

Technical data sheet Light curtain receiver Part no.: 50120152 CML720i-R05-2480.R/CV-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

Basic data

Basic data		
Series	720	
Operating principle	Throughbeam principle	
Device type	Receiver	
Contains	Accessories for the use of the BT-2R1	
Application	Object measurement	
Special version		
Special version	Crossed-beam scanning	
	Diagonal-beam scanning	
	Parallel-beam scanning	
	<u> </u>	
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	2,480 mm	
Number of beams	496 Piece(s)	
Beam spacing	5 mm	
······		
Measurement data		
Minimum object diameter	10 mm	
-		
Electrical data		
Protective circuit	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	0 435 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.	
Outputs		
Number of analog outputs	2 Piece(s)	
Analog outputs		
Туре	Analog output	
Current	0 24 mA	
Voltage	0 11 V	
Analog output 1		
Туре	Voltage	
Analog output 2	-	
Туре	Current	
In 1999 10 10 10 10 10 10 10 10 10 10 10 10 10		
Inputs/outputs selectable	100 mA	
Output current, max.	100 mA	
Input resistance	6,000 Ω	
Number of inputs/outputs selectable		
Туре	Inputs/outputs selectable	
Voltage type, outputs	DC	
Switching voltage, outputs	Typ. U _B / 0 V	
Voltage type, inputs	DC	
Switching voltage, inputs	high: ≥6V	
	low: $\leq 4 \text{ V}$	

Input/output 1 Activation/disable delay	1 ms	
Activation/disable delay	1 1115	
Time behavior		
Readiness delay	450 ms	
Cycle time	15.28 ms	
Response time per beam	30 µs	
Service interface		
Туре	IO-Link	
IO-Link		
Function	Configuration via software	
	Service	
Connection		
Number of connections	2 Piece(s)	
Plug outlet	Rear side	
-		
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 Thread size	Connector M12	
	Female	
Type		
Material	Metal	
No. of pins	5 -pin	
Encoding	A-coded	
Mechanical data		
Design	Cubic	
Dimension (W x H x L)	29 mm x 35.4 mm x 2,503 mm	
Housing material	Metal	
Metal housing	Aluminum	
Lens cover material	Plastic	
Net weight	2,600 g	
Housing color	Silver	
Type of fastening	Groove mounting	
	Via optional mounting device	
Operation and display		
Type of display	LED	
	OLED display	
Number of LEDs	2 Piece(s)	
Type of configuration	Software	
	Teach-in	
Operational controls	Membrane keyboard	

Leuze

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

We reserve the right to make technical changes

Technical data

Leuze

Environmental data

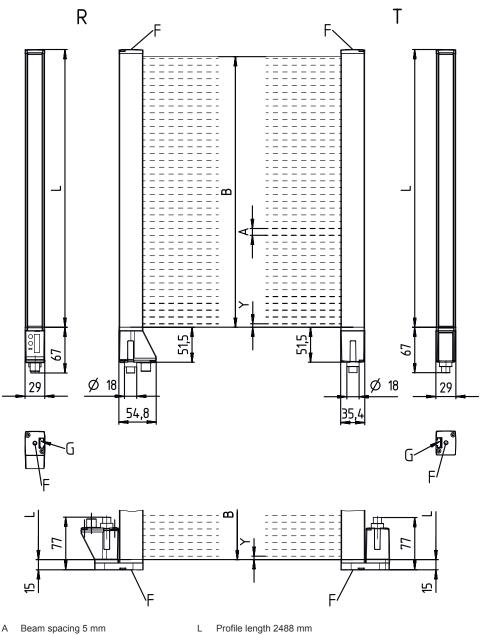
Ambient temperature, operation	-30 60 °C
Ambient temperature, storage	-40 70 °C
Certifications	

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 5 mm А

Fastening groove

- В Measurement field length 2480 mm
- F M6 thread

G

Transmitter R Receiver

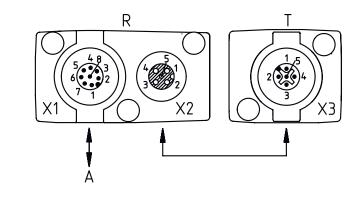
Т

2.5 mm Υ

Leuze

Dimensioned drawings





A PWR / SW IN / OUT

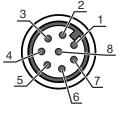
Electrical connection

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	I/O 1
3	GND
4	IO-Link
5	I/O 2
6	OUT V
7	OUT mA
8	AGND



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

- 1			
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

F	Part no.	Designation	Article	Description
5		CML720i-T05- 2480.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		
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.		

Leuze

Notes

Observe intended use!

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

 $\ensuremath{^{\ensuremath{\Downarrow}}}$ The product may only be put into operation by competent persons.

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

	For UL applications:
A	 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
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

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	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

7/8

Leuze

Accessories

Leuze

Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
RR.	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
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
6	ଓ A li

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