

# **Technical data sheet Light curtain receiver** Part no.: 50123068 CML730i-R05-1040.R/PB-M12



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### **Technical data**

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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		
Onestation			
Special version			
Special version	Crossed-beam scanning		
	Diagonal-beam scanning		
	Parallel-beam scanning		
Ontinal data			
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	1,040 mm		
Number of beams	208 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 <sub>B</sub>	18 30 V, DC		
Residual ripple	0 15 %, From U <sub>B</sub>		
Open-circuit current	0 270 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.		
Inputs/outputs selectable			
Output current, max.	100 mA		
Input resistance	6,000 Ω		
Number of inputs/outputs selectable			
Туре	Inputs/outputs selectable		
Voltage type, outputs	DC		
Switching voltage, outputs	Тур. U <sub>В</sub> / 0 V		
Voltage type, inputs	DC		
Switching voltage, inputs	high: ≥6V		
	low: ≤ 4 V		
Input/output 1			
Activation/disable delay	1 ms		
Time behavior			
Cycle time	2.23 ms		
Response time per beam	10 µs		
Interface			
Туре	PROFIBUS DP		
2 F -			

Function	Process
ervice interface	
/ре	IO-Link
IO-Link	
Function	Configuration via software
	Service
onnection	
umber of connections	2 Piece(s)
lug 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
Type Matorial	
Material	Metal
No. of pins	8 -pin A-coded
Encoding	A-coueu
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
echanical data	
	Outria
esign imension (W x H x L)	Cubic 29 mm x 35.4 mm x 1,063 mm
ousing material	Metal
etal housing	Aluminum
etal nousing ens cover material	Plastic
et weight	1,300 g Silver
ousing color	
vpe of fastening	Groove mounting Via optional mounting device
peration and display	
vpe of display	LED
	OLED display
umber of LEDs	2 Piece(s)
/pe of configuration	Software
	Teach-in
perational controls	Membrane keyboard
nvironmental data	
mbient temperature, operation	-30 60 °C

# **Technical data**

#### Certifications

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

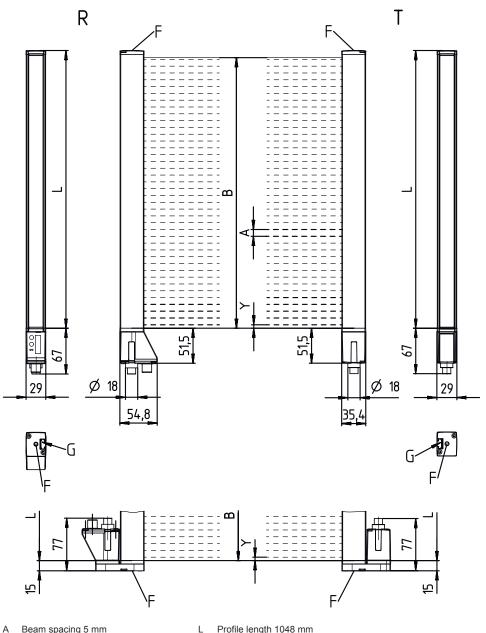
#### Classification

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 1040 mm
- F M6 thread G
  - Fastening groove
- Profile length 1048 mm
- Transmitter
- R Receiver

Т

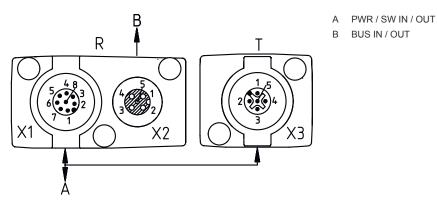
2.5 mm Υ

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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		



#### **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**

# PinPin assignment1V+2Tx-3PB GND4Tx+5FE/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
50118924	CML730i-T05- 1040.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
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	∜ 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
J.	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.