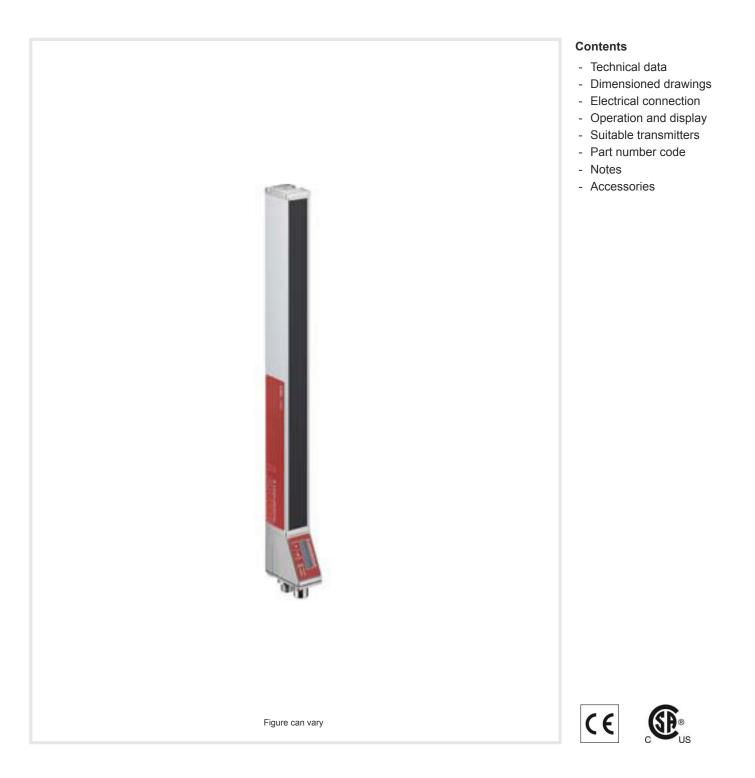


## **Technical data sheet** Light curtain receiver Part no.: 50119672 CML720i-R20-1910.A/CN-M12



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We reserve the right to make technical changes eng • 2023-02-05

#### **Technical data**

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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	
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	1,910 mm
Number of beams	96 Piece(s)
3eam spacing	20 mm
Measurement data	
Minimum object diameter	30 mm
Electrical data	
	Delevit, second evete stice
Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection
Performance data	
Supply voltage U <sub>B</sub>	18 30 V, DC
Residual ripple	0 15 %, From U <sub>B</sub>
Open-circuit current	0350 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.
Innuts/outputs solostable	
Inputs/outputs selectable Output current, max.	100 mA
Input resistance	6.000 Ω
Number of inputs/outputs selectable	-,
Туре	Inputs/outputs selectable
Voltage type, outputs	DC
Switching voltage, outputs	Тур. U <sub>в</sub> / 0 V
Switching voltage, outputs Voltage type, inputs	Typ. U <sub>B</sub> / 0 V DC
Voltage type, inputs	DC
Voltage type, inputs	DC high: ≥6V
Voltage type, inputs Switching voltage, inputs Input/output 1	DC high: ≥6V low: ≤ 4 V
Voltage type, inputs Switching voltage, inputs	DC high: ≥6V
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	DC high: ≥6V low: ≤ 4 V
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior	DC high: ≥6V low: ≤ 4 V
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Readiness delay	DC high: ≥6V Iow: ≤ 4 V
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Readiness delay Cycle time	DC high: ≥6V low: ≤ 4 V 1 ms 450 ms
Voltage type, inputs Switching voltage, inputs Input/output 1	DC high: ≥6V low: ≤ 4 V 1 ms 450 ms 3.28 ms
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Readiness delay Cycle time Response time per beam	DC high: ≥6V low: ≤ 4 V 1 ms 450 ms 3.28 ms
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Fime behavior Readiness delay Cycle time Response time per beam Interface	DC high: ≥6V low: ≤ 4 V 1 ms 450 ms 3.28 ms 30 μs
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Fime behavior Readiness delay Cycle time Response time per beam Interface	DC high: ≥6V low: ≤ 4 V 1 ms 450 ms 3.28 ms 30 μs

•	IO-Link
D-Link	
unction	Configuration via software
	Service
nnection	
mber of connections	2 Piece(s)
g outlet	Axial
Connection 1	Configuration interface
unction	Configuration interface Connection to transmitter
	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Гуре	Male
Vaterial	Metal
No. of pins	8 -pin
Encoding	A-coded
Connection 2	
Function	BUS IN
	BUS OUT
Type of connection	Connector
Thread size	M12
Гуре	Female
Material	Metal
No. of pins Encoding	5 -pin A-coded
Encouning	A-couleu
chanical data	
sign	Cubic
nension (W x H x L)	29 mm x 35.4 mm x 1,995 mm
using material	Metal
tal housing	Aluminum
ns cover material	Plastic
t weight	2,050 g
using color	Silver
be of fastening	Groove mounting
	Via optional mounting device
eration and display	
e of display	LED
	OLED display
mber of LEDs	2 Piece(s)
e of configuration	Software
	Teach-in
erational controls	Membrane keyboard
vironmental data	
bient temperature, operation	-30 60 °C

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#### **Technical data**

## Leuze

#### Certifications

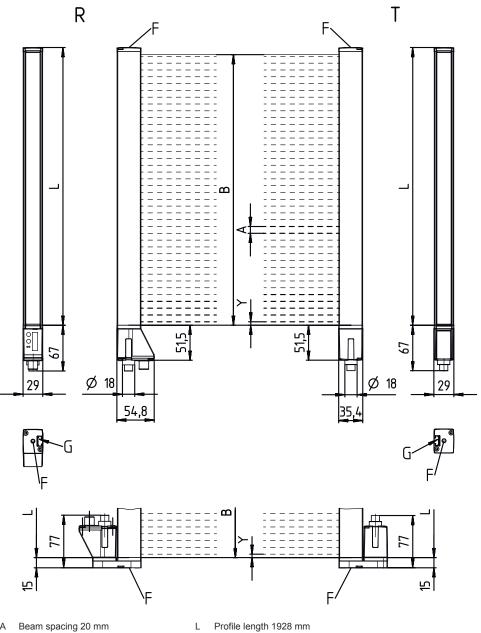
Degree of protection	IP 65
Protection class	III
Certifications	c CSA US
Standards applied	IEC 60947-5-2

#### 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
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549

#### **Dimensioned drawings**

All dimensions in millimeters



Beam spacing 20 mm А

Fastening groove

- В Measurement field length 1910 mm
- F M6 thread

G

R Receiver

Т

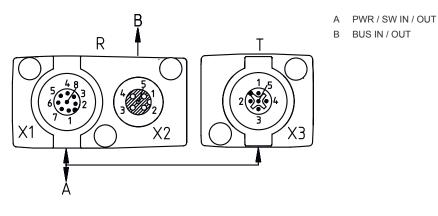
5 mm Υ

Transmitter



#### **Dimensioned drawings**





## **Electrical connection**

**Connection 1** 

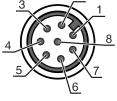
Function	Configuration interface
	Connection to transmitter
	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Туре	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

#### 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		



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



#### **Electrical connection**

Pin	Pin assignment	
1	FE/SHIELD	1
2	n.c.	
3	CAN GND	
4	CAN H	
5	CAN L	<u> 3/9</u>

#### **Operation and display**

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
50119434	CML720i-T20- 1910.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	<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
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

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#### 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 - 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

#### Accessories

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## 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
	50118185	K-YCN M12A-M12A- S-PUR	Interconnection cable	Suitable for interface: CANopen Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable length fork 1: 250 mm Cable length fork 2: 350 mm Sheathing material: PUR

### Connection technology - Terminating resistors

 Part no.	Designation	Article	Description
50040099	TS 01-5-SA	Terminator plug	Suitable for: DeviceNet, CANopen Function: Bus termination Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin

## 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. 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.

#### Accessories





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