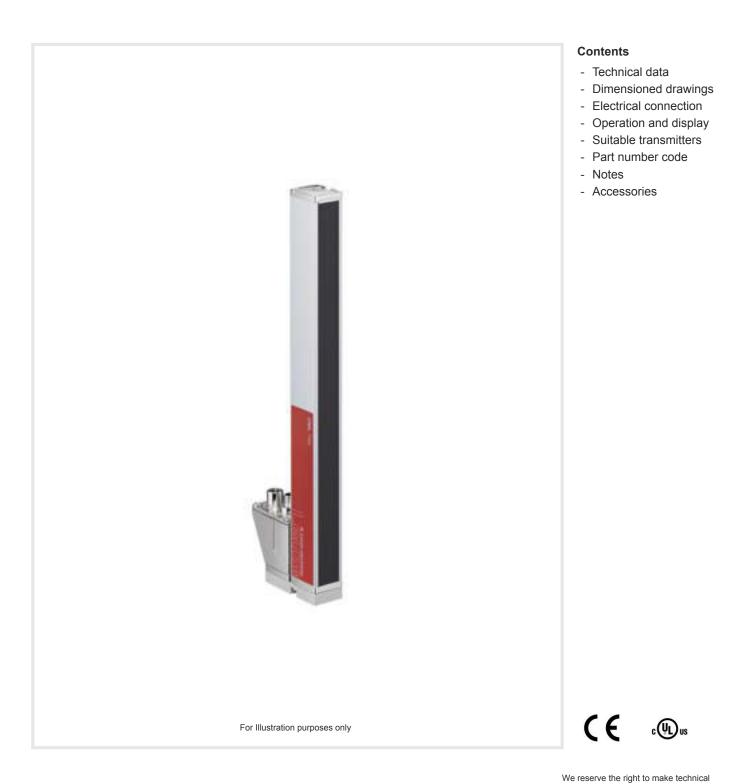


Technical data sheet Light curtain receiver Part no.: 50119977 CML720i-R40-290.R/CN-M12



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 changes

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Technical data

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Basic data Service interface Series 720 Throughbeam principle **Operating principle** Device type Receiver 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** 0.3 ... 7 m **Operating range** Guaranteed operating range Operating range limit 0.2 ... 9 m **Operating range limit** Typical operating range Measurement field length 290 mm Number of beams 7 Piece(s) Beam spacing 40 mm **Measurement data** Minimum object diameter 50 mm **Electrical data** Protective circuit Polarity reversal protection Short circuit protected Transient protection Performance data Supply voltage U_R 18 ... 30 V, DC 0 ... 15 %, From U_B **Residual ripple** 0 ... 165 mA, The specified values refer **Open-circuit current** to the entire package consisting of transmitter and receiver. Inputs/outputs selectable 100 mA Output current, max. Input resistance 6,000 Ω Number of inputs/outputs selectable 2 Piece(s) Туре Inputs/outputs selectable DC Voltage type, outputs Switching voltage, outputs Typ. U_B / 0 V Voltage type, inputs DC Switching voltage, inputs high: ≥6V low: $\leq 4 \text{ V}$ Input/output 1 Activation/disable delay 1 ms **Time behavior** Readiness delay 450 ms Cycle time 1 ms Response time per beam 30 µs Interface Туре CANopen CANopen Process Function

уре		IO-Link
IO-Link		
Function		Configuration via software
		Service
onnectio	on	
umber of	connections	2 Piece(s)
lug outlet		Rear side
Connec	tion 1	
Function		Configuration interface
i unotion		Connection to transmitter
		Signal IN
		Signal OUT
		Voltage supply
Type of a	connection	Connector
Thread s		M12
	125	Male
Type		
Material		Metal
No. of pi		8 -pin
Encoding	9	A-coded
Connec	tion 2	
Function		BUS IN
7 unction		BUS OUT
Type of a	connection	Connector
Thread s		M12
		Female
Type Material		
	20	Metal
No. of pi		5 -pin
Encoding	9	A-coded
lechanica	al data	
esign		Cubic
Dimension	(W x H x L)	29 mm x 35.4 mm x 343 mm
	atorial	
lousing ma	ateriai	Metal
-		Metal Aluminum
Metal housi	ing	
letal housi ens cover	ing	Aluminum
Metal housi Lens cover Net weight	ing material	Aluminum Plastic
Aetal housi Lens cover Net weight Housing co	ing material Jor	Aluminum Plastic 600 g
Aetal housi Lens cover Net weight Housing co	ing material Jor	Aluminum Plastic 600 g Silver
letal housi ens cover let weight lousing co ype of fast	ing material olor tening	Aluminum Plastic 600 g Silver Groove mounting
letal housi ens cover let weight lousing co ype of fast Operation	ing material olor tening and display	Aluminum Plastic 600 g Silver Groove mounting Via optional mounting device
letal housi ens cover let weight lousing co ype of fast Operation	ing material olor tening and display	Aluminum Plastic 600 g Silver Groove mounting Via optional mounting device
letal housi ens cover let weight lousing co ype of fast Operation	ing material olor tening and display play	Aluminum Plastic 600 g Silver Groove mounting Via optional mounting device LED OLED display
letal housi ens cover let weight lousing co ype of fast Operation ype of disp lumber of	ing material olor tening and display play LEDs	Aluminum Plastic 600 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s)
Metal housi Lens cover Vet weight Housing co Type of fast Dperation Type of disp	ing material olor tening and display play LEDs	Aluminum Plastic 600 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software
Metal housi Lens cover Net weight Housing co Type of fast Operation Type of disp Number of Type of con	ing material olor tening and display play LEDs nfiguration	Aluminum Plastic 600 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in
Metal housi Lens cover Net weight Housing co Type of fast Dperation Type of disp Number of Type of con	ing material olor tening and display play LEDs nfiguration	Aluminum Plastic 600 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software
Metal housi Lens cover Vet weight Housing co Type of fast Dperation Type of disp Number of Type of con Dperational	ing material olor tening and display play LEDs nfiguration	Aluminum Plastic 600 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in
Type of disj Number of I Type of con Operational Environme	ing material olor tening and display play LEDs ofiguration	Aluminum Plastic 600 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in

Technical data

Certifications

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

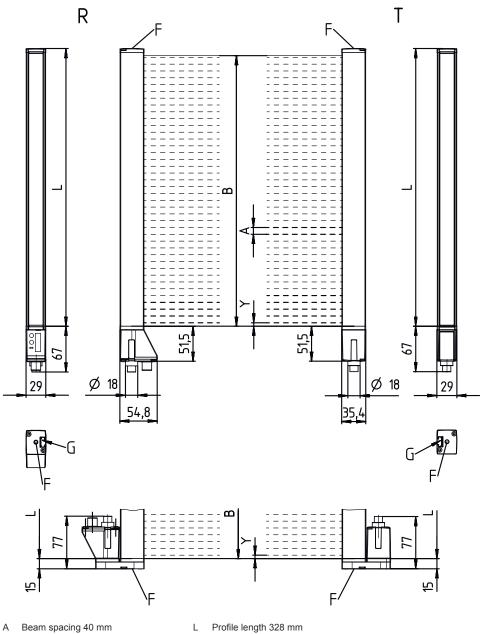
Classification

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
ECLASS 14.0	27270910
ECLASS 15.0	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



В

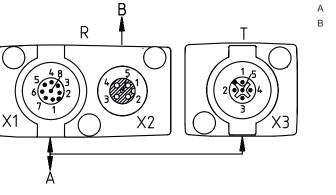
- Measurement field length 290 mm
- F M6 thread G Fastening groove
- Т R Receiver
 - Υ 5 mm

Transmitter

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Dimensioned drawings





A PWR / SW IN / OUTB BUS IN / OUT

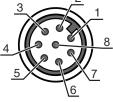
Electrical connection

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	A-coded

Electrical connection

Pin	Pin assignment	2
1	FE/SHIELD	1
2	n.c.	
3	CAN GND	
4	CAN H	
5	CAN L	3

Operation and display

LED	Display	Meaning
1	Green, continuous light	Operational readiness
	Green, flashing	Teach / error
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
50119523	CML720i-T40-290.R- M12	Light curtain transmitter	Operating range: 0.3 7 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
22	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: 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



Part number code



DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection
	Note
A	S 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 - 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 Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC

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

Accessories

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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
	50118185	K-YCN M12A-M12A- S-PUR	Interconnection cable	Suitable for interface: CANopen Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable length fork 1: 250 mm Cable length fork 2: 350 mm Sheathing material: PUR

Connection technology - Terminating resistors

 Part no.	Designation	Article	Description
50040099	TS 01-5-SA	Terminator plug	Suitable for: DeviceNet, CANopen Function: Bus termination Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
1.1. 1.1	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
æ.	429029	BT-2RG	Mounting bracket set	Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

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.

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Accessories

 Part no.	Designation	Article	Description
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
6	^t A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.

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 We reserve the right to make technical changes

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