



**Part no.: 50122986**  
**CML720i-R10-320.A/PB-M12**  
**Light curtain receiver**



Figure can vary

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## Technical data

<b>Basic data</b>	
Series	720
Operating principle	Throughbeam principle
Device type	Receiver
Contains	2x BT-NC sliding block
Application	Object measurement
<b>Special design</b>	
Special design	Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning
<b>Optical data</b>	
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	320 mm
Number of beams	32 Piece(s)
Beam spacing	10 mm
<b>Measurement data</b>	
Minimum object diameter	20 mm
<b>Electrical data</b>	
Protective circuit	Polarity reversal protection Short circuit protected Transient protection
<b>Performance data</b>	
Supply voltage UB	18 ... 30 V , DC
Residual ripple	0 ... 15 % , From UB
Open-circuit current	0 ... 165 mA , The specified values refer to the entire package consisting of transmitter and receiver.
<b>Inputs/outputs selectable</b>	
Output current, max.	100 mA
Input resistance	6,000 $\Omega$
Number of inputs/outputs selectable	2 Piece(s)
Type	Inputs/outputs selectable
Voltage type, outputs	DC
Switching voltage, outputs	Typ. UB / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	high: $\geq 6$ V low: $\leq 4$ V
<b>Input/output 1</b>	
Activation/disable delay	1 ms
<b>Timing</b>	
Cycle time	1.36 ms
Response time per beam	30 $\mu$ s

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#### Interface

Type	PROFIBUS DP
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#### PROFIBUS DP

Function	Process
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#### Service interface

Type	IO-Link
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#### IO-Link

Function	Configuration via software Service
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#### Connection

Number of connections	2 Piece(s)
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Plug outlet	Axial
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#### Connection 1

Function	Configuration interface Connection to transmitter Signal IN Signal OUT Voltage supply
Type of connection	Connector
Thread size	M12
Type	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
Type	Female
Material	Metal
No. of pins	5 -pin
Encoding	B-coded

#### Mechanical data

Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 395 mm
Housing material	Metal , Aluminum
Lens cover material	Plastic
Net weight	550 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

***Environmental data***

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

***Certifications***

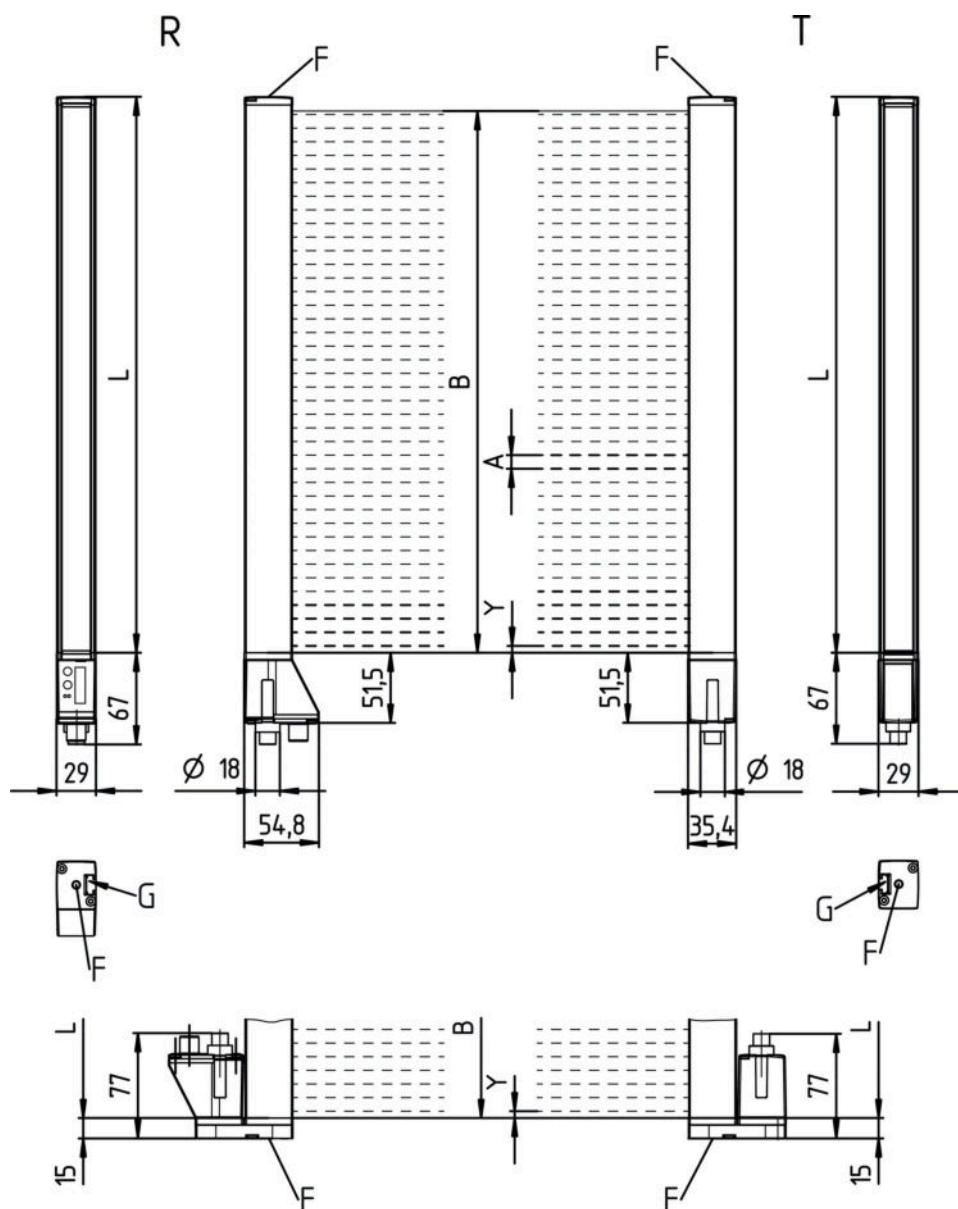
Degree of protection	IP 65
Protection class	III
Certifications	c CSA US
Standards applied	IEC 60947-5-2

***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



A Beam spacing 10 mm

B Measurement field length 320 mm

F M6 thread

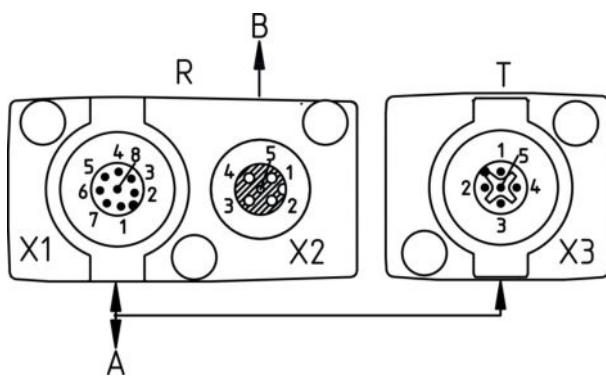
G Fastening groove

L Profile length 328 mm

T Transmitter

R Receiver

Y 5 mm

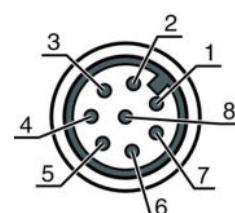


A PWR / SW IN/OUT  
B BUS IN / OUT

## Electrical connection

Connection 1	
Function	Configuration interface Connection to transmitter Signal IN Signal OUT Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

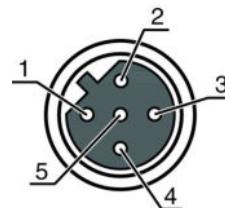
Pin	Pin assignment
1	V+
2	I/O 1
3	GND
4	IO-Link
5	I/O 2
6	RS 485 Tx+
7	RS 485 Tx+
8	FE/SHIELD



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

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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
	50119406	CML720i-T10-320.A-M12	Light curtain transmitter	Operating range: 0.3 ... 6 m Connection: Connector, M12, Axial, 5 -pin

## Part number code

Part designation: **CML7XXi-YZZ-AAAA.BCCCCDD-EEEFFFF**

CML	<b>Operating principle:</b> Measuring light curtain
7XXi	<b>Series:</b> 720i: 720i series 730i: 730i series
Y	<b>Device type:</b> T: transmitter R: receiver
ZZ	<b>Beam spacing:</b> 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm
AAAA	Measurement field length [mm], dependent on beam spacing
B	<b>Equipment:</b> A: connector outlet, axial R: rear connector outlet

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CCC	<b>Interface:</b> L: IO-Link /CN: CANopen /PB: PROFIBUS /PN: PROFINET /CV: Analog current and voltage output /D3: RS 485 Modbus
DDD	<b>Special equipment:</b> -PS: Power Setting
EEE	<b>Electrical connection:</b> M12: M12 connector
FFF	<b>-EX: Explosion protection:</b>

#### Note

A list with all available device types can be found on the Leuze electronic website at [www.leuze.com](http://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)

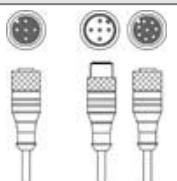
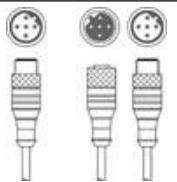
## Accessories

### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50132079	KD U-M12-5A-V1-050	Connection cable	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
	50118183	K-Y1 M12A-5m-M12A-S-PUR	Interconnection cable	<p>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</p>
	50123265	K-YPB M12A-5m-M12A-S-PUR	Interconnection cable	<p>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</p>

## Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50142900	BT 700M.5-2SET	Mounting device set	<p>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</p>

## Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
	429046	BT-2R1	Mounting bracket set	<p>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</p>

	Part no.	Designation	Article	Description
	50121098	SET MD12-US2-IL1.1 + Zub.	Diagnostics set	<p>Interface: USB          Connections: 2 Piece(s)          Degree of protection: IP 20</p>

## Services

	Part no.	Designation	Article	Description
	S981001	CS10-S-110	Start-up support	<p>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.</p>

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	Part no.	Designation	Article	Description
	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.