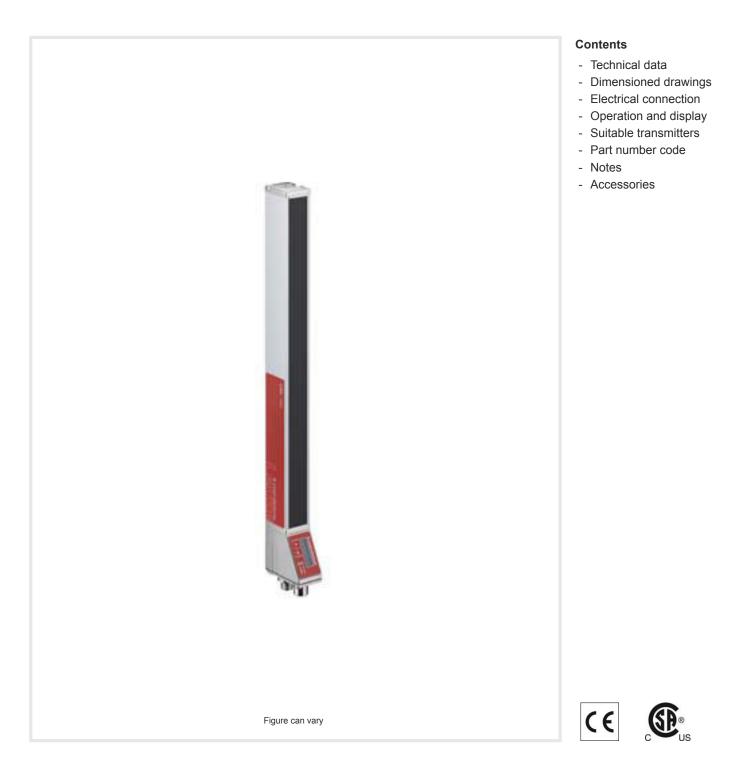


## **Technical data sheet** Light curtain receiver Part no.: 50119625 CML720i-R05-1600.A/CN-M12



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#### **Technical data**

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Series	720
	720 Throughbeam principle
Operating principle Device type	Receiver
Contains	2x BT-NC sliding block
Application	Object measurement
	object measurement
Special version	
Special version	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning
Optical data	
Operating range	Guaranteed operating range
Operating range	0.1 3.5 m
Operating range limit	Typical operating range
Operating range limit	0.1 4.5 m
Measurement field length	1,600 mm
Number of beams	320 Piece(s)
Beam spacing	5 mm
Measurement data	
Minimum object diameter	10 mm
Electrical data	
Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection
Deuferman	
Performance data	18 30 V DC
Supply voltage U <sub>B</sub>	18 30 V, DC
Residual ripple	0 15 %, From U <sub>B</sub> 0 350 mA, The specified values refer
Open-circuit current	to the entire package consisting of trans- mitter 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
	Typ. U <sub>B</sub> / 0 V
Switching voltage, outputs	51 B
Switching voltage, outputs Voltage type, inputs	DC
Voltage type, inputs	DC
Voltage type, inputs Switching voltage, 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 low: ≤ 4 V 1 ms
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Readiness delay Cycle time	DC high: ≥6∨ low: ≤ 4 ∨ 1 ms 450 ms
Voltage type, inputs Switching voltage, inputs Input/output 1	DC high: ≥6V low: ≤ 4 V 1 ms 450 ms 10 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 10 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: ≥6∨ low: ≤ 4 ∨ 1 ms 450 ms 10 ms 30 μs
Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Readiness delay Cycle time Response time per beam Interface Type CANopen	DC high: ≥6∨ low: ≤ 4 ∨ 1 ms 450 ms 10 ms 30 μs CANopen
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: ≥6∨ low: ≤ 4 ∨ 1 ms 450 ms 10 ms 30 μs

/pe	IO-Link
IO-Link	
Function	Configuration via software
	Service
onnection	
umber of connections	2 Piece(s)
lug outlet	Axial
Connection 1	Configuration into form
Function	Configuration interface
	Connection to transmitter
	Signal IN
	Signal OUT
<b>T</b>	Voltage supply
Type of connection	Connector
Thread size	M12
Туре	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded
Connection 2	
Function 2	BUS IN
	BUS OUT
Type of connection	Connector
Thread size	M12
	Female
Type	
Material	Metal
No. of pins	5 -pin A-coded
Encoding	A-COUEU
lechanical data	
esign	Cubic
imension (W x H x L)	29 mm x 35.4 mm x 1,675 mm
ousing material	Metal
letal housing	Aluminum
ens cover material	Plastic
et weight	1,750 g
ousing color	Silver
ype of fastening	Groove mounting
	Via optional mounting device
peration and display	
peration and display ype of display	LED
ype of display	OLED display
ype of display umber of LEDs	OLED display 2 Piece(s)
ype of display	OLED display 2 Piece(s) Software
ype of display umber of LEDs ype of configuration	OLED display 2 Piece(s) Software Teach-in
ype of display umber of LEDs	OLED display 2 Piece(s) Software
ype of display umber of LEDs ype of configuration	OLED display 2 Piece(s) Software Teach-in
ype of display umber of LEDs ype of configuration perational controls	OLED display 2 Piece(s) Software Teach-in

#### **Technical data**

## Leuze

#### Certifications

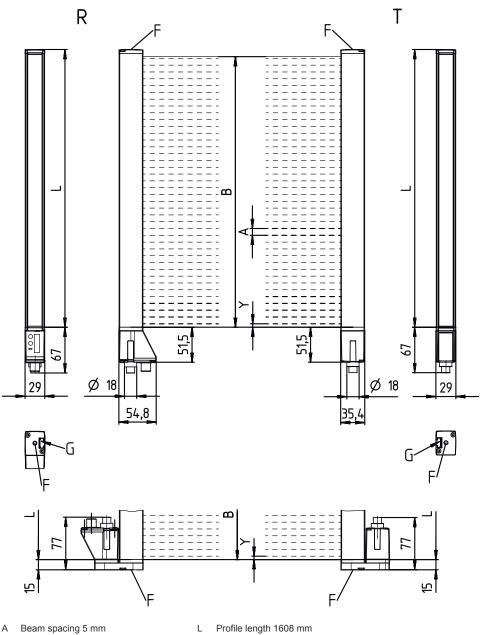
Degree of protection	IP 65
Protection class	III
Certifications	c CSA US
Standards applied	IEC 60947-5-2

#### 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



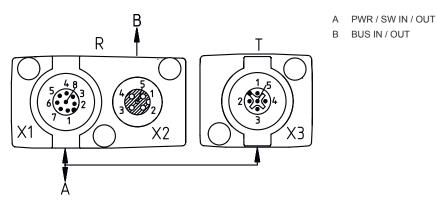
- Beam spacing 5 mm А
- В Measurement field length 1600 mm
- F M6 thread G Fastening groove
- Т R Receiver
  - 2.5 mm Υ

Transmitter



#### **Dimensioned drawings**





## **Electrical connection**

**Connection 1** 

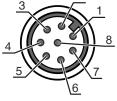
Function	Configuration interface
	Connection to transmitter
	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Туре	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

#### 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	
2	n.c.	
3	CAN GND	
4	CAN H	
5	CAN L	

#### **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
50119387	CML720i-T05- 1600.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
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!
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.     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 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

## Leuze

## 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
y; U	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.