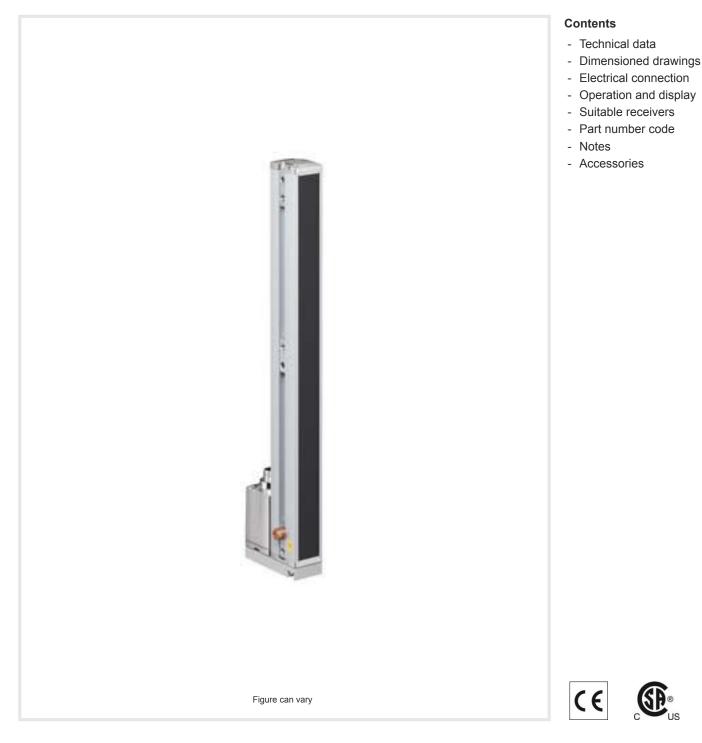
# **Technical data sheet Light curtain transmitter** Part no.: 50119505 CML720i-T20-150.R-M12





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We reserve the right to make technical changes eng • 2020-12-17

### **Technical data**

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#### Basic data

Basic data		Mechanical data
Series	720	Design
Operating principle	Throughbeam principle	Dimension (W x H x L)
Device type	Transmitter	Housing material
Contains	Accessories for the use of the BT-2R1	Metal housing
Application	Object measurement	Lens cover material
		Net weight
Special version		Housing color
Special version	Crossed-beam scanning	Type of fastening
	Diagonal-beam scanning	
	Parallel-beam scanning	Operation and displa
Optical data		Type of display
Operating range	Guaranteed operating range	Number of LEDs
Operating range	0.3 7 m	Enderse Attack
Operating range limit	Typical operating range	Environmental data
Operating range limit	0.2 9 m	Ambient temperature, o
Measurement field length	150 mm	Ambient temperature, s
Number of beams	8 Piece(s)	
Beam spacing	20 mm	Certifications
Light source	LED, Infrared	Degree of protection
LED light wavelength	940 nm	Protection class
Measurement data		Certifications
Minimum chiest dismotor	30 mm	Standards applied
Minimum object diameter	30 mm	Classification
Electrical data		Customs tariff number
Protective circuit	Polarity reversal protection	eCl@ss 5.1.4
	Short circuit protected	eCl@ss 8.0
	Transient protection	eCl@ss 9.0
		eCl@ss 10.0
Performance data		eCl@ss 11.0
Supply voltage U <sub>B</sub>	18 30 V, DC	ETIM 5.0
Residual ripple	0 15 %, From U <sub>B</sub>	ETIM 6.0
Open-circuit current	<ol> <li>135 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.</li> </ol>	ETIM 7.0
Timing		
Readiness delay	450 ms	
Cycle time	1 ms	
Connection		
Number of connections	1 Piece(s)	
Plug outlet	Rear side	
Connection 1		
Function	Connection to receiver	
	Sync-input	

Voltage supply

Connector

M12

Male Metal

5 -pin

A-coded

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Lens cover material	Plastic
Net weight	350 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
eCl@ss 5.1.4	27270910
eCl@ss 8.0	27270910
eCl@ss 9.0	27270910
eCl@ss 10.0	27270910
eCl@ss 11.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549 EC002549
	EC002549
ETIM 6.0	EC002549 EC002549

Cubic

Metal

Aluminum

29 mm x 35.4 mm x 183 mm

Type of connection

Thread size

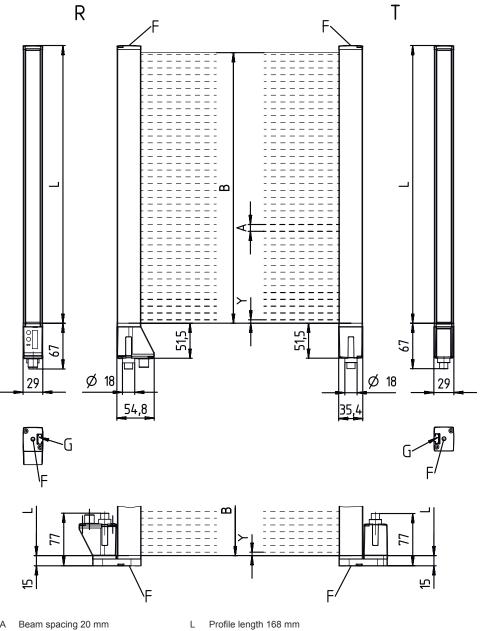
Туре

Material No. of pins

Encoding

### **Dimensioned drawings**

All dimensions in millimeters



Beam spacing 20 mm А

Fastening groove

- В Measurement field length 150 mm
- F M6 thread

G

R Receiver

Т

Υ 5 mm

Transmitter



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### **Electrical connection**

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#### **Connection 1**

Pin

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 assignment

1	FE/SHIELD	
2	V+	
3	GND	3
4	RS 485 Tx+	
5	RS 485 Tx-	



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
ł	50119959	CML720i-R20-150.R/ CN-M12	Light curtain receiver	Operating range: 0.3 7 m Interface: CANopen Connection: Connector, M12, Rear side, 8 -pin
	50120178	CML720i-R20-150.R/ CV-M12	Light curtain receiver	Operating range: 0.3 7 m Analog outputs: 2 Piece(s), Voltage, Current Connection: Connector, M12, Rear side, 8 -pin
	50123630	CML720i-R20-150.R/ D3-M12	Light curtain receiver	Operating range: 0.3 7 m Interface: RS 485 Modbus Connection: Connector, M12, Rear side, 8 -pin
	50120094	CML720i-R20-150.R/ L-M12	Light curtain receiver	Operating range: 0.3 7 m Interface: IO-Link Connection: Connector, M12, Rear side, 8 -pin

#### Suitable receivers

 Part no.	Designation	Article	Description
50123024	CML720i-R20-150.R/ PB-M12	Light curtain receiver	Operating range: 0.3 7 m Interface: PROFIBUS DP Connection: Connector, M12, Rear side, 8 -pin
50131957	CML720i-R20-150.R/ PN-M12	Light curtain receiver	Operating range: 0.3 7 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
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: 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	
	ist with all available device types can be found on the Leuze website at www.leuze.com.

#### Notes

#### Observe intended use!

✤ This product is not a safety sensor and is not intended as personnel protection.

 ${\ensuremath{\,\textcircled{\tiny \ensuremath{\,\Downarrow}}}}$  The product may only be put into operation by competent persons.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$  Only use the product in accordance with its intended use.

	For UL applications:
A	<ul> <li><sup>t</sup> For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).</li> <li><sup>t</sup> 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)</li> </ul>

#### 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
1.1. 1.1	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
ęł.	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

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#### Accessories

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