Technical data sheet
Light curtain transmitter
Part no.: 50119430
CML720i-T20-1270.A-M12

Figure can vary

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Operation and display
- Suitable receivers
- Part number code
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Technical data

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Basic data

Series	720
Operating principle	Throughbeam principle
Device type	Transmitter
Contains	2x BT-NC sliding block
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	1,270 mm
Number of beams	64 Piece(s)
Beam spacing	20 mm
Light source	LED, Infrared
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 U_B	18 ... 30 V, DC
Residual ripple	0 ... 15 %, From U_B
Open-circuit current	0 ... 270 mA, The specified values refer to the entire package consisting of transmitter and receiver.

Time behavior

Readiness delay	450 ms
Cycle time	2.32 ms

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
Type	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 1,355 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	1,400 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

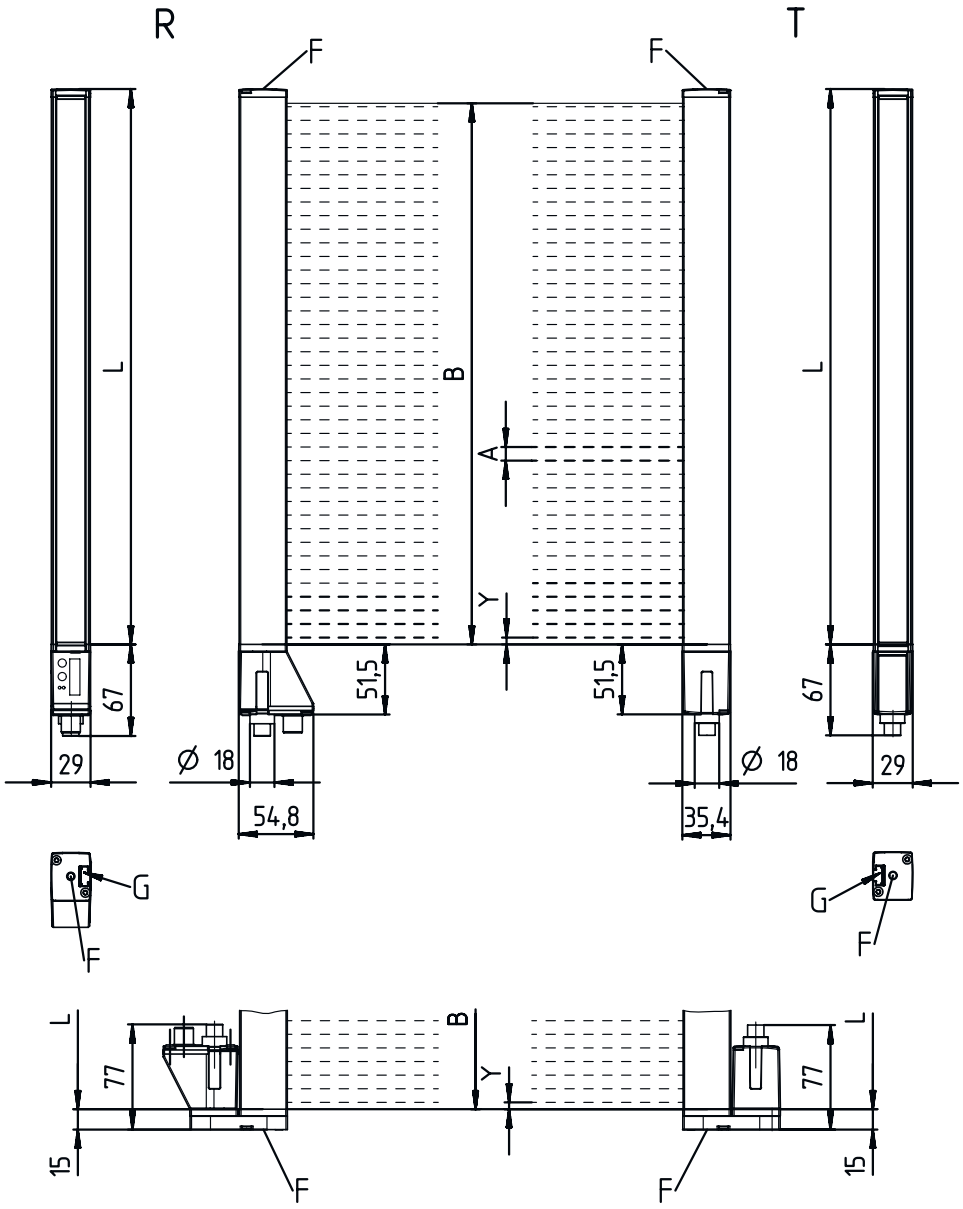
Degree of protection	IP 65
Protection class	III
Certifications	c CSA US
Standards applied	IEC 60947-5-2

Classification

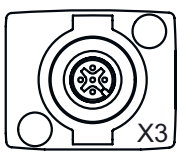
Customs tariff number	90314990
ECLASS 5.1.4	27270910
ECLASS 8.0	27270910
ECLASS 9.0	27270910
ECLASS 10.0	27270910
ECLASS 11.0	27270910
ECLASS 12.0	27270910
ECLASS 13.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549

Dimensioned drawings

All dimensions in millimeters



A	Beam spacing 20 mm	L	Profile length 1288 mm
B	Measurement field length 1270 mm	T	Transmitter
F	M6 thread	R	Receiver
G	Fastening groove	Y	5 mm

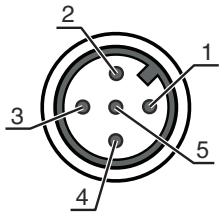


Electrical connection

Connection 1

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

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
	50119668	CML720i-R20-1270.A/CN-M12	Light curtain receiver	Operating range: 0.3 ... 7 m Interface: CANopen Connection: Connector, M12, Axial, 8 -pin
	50119858	CML720i-R20-1270.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
	50123556	CML720i-R20-1270.A/D3-M12	Light curtain receiver	Operating range: 0.3 ... 7 m Interface: RS 485 Modbus Connection: Connector, M12, Axial, 8 -pin
	50119777	CML720i-R20-1270.A/L-M12	Light curtain receiver	Operating range: 0.3 ... 7 m Interface: IO-Link Connection: Connector, M12, Axial, 8 -pin

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Suitable receivers

	Part no.	Designation	Article	Description
	50122992	CML720i-R20-1270.A/PB-M12	Light curtain receiver	Operating range: 0.3 ... 7 m Interface: PROFIBUS DP Connection: Connector, M12, Axial, 8 -pin
	50131952	CML720i-R20-1270.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
B	**Equipment** A: Axial connector outlet 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 website at www.leuze.com.

Notes

Observe intended use!

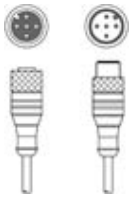
- This product is not a safety sensor and is not intended as personnel protection.
- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.

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: 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

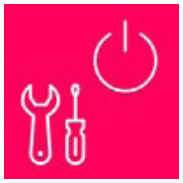
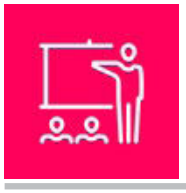
	Part no.	Designation	Article	Description
	50142900	BT 700M.5-2SET	Mounting device set	Design of mounting device: Bracket mounting Fastening, at system: Through-hole mounting, T slotted hole Mounting bracket, at device: Screw type, Sliding block Type of mounting device: Rigid Material: Steel

Configuration devices

	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

Accessories

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.