

Technical data sheet Light curtain receiver Part no.: 50119723 CML720i-R05-720.A/L-M12



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Technical data

Series	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	720 mm
Number of beams	144 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	0 215 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.
Inputs/outputs selectable	
Output current, max.	100 mA
Input resistance	6,000 Ω
Number of inputs/outputs selectable	,
Type	Inputs/outputs selectable
Voltage type, outputs	DC
Switching voltage, outputs	Typ. U _B / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥6V
· e	$low: \leq 4 V$
Input/output 1	
Activation/disable delay	0 1 ms
Time behavior	
Readiness delay	400 ms
Cycle time	4.72 ms
Response time per beam	30 µs
Interface	
Туре	IO-Link
· / F -	

COM mode	COM2						
Min. cycle time	COM2 = 2.3 ms						
Specification	V1.0.1						
	V1.1						
ervice interface							
уре	IO-Link						
IO-Link							
Function	Configuration via software						
	Service						
connection							
umber of connections	2 Piece(s)						
lug outlet	Axial						
Connection 1	Configuration into f						
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						
lechanical data							
esign	Cubic						
imension (W x H x L)	29 mm x 35.4 mm x 795 mm						
ousing material	Metal						
letal housing	Aluminum						
•							
letal housing	Aluminum						
letal housing ens cover material	Aluminum Plastic						
letal housing ens cover material et weight	Aluminum Plastic 950 g Silver Groove mounting						
letal housing ens cover material et weight ousing color	Aluminum Plastic 950 g Silver						
letal housing ens cover material et weight ousing color	Aluminum Plastic 950 g Silver Groove mounting						
letal housing ens cover material let weight ousing color ype of fastening	Aluminum Plastic 950 g Silver Groove mounting						
letal housing ens cover material et weight ousing color ype of fastening Operation and display	Aluminum Plastic 950 g Silver Groove mounting Via optional mounting device						
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letal housing ens cover material let weight lousing color ype of fastening Operation and display ype of display umber of LEDs	Aluminum Plastic 950 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s)						
letal housing ens cover material let weight lousing color ype of fastening Operation and display ype of display umber of LEDs	Aluminum Plastic 950 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software						
letal housing ens cover material let weight lousing color ype of fastening Operation and display ype of display umber of LEDs ype of configuration	Aluminum Plastic 950 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in						
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Technical data

Certifications

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

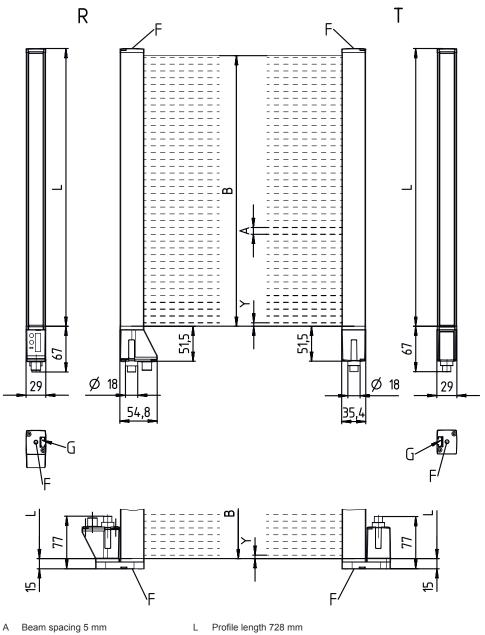
Classification

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



В Measurement field length 720 mm

Fastening groove

M6 thread

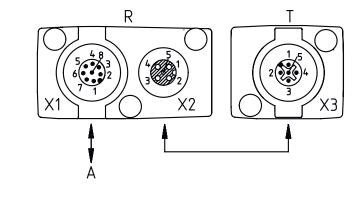
F

G

- Transmitter Т
 - Receiver
- R
- Υ 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 IO2 6 IO3 7 IO4		
3 GND 4 IO-Link 5 IO2 6 IO3	1	V+
4 IO-Link 5 IO2 6 IO3	2	IO1
5 IO2 6 IO3	3	GND
6 IO3	4	IO-Link
	5	IO2
7 104	6	IO3
1 104	7	IO4
8 GND	8	GND



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

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
50119376	CML720i-T05-720.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.					

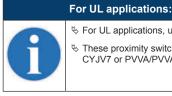
Notes

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.



Ŀ,	For UL	appli	catior	ns, use	is only pe	rmitted in Cla	ass 2 circuits	in accordance	with the NEC (N	lational	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 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

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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

Configuration devices

Accessories

 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

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