

Technical data sheet Light curtain receiver Part no.: 50119283 CML730i-R40-290.R/CV-M12



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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	290 mm	
Number of beams	7 Piece(s)	
Beam spacing	40 mm	
Measurement data		

50 mm

Polarity reversal protection

Minimum object diameter

Electrical data

Protective circuit

	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	0 165 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	

Current

Analog output 2 Туре

Inputs/outputs selectable Output current, max. 100 mA 6.000 Ω Input resistance Number of inputs/outputs selectable 2 Piece(s) Inputs/outputs selectable Туре Voltage type, outputs DC Typ. U_B / 0 V Switching voltage, outputs Voltage type, inputs DC Switching voltage, inputs high: ≥6V low: $\leq 4 \text{ V}$ Input/output 1 Activation/disable delay 1 ms **Time behavior** Readiness delay 450 ms Cycle time 1 ms Response time per beam 10 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 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 Cubic Design Dimension (W x H x L) 29 mm x 35.4 mm x 343 mm Metal Housing material Metal housing Aluminum Lens cover material Plastic 600 g

> Silver Groove mounting Via optional mounting device

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Net weight Housing color

Type of fastening

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Operation and display

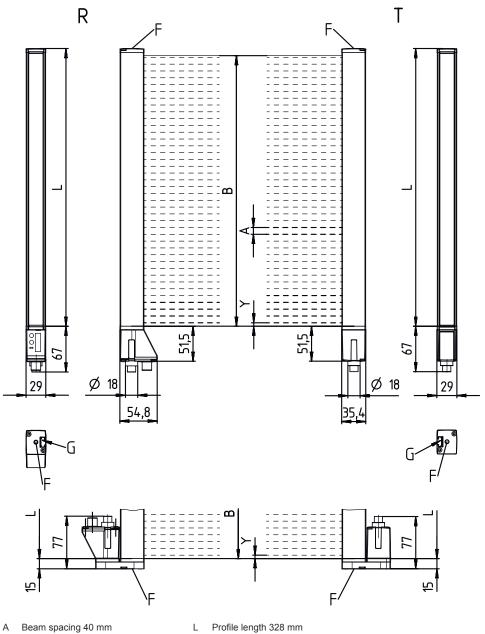
Type of display	LED
	OLED display
Number of LEDs	2 Piece(s)
Type of configuration	Software
	Teach-in
Operational controls	Membrane keyboard
Environmental data	
Ambient temperature, operation	-30 60 °C
Ambient temperature, operation Ambient temperature, storage	-30 60 °C -40 70 °C
Ambient temperature, storage	
Ambient temperature, storage	
Ambient temperature, storage	-40 70 °C
Ambient temperature, storage Certifications Degree of protection	-40 70 °C IP 65
Ambient temperature, storage Certifications Degree of protection Protection class	-40 70 °C IP 65 III

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



В

Fastening groove

- Measurement field length 290 mm
- F M6 thread

G

R Receiver

Т

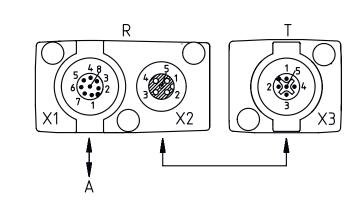
Υ 5 mm

Transmitter

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Dimensioned drawings





A PWR / SW IN / OUT

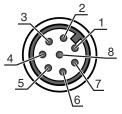
Electrical connection

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
50118984	CML730i-T40-290.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
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	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	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
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
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.