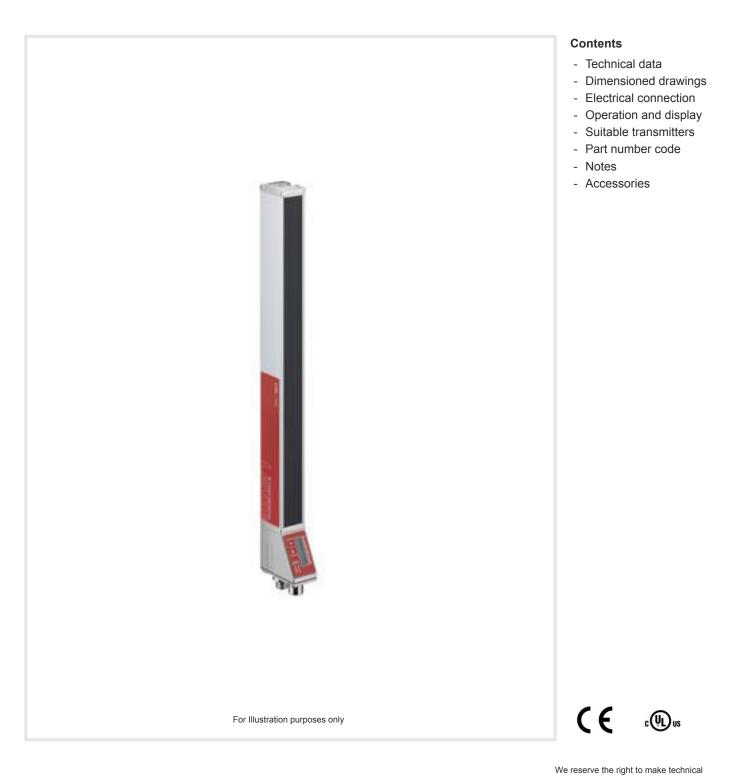


Technical data sheet Light curtain receiver Part no.: 50122956 CML720i-R05-960.A/PB-M12



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 eng • 2025-04-04

Technical data

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Operating principle	720
	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	
Dperating 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	
Protective circuit	Polarity reversal protection
	Polarity reversal protection Short circuit protected
	Transient protection
Performance data	
Supply voltage U _B	18 30 V, DC
Residual ripple	0 15 %, From U _B
Open-circuit current	0 270 mA, The specified values refer to the entire package consisting of tran mitter and receiver.
Inputs/outputs selectable	
IIIDULS/UULDUIS SEIECIADIE	100 mA
Output current, max.	6.000 Ω
Output current, max. Input resistance	6,000 Ω le 2 Piece(s)
Output current, max. Input resistance Number of inputs/outputs selectabl	e 2 Piece(s)
Output current, max. Input resistance Number of inputs/outputs selectabl Type	,
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs	e 2 Piece(s) Inputs/outputs selectable DC
Output current, max. Input resistance Number of inputs/outputs selectabl Type	e 2 Piece(s) Inputs/outputs selectable
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs	e 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs	e 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs	e 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 ∨ DC high: ≥6V
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1	e 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 ∨ DC high: ≥6V
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs	e 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	le 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ Iow: $\leq 4 V$
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	le 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ Iow: $\leq 4 V$
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time	e 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time Response time per beam	e 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 1 ms 6.16 ms
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time	e 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 1 ms 6.16 ms
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time Response time per beam	e 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 1 ms 6.16 ms 30 µs
Output current, max. Input resistance Number of inputs/outputs selectabl Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time Response time per beam	e 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 1 ms 6.16 ms 30 µs

уре	IO-Link
IO-Link	
Function	Configuration via software
	Service
connection	
umber of connections	
lug outlet	2 Piece(s) Axial
lug outlet	
Connection 1	
Function	Configuration interface
	Connection to transmitter
	Signal IN
	Signal OUT
T	Voltage supply
Type of connection	Connector
Thread size	M12
Type Material	Male
	Metal
No. of pins Encoding	8 -pin A-coded
Licoung	A-OUUCU
Connection 2	
Function	BUS IN
	BUS OUT
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	5 -pin
Encoding	B-coded
echanical data	
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	1,150 g
ousing color	Silver
/pe of fastening	Groove mounting
	Via optional mounting device
peration and display	
ype of display	LED
	OLED display
umber of LEDs	2 Piece(s)
ype of configuration	Software
	Teach-in
perational controls	Membrane keyboard
nvironmental data	
mbient temperature, operation	-30 60 °C
· · · ·	-40 70 °C

Technical data

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Certifications

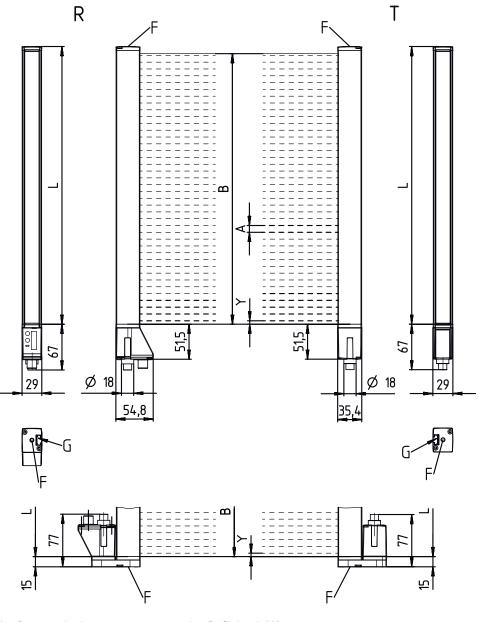
Degree of protection	IP 65
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

Classification

90314990
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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

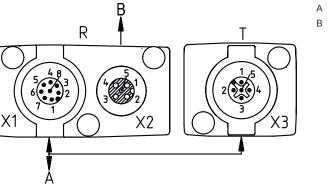
- T Transmitter
- R Receiver
- Y 2.5 mm

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Dimensioned drawings





PWR / SW IN / OUT BUS IN / OUT

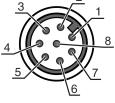
Electrical connection

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		



Connection 2

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

Electrical connection

Pin Pin assignment 1 V+ 2 Tx 3 PB GND 4 Tx+ 5 FE/SHIELD



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
22	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



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. Only use 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 - 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

Accessories

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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
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

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