

Technical data sheet Light curtain receiver Part no.: 50122970 CML720i-R10-1600.R/PB-M12



Leuze electronic GmbH + Co. KG

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Technical data

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Series 720 Operating principle Throughbeam principle Device type Receiver Contains Accessories for the use of the BT-2R1 Application Object measurement Special version Crossed-beam scanning Special version Crossed-beam scanning Operating range 0.3 7 m Operating range Guaranteed operating range Operating range limit 0.2 9 m Operating range limit Typical operating range Mumber of beams 160 Piece(s) Beam spacing 10 mm Measurement field length 1.600 mm Number of beams 160 Piece(s) Beam spacing 10 mm Measurement data Portective circuit Portective circuit Polarity reversal protection Short circuit protected Transient protection Short circuit protected Transient protection Portective circuit current	Sorios	720
Device type Receiver Contains Accessories for the use of the BT-2R1 Application Object measurement Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Special version Crossed-beam scanning Diagonal-beam scanning Operating range 0.3 7 m Operating range 0.3 7 m Operating range limit 0.2 9 m Operating range limit 1,600 mm Number of beams 160 Piece(s) Beam spacing 10 mm Measurement field length 1,600 mm Number of beams 20 mm Electrical data Polarity reversal protection Short circuit protected Transent protection Short circuit protected Transent protection Supply voltage Ug 18 30 V, DC Residual ripple 0 15 %, From Ug Open-circuit current 0 350 mA, The specified values refer to the entire package consisting of trans mitter and receiver. Input soutputs selectable Output current, max. 100 mA Input resistance 6,000 Ω 0.0		
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	Activation/disable delay Time behavior Cycle time Response time per beam Interface	5.2 ms 30 μs
	Activation/disable delay Time behavior Cycle time Response time per beam Interface Type	5.2 ms 30 μs

S	Service interface			
Ту	уре	IO-Link		
	IO-Link			
	Function	Configuration via software		
		Service		
_				
C	onnection			
	umber of connections	2 Piece(s)		
P	lug outlet	Rear side		
	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		
	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		
M	echanical data			
D	esign	Cubic		
D	imension (W x H x L)	29 mm x 35.4 mm x 1,623 mm		
Н	ousing material	Metal		
Μ	etal housing	Aluminum		
Le	ens cover material	Plastic		
	et weight	1,800 g		
Housing color		Silver		
Ŋ	/pe of fastening	Groove mounting Via optional mounting device		
		via optional mounting device		
0	peration and display			
Ту	/pe of display	LED		
		OLED display		
Ν	umber of LEDs	2 Piece(s)		
Ту	/pe of configuration	Software		
•		Teach-in		
0	perational controls	Membrane keyboard		
E	nvironmental data			
Α	mbient temperature, operation	-30 60 °C		
A	mbient temperature, storage	-40 70 °C		

Technical data

Certifications

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

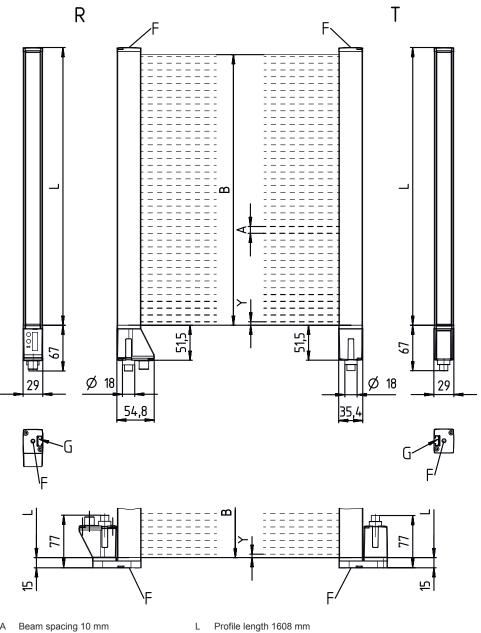
Classification

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



Beam spacing 10 mm А

Fastening groove

- В Measurement field length 1600 mm
- F M6 thread

G

R Receiver

Т

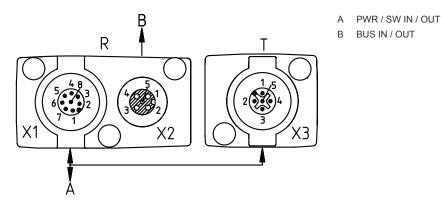
5 mm Υ

Transmitter



Dimensioned drawings





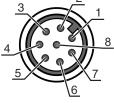
Electrical connection

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		



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

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
50119496	CML720i-T10- 1600.R-M12	Light curtain transmitter	Operating range: 0.3 7 m Connection: Connector, M12, Rear side, 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

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Accessories

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

Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
ęę.	429029	BT-2RG	Mounting bracket set	Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

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