

## Technical data sheet

### Light curtain receiver

Part no.: 50131842

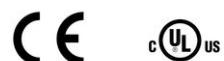
CML720i-R05-1040.A/PN-M12

#### Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Operation and display
- Suitable transmitters
- Part number code
- Notes
- Accessories



For illustration purposes only



## Technical data

### Basic data

Series	720
Operating principle	Throughbeam principle
Device type	Receiver
Contains	2x BT-NC sliding block
Application	Object measurement

### PROFINET

Function	Process
Conformance class	B
Protocol	PROFINET RT
Switch functionality	Integrated
Transmission speed	10 Mbit/s 100 Mbit/s

### Special version

Special version	Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning
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### Service interface

Type	IO-Link
IO-Link	Function Configuration via software Service

### Optical data

Measurement field length	1,040 mm
Number of beams	208 Piece(s)
Beam spacing	5 mm

### Connection

Number of connections	3 Piece(s)
Plug outlet	Axial

### Connection 1

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

### Connection 2

Function	BUS IN
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

### Connection 3

Function	BUS OUT
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

### Mechanical data

Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 1,115 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	1,250 g
Housing color	Silver
Type of fastening	Groove mounting Via optional mounting device

### Time behavior

Readiness delay	1,500 ms
Cycle time	6.64 ms
Response time per beam	30 µs

### Interface

Type	PROFINET
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## Technical data

### Operation and display

Type of display	LED
	OLED display
Number of LEDs	4 Piece(s)
Type of configuration	Software Teach-in

### Environmental data

Ambient temperature, operation	-30 ... 60 °C
Ambient temperature, storage	-40 ... 70 °C

### Certifications

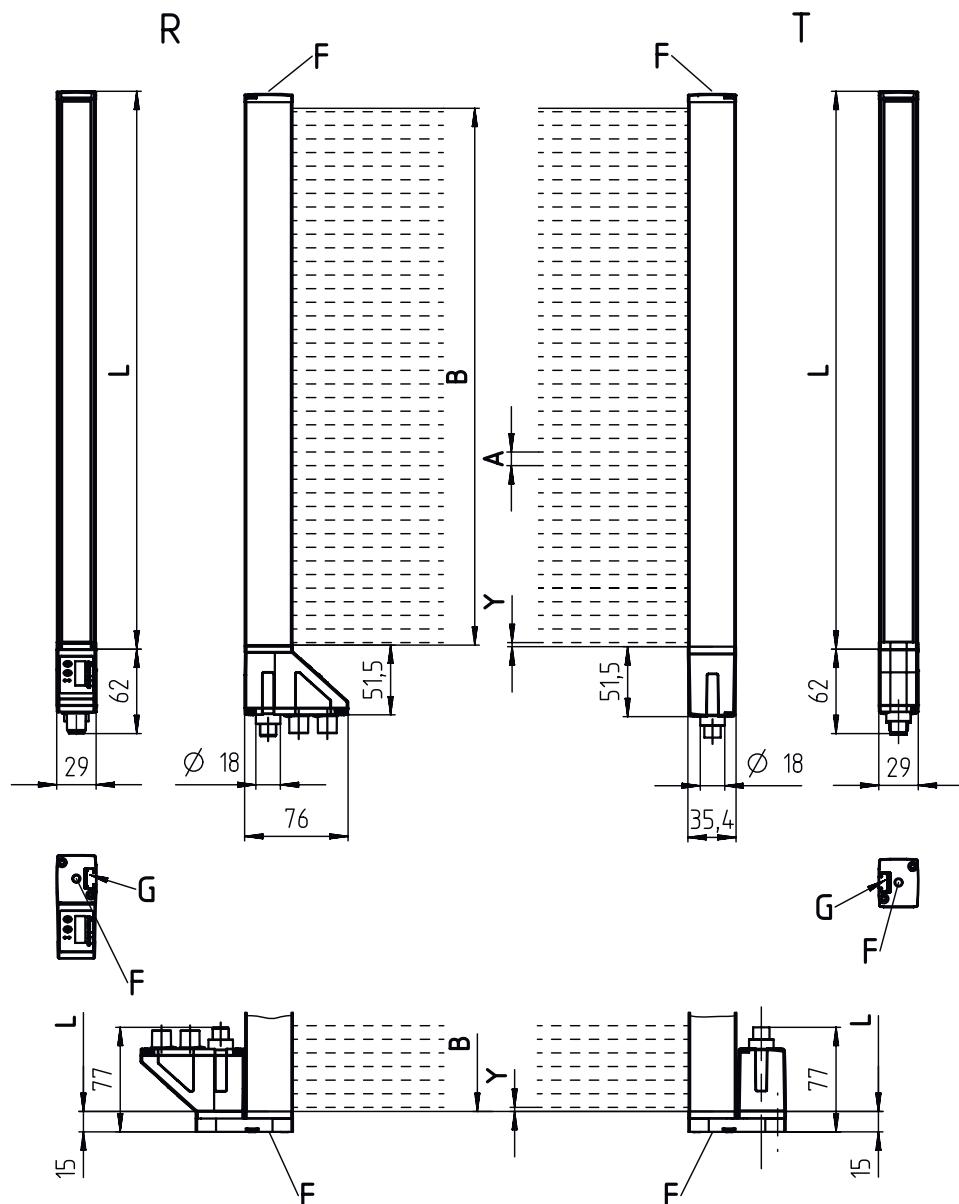
Degree of protection	IP 65
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

### Classification

Customs tariff number	90314990
<b>ECLASS 5.1.4</b>	27270910
<b>ECLASS 8.0</b>	27270910
<b>ECLASS 9.0</b>	27270910
<b>ECLASS 10.0</b>	27270910
<b>ECLASS 11.0</b>	27270910
<b>ECLASS 12.0</b>	27270910
<b>ECLASS 13.0</b>	27270910
<b>ECLASS 14.0</b>	27270910
<b>ECLASS 15.0</b>	27270910
<b>ETIM 5.0</b>	EC002549
<b>ETIM 6.0</b>	EC002549
<b>ETIM 7.0</b>	EC002549
<b>ETIM 8.0</b>	EC002549
<b>ETIM 9.0</b>	EC002549
<b>ETIM 10.0</b>	EC002549

## Dimensioned drawings

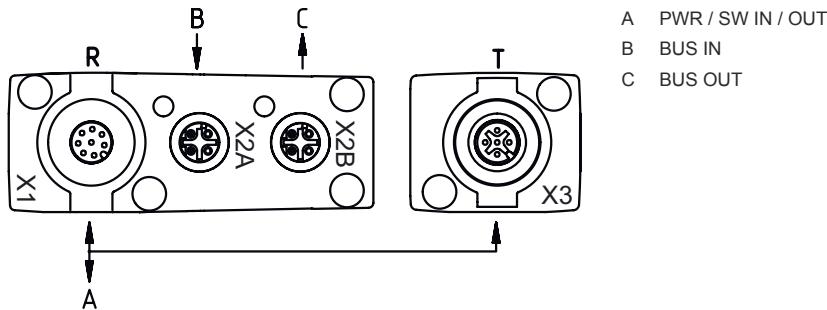
All dimensions in millimeters



A Beam spacing 5 mm  
 B Measurement field length 1040 mm  
 F M6 thread  
 G Fastening groove

L Profile length 1048 mm  
 T Transmitter  
 R Receiver  
 Y 2.5 mm

## Dimensioned drawings



## Electrical connection

## Connection 1

## X1

## Function

Configuration interface

Connection to transmitter

Signal IN

Signal OUT

Voltage supply

Connector

## Type of connection

## Thread size

M12

## Type

Male

## Material

Metal

## No. of pins

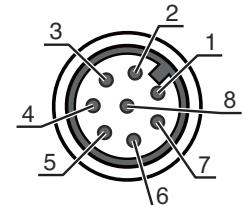
8 -pin

## 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 Rx+
8	FE/SHIELD



## Connection 2

## X2A

## Function

BUS IN

## Type of connection

Connector

## Thread size

M12

## Type

Female

## Material

Metal

## No. of pins

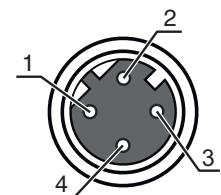
4 -pin

## Encoding

D-coded

## Pin Pin assignment

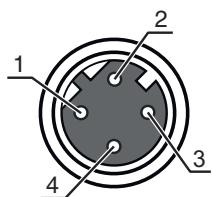
1	TD0+
2	RD0+
3	TD0-
4	RD0-



## Electrical connection

Connection 3	X2B
Function	BUS OUT
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

Pin	Pin assignment
1	TD0+
2	RD0+
3	TD0-
4	RD0-



## 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
3	Green, continuous light (at the X2A / X2B connector)	Link
4	Yellow, continuous light (at the X2A / X2B connector)	Activity

## Suitable transmitters

Part no.	Designation	Operating range Operating range limit	Description
	50119380 CML720i-T05-1040.A-M12	0.1 ... 3.5 m 0.1 ... 4.5 m	Operating range: 0.1 ... 3.5 m Connection: Connector, M12, Axial, 5 -pin

## Part number code

Part designation: CML7XXi-YZZ-AAAA.BCCCCDD-EEEEFF

<b>CML</b>	<b>Operating principle</b> Measuring light curtain
<b>7XXi</b>	<b>Series</b> 720i: 720i series 730i: 730i series
<b>Y</b>	<b>Device type</b> T: transmitter R: receiver
<b>ZZ</b>	<b>Beam spacing</b> 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm
<b>AAAA</b>	Measurement field length [mm], dependent on beam spacing

## Part number code

<b>B</b>	<b>Equipment</b> A: Axial connector outlet R: Rear connector outlet
<b>CCC</b>	<b>Interface</b> L: IO-Link /CN: CANopen /PB: PROFIBUS /PN: PROFINET /CV: Analog current and voltage output /D3: RS 485 Modbus
<b>DDD</b>	<b>Special equipment</b> -PS: Power Setting
<b>EEE</b>	<b>Electrical connection</b> M12: M12 connector
<b>FFF</b>	<b>-EX: Explosion protection</b>
<b>Note</b>	
	↳ A list with all available device types can be found on the Leuze website at <a href="http://www.leuze.com">www.leuze.com</a> .

## Notes

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

<b>For UL applications:</b>


## Accessories

### Connection technology - Connection cables

Part no.	Designation	Article	Description
	50132079	KD U-M12-5A-V1-050	Connection cable Application: Chemical resistant 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

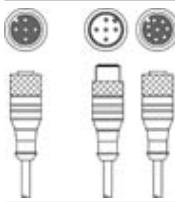
## Accessories

Part no.	Designation	Article	Description
	50135074 KS ET-M12-4A-P7-050	Connection cable	Application: Oil and lubricant resistant Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

## Connection technology - Interconnection cables

Part no.	Designation	Article	Description
	50135081 KSS ET-M12-4A-RJ45-A-P7-050	Interconnection cable	Application: Oil and lubricant resistant Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

## 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

## Mounting technology - Mounting brackets

Part no.	Designation	Article	Description
	50142900 BT 700M.5-2SET	Mounting device set	Contains: 2x mounting brackets, 1 teach template, 4 M6 x 10 screws 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

Part no.	Designation	Article	Description
	50121098 SET MD12-US2-IL1.1 + Zub.	Diagnostics set	Supply voltage: DC Interface: USB Connections: 2 Piece(s) Degree of protection: IP 20

## Accessories

### 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**

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