



the sensor people





Figure can vary

Part no.: 50119460 CML720i-T05-960.R-M12 Light curtain transmitter





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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
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	960 mm
Number of beams	192 Piece(s)
Beam spacing	5 mm
Light source	LED , Infrared
LED light wavelength	940 nm
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	0 270 mA , The specified values refer to the entire package con-
	sisting of transmitter and receiver.
Timing	
Readiness delay	450 ms
Cycle time	6.16 ms
Connection	
Number of connections	1 Piece(s)
Plug outlet	Rear side
Connection 1	
Function	Connection to receiver Sync-input Voltage supply
Type of connection	Connector
Thread size	M12
	M12 Male
Thread size	
Thread size Type	Male



Mechanical data	
Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 983 mm
Housing material	Metal , Aluminum
Lens cover material	Plastic
Net weight	1,150 g
Housing color	Silver
Type of fastening	Groove mounting Via optional mounting device
Operation and display	
	1.50
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

Classification	
Customs tariff number	90314990
eCl@ss 8.0	27270910
eCl@ss 9.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549

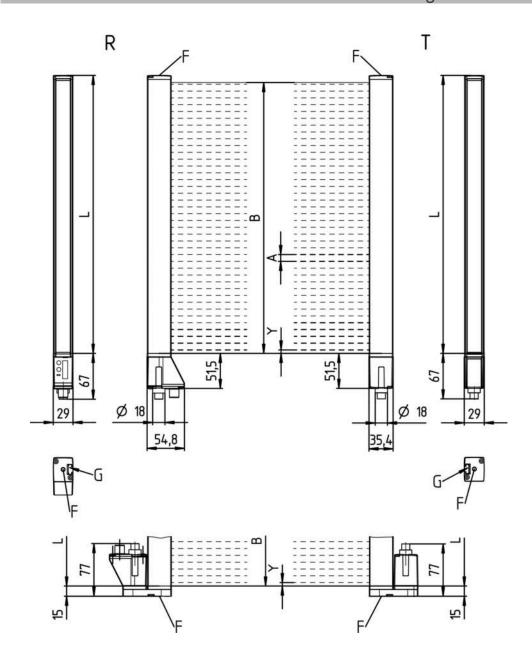
IEC 60947-5-2

### **Dimensioned drawings**

All dimensions in millimeters

Standards applied





- A Beam spacing 5 mm B Measurement field length 960 mm
- F M6 thread
- G Fastening groove
- L Profile length 968 mm
- T Transmitter
- R Receiver
- Y 2.5 mm

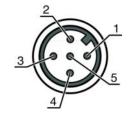




#### **Electrical connection**

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**

### **LEDs**

	LED	Display	Meaning
	1	Green, continuous light	Continuous mode
1		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
1	50119915	CML720i- R05-960.R/CN- M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: CANopen Connection: Connector, M12, Rear side, 8 -pin
4	50120133	CML720i- R05-960.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	50123586	CML720i- R05-960.R/ D3-M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: RS 485 Connection: Connector, M12, Rear side, 8 -pin



	Part no.	Designation	Article	Description
1	50119996	CML720i- R05-960.R/L-M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: IO-Link Connection: Connector, M12, Rear side, 8 -pin
4	50122959	CML720i- R05-960.R/PB- M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: PROFIBUS DP Connection: Connector, M12, Rear side, 8 -pin
	50131913	CML720i- R05-960.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
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
A list with all available device types can be found on the Leuze electronic website at www.leuze.com.



#### **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	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

# Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
EE,	429046	BT-2R1	Mounting bracket set	Contains: 2x BT-R swivel mount, 1 cylinder for mounting on the light curtain Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

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	Part no.	Designation	Article	Description
165	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 electronic website in the Download tab of the article detailed page.