Leuze

Technical data sheet Light curtain receiver Part no.: 50119740 CML720i-R05-2080.A/L-M12



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Technical data

720	
Throughbeam principle	
Receiver 2x BT-NC sliding block	
Crossed-beam scanning	
Diagonal-beam scanning	
Parallel-beam scanning	
0.1 3.5 m	
Guaranteed operating range	
0.1 4.5 m	
Typical operating range	
2,080 mm	
416 Piece(s)	
5 mm	
10	
10 mm	
Polarity reversal protection	
Short circuit protected	
Transient protection	
18 30 V, DC	
0 15 %, From U _B	
0 435 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.	
100 mA	
100 mA 6.000 Ω	
6,000 Ω	
6,000 Ω 4 Piece(s)	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC	
6,000 Ω 4 Piece(s) Inputs/outputs selectable	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. $U_{\rm B}$ / 0 V	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. $U_B / 0 V$ DC high: ≥6V	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. $U_B / 0 V$ DC high: ≥6V	
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6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 ∨ DC high: ≥6∨ Iow: ≤ 4 ∨	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. $U_B / 0 V$ DC high: ≥6V Iow: ≤ 4 V 0 1 ms	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 0 1 ms 400 ms	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 0 1 ms 400 ms 12.88 ms	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 0 1 ms 400 ms 12.88 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	
lumber of connections	2 Piece(s)
Plug outlet	Axial
Connection 1 Function	Configuration interface
- unotion	Configuration interface Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Type	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	
-	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 2,155 mm
Dimension (W x H x L) Housing material	29 mm x 35.4 mm x 2,155 mm Metal
Dimension (W x H x L) Housing material Metal housing	29 mm x 35.4 mm x 2,155 mm Metal Aluminum
Dimension (W x H x L) Housing material Metal housing Lens cover material	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deperation and display	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deperation and display	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Decration and display	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deperation and display Type of display	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s)
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deperation and display Type of display	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Operational controls	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s)
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deration and display Type of display Number of LEDs Type of configuration Derational controls	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in
Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deration and display Type of display Number of LEDs Type of configuration	29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in

Technical data

Certifications

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

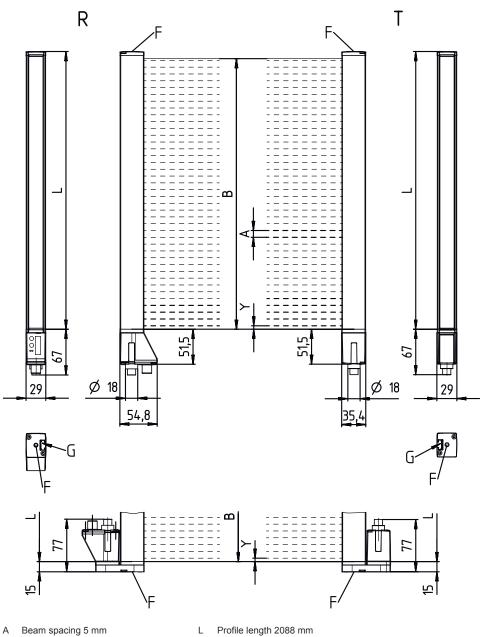
Classification

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
- В Measurement field length 2080 mm
- F M6 thread G Fastening groove
- R Receiver

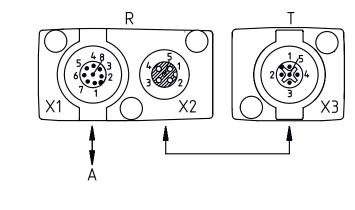
Т

Transmitter

2.5 mm Υ

Dimensioned drawings





A PWR / SW IN / OUT

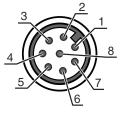
Electrical connection

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	101
3	GND
4	IO-Link
5	102
6	103
7	IO4
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

I	Part no.	Designation	Article	Description
		CML720i-T05- 2080.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 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.

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.

	For
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UL app	olicati	ions:		
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✤ 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 unit

	Part no.	Designation	Article	Description
C. L. LILLE	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
Ŭ				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

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.