

Technical data sheet Light curtain transmitter

Part no.: 50119519

CML720i-T20-2390.R-M12



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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
Special version	

Special version	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning

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	2,390 mm
Number of beams	120 Piece(s)
Beam spacing	20 mm
Light source	LED, Infrared
LED light wavelength	940 nm

Measurement data

Minimum object diameter	30 mn
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Electrical data

Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection
Performance data	
Supply voltage U _B	18 30 V, DC
Residual ripple	0 15 %, From U _B
Open-circuit current	0 435 mA, The specified values refer to the entire package consisting of transmitter and receiver.

Timing

Readiness delay	450 ms
Cycle time	4 ms

Connection

Number of connections	1 Piece(s)
Plug outlet	Rear side

Connection 1

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

Mechanical data

Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 2,423 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	2,450 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

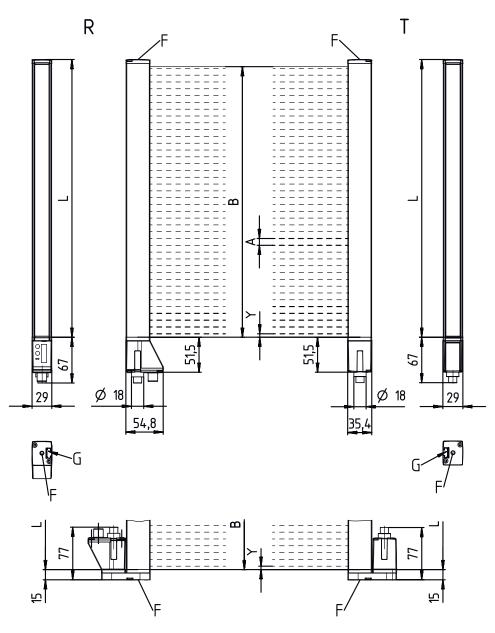
Classification

Customs tariff number	90314990
eCI@ss 5.1.4	27270910
eCI@ss 8.0	27270910
eCI@ss 9.0	27270910
eCI@ss 10.0	27270910
eCI@ss 11.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549

Dimensioned drawings



All dimensions in millimeters



- A Beam spacing 20 mm
- B Measurement field length 2390 mm
- F M6 thread
- G Fastening groove
- L Profile length 2408 mm
- T Transmitter
- R Receiver
- Y 5 mm



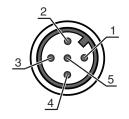
Electrical connection



Connection 1

Function	Connection to receiver
	Sync-input
	Voltage supply
Type of connection	Connector
Thread size	M12
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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

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
50119973	CML720i-R20- 2390.R/CN-M12	Light curtain receiver	Operating range: 0.3 7 m Interface: CANopen Connection: Connector, M12, Rear side, 8 -pin
50120192	CML720i-R20- 2390.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
50123644	CML720i-R20- 2390.R/D3-M12	Light curtain receiver	Operating range: 0.3 7 m Interface: RS 485 Modbus Connection: Connector, M12, Rear side, 8 -pin
50120109	CML720i-R20- 2390.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
50123030	CML720i-R20- 2390.R/PB-M12	Light curtain receiver	Operating range: 0.3 7 m Interface: PROFIBUS DP Connection: Connector, M12, Rear side, 8 -pin
50131969	CML720i-R20- 2390.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
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



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
(i)	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	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	Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

Accessories



Configuration devices

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