

Technical data sheet Light curtain receiver Part no.: 50119909 CML720i-R05-480.R/CN-M12



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 changes

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Technical data

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Interface Type	CANopen
Response time per beam	30 µs
Cycle time	3.28 ms
Readiness delay	450 ms
Activation/disable delay	1 ms
Input/output 1	
Switching voltage, inputs	high: ≥6V low: ≤ 4 V
Voltage type, inputs	DC
Switching voltage, outputs	Typ. U _B / 0 V
Voltage type, outputs	
Туре	Inputs/outputs selectable
Number of inputs/outputs selectable	
Input resistance	6,000 Ω
Output current, max.	100 mA
Inputs/outputs selectable	
Open-circuit current	0 165 mA, The specified values refer to the entire package consisting of trans mitter and receiver.
	0 15 %, From U _B
Supply voltage U _B	18 30 V, DC
Performance data	
	Transient protection
	Short circuit protected
Protective circuit	Polarity reversal protection
Electrical data	
Measurement data Minimum object diameter	10 mm
Beam spacing	5 mm
	96 Piece(s)
	480 mm
	Typical operating range
Operating range limit	0.1 4.5 m
Operating range	Guaranteed operating range
	0.1 3.5 m
Optical data	
	Parallel-beam scanning
	Diagonal-beam scanning
Special version	Crossed-beam scanning
Special version	
Application	Object measurement
	Accessories for the use of the BT-2R1
Device type	Receiver
	rinoughoeann principie
Operating principle	Throughbeam principle

Service interface			
Туре		IO-Link	
	IO-Link		
	Function	Configuration via software	
		Service	
С	onnection		
N	umber of connections	2 Piece(s)	
PI	ug 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	
	Type	Female	
	Material No. of pins	Metal 5 -pin	
	Encoding	A-coded	
	Encounty	A coded	
Μ	echanical data		
De	esign	Cubic	
	mension (W x H x L)	29 mm x 35.4 mm x 503 mm	
	ousing material	Metal	
	etal housing	Aluminum	
	ens cover material	Plastic	
	et weight ousing color	750 g Silver	
	vpe of fastening	Groove mounting	
.,	po el 12000g	Via optional mounting device	
0	peration and display		
-		1.50	
ту	vpe of display	LED	
N 1-		OLED display	
	umber of LEDs vpe of configuration	2 Piece(s) Software	
' y		Teach-in	
0	perational controls	Membrane keyboard	
-			
E	nvironmental data		
A	mbient temperature, operation	-30 60 °C	
A	mbient 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

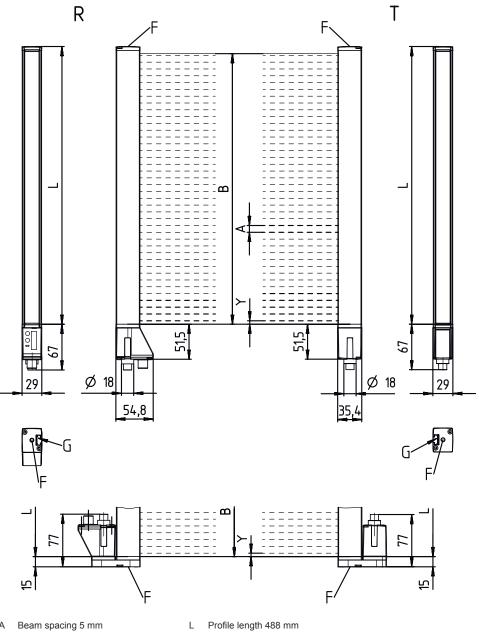
Classification

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



Beam spacing 5 mm А

Fastening groove

- В Measurement field length 480 mm
- F M6 thread

G

- R
 - Υ 2.5 mm

Т

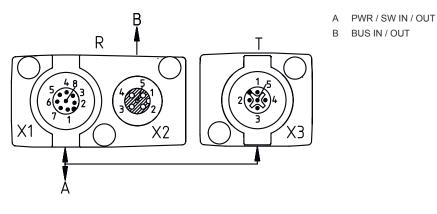
Transmitter

Receiver



Dimensioned drawings





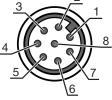
Electrical connection

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	A-coded

Electrical connection

Pin	Pin assignment	
	FE/SHIELD	
	n.c.	
	CAN GND	
	CAN H	
	CAN L	

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
50119454	CML720i-T05-480.R- M12	Light curtain transmitter	Operating range: 0.1 3.5 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	∜ 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. 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
 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.