

# **Technical data sheet Light curtain transmitter**

Part no.: 50119454

CML720i-T05-480.R-M12



### Contents

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





### **Technical data**



### Basic data

Series	720
Operating principle	Throughbeam principle
Device type	Transmitter
Contains	Accessories for the use of the BT-2R1
Application	Object measurement
Special version	

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

### **Optical data**

Operating range	Guaranteed operating range
Operating range	0.1 3.5 m
Operating range limit	Typical operating range
Operating range limit	0.1 4.5 m
Measurement field length	480 mm
Number of beams	96 Piece(s)
Beam spacing	5 mm
Light source	LED, Infrared
LED light wavelength	940 nm

#### Measurement data

Minimum object diameter	10 mm
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### **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 transmitter and receiver.

### **Timing**

Readiness delay	450 ms
Cycle time	3.28 ms

### Connection

Number of connections	1 Piece(s)
Plug outlet	Rear side

#### Connection 1

Connection 1	
Function	Connection to receiver
	Sync-input
	Voltage supply
Type of connection	Connector
Thread size	M12
Туре	Male
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

### Mechanical data

Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 503 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	700 g
Housing color	Silver
Type of fastening	Groove mounting
	Via optional mounting device

### Operation and display

Type of display	LED
Number of LEDs	1 Piece(s)

### **Environmental data**

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

#### Certifications

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

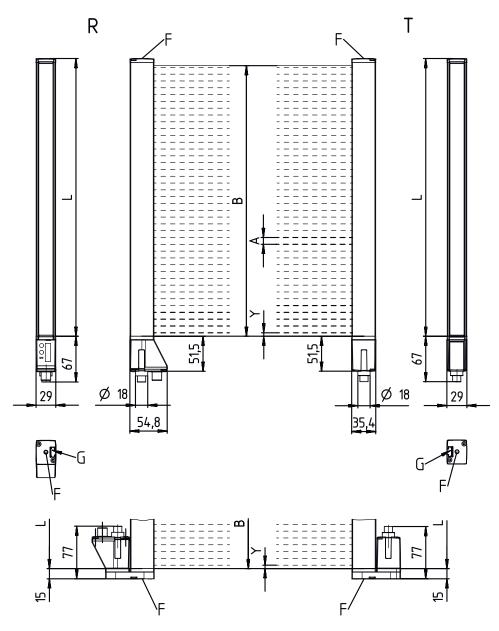
### Classification

Customs tariff number	90314990
eCI@ss 5.1.4	27270910
eCI@ss 8.0	27270910
eCI@ss 9.0	27270910
eCI@ss 10.0	27270910
eCI@ss 11.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549

## **Dimensioned drawings**



All dimensions in millimeters



- Beam spacing 5 mm
- В Measurement field length 480 mm
- M6 thread
- Fastening groove
- Profile length 488 mm
- Transmitter
- Receiver
- 2.5 mm



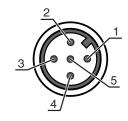
## **Electrical connection**



### **Connection 1**

Function	Connection to receiver
	Sync-input
	Voltage supply
Type of connection	Connector
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Pin	Pin assignment
1	FE/SHIELD
2	V+
3	GND
4	RS 485 Tx+
5	RS 485 Tx-



## **Operation and display**

LED	Display	Meaning
1	Green, continuous light	Continuous mode
	Off	No communication with the receiver / waiting for trigger
	green, flashing in sync with the measurement	Measurement frequency display

### Suitable receivers

	Part no.	Designation	Article	Description
	50119909	CML720i-R05-480.R/ CN-M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: CANopen Connection: Connector, M12, Rear side, 8 -pin
	50120127	CML720i-R05-480.R/ CV-M12	Light curtain receiver	Operating range: 0.1 3.5 m Analog outputs: 2 Piece(s), Voltage, Current Connection: Connector, M12, Rear side, 8 -pin
4	50123580	CML720i-R05-480.R/ D3-M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: RS 485 Modbus Connection: Connector, M12, Rear side, 8 -pin
	50119990	CML720i-R05-480.R/ L-M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: IO-Link Connection: Connector, M12, Rear side, 8 -pin

### Suitable receivers



Part no.	Designation	Article	Description
50122943	CML720i-R05-480.R/ PB-M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: PROFIBUS DP Connection: Connector, M12, Rear side, 8 -pin
50131901	CML720i-R05-480.R/ PN-M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: PROFINET Connection: Connector, M12, Rear side, 8 -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
<b>7</b> Z	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
DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection

### Note



### **Notes**





### Observe intended use!



- \$ This product is not a safety sensor and is not intended as personnel protection.
- \$ The product may only be put into operation by competent persons.
- 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 - Interconnection cables

	Part no.	Designation	Article	Description
	50129781	KDS DN-M12-5A- M12-5A-P3-050	Interconnection cable	Suitable for interface: IO-Link, DeviceNet, CANopen Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable length: 5,000 mm 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
EE.	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

### **Accessories**



## Configuration devices

	Part no.	Designation	Article	Description
IG	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.

### Note



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