

Technical data sheet Light curtain receiver Part no.: 50122932 CML720i-R05-2880.R/PB-M12



Leuze electronic GmbH + Co. KG
 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

info@leuze.com • www.leuze.com changes

We reserve the right to make technical

Technical data

Leuze

720
Throughbeam principle
Receiver
Accessories for the use of the BT-2R1
Object measurement
Crossed-beam scanning
Diagonal-beam scanning
Parallel-beam scanning
0.1 3.5 m
Guaranteed operating range
0.1 4.5 m
Typical operating range
2,880 mm
576 Piece(s)
5 mm
10 mm
Delarity revenal arcticit
Polarity reversal protection
Short circuit protected
Transient protection
18 30 V, DC
0 15 %, From U _B
0 600 mA, The specified values refer to the entire package consisting of trans mitter and receiver.
100 mA
100 mA 6.000 Ω
6,000 Ω
6,000 Ω 2 Piece(s)
6,000 Ω
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U_B / 0 V DC
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U_B / 0 V DC
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 1 ms
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 1 ms 17.68 ms
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 1 ms
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 1 ms 17.68 ms
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 1 ms 17.68 ms
6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 1 ms 17.68 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		
		BUSOUT		
	Type of connection	Connector		
	Thread size	M12		
	Туре	Female		
	Material	Metal		
	No. of pins	5 -pin		
	Encoding	B-coded		
Μ	lechanical data			
D	esign	Cubic		
D	imension (W x H x L)	29 mm x 35.4 mm x 2,903 mm		
Н	ousing material	Metal		
Μ	etal housing	Aluminum		
Le	ens cover material	Plastic		
	et weight	2,950 g		
	ousing color	Silver		
Ту	/pe of fastening	Groove mounting		
		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			
A	mbient temperature, operation	-30 60 °C		
A	mbient temperature, storage	-40 70 °C		

Technical data

Leuze

Certifications

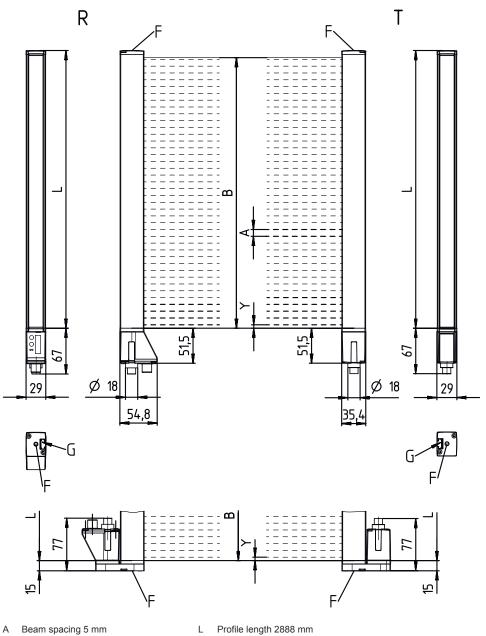
Degree of protection	IP 65
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

Classification

90314990
27270910
27270910
27270910
27270910
27270910
27270910
27270910
27270910
27270910
EC002549

Dimensioned drawings

All dimensions in millimeters



- Beam spacing 5 mm А
- В Measurement field length 2880 mm
- F M6 thread G Fastening groove
- R Receiver

Т

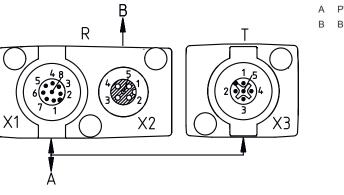
Transmitter

2.5 mm Υ

Leuze

Dimensioned drawings





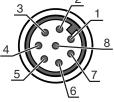
PWR / SW IN / OUT BUS IN / OUT

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

PinPin assignment1V+2Tx-3PB GND4Tx+5FE/SHIELD

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
50119484	CML720i-T05- 2880.R-M12	Light curtain transmitter	Operating range: 0.1 3.5 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. 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

Leuze

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.