



the sensor people





Figure can vary

Part no.: 50119446 CML720i-T40-1890.A-M12 Light curtain transmitter





# **Contents**

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



### **Technical data**

Basic data		
Series Series	720	
Operating principle	Throughbeam principle	
Device type	Transmitter	
Contains	2x BT-NC sliding block	
Application	Object measurement	
h h - s - s -	- <b>.</b>	
Optical data		
Operating range	Guaranteed operating range	
Operating range	0.3 7 m	
Operating range limit	Typical operating range	
Operating range limit	0.2 9 m	
Measurement field length	1,890 mm	
Number of beams	48 Piece(s)	
Beam spacing	40 mm	
Light source	LED , Infrared	
LED light wavelength	940 nm	
Measurement data		
Minimum object diameter	50 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	0 350 mA , The specified values refer to the entire package con-	
	sisting of transmitter and receiver.	
Timing		
Readiness delay	450 ms	
Cycle time	1.84 ms	
Cycle line	1.04 1110	
Connection		
Number of connections	1 Piece(s)	
Plug outlet	Axial	
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	
140. 01 pil19	o p	



Mechanical data	
Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 1,995 mm
Housing material	Metal , Aluminum
Lens cover material	Plastic
Net weight	2,000 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	
Dograp of protection	ID 65

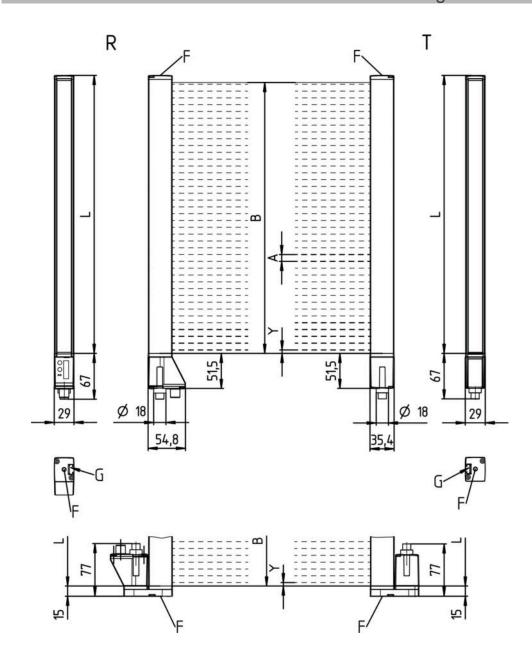
Certifications		
Degree of protection	IP 65	
Protection class	III	
Certifications	c CSA US	
Standards applied	IEC 60947-5-2	

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

### **Dimensioned drawings**

All dimensions in millimeters





- A Beam spacing 40 mm B Measurement field length 1890 mm
- F M6 thread
- G Fastening groove
- L Profile length 1928 mm
- T Transmitter
- R Receiver
- Y 5 mm

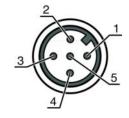




#### **Electrical connection**

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
50119684	CML720i- R40-1890.A/CN- M12	Light curtain receiver	Operating range: 0.3 7 m Interface: CANopen Connection: Connector, M12, Axial, 8 -pin
50119874	CML720i- R40-1890.A/CV- M12	Light curtain receiver	Operating range: 0.3 7 m Analog outputs: 2 Piece(s), Voltage, Current Connection: Connector, M12, Axial, 8 -pin
50123572	CML720i- R40-1890.A/ D3-M12	Light curtain receiver	Operating range: 0.3 7 m Interface: RS 485 Connection: Connector, M12, Axial, 8 -pin



Part no.	Designation	Article	Description
50119793	CML720i- R40-1890.A/L- M12	Light curtain receiver	Operating range: 0.3 7 m Interface: IO-Link Connection: Connector, M12, Axial, 8 -pin
50123051	CML720i- R40-1890.A/PB- M12	Light curtain receiver	Operating range: 0.3 7 m Interface: PROFIBUS DP Connection: Connector, M12, Axial, 8 -pin
50131990	CML720i- R40-1890.A/PN- M12	Light curtain receiver	Operating range: 0.3 7 m Interface: PROFINET Connection: Connector, M12, Axial, 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	
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 a	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	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

Leuze electronic GmbH + Co. KG, In der Braike 1, 73277 Owen Phone: +49 7021 573-0, Fax: +49 7021 573-199



	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.