Leuze

Technical data sheet Light curtain receiver Part no.: 50119786 CML720i-R20-2710.A/L-M12



 Leuze electronic GmbH + Co. KG
 info@leuze.com • www.leuze.com
 changes

 The Sensor People
 In der Braike 1, D-73277 Owen/Germany
 Phone: +49 7021 573-0 • Fax: +49 7021 573-199
 eng • 2025-04-04

1/8

Technical data

eries	720	
perating principle	Throughbeam principle	
evice type	Receiver	
ontains	2x BT-NC sliding block	
pplication	Object measurement	
pecial version		
pecial version	Crossed-beam scanning	
	Diagonal-beam scanning	
	Parallel-beam scanning	
Optical data		
perating range	0.3 7 m	
perating range	Guaranteed operating range	
perating range limit	0.2 9 m	
perating range limit	Typical operating range	
leasurement field length	2,710 mm	
lumber of beams	136 Piece(s)	
leam spacing	20 mm	
leasurement data		
linimum object diameter	30 mm	
ectrical data		
rotective circuit	Polarity reversal protection	
	Polarity reversal protection Short circuit protected	
	Transient protection	
	Transient protection	
Performance data		
Supply voltage U _B	18 30 V, DC	
Residual ripple	0 15 %, From U _B	
Open-circuit current	0 435 mA, The specified values refer to the entire package consisting of trans-	
	mitter and receiver.	
Inputs/outputs selectable	mitter and receiver.	
Inputs/outputs selectable Output current, max.	mitter and receiver.	
Inputs/outputs selectable Output current, max. Input resistance	mitter and receiver. 100 mA 6,000 Ω	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable	mitter and receiver. 100 mA 6,000 Ω 4 Piece(s)	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type	mitter and receiver. 100 mA 6,000 Ω 4 Piece(s) Inputs/outputs selectable	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs	mitter and receiver. 100 mA 6,000 Ω 4 Piece(s) Inputs/outputs selectable DC	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs	mitter and receiver. 100 mA 6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs	mitter and receiver. 100 mA 6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs	mitter and receiver. 100 mA 6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs	mitter and receiver. 100 mA 6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs	mitter and receiver. 100 mA 6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs	mitter and receiver. 100 mA 6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Switching voltage, inputs	mitter and receiver. 100 mA $6,000 \Omega$ 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ Iow: $\leq 4 V$	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	mitter and receiver. 100 mA $6,000 \Omega$ 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ Iow: $\leq 4 V$ 0 1 ms	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	mitter and receiver. 100 mA $6,000 \Omega$ 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ Iow: $\leq 4 V$	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	mitter and receiver. 100 mA $6,000 \Omega$ 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ Iow: $\leq 4 V$ 0 1 ms 400 ms	
Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Cime behavior	mitter and receiver. 100 mA $6,000 \Omega$ 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ Iow: $\leq 4 V$ 0 1 ms 400 ms 4.48 ms	

COM mode	COM2
Min. cycle time	COM2 = 2.3 ms
Specification	V1.0.1
	V1.1
Service interface	
Туре	IO-Link
IO-Link Function	Configuration via software
	Service
Connection	
Number of connections	2 Piece(s)
Plug outlet	Axial
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
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
Mechanical data	
Design	Cubic
-	Cubic 29 mm x 35.4 mm x 2,795 mm
Dimension (W x H x L)	
Dimension (W x H x L) Housing material	29 mm x 35.4 mm x 2,795 mm
Dimension (W x H x L) Housing material Metal housing	29 mm x 35.4 mm x 2,795 mm Metal
Dimension (W x H x L) Housing material Metal housing Lens cover material	29 mm x 35.4 mm x 2,795 mm Metal Aluminum
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic 2,750 g
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic 2,750 g Silver
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic 2,750 g Silver Groove mounting
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic 2,750 g Silver Groove mounting
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic 2,750 g Silver Groove mounting Via optional mounting device
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic 2,750 g Silver Groove mounting Via optional mounting device
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic 2,750 g Silver Groove mounting Via optional mounting device LED OLED display
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic 2,750 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s)
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic 2,750 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Operational controls Environmental data	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic 2,750 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Operational controls	29 mm x 35.4 mm x 2,795 mm Metal Aluminum Plastic 2,750 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in

Technical data

Certifications

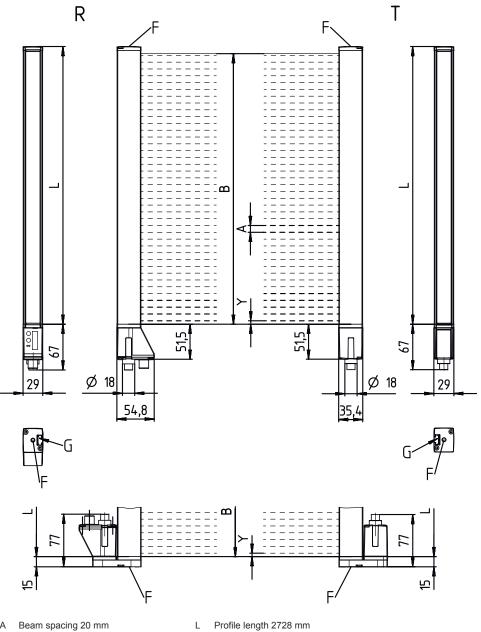
Classification

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 20 mm А

Fastening groove

- В Measurement field length 2710 mm
- F M6 thread

G

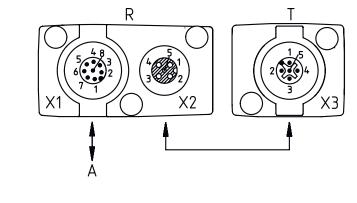
- Т R Receiver
 - 5 mm Υ

Transmitter

We reserve the right to make technical Leuze electronic GmbH + Co. KG info@leuze.com • www.leuze.com changes The Sensor People In der Braike 1, D-73277 Owen/Germany Phone: +49 7021 573-0 • Fax: +49 7021 573-199 eng • 2025-04-04

Dimensioned drawings





A PWR / SW IN / OUT

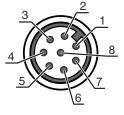
Electrical connection

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	IO1		
3	GND		
4	IO-Link		
5	102		
6	IO3		
7	IO4		
8	GND		



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

LED

2

C	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
50119439	CML720i-T20- 2710.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

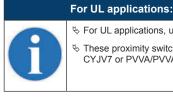
CML	Operating principle Measuring light curtain
7XXi	Series 720i: 720i series 730i: 730i series
Y	Device type T: transmitter R: receiver
ZZ	Beam spacing 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm
AAAA	Measurement field length [mm], dependent on beam spacing
В	Equipment A: Axial connector outlet R: Rear connector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

Notes

Observe intended use!

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

 $\ensuremath{\mathfrak{b}}$ Only use the product in accordance with its intended use.



Sor 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 unit

	Part no.	Designation	Article	Description
C. LEATING	50144900	MD 798i-11-82/L5- 2222	IO-Link master	Type: IO-Link master Current consumption, max.: 11,000 mA Switching outputs for each sensor connection: 1 Piece(s) Switching output: Transistor, PNP Interface: IO-Link, Automatic protocol detection, EtherNet IP, Modbus TCP, PROFINET Connections: 12 Piece(s) Sensor connections: 8 Piece(s) Connections for voltage supply: 2 Piece(s) Interface connections: 2 Piece(s) Degree of protection: IP 67, IP 65, IP 69K

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

Leuze

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

Configuration devices

Accessories

	Part no.	Designation	Article	Description
165	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
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

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