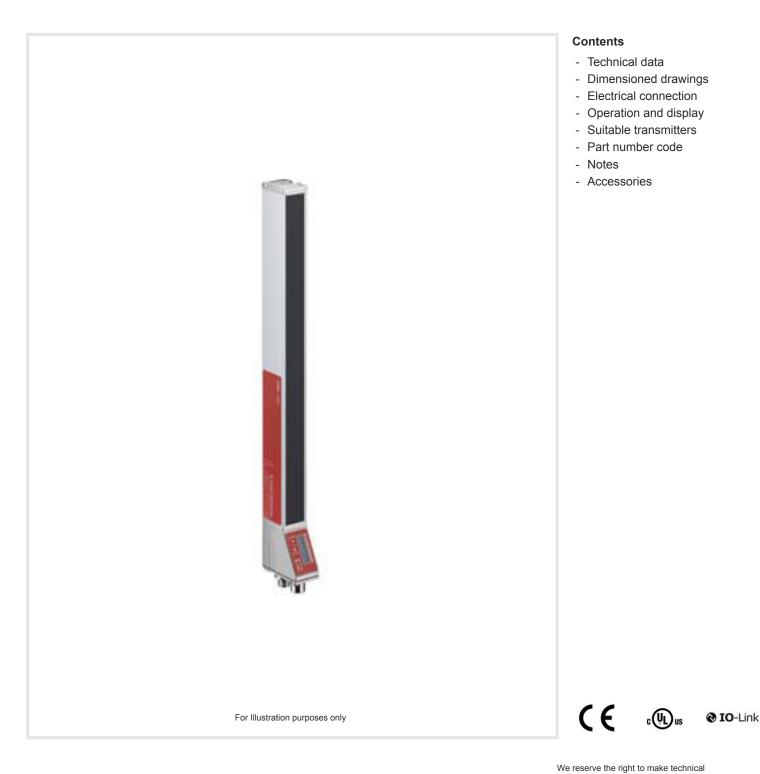


## **Technical data sheet Light curtain receiver** Part no.: 50119726 CML720i-R05-960.A/L-M12



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 eng • 2025-04-04

### **Technical 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	
Operating range	0.1 3.5 m
Operating range	Guaranteed operating range
Operating range limit	0.1 4.5 m
Operating range limit	Typical operating range
Measurement field length	960 mm
Number of beams	192 Piece(s)
Beam spacing	5 mm
Measurement data	
Minimum object diameter	10 mm
Electrical data	
	Date //
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	0 270 mA, The specified values refer 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	,
Type	Inputs/outputs selectable
Voltage type, outputs	DC
Switching voltage, outputs	Typ. U <sub>B</sub> / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥6V
	$low: \le 4 V$
Input/output 1	
Activation/disable delay	0 1 ms
Time behavior	
Readiness delay	400 ms
Cycle time	6.16 ms
Response time per beam	30 µs
Interface	
Туре	IO-Link

	IO-Link					
	COM mode	COM2				
	Min. cycle time	COM2 = 2.3 ms				
	Specification	V1.0.1				
		V1.1				
S	ervice interface					
Ту	/ре	IO-Link				
	IO-Link					
	Function	Configuration via software Service				
		Service				
С	onnection					
N	umber of connections	2 Piece(s)				
PI	lug outlet	Axial				
	-					
	Connection 1					
	Function	Configuration interface				
		Signal IN				
		Signal OUT				
	The second s	Voltage supply				
	Type of connection Thread size	Connector M12				
	Type	Male				
	Material	Metal				
	No. of pins	8 -pin				
	Encoding	A-coded				
	Connection 2					
	Function	Connection to transmitter				
	Type of connection	Connector				
	Thread size	M12				
	Type Material	Female Metal				
	No. of pins	5 -pin				
	Encoding	A-coded				
Μ	lechanical data					
D	esign	Cubic				
	imension (W x H x L)	29 mm x 35.4 mm x 1,035 mm				
	ousing material	Metal				
	etal housing	Aluminum				
	ens cover material	Plastic				
	et weight ousing color	1,150 g Silver				
	/pe of fastening	Groove mounting				
ر.	pe of fusiening	Via optional mounting device				
0	peration and display					
ту	/pe of display	LED				
		OLED display				
N	umber of LEDs	2 Piece(s)				
Ту	/pe of configuration	Software				
		Teach-in				
0	perational controls	Membrane keyboard				
E	nvironmental data					
_		20 60 °C				
	mbient temperature, operation mbient temperature, storage	-30 60 °C -40 70 °C				
A	molent temperature, storage					

### **Technical data**

#### Certifications

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

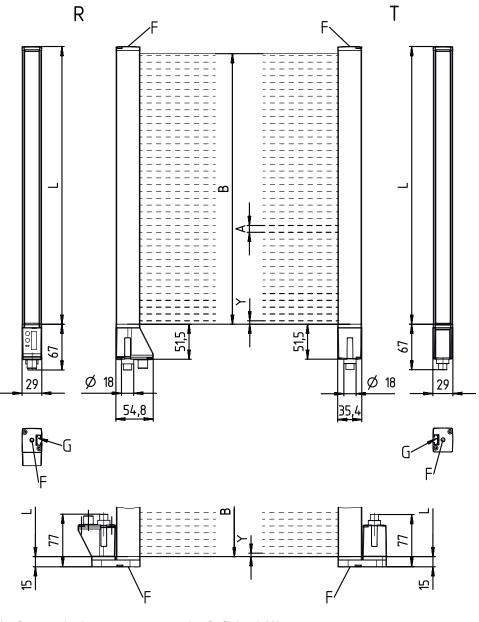
#### Classification

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



A Beam spacing 5 mm

- B Measurement field length 960 mm
- F M6 thread

G

Fastening groove

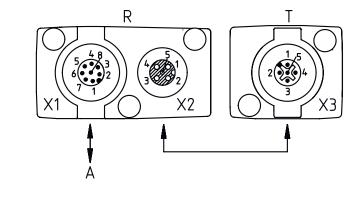
L Profile length 968 mm

- T Transmitter
- R Receiver
- Y 2.5 mm

### We reserve the right to make technical changes

### **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       IO2         6       IO3         7       IO4		
3         GND           4         IO-Link           5         IO2           6         IO3	1	V+
4         IO-Link           5         IO2           6         IO3	2	IO1
5 IO2 6 IO3	3	GND
6 IO3	4	IO-Link
	5	IO2
7 104	6	IO3
1 104	7	IO4
8 GND	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	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
50119379	CML720i-T05-960.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.				

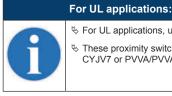
#### Notes

#### Observe intended use!

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

b The product may only be put into operation by competent persons.

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



ŀ,	For U	L applicatio	ons, use	is only per	mitted in Class 2 c	circuits in accorda	nce with the NEC (N	lational 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
Ŭ				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

#### Accessories

## 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

 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
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

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