

Technical data sheet Light curtain receiver Part no.: 50119718 CML720i-R05-320.A/L-M12



Technical data

	720				
Operating principle	Throughbeam principle				
Device type	Receiver				
Contains	2x BT-NC sliding block				
Application	Object measurement				
Special version					
Special version	Crossed-beam scanning				
	Diagonal-beam scanning				
	Parallel-beam scanning				
Optical data					
Operating range	0.1 3.5 m				
Operating range	Guaranteed operating range				
Operating range limit	0.1 4.5 m				
Operating range limit	Typical operating range				
Measurement field length	320 mm				
Number of beams	64 Piece(s)				
Beam spacing	5 mm				
Measurement data					
Minimum object diameter	10 mm				
Electrical data					
Protective circuit	Polarity reversal protection				
	Short circuit protected				
	Transient protection				
Performance data					
Supply voltage U _B	18 30 V, DC				
Residual ripple	0 15 %, From U _B				
Open-circuit current	0 165 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.				
Inpute/outpute coloctable					
Inputs/outputs selectable	100 mA				
Output current, max.	100 mA				
Output current, max. Input resistance	6,000 Ω				
Output current, max. Input resistance Number of inputs/outputs selectable	6,000 Ω 4 Piece(s)				
Output current, max. Input resistance Number of inputs/outputs selectable Type	6,000 Ω 4 Piece(s) Inputs/outputs selectable				
Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs	6,000 Ω 4 Piece(s) Inputs/outputs selectable DC				
Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs	6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V				
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Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1	6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ Iow: $\leq 4 V$				
Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior	6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ Iow: $\leq 4 V$				
Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Readiness delay	6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ Iow: $\leq 4 V$ 0 1 ms				
Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior	6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: \geq 6V Iow: \leq 4 V 0 1 ms 400 ms				
Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Readiness delay Cycle time	6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ low: $\leq 4 V$ 0 1 ms 400 ms 2.32 ms				
Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Readiness delay Cycle time Response time per beam	6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ low: $\leq 4 V$ 0 1 ms 400 ms 2.32 ms				

IO-Link COM mode	COM2		
Min. cycle time	COM2 = 2.3 ms		
Specification	V1.0.1		
	V1.1		
Service interface			
уре	IO-Link		
IO-Link Function	Configuration via software		
	Service		
Connection			
Number of connections	2 Piece(s)		
Plug outlet	Axial		
Connection 1			
Function	Configuration interface		
	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	Connection to transmitter		
Type of connection	Connector		
Thread size	M12		
Туре	Female		
Material	Metal		
No. of pins	5 -pin		
Encoding	A-coded		
Mechanical data			
Design	Cubic		
Dimension (W x H x L)	29 mm x 35.4 mm x 395 mm		
lousing material	Metal		
Metal housing	Aluminum		
ens cover material	Plastic		
Net weight	550 g		
lousing color	Silver		
Type of fastening	Groove mounting Via optional mounting device		
Operation and display	, <u>.</u>		
Type of display	LED OLED display		
Number of LEDs	2 Piece(s)		
Type of configuration	Software		
JE C. Comgulation	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

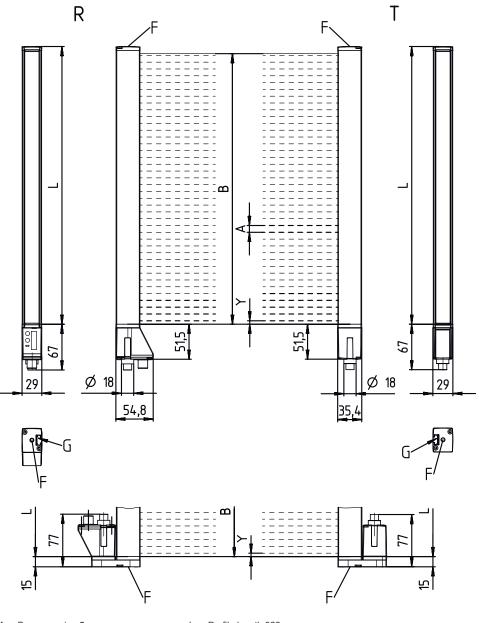
Classification

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



A Beam spacing 5 mm

- B Measurement field length 320 mm
- F M6 thread

G

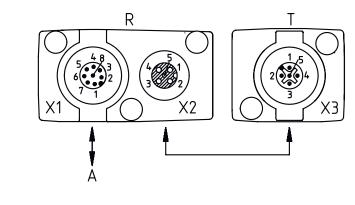
Fastening groove

L Profile length 328 mm

- T Transmitter
- R Receiver
- Y 2.5 mm

Dimensioned drawings





A PWR / SW IN / OUT

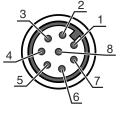
Electrical connection

Connection 1

Function	Configuration interface
	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	IO1
3	GND
4	IO-Link
5	102
6	IO3
7	104
8	GND



Connection 2

Pin Pin assignment

1	FE/SHIELD
2	V+
3	GND
4	RS 485 Tx+
5	RS 485 Tx-



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
50119371	CML720i-T05-320.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				
ZZ	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				
DDD	Special equipment -PS: Power Setting				
EEE	Electrical connection M12: M12 connector				
FFF	-EX: Explosion protection				
Note					
A list wi	th all available device types can be found on the Leuze website at www.leuze.com.				

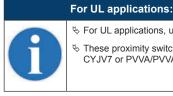
Notes

Observe intended use!

✤ This product is not a safety sensor and is not intended as personnel protection.

b The product may only be put into operation by competent persons.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$ Only use the product in accordance with its intended use.



Ľ۵,	For I	II application		is only por	mitted in Class 2 cit	reuite in accordanc	o with the NEC (Not	tional Electric Code).	
$\mathbf{\nabla}$			ns, use	is only per					

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 unit

	Part no.	Designation	Article	Description
C. LEATING	50144900	MD 798i-11-82/L5- 2222	IO-Link master	Type: IO-Link master Current consumption, max.: 11,000 mA Switching outputs for each sensor connection: 1 Piece(s) Switching output: Transistor, PNP Interface: IO-Link, Automatic protocol detection, EtherNet IP, Modbus TCP, PROFINET Connections: 12 Piece(s) Sensor connections: 8 Piece(s) Connections for voltage supply: 2 Piece(s) Interface connections: 2 Piece(s) Degree of protection: IP 67, IP 65, IP 69K

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50135128	KD S-M12-8A-P1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connector, LED: No Connection 2: Open end
				Shielded: Yes Cable length: 5.000 mm Sheathing material: PUR

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

Leuze

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

Configuration devices

 Part no.	Designation	Article	Description
50121098	SET MD12-US2-IL1.1 + Zub.	Diagnostics set	Interface: USB Connections: 2 Piece(s) Degree of protection: IP 20

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

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