

# **Technical data sheet** Light curtain receiver

Part no.: 50123069

CML730i-R05-1120.R/PB-M12



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### **Technical data**



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Series	730
Operating principle	Throughbeam principle
Device type	Receiver
Contains	Accessories for the use of the BT-2R1
Application Detection of transparent ob	Detection of transparent objects
	Object measurement
Charles warning	

#### **Special version**

Special version	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning

#### **Optical data**

Operating range	Guaranteed operating range	
Operating range	0.1 4.5 m	
Operating range, transparent media	0.1 1.75 m	
Operating range limit	Typical operating range	
Operating range limit	0.1 6 m	
Measurement field length	1,120 mm	
Number of beams	224 Piece(s)	
Beam spacing	5 mm	

#### Measurement data

Minimum obje	ect diameter	10 mm
willing obje	ct diameter	10 1111

#### **Electrical data**

Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection

#### Performance data Supply voltage Un

Supply voltage U <sub>B</sub>	18 30 V, DC
Residual ripple	0 15 %, From U <sub>B</sub>
Open-circuit current	0 270 mA, The specific

ied values refer to the entire package consisting of transmitter and receiver.

#### 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 <sub>B</sub> / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥6V
	low: ≤4V

#### Input/output 1 Activation/disable delay

Response time per beam

Timing	
Cycle time	2.39 ms

10 µs

#### Interface

Tuno	DDOEIDI IC DD

PROFIBUS DP	Process	
Service interface		
Туре	IO-Link	
IO-Link		

Configuration via software

#### Connection

Function

Number of connections	2 Piece(s)
Plug outlet	Rear side

Service

Connection '	1
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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**

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

#### **Mechanical data**

Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 1,143 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	1,350 g
Housing color	Silver
Type of fastening	Groove mounting
	Via optional mounting device

#### 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, storage	-40 70 °C

## **Technical data**



#### Certifications

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

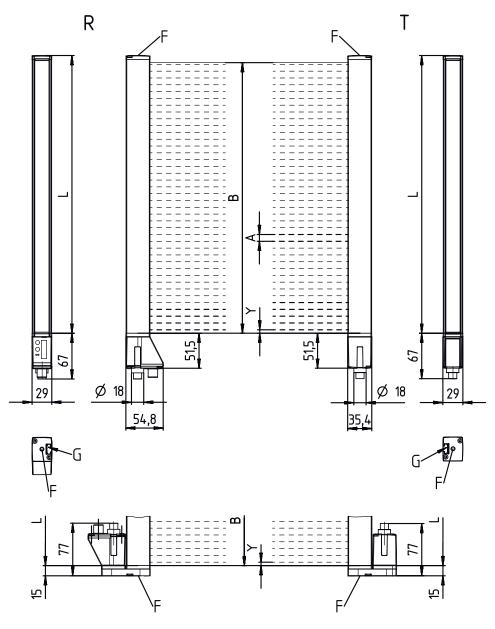
#### Classification

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
eCI@ss 11.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549

## **Dimensioned drawings**

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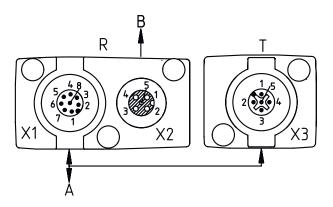
All dimensions in millimeters



- A Beam spacing 5 mm
- B Measurement field length 1120 mm
- F M6 thread
- G Fastening groove
- L Profile length 1128 mm
- T Transmitter
- R Receiver
- Y 2.5 mm

## **Dimensioned drawings**





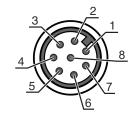
- A PWR / SW IN / OUT
- B BUS IN / OUT

## **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	1/0 1
3	GND
4	IO-Link
5	I/O 2
6	RS 485 Tx+
7	RS 485 Tx+
8	FE/SHIELD



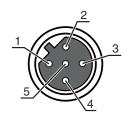
#### **Connection 2**

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

### **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
50118925	CML730i-T05- 1120.R-M12	Light curtain transmitter	Operating range: 0.1 4 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
Υ	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

### Part number code



DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection

#### Note



 $\$  A list with 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.
- by Only use the product in accordance with its intended use.

#### 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**



	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
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
QQ.	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

## Configuration devices

	Part no.	Designation	Article	Description
TIES .	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.  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.

### **Accessories**



#### Note



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