

Technical data sheet Light curtain receiver Part no.: 50123386 CML730i-R05-2720.R/D3-M12



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 changes

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 eng • 2025-04-04

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Technical data

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Basic data

Operating principle Throughbeam principle Device type Receiver Contains Accessories for the use of the BT-2R1 Application Detection of transparent objects Object measurement Object measurement Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Operating range 0.1 4.5 m Operating range, transparent media 0.1 1.75 m Operating range ilmit 0.1 1.75 m Operating range ilmit 0.1 4.5 m Operating range ilmit 0.1 1.75 m Operating range ilmit 1 1.75 m Weasurement field length 2.720 mm Number of beams 544 Piece(s) Beam spacing 5 mm Measurement data Diagonal-beam field Minimum object diameter 10 mm Electrical data Polarity reversal protection Short circuit protected Transient protection Short circuit protected Transient protection Open-circuit current 0 15 %, From Ug Open-circuit current	Basic data	
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Type RS 485 Modbus RS 485 Function Process Service interface	Response time per beam	10 µs
RS 485 Function Process Service interface	Interface	
Function Process Service interface Image: Construction of the second se	Туре	RS 485 Modbus
Function Process Service interface Image: Construction of the second se	RS 485	
		Process
	O under the test	
Type IO-Link	Service interface	
	Туре	IO-Link

	IO-Link	
	Function	Configuration via software
		Service
С	onnection	
N	umber of connections	2 Piece(s)
	lug outlet	Rear side
	Connection 1	
	Function	Configuration interface
		Connection to transmitter
		Signal IN
		Signal OUT
	Type of connection	Voltage supply 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
	Type Meterial	Female
	Material No. of pins	Metal 5 -pin
	Encoding	B-coded
	Encouning	D-coded
Μ	lechanical data	
D	esign	Cubic
D	imension (W x H x L)	29 mm x 35.4 mm x 2,743 mm
	ousing material	Metal
	etal housing	Aluminum
	ens cover material	Plastic
	et weight	2,800 g
	ousing color /pe of fastening	Silver
1)		Croove mounting
	pe of lastening	Groove mounting
	pe of fastering	Groove mounting Via optional mounting device
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-		0
Ту	peration and display /pe of display	Via optional mounting device
Ту	peration and display	Via optional mounting device
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T) N T) O E	peration and display /pe of display umber of LEDs /pe of configuration perational controls nvironmental data	Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard
T) N T) O E A	peration and display /pe of display umber of LEDs /pe of configuration perational controls nvironmental data mbient temperature, operation	Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard
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Ty N Ty O E A A C D P I A	peration and display ype of display umber of LEDs ype of configuration perational controls nvironmental data mbient temperature, operation mbient temperature, storage ertifications egree of protection rotection class	Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C -40 70 °C IIP 65 III c UL US

Technical data

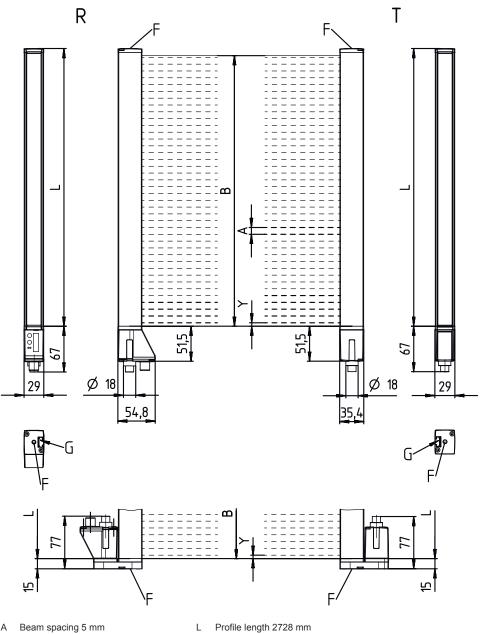
Customs tariff number	90314990
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ECLASS 8.0	27270910
ECLASS 9.0	27270910
ECLASS 10.0	27270910
ECLASS 11.0	27270910
ECLASS 12.0	27270910
ECLASS 13.0	27270910
ECLASS 14.0	27270910
ECLASS 15.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549
ETIM 10.0	EC002549

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Dimensioned drawings

All dimensions in millimeters

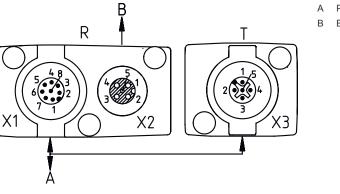


- Beam spacing 5 mm А
- В Measurement field length 2720 mm
- F M6 thread G Fastening groove
- Transmitter Т R Receiver
 - 2.5 mm Υ

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Dimensioned drawings





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

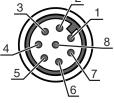
Electrical connection

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

Electrical connection

Pin

1 2

3

4

5

Pin assignment V+ Tx PB GND Tx+ 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
50118945	CML730i-T05- 2720.R-M12	Light curtain transmitter	Operating range: 0.1 4 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	N 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
y; U	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

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