# Leuze

## **Technical data sheet** Light curtain receiver Part no.: 50123402 CML730i-R10-2080.R/D3-M12



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## **Technical data**

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#### Basic data

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	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning
Optical data	
Operating range	Guaranteed operating range
Operating range	0.3 9.5 m
Operating range, transparent media	0.3 3.5 m
Operating range limit	Typical operating range
Operating range limit	0.2 12 m
Measurement field length	2,080 mm
Number of beams	208 Piece(s)
Beam spacing	10 mm
Measurement data	
Minimum object diameter	20 mm
Electrical data	
	Delerity reversel protection
Protective circuit	Polarity reversal protection
	Short circuit protected Transient protection
	Transient protection
Performance data	
Supply voltage U <sub>B</sub>	18 30 V, DC
Residual ripple	0 15 %, From U <sub>B</sub>
Open-circuit current	0 435 mA, The specified values refer
	to the entire package consisting of trans- mitter and receiver.
Inputs/outputs selectable	
Number of inputs/outputs selectable	
Type	Inputs/outputs selectable
Voltage type, outputs	
Switching voltage, outputs	Typ. U <sub>B</sub> / 0 V
Switching voltage, inputs	high: ≥6V low: ≤4V
	10.00. 24.0
Input/output 1	
Timing	
Cycle time	2.23 ms
Response time per beam	10 µs
Interface	
Туре	RS 485 Modbus
RS 485	
Function	Process
Service interface	
Туре	
iype	IO-Link

	IO-Link	
	Function	Configuration via software
		Service
0	onnection	
	umber of connections	2 Piece(s)
PI	ug outlet	Rear side
	Connection 1	
	Function	Configuration interface
		Connection to transmitter
		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	
	Function	BUS IN
		BUS OUT
	Type of connection	Connector
	Thread size	M12
	Туре	Female
	Material	Metal
	No. of pins	5 -pin
	Encoding	B-coded
м	echanical data	
	echanical data	Cubic
De	esign	Cubic
De Di	esign mension (W x H x L)	29 mm x 35.4 mm x 2,103 mm
De Di He	esign mension (W x H x L) ousing material	29 mm x 35.4 mm x 2,103 mm Metal
De Di He Me	esign mension (W x H x L) busing material etal housing	29 mm x 35.4 mm x 2,103 mm Metal Aluminum
De Di He Me	esign mension (W x H x L) ousing material etal housing ens cover material	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic
De Di He Me	esign mension (W x H x L) ousing material etal housing ens cover material et weight	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic 2,250 g
De Di He Le Ne	esign mension (W x H x L) ousing material etal housing ens cover material et weight ousing color	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic 2,250 g Silver
De Di He Le Ne	esign mension (W x H x L) ousing material etal housing ens cover material et weight	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic 2,250 g Silver Groove mounting
De Di He Le Ne	esign mension (W x H x L) ousing material etal housing ens cover material et weight ousing color	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic 2,250 g Silver
De Di He Le He Ty	esign mension (W x H x L) ousing material etal housing ens cover material et weight ousing color	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic 2,250 g Silver Groove mounting
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De Di He Le Ne Ho Ty	essign mension (W x H x L) busing material etal housing ens cover material et weight busing color rpe of fastening peration and display	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic 2,250 g Silver Groove mounting Via optional mounting device
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De Di Ho Ne Ho Ty O	esign mension (W x H x L) busing material etal housing ens cover material et weight busing color rpe of fastening peration and display	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic 2,250 g Silver Groove mounting Via optional mounting device
De Di Ho Ne Ho Ty O	esign mension (W x H x L) busing material etal housing ens cover material et weight busing color rpe of fastening peration and display rpe of display umber of LEDs	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic 2,250 g Silver Groove mounting Via optional mounting device
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	essign mension (W x H x L) busing material etal housing ens cover material etal weight busing color repe of fastening peration and display repe of display umber of LEDs repe of configuration perational controls	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic 2,250 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard
	essign mension (W x H x L) busing material etal housing ens cover material etal weight busing color rpe of fastening peration and display unber of LEDs rpe of configuration perational controls nvironmental data mbient temperature, operation	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic 2,250 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard
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De Di Ha Ne Ha Ty O Ty Nu Ty O I U E I An An Ca Pr	essign mension (W x H x L) busing material etal housing ens cover material et weight busing color repe of fastening peration and display unber of LEDs repe of display unber of LEDs repe of configuration perational controls nvironmental data mbient temperature, operation mbient temperature, storage ertifications egree of protection rotection class	29 mm x 35.4 mm x 2,103 mm Metal Aluminum Plastic 2,250 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C -40 70 °C
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## **Technical data**

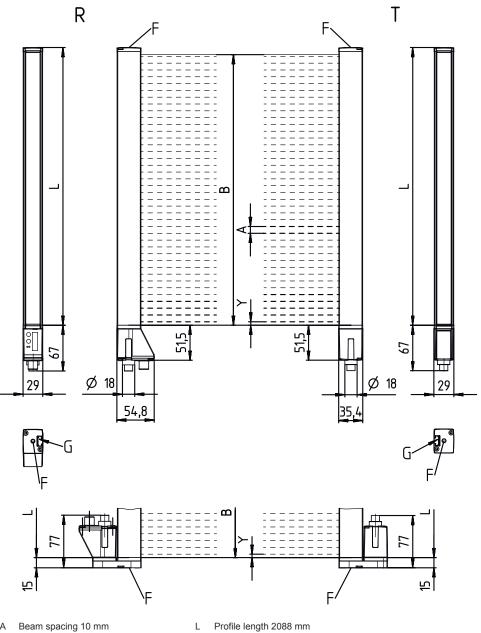
Customs tariff number	90314990
eCl@ss 5.1.4	27270910
eCl@ss 8.0	27270910
eCl@ss 9.0	27270910
eCl@ss 10.0	27270910
eCl@ss 11.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549

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#### **Dimensioned drawings**

All dimensions in millimeters



Beam spacing 10 mm А

Fastening groove

- В Measurement field length 2080 mm
- F M6 thread

G

Transmitter R Receiver

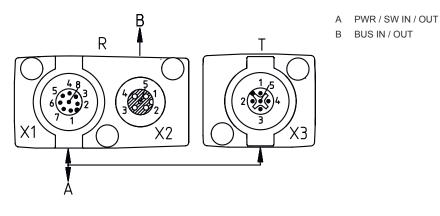
Т

5 mm Υ

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#### **Dimensioned drawings**





## **Electrical connection**

**Connection 1** 

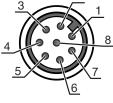
Function	Configuration interface
	Connection to transmitter
	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Туре	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

#### Pin Pin assignment

1	V+		
2	I/O 1		
3	GND		
4	IO-Link		
5	I/O 2		
6	RS 485 Tx+		
7	RS 485 Tx+		
8	FE/SHIELD		



Function	BUS IN
	BUS OUT
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	5 -pin
Encoding	B-coded



## **Electrical connection**

# Pin Pin assignment 1 V+ 2 Tx 3 PB GND 4 Tx+ 5 FE/SHIELD

## **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
50118960	CML730i-T10- 2080.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: connector outlet, axial 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

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#### Part number code



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DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection
	Note
A	<sup>t</sup> ⊗ A list with all available device types can be found on the Leuze website at www.leuze.com.

#### Notes

Observe intended use!
<ul> <li>This product is not a safety sensor and is not intended as personnel protection.</li> <li>The product may only be put into operation by competent persons.</li> <li>Only use the product in accordance with its intended use.</li> </ul>



#### For UL applications:

 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
50132079	KD U-M12-5A-V1- 050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

#### Connection technology - Y distribution cables

	Part no.	Designation	Article	Description
	50118183	K-Y1 M12A-5m- M12A-S-PUR	Interconnection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Female, A-coded, 8 -pin Shielded: Yes Cable length fork 1: 5,000 mm Cable length fork 2: 150 mm Sheathing material: PUR

#### Accessories

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	Part no.	Designation	Article	Description
	50123265	K-YPB M12A-5m- M12A-S-PUR	Interconnection cable	Suitable for interface: PROFIBUS DP Connection 1: Connector, M12, Axial, Male, B-coded, 5 -pin Connection 2: Cable with connector, M12, Axial, Female, B-coded, 5 -pin Connection 3: Cable with connector, M12, Axial, Male, B-coded, 5 -pin Shielded: Yes Sheathing material: PUR

#### Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
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

#### Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
ęę.	429046	BT-2R1	Mounting bracket set	Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

#### Services

	Part no.	Designation	Article	Description
y; U	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. Restrictions: No mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment.
	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. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure.

#### Note

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