

# **Technical data sheet Light curtain transmitter**

Part no.: 50119467

CML720i-T05-1520.R-M12



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### **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	1,520 mm
Number of beams	304 Piece(s)
Beam spacing	5 mm
Light source	LED, Infrared
LED light wavelength	940 nm

#### Measurement data

Minimum ol	ject 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	<ol> <li>350 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.</li> </ol>

### **Timing**

Readiness delay	450 ms
Cycle time	9.52 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 1,543 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	1,650 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

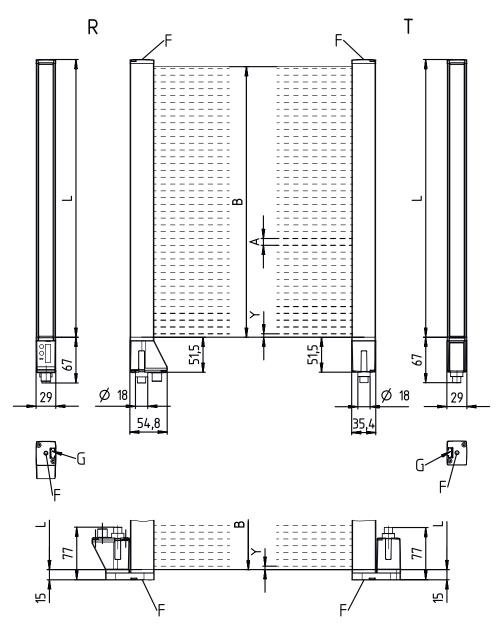
### Classification

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

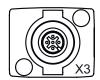
# **Dimensioned drawings**



All dimensions in millimeters



- A Beam spacing 5 mm
- B Measurement field length 1520 mm
- F M6 thread
- G Fastening groove
- L Profile length 1528 mm
- T Transmitter
- R Receiver
- Y 2.5 mm



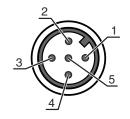
# **Electrical connection**



### **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

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
50119922	CML720i-R05- 1520.R/CN-M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: CANopen Connection: Connector, M12, Rear side, 8 -pin
50120140	CML720i-R05- 1520.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
50123593	CML720i-R05- 1520.R/D3-M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: RS 485 Modbus Connection: Connector, M12, Rear side, 8 -pin
50120057	CML720i-R05- 1520.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
1	50122893	CML720i-R05- 1520.R/PB-M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: PROFIBUS DP Connection: Connector, M12, Rear side, 8 -pin
	50131855	CML720i-R05- 1520.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	<b>Series</b> 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
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
(i)	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
IS	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.