



the sensor people





Figure can vary

Part no.: 50122968 CML720i-R10-1440.R/PB-M12 Light curtain receiver





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Technical data

Series Operating principle Device type Contains Application Special design Special design	720 Throughbeam principle Receiver Accessories for the use of the BT-2R1 Object measurement Crossed-beam scanning Diagonal-beam scanning
Operating principle Device type Contains Application Special design	Throughbeam principle Receiver Accessories for the use of the BT-2R1 Object measurement Crossed-beam scanning
Device type Contains Application Special design	Receiver Accessories for the use of the BT-2R1 Object measurement Crossed-beam scanning
Contains Application Special design	Accessories for the use of the BT-2R1 Object measurement Crossed-beam scanning
Application Special design	Object measurement Crossed-beam scanning
Special design	Crossed-beam scanning
	Crossed-beam scanning Diagonal-beam scanning
Special design	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	1,440 mm
Number of beams	144 Piece(s)
Beam spacing	10 mm
Measurement data	
Minimum object diameter	20 mm
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	350 mA , The specified values refer to the entire package consisting of transmitter and receiver.
Inputs/outputs selectable	
Output current, max.	100 mA
Input resistance	6,000 Ω
Number of inputs/outputs selectable	2 Piece(s)
Туре	Inputs/outputs selectable
Voltage type, outputs	DC
Switching voltage, outputs	Typ. U _B / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥6V low: ≤4V
Input/output 1	
Activation/disable delay	1 ms
Timing	
Timing	4.72 ms
Cycle time	7.16 1110



Interface	PROFIRM PR		
Туре	PROFIBUS DP		
PROFIBUS DP	Description		
Function	Process		
Service interface	المال		
Туре	IO-Link		
IO-Link	Configuration via coffware		
Function	Configuration via software Service		
Connection			
Number of connections	2 Piece(s)		
Plug outlet	Rear side		
Connection 1			
Function	Configuration interface		
	Connection to transmitter Signal IN		
	Signal OUT		
Type of connection	Voltage supply		
Type of connection	Connector		
Thread size	M12 Male		
Type			
Material	Metal		
No. of pins Encoding	8 -pin A-coded		
Connection 2	A-coueu		
Function	BUS IN		
Tunction	BUS OUT		
Type of connection	Connector		
Thread size	M12		
Туре	Female		
Material	Metal		
No. of pins	5 -pin		
Encoding	B-coded		
Mechanical data			
Design	Cubic		
Dimension (W x H x L)	29 mm x 35.4 mm x 1,463 mm		
Housing material	Metal , Aluminum		
Lens cover material	Plastic		
Net weight	1,650 g		
Housing color	Silver		
Type of fastening	Groove mounting Via optional mounting device		
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Operation and display			
Type of display	LED OLED display		
Number of LEDs	2 Piece(s)		
Type of configuration	Software Teach-in		
Operational controls	Membrane keyboard		
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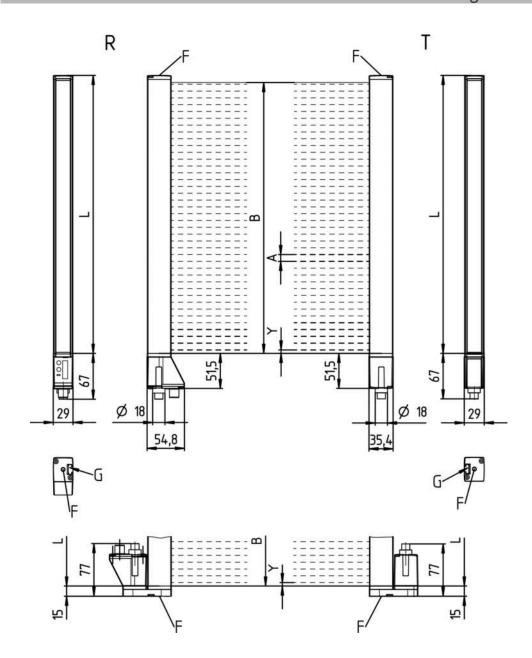


Environmental data				
Ambient temperature, operation	-30 60 °C	-30 60 °C		
Ambient temperature, storage	-40 70 °C	-40 70 °C		
Certifications				
Degree of protection	IP 65			
Protection class	III	III		
Certifications	c CSA US			
Standards applied	IEC 60947-5-2	IEC 60947-5-2		
Classification				
Customs tariff number	90314990			
eCl@ss 8.0	27270910	27270910		
eCl@ss 9.0	27270910	27270910		
ETIM 5.0	EC002549	EC002549		
ETIM 6.0	EC002549	EC002549		

Dimensioned drawings

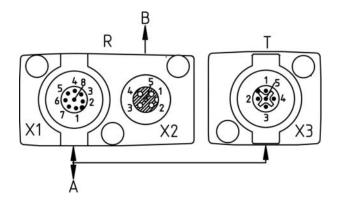
All dimensions in millimeters





- A Beam spacing 10 mm B Measurement field length 1440 mm
- F M6 thread
- G Fastening groove
- L Profile length 1448 mm
- T Transmitter
- R Receiver
- Y 5 mm



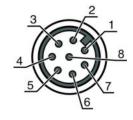


A PWR / SW IN/OUT B BUS IN / OUT

Electrical connection

Connection 1		
Function	Configuration interface Connection to transmitter Signal IN Signal OUT Voltage supply	
Type of connection	Connector	
Thread size	M12	
Туре	Male	
Material	Metal	
No. of pins	8 -pin	
Encoding	A-coded	

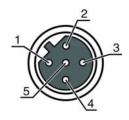
Pin	Pin assignment
1	V+
2	I/O 1
3	GND
4	IO-Link
5	I/O 2
6	RS 485 Tx+
7	RS 485 Tx+
8	FE/SHIELD



Connection 2	
Function	BUS IN BUS OUT
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	5 -pin
Encoding	B-coded



Pin	Pin assignment
1	V+
2	Tx-
3	PB GND
4	Tx+
5	FE/SHIELD



Operation and display

LEDs

LED	Display	Meaning
1	Green, continuous light	Operational readiness
	Green, flashing	Teach / error
		Measurement frequency display
2	Yellow, continuous light	Light path free, with function reserve
	Yellow, flashing	No function reserve
	Off	Object detected

Suitable transmitters

Part no.	Designation	Article	Description
50119495	CML720i- T10-1440.R-M12	Light curtain transmitter	Operating range: 0.3 6 m Connection: Connector, M12, Rear side, 5 -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.

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 - Connection cables

Part no.	Designation	Article	Description
50132079	KD U-M12-5A- V1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

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Connection technology - Y distribution cables

	Part no.	Designation	Article	Description
	50118183	K-Y1 M12A-5m- M12A-S-PUR	Interconnection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Female, A-coded, 8 -pin Shielded: Yes Cable length fork 1: 5,000 mm Cable length fork 2: 150 mm Sheathing material: PUR
	50123265	K-YPB M12A-5m- M12A-S-PUR	Interconnection cable	Suitable for interface: PROFIBUS DP Connection 1: Connector, M12, Axial, Male, B-coded, 5 -pin Connection 2: Connector, M12, Axial, Female, B-coded, 5 -pin Connection 3: Connector, M12, Axial, Male, B-coded, 5 -pin Shielded: Yes Cable length fork 1: 5,000 mm Cable length fork 2: 250 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	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

	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.

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Part no.	Designation	Article	Description
\$981005	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.