

# **Technical data sheet** Light curtain receiver Part no.: 50119828 CML720i-R05-2640.A/CV-M12



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Leuze electronic GmbH + Co. KG

### **Technical data**

#### Basic data

Basic data	
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	C C
Operating range	0.1 3.5 m
· · · ·	
Operating range Operating range limit	Guaranteed operating range 0.1 4.5 m
Operating range limit	
	Typical operating range
Measurement field length Number of beams	2,640 mm 528 Piece(s)
	528 Piece(s) 5 mm
Beam spacing	5 mm
Measurement data	
Minimum object diameter	10 mm
Electrical data	
Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection
	ransient 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	0 435 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.
Outpute	
Outputs Number of analog outputs	2 Piece(s)
Number of analog outputs	2 1 1000(0)
Analog outputs	
Туре	Analog output
Current	0 24 mA
Voltage	0 11 V
Analog output 1	
Туре	Voltage
Analog output 2	Querent
Туре	Current
Inputs/outputs coloctable	
Inputs/outputs selectable Output current, max.	100 mA
Input resistance	6,000 Ω
Number of inputs/outputs selectable	
Type	Inputs/outputs selectable
Voltage type, outputs	
Switching voltage, outputs	Typ. U <sub>B</sub> / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥6V
	low: ≤ 4 V

	Input/output 1 Activation/disable delay	1 ms
	Activation/disable delay	1 ms
Time	e behavior	
Read	iness delay	450 ms
Cycle	e time	16.24 ms
Resp	onse time per beam	30 µs
Serv	ice interface	
Туре		IO-Link
	-Link nction	Configuration via software
гu	liction	Service
Con	nection	
Numl	ber of connections	2 Piece(s)
Plug	outlet	Axial
0		
	onnection 1	
Fu	nction	Configuration interface
		Signal IN
		Signal OUT
		Voltage supply
Ту	pe of connection	Connector
Th	read size	M12
Ту	ре	Male
Ma	aterial	Metal
No	o. of pins	8 -pin
En	coding	A-coded
Co	onnection 2	
Fu	nction	Connection to transmitter
Ту	pe of connection	Connector
Th	read size	M12
Ту	ре	Female
Ma	aterial	Metal
No	o. of pins	5 -pin
En	coding	A-coded
Mec	hanical data	
Desig		Cubic
	nsion (W x H x L)	29 mm x 35.4 mm x 2,715 mm
	sing material	Metal
	I housing	Aluminum
	cover material	Plastic
	veight	
	0	2,700 g Silver
	ing color	
Type	of fastening	Groove mounting Via optional mounting device
Ope	ration and display	
туре	of display	LED
		OLED display
	ber of LEDs	2 Piece(s)
Туре	of configuration	Software
		Teach-in
	ational controls	Membrane keyboard

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## **Technical data**

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#### **Environmental data**

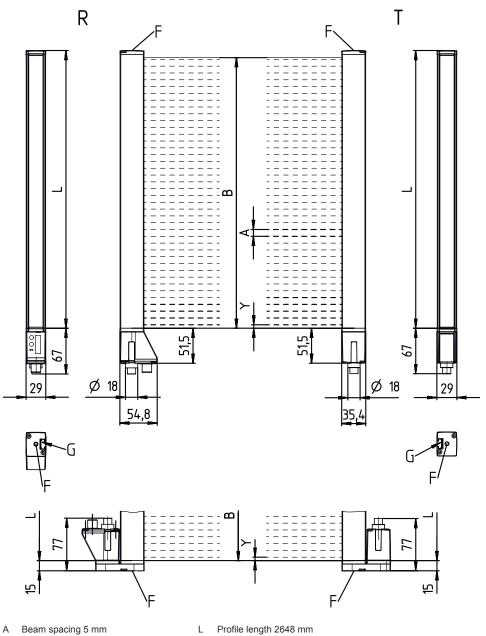
Ambient temperature, operation	-30 60 °C
Ambient temperature, storage	-40 70 °C
Certifications	

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

Customs tariff number         90314990           ECLASS 5.1.4         27270910           ECLASS 8.0         27270910           ECLASS 9.0         27270910	
ECLASS 8.0         27270910           ECLASS 9.0         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	
ETIM 5.0 EC002549	
ETIM 6.0 EC002549	
ETIM 7.0 EC002549	
ETIM 8.0 EC002549	
ETIM 9.0 EC002549	

### **Dimensioned drawings**

All dimensions in millimeters



Beam spacing 5 mm А

Fastening groove

- В Measurement field length 2640 mm
- F M6 thread

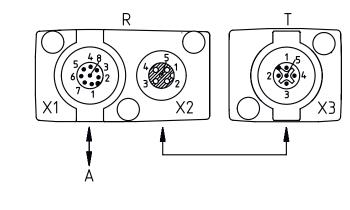
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- Transmitter Т
- R Receiver
- 2.5 mm Υ

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## **Dimensioned drawings**





A PWR / SW IN / OUT

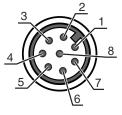
## **Electrical connection**

**Connection 1** 

Function	Configuration interface
	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	OUT V
7	OUT mA
8	AGND



#### **Connection 2**

Function	Connection to transmitter
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

#### Pin Pin assignment

1	FE/SHIELD
2	V+
3	GND
4	RS 485 Tx+
5	RS 485 Tx-



### **Operation and display**

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ED	Display	Meaning	
	Green, continuous light	Operational readiness	
	Green, flashing	Teach / error	
	Yellow, continuous light	Light path free, with function reserve	
	Yellow, flashing	No function reserve	
	Off	Object detected	

### Suitable transmitters

 Part no.	Designation	Article	Description
50119400	CML720i-T05- 2640.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
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: 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
DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection
Note	
A list wi	th all available device types can be found on the Leuze website at www.leuze.com.

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#### Notes

#### Observe intended use!

✤ This product is not a safety sensor and is not intended as personnel protection.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$  The product may only be put into operation by competent persons.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$  Only use the product in accordance with its intended use.

	For UL applications:
A	<ul> <li>For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).</li> <li>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)</li> </ul>

#### Accessories

### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50135128	KD S-M12-8A-P1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5.000 mm Sheathing material: PUR

### 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

#### Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
1 + 1 + + + + + + + + + + + + + + + + +	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

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#### Accessories

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## Configuration devices

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

#### Services

	Part no.	Designation	Article	Description
ц.	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
A	Solution A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.