

# **Technical data sheet Light curtain receiver** Part no.: 50123482 CML720i-R10-800.A/D3-M12



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 changes

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## **Technical data**

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	720
	Throughbeam principle
	Receiver
	2x BT-NC sliding block
Application	Object measurement
Special version	
Special version	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning
Optical data	
Operating range	0.3 7 m
	Guaranteed operating range
	0.2 9 m
	Typical operating range
Measurement field length	800 mm
Number of beams	80 Piece(s)
Beam spacing	10 mm
leasurement data	
Ainimum object diameter	20 mm
Electrical data	
	Polarity reversal protection
	Short circuit protected
	Transient protection
Performance data	
	18 30 V, DC
	0 15 %, From U <sub>B</sub>
	0 215 mA, The specified values refer
	to the entire package consisting of trans mitter and receiver.
Inputs/outputs selectable	
Output ourrant may	100 m A
····	100 mA
Input resistance	6,000 Ω
Input resistance Number of inputs/outputs selectable	6,000 Ω 2 Piece(s)
Input resistance Number of inputs/outputs selectable Type	6,000 Ω 2 Piece(s) Inputs/outputs selectable
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs	6,000 Ω 2 Piece(s) Inputs/outputs selectable DC
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs	6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs	6,000 $\Omega$ 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V high: $\geq$ 6V
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs	6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs	6,000 $\Omega$ 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V high: $\geq$ 6V
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1	6,000 $\Omega$ 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V high: $\geq$ 6V
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1 Activation/disable delay	6,000 $\Omega$ 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V high: $\geq$ 6V Iow: $\leq$ 4 V
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1 Activation/disable delay	6,000 $\Omega$ 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V high: $\geq$ 6V Iow: $\leq$ 4 V 1 ms
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time	6,000 $\Omega$ 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V high: $\geq$ 6V Iow: $\leq$ 4 V 1 ms 2.8 ms
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time Response time per beam	6,000 $\Omega$ 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V high: $\geq$ 6V Iow: $\leq$ 4 V 1 ms
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time Response time per beam Interface	6,000 $\Omega$ 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V high: $\geq$ 6V Iow: $\leq$ 4 V 1 ms 2.8 ms 30 µs
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time Response time per beam	6,000 $\Omega$ 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V high: $\geq$ 6V Iow: $\leq$ 4 V 1 ms 2.8 ms
Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time Response time per beam	6,000 $\Omega$ 2 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V high: $\geq$ 6V Iow: $\leq$ 4 V 1 ms 2.8 ms 30 µs

Service interface		
Туре	IO-Link	
IO-Link		
Function	Configuration via software	
	Service	
Connection		
Number of connections	2 Piece(s)	
Plug outlet	Axial	
O and a firm t		
Connection 1 Function	Configuration interface	
Tunction	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	
Time of composition	BUS OUT	
Type of connection Thread size	Connector 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 875 mm	
Housing material	Metal	
Metal housing Lens cover material	Aluminum Plastic	
Net weight	1,000 g	
Housing color	Silver	
Type of fastening	Groove mounting	
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Via optional mounting device	
On small strand strands and	5.0	
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	

## **Technical data**

### Certifications

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

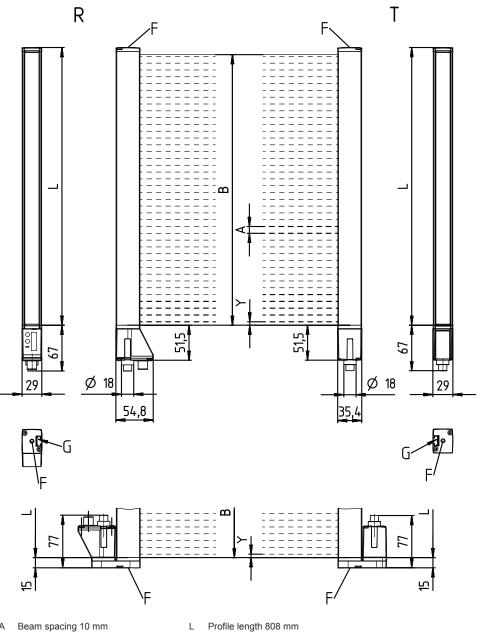
### Classification

Customs tariff number	90314990
ECLASS 5.1.4	27270910
ECLASS 8.0	27270910
ECLASS 9.0	27270910
ECLASS 10.0	27270910
ECLASS 11.0	27270910
ECLASS 12.0	27270910
ECLASS 13.0	27270910
ECLASS 14.0	27270910
ECLASS 15.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549
ETIM 10.0	EC002549



## **Dimensioned drawings**

All dimensions in millimeters



Beam spacing 10 mm А

Fastening groove

- В Measurement field length 800 mm
- F M6 thread

G

R Receiver

Т

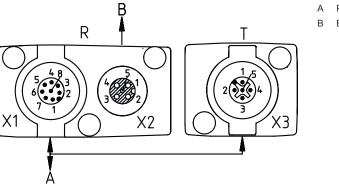
Υ 5 mm

Transmitter

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### **Dimensioned drawings**





A PWR / SW IN / OUTB BUS IN / OUT

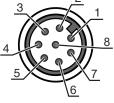
# Electrical connection

**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

## **Electrical connection**

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



LED	Display	Meaning
1	Green, continuous light	Operational readiness
	Green, flashing	Teach / error
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
50119409	CML720i-T10-800.A- M12	Light curtain transmitter	Operating range: 0.3 7 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
22	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



### Part number code



DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection
	Note
A	∜ A list with all available device types can be found on the Leuze website at www.leuze.com.

### Notes

Observe intended use!
<ul> <li>This product is not a safety sensor and is not intended as personnel protection.</li> <li>The product may only be put into operation by competent persons.</li> <li>Only use the product in accordance with its intended use.</li> </ul>



### 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 Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC

### Connection technology - Y distribution cables

	Part no.	Designation	Article	Description
	50118183	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

### Accessories

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## 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

### 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.
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
6	✤ A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.