

## **Technical data sheet Light curtain receiver** Part no.: 50123084 CML730i-R05-1680.A/PB-M12



 Leuze electronic GmbH + Co. KG
 info@leuze.com • www.leuze.com
 changes

 The Sensor People
 In der Braike 1, D-73277 Owen/Germany
 Phone: +49 7021 573-0 • Fax: +49 7021 573-199
 eng • 2025-04-04

We reserve the right to make technical changes

#### **Technical data**

# Leuze

Process

IO-Link

Service

Configuration via software

**PROFIBUS DP** Function

Service interface

IO-Link Function

Connection

Туре

Series	730	
Operating principle	Throughbeam principle	
Device type	Receiver	
Contains	2x BT-NC sliding block	
Application	Detection of transparent objects	
	Object measurement	
Special version		
•	Crossed been seensing	
Special version	Crossed-beam scanning	
	Diagonal-beam scanning Parallel-beam scanning	
	r aranci bearr searring	
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	1,680 mm	
Number of beams	336 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	0 350 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	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: $\leq 4 \text{ V}$	
Input/output 1 Activation/disable delay	1 ms	
Time behavior		
Cycle time	3.51 ms	
Response time per beam	10 µs	
Interface		

Number of connections 2 Piece(s)		
Plug outlet	Axial	
Connection 1 Function	Configuration interface	
Function	Configuration interface Connection to transmitter	
	Signal IN	
	Signal OUT	
Truck of commonsting	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	
	5 -pin	
NO OT DIDS		
No. of pins Encoding	1	
No. of pins Encoding	B-coded	
Encoding	1	
Encoding Mechanical data	1	
Encoding Mechanical data Design	B-coded	
Encoding Mechanical data Design Dimension (W x H x L)	B-coded Cubic	
Encoding Mechanical data Design Dimension (W x H x L) Housing material	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver Groove mounting	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver Groove mounting	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver Groove mounting	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deration and display	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver Groove mounting Via optional mounting device	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deration and display Type of display	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver Groove mounting Via optional mounting device	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deperation and display Type of display Number of LEDs	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver Groove mounting Via optional mounting device	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deperation and display Type of display Number of LEDs	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s)	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deration and display Type of display Number of LEDs Type of configuration	B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deration and display Type of display Number of LEDs Type of configuration	B-coded B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in	
Encoding Mechanical data Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Operational controls	B-coded B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in	
•	B-coded B-coded Cubic 29 mm x 35.4 mm x 1,755 mm Metal Aluminum Plastic 1,800 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in	

PROFIBUS DP

### **Technical data**

#### Certifications

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

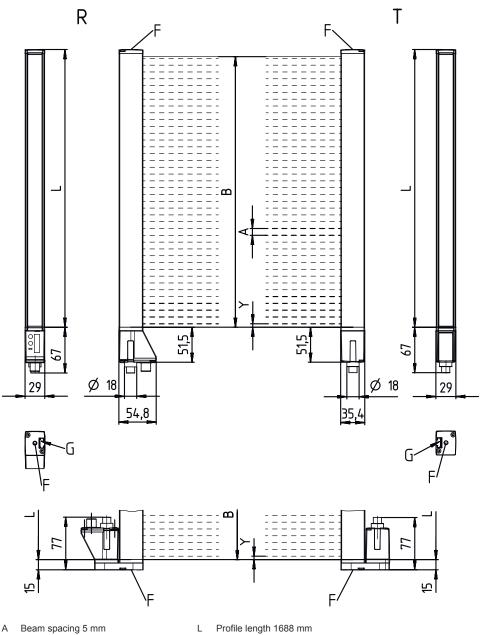
#### Classification

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

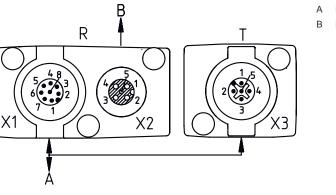


- Beam spacing 5 mm А
- В Measurement field length 1680 mm
- F M6 thread G Fastening groove
- Transmitter Т
- R Receiver
- 2.5 mm Υ

## Leuze

#### **Dimensioned drawings**





A PWR / SW IN / OUTB BUS IN / OUT

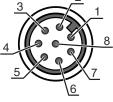
## **Electrical connection**

**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	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**

# 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
50118596	CML730i-T05- 1680.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



#### 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

# Leuze

## 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

#### Configuration devices

**Accessories** 

 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
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

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