

Technical data sheet Light curtain receiver Part no.: 50118854 CML730i-R05-2960.A/CV-M12



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 eng • 2025-04-03

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Technical data

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Basic data

Basic data		
Series	730	
Operating principle	Throughbeam principle Receiver	
Device type		
Contains	2x BT-NC sliding block	
Application	Detection of transparent objects	
	Object measurement	
Special version		
Special version	Crossed-beam scanning	
	Diagonal-beam scanning	
	Parallel-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	2,960 mm	
Number of beams	592 Piece(s)	
Beam spacing	5 mm	
Measurement data		
Measurement data		
Minimum object diameter	10 mm	
Electrical data		
Protective circuit	Delerity reversel protection	
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	0 600 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		
Type	Analog output	
Current	0 24 mA	
Voltage	0 11 V	
Jonago	· · · · · · ·	
Analog output 1		
Туре	Voltage	
Analog output 2		
Туре	Current	

-		
	s/outputs selectable t current, max.	100 mA
-	resistance	6,000 Ω
	er of inputs/outputs selectable	,
	er of inputs/outputs selectable	
Type		Inputs/outputs selectable
-	e type, outputs	DC
	ning voltage, outputs	Typ. U _B / 0 V
-	e type, inputs	DC
Switch	ning voltage, inputs	high: ≥6V
		low: $\leq 4 \text{ V}$
	ut/output 1 ivation/disable delay	1 ms
ACI	Ivation/disable delay	11115
Time be	havior	
Readines	ss delay	450 ms
Cycle tim	10	6.07 ms
Respons	e time per beam	10 µs
•		
Service	interface	
Туре		IO-Link
IO-Lir		
Functi	on	Configuration via software
		Service
•		
Connec	tion	
Number	of connections	2 Piece(s)
Plug out	let	Axial
	ection 1	
Functi	on	Configuration interface
		Signal IN
		Signal OUT
		Voltage supply
		voltage supply
Туре с	of connection	Connector
Type of Thread		
		Connector
Thread Type Materi	d size al	Connector M12
Thread Type	d size al	Connector M12 Male
Thread Type Materi	d size al pins	Connector M12 Male Metal
Thread Type Materi No. of	d size al pins	Connector M12 Male Metal 8 -pin
Thread Type Materi No. of Encod	d size al pins ling ection 2	Connector M12 Male Metal 8 -pin A-coded
Thread Type Materi No. of Encod Conn Functi	d size al pins ling ection 2 on	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter
Thread Type Materi No. of Encod Conn Functi Type o	d size al pins ling ection 2 ion of connection	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter Connector
Thread Type Materi No. of Encod Conn Functi	d size al pins ling ection 2 ion of connection	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter Connector M12
Thread Type Materi No. of Encod Conn Functi Type o Thread Type	d size al pins ling ection 2 on of connection d size	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter Connector
Thread Type Materi No. of Encod Conn Functi Type of Thread Type Materi	d size al pins ling ection 2 ion of connection d size al	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter Connector M12
Thread Type Materi No. of Encod Conn Functi Type of Thread Type Materi No. of	d size al pins ection 2 on of connection d size al pins	Connector M12 Male Metal 8 -pin A-coded Connector to transmitter Connector M12 Female
Thread Type Materi No. of Encod Conn Functi Type of Thread Type Materi	d size al pins ection 2 on of connection d size al pins	Connector M12 Male Metal 8 -pin A-coded Connector to transmitter Connector M12 Female Metal
Thread Type Materi No. of Encod Conn Functi Type of Thread Type Materi No. of Encod	d size al pins ling ection 2 on of connection d size al pins ling	Connector M12 Male Metal 8 -pin A-coded Connector Connector M12 Female Metal 5 -pin
Thread Type Materi No. of Encod Conn Functi Type of Thread Type Materi No. of Encod	d size al pins ection 2 on of connection d size al pins	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter Connector M12 Female Metal 5 -pin A-coded
Thread Type Materi No. of Encod Conn Functi Type of Thread Type Materi No. of Encod	d size al pins ling ection 2 on of connection d size al pins ling ical data	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter Connector M12 Female Metal 5 -pin A-coded Cubic
Thread Type Materi No. of Encod Conn Functi Type Thread Type Materi No. of Encod	d size al pins ling ection 2 fon fconnection d size al pins ling ling ling ling ling lical data pon (W x H x L)	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter Connector M12 Female Metal 5 -pin A-coded Cubic 29 mm x 35.4 mm x 3,035 mm
Thread Type Materi No. of Encod Conn Functi Type of Thread Type Materi No. of Encod Mechan Design Dimensio Housing	d size al pins con ection 2 foon of connection d size al pins ling cical data	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter Connector M12 Female Metal 5 -pin A-coded Cubic 29 mm x 35.4 mm x 3,035 mm Metal
Thread Type Materi No. of Encod Conn Functi Type of Thread Type Materi No. of Encod Mechan Design Dimension Housing Metal housing	d size al pins con	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter Connector M12 Female Metal 5 -pin A-coded Cubic 29 mm x 35.4 mm x 3,035 mm Metal Aluminum
Thread Type Materi No. of Encod Conn Functi Type Thread Type Materi No. of Encod Mechan Design Dimensio Housing Metal hou	d size al pins ling ection 2 con of connection d size al pins ling cical data on (W x H x L) material using ver material	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter Connector M12 Female Metal 5 -pin A-coded Cubic 29 mm x 35.4 mm x 3,035 mm Metal Aluminum Plastic
Thread Type Materi No. of Encod Conn Functi Type of Thread Type Materi No. of Encod Mechan Dimension Housing Metal hous Lens cov Net weig	d size al pins ling ection 2 con of connection d size al pins ling cical data on (W x H x L) material using ver material ht	Connector M12 Male Metal 8 -pin A-coded Connector to transmitter Connector M12 Female Metal 5 -pin A-coded Cubic 29 mm x 35.4 mm x 3,035 mm Metal Aluminum Plastic 3,000 g
Thread Type Materi No. of Encod Conn Functi Type of Thread Type Materi No. of Encod Mechan Dimension Housing Metal housing Housing	d size al pins ling ection 2 con of connection d size al pins ling cical data on (W x H x L) material using ver material ht color	Connector M12 Male Metal 8 -pin A-coded Connection to transmitter Connector M12 Female Metal 5 -pin A-coded Cubic 29 mm x 35.4 mm x 3,035 mm Metal Aluminum Plastic 3,000 g Silver
Thread Type Materi No. of Encod Conn Functi Type of Thread Type Materi No. of Encod Mechan Dimensio Housing Metal housing Housing	d size al pins ling ection 2 con of connection d size al pins ling cical data on (W x H x L) material using ver material ht	Connector M12 Male Metal 8 -pin A-coded Connector to transmitter Connector M12 Female Metal 5 -pin A-coded Cubic 29 mm x 35.4 mm x 3,035 mm Metal Aluminum Plastic 3,000 g

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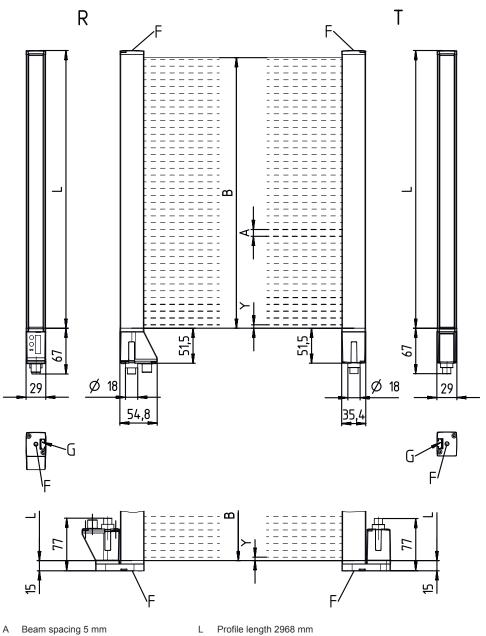
Operation and display

The second second second	
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 5 mm А
- В Measurement field length 2960 mm
- F M6 thread G
 - Fastening groove
- R Receiver

Т

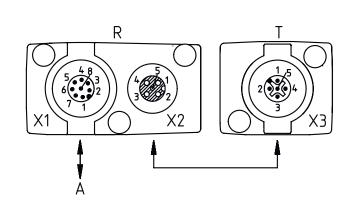
Transmitter

2.5 mm Υ

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Dimensioned drawings





A PWR / SW IN / OUT

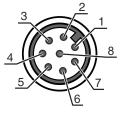
Electrical connection

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

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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
50118612	CML730i-T05- 2960.A-M12	Light curtain transmitter	Operating range: 0.1 4 m Connection: Connector, M12, Axial, 5 -pin

Part number code

Part designation: CML7XXi-YZZ-AAAA.BCCCDDD-EEEFFF

Operating principle Measuring light curtain
Series 720i: 720i series 730i: 730i series
Device type T: transmitter R: receiver
Beam spacing 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm
Measurement field length [mm], dependent on beam spacing
Equipment A: Axial connector outlet R: Rear connector outlet
Interface L: IO-Link /CN: CANopen /PB: PROFIBUS /PN: PROFINET /CV: Analog current and voltage output /D3: RS 485 Modbus
Special equipment -PS: Power Setting
Electrical connection M12: M12 connector
-EX: Explosion protection
th 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.

 ${\ensuremath{\,\textcircled{\tiny \ensuremath{\,\Downarrow}}}}$ 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
	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
P. A.	429393	BT-2HF	Mounting bracket set	Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

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Accessories

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