

Technical data sheet Light curtain receiver Part no.: 50123630 CML720i-R20-150.R/D3-M12



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Technical data

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Basic data Series 720 **Operating principle** Throughbeam principle Device type Receiver Accessories for the use of the BT-2R1 Contains 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 150 mm Number of beams 8 Piece(s) Beam spacing 20 mm **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 0 ... 15 %, From U_B **Residual ripple** 0 ... 135 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 Voltage type, outputs DC Switching voltage, outputs Typ. U_B / 0 V Switching voltage, inputs high: ≥6V low: $\leq 4 \text{ V}$ Input/output 1 Activation/disable delay 1 ms Time behavior Cycle time 1 ms Response time per beam 30 µs Interface Туре RS 485 Modbus RS 485 Process Function

	IO Link	
уре	IO-Link	
IO-Link		
Function	Configuration via software	
	Service	
Connection		
lumber of connections	2 Piece(s)	
Plug outlet	Rear side	
-		
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	
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	
Mechanical data		
Design	Cubic	
Dimension (W x H x L)	29 mm x 35.4 mm x 183 mm	
lousing material	Metal	
Metal housing	Aluminum	
ens cover material	Plastic	
let weight	400 g	
lousing color	Silver	
Type of fastening	Groove mounting	
	Via optional mounting device	
Operation and display		
Гуре of display	LED	
	OLED display	
Number of LEDs	2 Piece(s)	
Type of configuration	Software	
	Teach-in	
Operational controls	Membrane keyboard	
Environmental data		
Ambient temperature, operation	-30 60 °C	

Technical data

Certifications

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

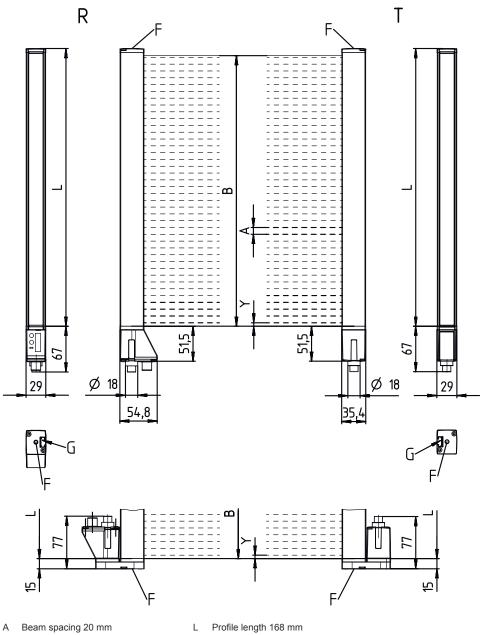
Classification

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



B Measurement field length 150 mm

M6 thread

Fastening groove

F

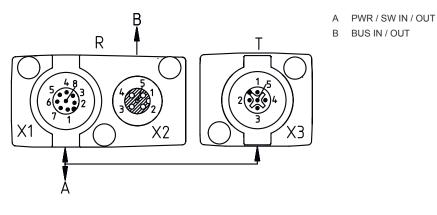
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- n T Transmitter
 - Receiver
 - R Rec
 - Y 5 mm

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Dimensioned drawings





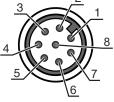
Electrical connection

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

Electrical connection

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



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
50119505	CML720i-T20-150.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 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 - 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

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Accessories

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
RR.	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.
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.

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Note

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