

Technical data sheet

Light curtain transmitter

Part no.: 50119451
CML720i-T05-240.R-M12

Contents

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- Dimensioned drawings
- Electrical connection
- Operation and display
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For illustration purposes only



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	0.1 ... 3.5 m
Operating range limit	0.1 ... 4.5 m
Measurement field length	240 mm
Number of beams	48 Piece(s)
Beam spacing	5 mm
Light source	LED, Infrared
Wavelength	940 nm

Measurement data

Minimum object diameter	10 mm
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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 ... 165 mA, The specified values refer to the entire package consisting of transmitter and receiver.

Time behavior

Readiness delay	450 ms
Cycle time	1.84 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
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 263 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	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

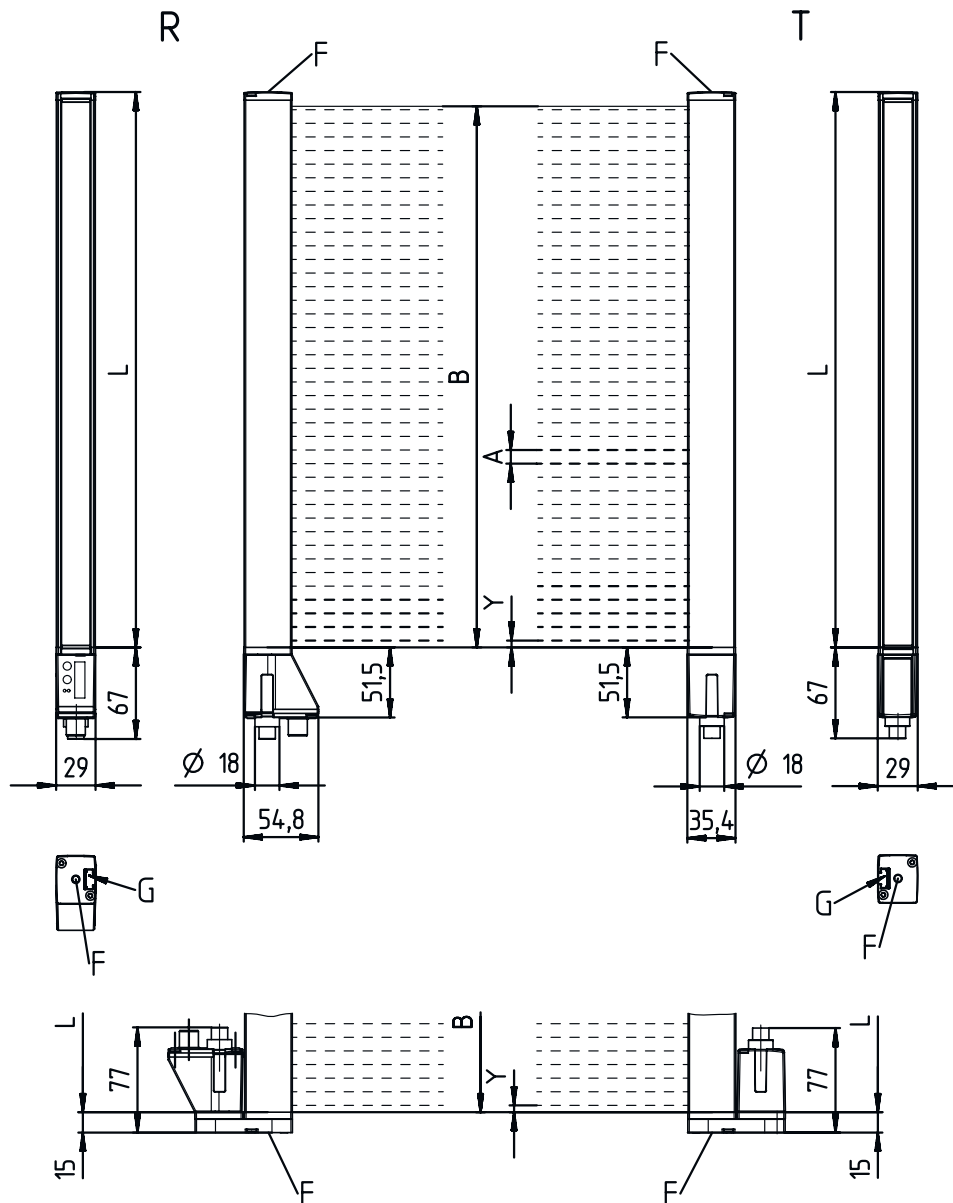
Degree of protection	IP 65
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

Classification

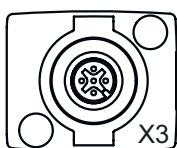
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ECLASS 15.0	27270910
ECLASS 16.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549
ETIM 10.0	EC002549

Dimensioned drawings

All dimensions in millimeters



- | | | | |
|---|---------------------------------|---|-----------------------|
| A | Beam spacing 5 mm | L | Profile length 248 mm |
| B | Measurement field length 240 mm | T | Transmitter |
| F | M6 thread | R | Receiver |
| G | Fastening groove | Y | 2.5 mm |



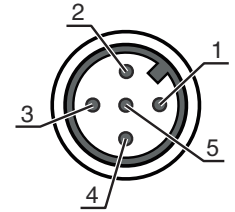
Electrical connection

Connection 1

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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	Operating range Operating range limit	Description
	50119906	CML720i-R05-240.R/ CN-M12	0.1 ... 3.5 m 0.1 ... 4.5 m	Interface: CANopen Connection: Connector, M12, Rear side, 8 -pin
	50120124	CML720i-R05-240.R/ CV-M12	0.1 ... 3.5 m 0.1 ... 4.5 m	Analog outputs: 2 Piece(s), Voltage, Current Connection: Connector, M12, Rear side, 8 -pin
	50123577	CML720i-R05-240.R/ D3-M12	0.1 ... 3.5 m 0.1 ... 4.5 m	Interface: RS 485 Modbus Connection: Connector, M12, Rear side, 8 -pin
	50119987	CML720i-R05-240.R/ L-M12	0.1 ... 3.5 m 0.1 ... 4.5 m	Interface: IO-Link Connection: Connector, M12, Rear side, 8 -pin

Suitable receivers

	Part no.	Designation	Operating range Operating range limit	Description
	50122925	CML720i-R05-240.R/ PB-M12	0.1 ... 3.5 m 0.1 ... 4.5 m	Interface: PROFIBUS DP Connection: Connector, M12, Rear side, 8 -pin
	50131879	CML720i-R05-240.R/ PN-M12	0.1 ... 3.5 m 0.1 ... 4.5 m	Interface: PROFINET Connection: Connector, M12, Rear side, 8 -pin

Part number code

Part designation: CML7XXi-YYY-AAAA.BCCDDDD-EEEEFF

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.

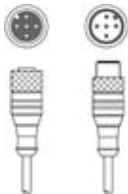
For UL applications:



- ⚠ 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	Application: Oil and lubricant resistant 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	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
	429029	BT-2RG	Mounting bracket set	Contains: 2x BT-R swivel mount, 2 cylinders 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

Accessories

Configuration devices

	Part no.	Designation	Article	Description
	50121098	SET MD12-US2-IL1.1 + Zub.	Diagnostics set	Supply voltage: DC 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.
	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.

Note



🔗 A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.