

## **Technical data sheet** Light curtain receiver Part no.: 50123229 CML730i-R40-290.R/PB-M12



Leuze electronic GmbH + Co. KG

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### **Technical data**

# Leuze

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	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	
Minimum object diameter	50 mm
Electrical data	
Protective circuit	Polarity reversal protection
	Short circuit protected
	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	0 165 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.
Inputs/outputs selectable	400 4
Output current, max.	100 mA 6,000 Ω
Input resistance Number of inputs/outputs selectable	,
· ·	Inputs/outputs selectable
Type Voltage type, outputs	DC
Voltage type, outputs Switching voltage, outputs	Typ. U <sub>B</sub> / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	bc high: ≥6V
ownorming voltage, inputs	low: $\leq 4 \text{ V}$
Input/output 1	
Activation/disable delay	1 ms
-	
Time behavior	1 ms
Cycle time Response time per beam	
Response time per beam	10 µs
Interface	
Туре	PROFIBUS DP

Function	Process
ervice interface	
ype	IO-Link
<b>J</b> P0	
IO-Link	
Function	Configuration via software
	Service
Connection	
lumber of connections	2 Piece(s)
Plug outlet	Rear side
Connection 1	
Function	Configuration interface
	Connection to transmitter
	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
	M12
Thread size	M12 Male
Type	
Material	Metal 8. pin
No. of pins	8 -pin A-coded
Encoding	A-coded
Connection 2	
Function	BUS IN
1 unotion	BUS OUT
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	5 -pin
Encoding	B-coded
Encoding	Booded
lechanical data	
Design	Cubic
)imension (W x H x L)	29 mm x 35.4 mm x 343 mm
lousing material	Metal
letal housing	Aluminum
one cover material	Plastic
ens cover material	
let weight	600 g
let weight lousing color	Silver
let weight	Silver Groove mounting
let weight lousing color	Silver
let weight lousing color	Silver Groove mounting
let weight lousing color ype of fastening Operation and display	Silver Groove mounting Via optional mounting device
let weight lousing color ÿpe of fastening	Silver Groove mounting Via optional mounting device
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let weight lousing color ype of fastening Operation and display ype of display lumber of LEDs ype of configuration	Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in
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let weight lousing color iype of fastening Operation and display iype of display lumber of LEDs iype of configuration Operational controls	Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in

### **Technical data**

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#### Certifications

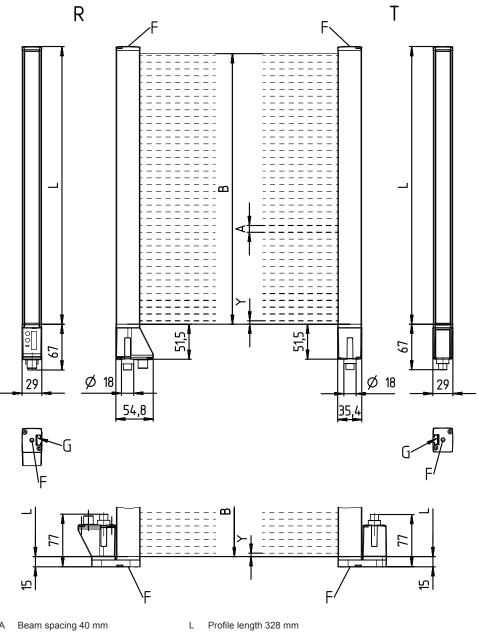
Degree of protection	IP 65
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

#### 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 40 mm А
- В Measurement field length 290 mm
- F M6 thread G Fastening groove
- R Receiver

Transmitter

Υ 5 mm

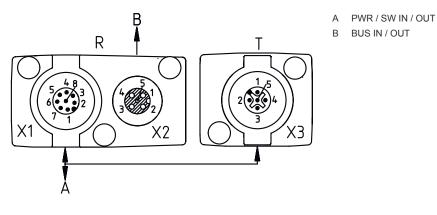
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#### **Dimensioned drawings**





## **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 V+ 1 2 Tx-3 PB GND 4 Tx+ 5 FE/SHIELD



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

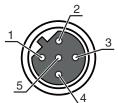
 Part no.	Designation	Article	Description
50118984	CML730i-T40-290.R- M12	Light curtain transmitter	Operating range: 0.3 9.5 m Connection: Connector, M12, Rear side, 5 -pin

#### 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





#### Part number code



DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection
	Note
A	S 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 Connector, LED: No 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

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#### Accessories

### 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

#### 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
с. С	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
6	☆ A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.