

Technical data sheet Light curtain receiver Part no.: 50123451 CML720i-R05-960.A/D3-M12



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We reserve the right to make technical changes eng • 2025-04-04

Technical data

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Operating principle Throughbeam principle Device type Receiver Contains 2x BT-NC sliding block Application Object measurement Special version Crossed-beam scanning Diagonal-beam scanning Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Operating range 0.13.5 m Operating range 0.13.5 m Operating range limit 0.14.5 m Operating range limit 0.14.5 m Operating range limit 0.14.5 m Operating range limit 1.0		700
Device type Receiver Contains 2x BT-NC silding block Application Object measurement Special version Crossed-beam scanning Diagonal-beam scanning Special version Crossed-beam scanning Operating range 0.13.5 m Operating range 0.13.5 m Operating range 0.14.5 m Operating range limit 0.14.5 m Operating range 5 mm Measurement field length 960 mm Number of beams 192 Piece(s) Beam spacing 5 mm Measurement data Minimum object diameter Iniminum object diameter 10 mm Electrical data Polarity reversal protection Performance data Supply voltage Ug Supply voltage Ug 18 30 V, DC Residual ripple 0 15 %, From Ug Open-circuit current 0 270 mA, The specified values refer to the entire package consisting of trans mitter and receiver. Inputs/outputs selectable Output current, max. 100 mA Inputs/output 1 Inputsiselectable	Series	
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RS 485	Interface	
	Туре	RS 485 Modbus
	RS 485	

Service	interface		
Туре		IO-Link	
IO-Li	nk		
Function		Configuration via software	
		Service	
•	41		
Connec	tion		
	of connections	2 Piece(s)	
Plug out	let	Axial	
Conr	ection 1		
Funct		Configuration interface	
		Connection to transmitter	
		Signal IN	
		Signal OUT	
		Voltage supply	
Туре	of connection	Connector	
Threa	d size	M12	
Туре		Male	
Mater	ial	Metal	
No. of	fpins	8 -pin	
Enco	ding	A-coded	
Com	ection 2		
Funct		BUS IN	
i unot		BUS OUT	
Type	of connection	Connector	
	d size	M12	
Туре		Female	
Mater	ial	Metal	
No. of	f pins	5 -pin	
Enco	ding	B-coded	
Mechai	nical data		
		Cubic	
Design Dimension (W x H x L)		Cubic 29 mm x 35.4 mm x 1,035 mm	
	material	Metal	
Metal ho		Aluminum	
	ver material	Plastic	
Net weig		1,150 g	
Housing	color	Silver	
Type of	fastening	Groove mounting	
		Via optional mounting device	
Onereti	on and diaplay		
	on and display		
Type of	display	LED	
		OLED display	
	of LEDs	2 Piece(s)	
type of	configuration	Software	
Operational controls		Teach-in Membrane keyboard	
operation		memorane reyboard	
Enviro	nmental data		
Ambient	temperature, operation	-30 60 °C	
	temperature, storage	-40 70 °C	

Technical data

Certifications

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

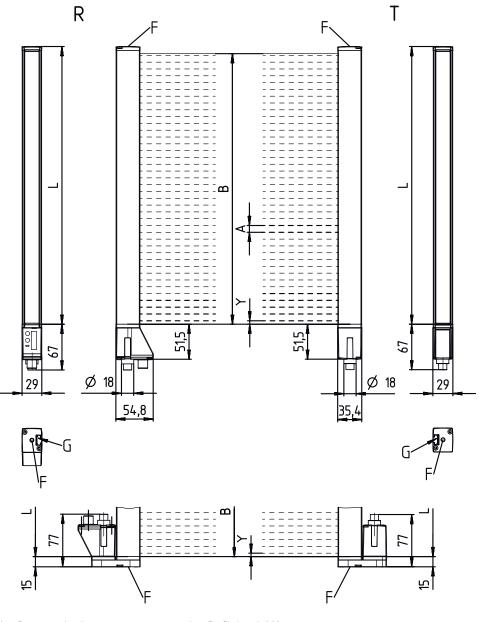
Classification

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



A Beam spacing 5 mm

- B Measurement field length 960 mm
- F M6 thread

G

Fastening groove

L Profile length 968 mm

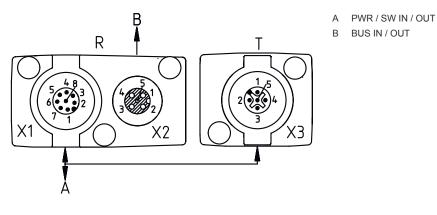
- T Transmitter
- R Receiver
- Y 2.5 mm



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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



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
50119379	CML720i-T05-960.A- M12	Light curtain transmitter	Operating range: 0.1 3.5 m Connection: Connector, M12, Axial, 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	∜ 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

Accessories

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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

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