SMART SENSOR BUSINESS

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Part no.: 50119508 CML720i-T20-630.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	0.3 7 m		
Operating range limit	Typical operating range		
Operating range limit	0.2 9 m		
Measurement field length	630 mm		
Number of beams	32 Piece(s)		
Beam spacing	20 mm		
Light source	LED , Infrared		
LED light wavelength	940 nm		
Measurement data			
Minimum object diameter	30 mm		
Electrical data			
Protective circuit	Polarity reversal protection Short circuit protected Transient protection		
Performance data			
Supply voltage UB	18 30 V , DC		
Residual ripple	0 15 % , From U _B		
Open-circuit current	0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver.		
Timing			
0			
Readiness delay	450 ms		
	450 ms 1.36 ms		
Cycle time			
Cycle time Connection	1.36 ms		
Cycle time Connection Number of connections	1.36 ms 1 Piece(s)		
Cycle time Connection Number of connections Plug outlet	1.36 ms		
Cycle time Connection Number of connections Plug outlet Connection 1	1.36 ms 1 Piece(s) Rear side		
Number of connections Plug outlet	1.36 ms 1 Piece(s)		
Cycle time Connection Number of connections Plug outlet Connection 1	1.36 ms 1 Piece(s) Rear side Connection to receiver Sync-input		
Cycle time Connection Number of connections Plug outlet Connection 1 Function	1.36 ms 1 Piece(s) Rear side Connection to receiver Sync-input Voltage supply		
Cycle time Connection Number of connections Plug outlet Connection 1 Function Type of connection	1.36 ms 1 Piece(s) Rear side Connection to receiver Sync-input Voltage supply Connector		
Cycle time Connection Number of connections Plug outlet Connection 1 Function Type of connection Thread size	1.36 ms 1 Piece(s) Rear side Connection to receiver Sync-input Voltage supply Connector M12		
Cycle time Connection Number of connections Plug outlet Connection 1 Function Type of connection Thread size Type	1.36 ms 1 Piece(s) Rear side Connection to receiver Sync-input Voltage supply Connector M12 Male		

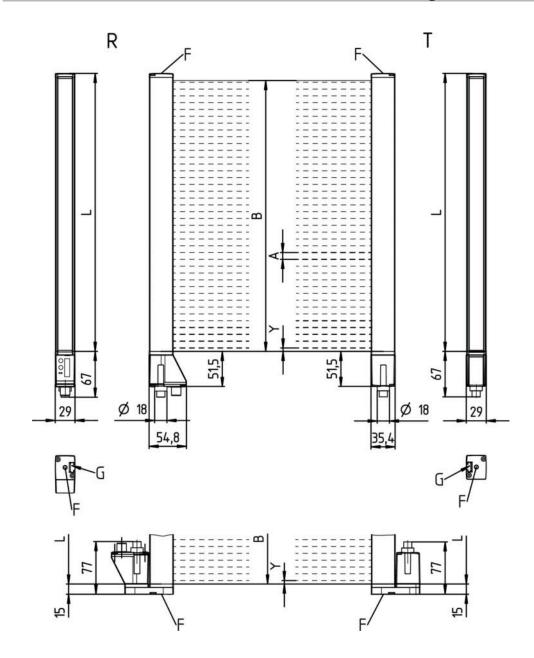
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Mechanical data			
Design	Cubic		
Dimension (W x H x L)	29 mm x 35.4 mm x 663 mm		
Housing material			
Lens cover material	Plastic		
Net weight	850 g		
Housing color	Silver		
Type of fastening	Groove mounting Via optional mounting device		
Operation 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			
Certifications	c CSA US		
Standards applied	IEC 60947-5-2		
	IEC 00947-3-2		
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

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A Beam spacing 20 mm B Measurement field length 630 mm

F M6 thread

G Fastening groove

L Profile length 648 mm

T Transmitter

R Receiver

Y 5 mm

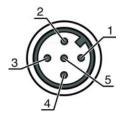


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Electrical connection

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
50119962	CML720i- R20-630.R/CN- M12	Light curtain receiver	Operating range: 0.3 7 m Interface: CANopen Connection: Connector, M12, Rear side, 8 -pin
50120181	CML720i- R20-630.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
50123633	CML720i- R20-630.R/ D3-M12	Light curtain receiver	Operating range: 0.3 7 m Interface: RS 485 Connection: Connector, M12, Rear side, 8 -pin

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Part no.	Designation	Article	Description
50120097	CML720i- R20-630.R/L-M12	Light curtain receiver	Operating range: 0.3 7 m Interface: IO-Link Connection: Connector, M12, Rear side, 8 -pin
50123036	CML720i- R20-630.R/PB- M12	Light curtain receiver	Operating range: 0.3 7 m Interface: PROFIBUS DP Connection: Connector, M12, Rear side, 8 -pin
50131981	CML720i- R20-630.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				
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.

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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
4 2 4 4 A	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
ę.	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
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.