



the sensor people





Figure can vary

Part no.: 50119453 CML720i-T05-400.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	400 mm		
Number of beams	80 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	0 165 mA , The specified values refer to the entire package con-		
	sisting of transmitter and receiver.		
Timing			
Readiness delay	450 ms		
Cycle time	2.8 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		
Type of connection Thread size	Connector M12		
Thread size	M12		
Thread size Type	M12 Male		



Mechanical data	
Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 423 mm
Housing material	Metal , Aluminum
Lens cover material	Plastic
Net weight	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	

90314990

27270910

27270910

EC002549

EC002549

### **Dimensioned drawings**

All dimensions in millimeters

Customs tariff number

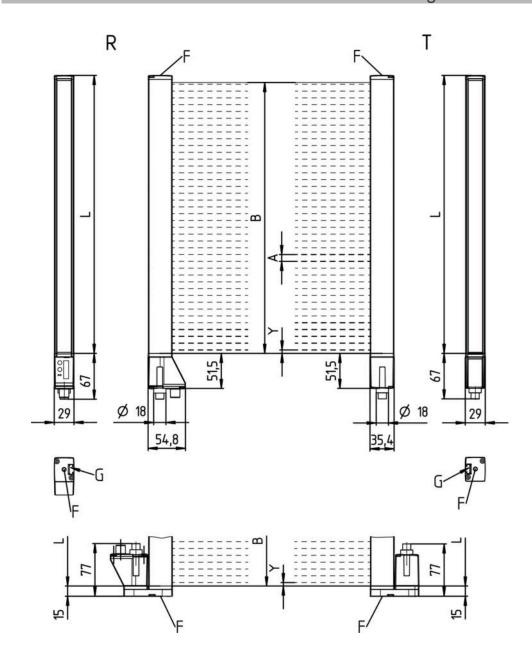
eCl@ss 8.0

eCl@ss 9.0

ETIM 5.0

ETIM 6.0





- A Beam spacing 5 mm B Measurement field length 400 mm
- F M6 thread
- G Fastening groove
- L Profile length 408 mm
- T Transmitter
- R Receiver
- Y 2.5 mm

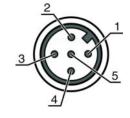




#### **Electrical connection**

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
	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
	50119908	CML720i- R05-400.R/CN- M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: CANopen Connection: Connector, M12, Rear side, 8 -pin
4	50120126	CML720i- R05-400.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
	50123579	CML720i- R05-400.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	50119989	CML720i- R05-400.R/L-M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: IO-Link Connection: Connector, M12, Rear side, 8 -pin
1	50122942	CML720i- R05-400.R/PB- M12	Light curtain receiver	Operating range: 0.1 3.5 m Interface: PRÖFIBUS DP Connection: Connector, M12, Rear side, 8 -pin
4	50131899	CML720i- R05-400.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					
Y	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					
ССС	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		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	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.