

Technical data sheet Light curtain receiver Part no.: 50119213 CML730i-R05-320.R/CV-M12



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 eng • 2025-04-07

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Technical data

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Basic data

Series	730
Operating principle	Throughbeam principle
Device type	Receiver
Contains	Accessories for the use of the BT-2R1
Application	Detection of transparent objects
	Object measurement

Special version

Special version

Diagonal-beam scanning Parallel-beam scanning

Crossed-beam scanning

Optical data

Operating range	0.1 4.5 m		
Operating range	Guaranteed operating range		
Operating range, transparent media	0.1 1.75 m		
Operating range limit	0.1 6 m		
Operating range limit	Typical operating range		
Measurement field length	320 mm		
Number of beams	64 Piece(s)		
Beam spacing	5 mm		
Measurement data			
Minimum object diameter	10 mm		

Electrical data

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	 165 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	

Current

Analog output 2 Туре

	Inputs/outputs selectable 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: ≤ 4 V	
	emiening verage, inpute		
	Input/output 1		
	Activation/disable delay	1 ms	
-	ime behavior		
	eadiness delay	450 ms	
	ycle time	1 ms	
R	esponse time per beam	10 µs	
S	ervice interface		
т	/pe	IO-Link	
()	, he		
	IO-Link		
	Function	Configuration via software	
		Service	
_			
С	onnection		
N	umber of connections	2 Piece(s)	
PI	ug outlet	Rear side	
	Connection 1 Function		
	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	
	Ũ		
	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	
Μ	echanical data		
D	esign	Cubic	
	imension (W x H x L)	29 mm x 35.4 mm x 343 mm	
	ousing material	Metal	
	etal housing	Aluminum	
	ens cover material	Plastic	
N	et weight	600 g	
	ousing color	Silver	
-			

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Type of fastening

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Operation and display

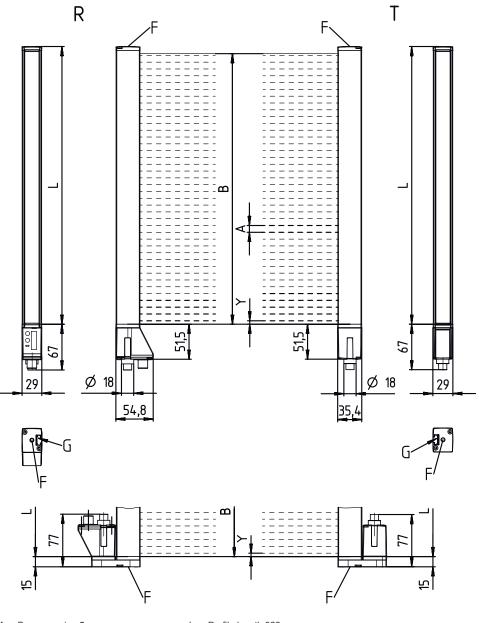
Type of display	LED	
	OLED display	
Number of LEDs	2 Piece(s)	
Type of configuration	Software	
	Teach-in	
Operational controls	Membrane keyboard	
Environmental data		
Ambient temperature, operation	-30 60 °C	
Ambient temperature, storage	-40 70 °C	
Certifications		
Degree of protection	IP 65	
Protection class	III	
Approvals	c UL US	
Approvais	0000	
Standards applied	IEC 60947-5-2	

Classification	
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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 320 mm
- F M6 thread

G

Fastening groove

L Profile length 328 mm

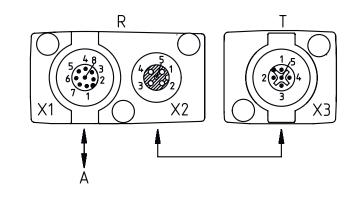
- T Transmitter
- R Receiver
- Y 2.5 mm

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Dimensioned drawings





A PWR / SW IN / OUT

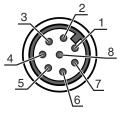
Electrical connection

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

•		
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
50118915	CML730i-T05-320.R- M12	Light curtain transmitter	Operating range: 0.1 4 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.

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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.

 $\ensuremath{\mathfrak{b}}$ 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	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

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Accessories



Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
ęr.	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
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
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to A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.