
| Switching voltage, inputs | high: ≥6V Iow: ≤4V | | |
| Input/output 1 | | | |
| Activation/disable delay | 1 ms | | |
| Timina | | | |
| Timing Curle time | 4.70 mg | | |
| Cycle time | 4.72 ms | | |
| Response time per beam | 30 µs | | |

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| 146046000 | |
|------------------------|--|
| Interface | RS 485 |
| Type | NO 400 |
| RS 485 Function | Process |
| Function | FILLESS |
| Our day interface | |
| Service interface | IO-Link |
| Type | IO-LINK |
| IO-Link Function | Configuration via software |
| Function | Service |
| | |
| Connection | |
| Number of connections | 2 Piece(s) |
| Plug outlet | Rear side |
| Connection 1 | |
| Function | Configuration interface Connection to transmitter |
| | 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 |
| Connection 2 | |
| Function | BUS IN |
| | BUS OUT |
| Type of connection | Connector |
| Thread size | M12 |
| Туре | Female |
| Material | Metal |
| No. of pins | 5-pin |
| Encoding | B-coded |
| Machanical data | |
| Mechanical data Design | Cubic |
| Dimension (W x H x L) | 29 mm x 35.4 mm x 1,463 mm |
| Housing material | Metal , Aluminum |
| Lens cover material | Plastic |
| Net weight | 1,650 g |
| Housing color | Silver |
| Type of fastening | Groove mounting |
| - | Via optional mounting device |
| | |
| Operation and display | |
| Type of display | LED OLED display |
| Number of LEDs | 2 Piece(s) |
| Type of configuration | Software Teach-in |
| Operational controls | Membrane keyboard |
| | |

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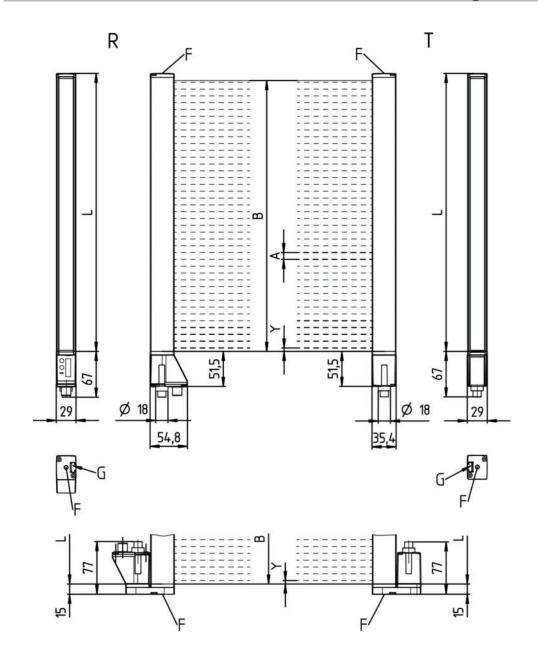
| Environmental data | | | |
|--------------------------------|---------------|---------------|--|
| Ambient temperature, operation | -30 60 °C | | |
| Ambient temperature, storage | -40 70 °C | | |
| | | | |
| Certifications | | | |
| Degree of protection | IP 65 | | |
| Protection class | III | | |
| Certifications c CSA US | | | |
| Standards applied | IEC 60947-5-2 | 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 1440 mm

F M6 thread

- G Fastening groove
- L Profile length 1448 mm

T Transmitter

R Receiver

Y 5 mm

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

Electrical connection

| Connection 1 | |
|--------------------|---|
| Function | Configuration interface Connection to transmitter 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 |

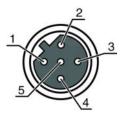
| Pin | Pin assignment |
|-----|----------------|
| 1 | V+ |
| 2 | I/O 1 |
| 3 | GND |
| 4 | IO-Link |
| 5 | I/O 2 |
| 6 | RS 485 Tx+ |
| 7 | RS 485 Tx+ |
| 8 | FE/SHIELD |



| Connection 2 | | |
|--------------------|-------------------|--|
| Function | BUS IN BUS OUT | |
| Type of connection | Connector | |
| Thread size | M12 | |
| Туре | Female | |
| Material | Metal | |
| No. of pins | 5 -pin | |
| Encoding | B-coded | |

Part no.: 50123620 – CML720i-R10-1440.R/D3-M12 – Light curtain receiver

| Pin | Pin assignment |
|-----|----------------|
| 1 | V+ |
| 2 | Tx- |
| 3 | PB GND |
| 4 | Tx+ |
| 5 | FE/SHIELD |



Operation and display

LEDs

| LED | Display | Meaning |
|-----|--------------------------|--|
| 1 | Green, continuous light | Operational readiness |
| | Green, flashing | Teach / error |
| | | Measurement frequency display |
| 2 | Yellow, continuous light | Light path free, with function reserve |
| | Yellow, flashing | No function reserve |
| | Off | Object detected |

Suitable transmitters

| Part no. | Designation | Article | Description |
|----------|----------------------------|------------------------------|---|
| 50119495 | CML720i- T10-1440.R-M12 | Light curtain transmitter | Operating range: 0.3 6 m Connection: Connector, M12, Rear side, 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: connector outlet, axial R: rear connector outlet |

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| 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 - Connection cables

| Part no. | Designation | Article | Description |
|----------|------------------------|---------|---|
| 50132079 | KD U-M12-5A- V1-050 | | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC |

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Connection technology - Y distribution cables

| | Part no. | Designation | Article | Description |
|--|----------|------------------------------|--------------------------|---|
| | | K-Y1 M12A-5m- M12A-S-PUR | Interconnection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Female, A-coded, 8 -pin Shielded: Yes Cable length fork 1: 5,000 mm Cable length fork 2: 150 mm Sheathing material: PUR |
| | 50123265 | K-YPB M12A-5m- M12A-S-PUR | Interconnection cable | Suitable for interface: PROFIBUS DP Connection 1: Connector, M12, Axial, Male, B-coded, 5 -pin Connection 2: Connector, M12, Axial, Female, B-coded, 5 -pin Connection 3: Connector, M12, Axial, Male, B-coded, 5 -pin Shielded: Yes Cable length fork 1: 5,000 mm Cable length fork 2: 250 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 |
|-----|----------|-------------|---------|--|
| RR. | 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 |

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 nage | l |