

Technical data sheet Light curtain receiver Part no.: 50119282 CML730i-R20-2870.R/CV-M12



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 changes

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 eng • 2025-04-03

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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	0.3 9.5 m
Operating range	Guaranteed operating range
Operating range, transparent media	0.3 3.5 m
Operating range limit	0.2 12 m
Operating range limit	Typical operating range
Measurement field length	2,870 mm
Number of beams	144 Piece(s)
Beam spacing	20 mm
Measurement data	

30 mm

Polarity reversal protection Chart airquit protostad

Minimum object diameter

Electrical data

Protective	circuit	

	Short circuit protected
	Transient protection
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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

Current

low: $\leq 4 \text{ V}$ Input/output 1 Activation/disable delay 1 ms **Time behavior** Readiness delay 450 ms Cycle time 1.59 ms Response time per beam 10 µs Service interface 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 Type Male Material Metal No. of pins 8 -pin Encoding A-coded **Connection 2** Connection to transmitter Function Type of connection Connector Thread size M12 Туре Female Material Metal No. of pins 5 -pin Encoding A-coded Mechanical data

100 mA 6.000 Ω

DC

DC

Typ. U_B / 0 V

high: ≥6V

Inputs/outputs selectable

Cubic Design Dimension (W x H x L) 29 mm x 35.4 mm x 2,903 mm Metal Housing material Aluminum Metal housing Lens cover material Plastic 2,950 g Net weight Housing color Silver Type of fastening Groove mounting Via optional mounting device

Analog output 2

Туре

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Inputs/outputs selectable Output current, max.

Number of inputs/outputs selectable 2 Piece(s)

Input resistance

Voltage type, outputs

Switching voltage, outputs Voltage type, inputs

Switching voltage, inputs

Туре

Туре

We reserve the right to make technical changes eng • 2025-04-03

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Operation and display

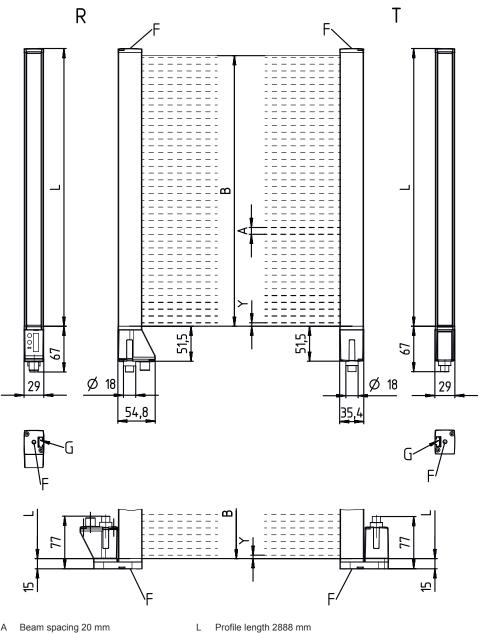
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Type of display	LED	
	OLED display	
Number of LEDs	2 Piece(s)	
Type of configuration	Software	
	Teach-in	
Operational controls	Membrane keyboard	
Environmental data		
Ambient temperature, operation	-30 60 °C	
Ambient temperature, storage	-40 70 °C	
Certifications		
Degree of protection	IP 65	
Protection class	III	
Approvals	c UL US	
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 20 mm А
- В Measurement field length 2870 mm
- F M6 thread G Fastening groove
- Transmitter
- Receiver
- R 5 mm Υ

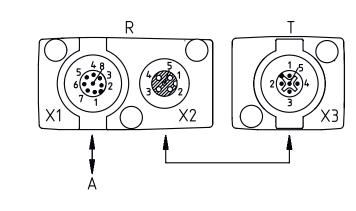
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Dimensioned drawings





A PWR / SW IN / OUT

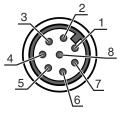
Electrical connection

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
50118983	CML730i-T20- 2870.R-M12	Light curtain transmitter	Operating range: 0.3 9.5 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
ZZ	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.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$ 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

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Accessories

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