

Technical data sheet Light curtain receiver Part no.: 50118837 CML730i-R05-1600.A/CV-M12



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 changes

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 eng • 2025-04-03

Technical data

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Basic data

Basic data			
Series	730		
Operating principle	Throughbeam principle		
Device type	Receiver		
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	1,600 mm		
Number of beams	320 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	0 350 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.		
Outpute			
Outputs Number of analog outputs	2 Piece(s)		
Number of analog outputs	211606(3)		
Analog outputs			
Туре	Analog output		
Current	0 24 mA		
Voltage	0 11 V		
Analog output 1			
Туре	Voltage		
Analog output 2			
Туре	Current		

	Inputs/outputs selectable	
	Output current, max.	100 mA
	Input resistance	6,000 Ω
	Number of inputs/outputs selectable	2 Piece(s)
	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
	Input/output 1	
	Activation/disable delay	1 ms
	me behavior	
e	eadiness delay	450 ms
;)	vcle time	3.35 ms
e	esponse time per beam	10 µs
	and a state of a second	
(ervice interface	
y	ре	IO-Link
	IO-Link	
	Function	Configuration via software
		Service
	onnection	
	Sinection	
ι	Imber of connections	2 Piece(s)
	ug outlet	Axial
	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	Opposed in the last of the
	Function	Connection to transmitter
	Type of connection	Connector
	Thread size	M12
	Туре	Female
	Material	Metal
		5 -pin
	No. of pins	•
	No. of pins Encoding	A-coded
	Encoding	•
		•
•	Encoding echanical data ssign	•
•	Encoding echanical data	A-coded
)e	Encoding echanical data ssign	A-coded Cubic
De Di Ic	Encoding echanical data esign mension (W x H x L)	A-coded Cubic 29 mm x 35.4 mm x 1,675 mm
De Di Ho	Encoding echanical data esign mension (W x H x L) pusing material	A-coded Cubic 29 mm x 35.4 mm x 1,675 mm Metal
) i l //	Encoding echanical data esign mension (W x H x L) busing material etal housing	A-coded Cubic 29 mm x 35.4 mm x 1,675 mm Metal Aluminum
De Di lc .e	Encoding echanical data esign mension (W x H x L) busing material etal housing ms cover material	A-coded Cubic 29 mm x 35.4 mm x 1,675 mm Metal Aluminum Plastic
)e c c	Encoding echanical data esign mension (W x H x L) pusing material etal housing ins cover material et weight	A-coded Cubic 29 mm x 35.4 mm x 1,675 mm Metal Aluminum Plastic 1,750 g

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Operation and display

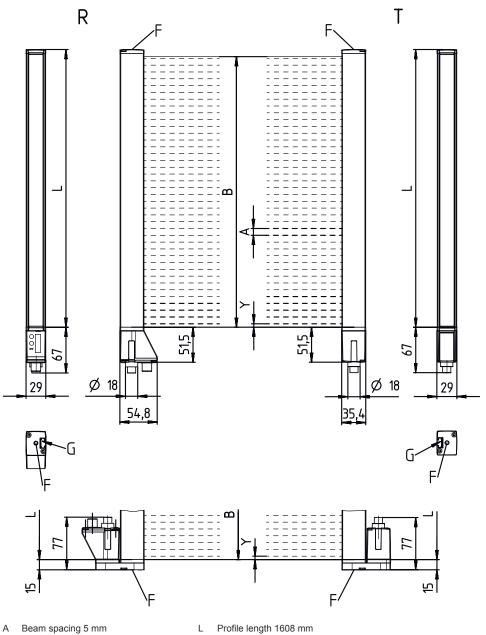
The second second second			
Type of display	LED		
	OLED display		
Number of LEDs	2 Piece(s)		
Type of configuration	Software		
	Teach-in		
Operational controls	Membrane keyboard		
Environmental data			
Ambient temperature, operation	-30 60 °C		
Ambient temperature, storage	-40 70 °C		
Certifications			
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

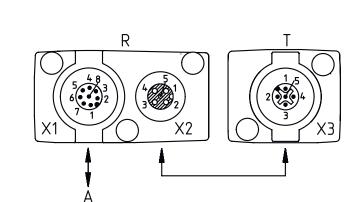


- Beam spacing 5 mm А
- В Measurement field length 1600 mm
- F M6 thread G Fastening groove
- Transmitter Т
- R Receiver
- 2.5 mm Υ

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Dimensioned drawings





A PWR / SW IN / OUT

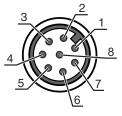
Electrical connection

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		

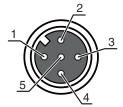


Connection 2

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

LED

2

ration and display			
	Display	Meaning	
	Green, continuous light	Operational readiness	
	Green, flashing	Teach / error	
	Yellow, continuous light	Light path free, with function reserve	
	Yellow, flashing	No function reserve	
	Off	Object detected	

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Suitable transmitters

 Part no.	Designation	Article	Description
50118595	CML730i-T05- 1600.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

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	FF -EX: Explosion protection			
Note	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.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$ 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	Solution A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.