# Leuze

# **Technical data sheet Light curtain receiver** Part no.: 50119750 CML720i-R05-2880.A/L-M12



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 changes

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We reserve the right to make technical changes eng • 2025-04-04

## **Technical data**

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720	
Throughbeam principle	
Receiver	
2x BT-NC sliding block	
Object measurement	
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	
2,880 mm	
576 Piece(s)	
5 mm	
10 mm	
Polarity reversal protection	
Short circuit protected	
Transient protection	
18 20 1/ DC	
18 30 V, DC	
0 15 %, From U <sub>B</sub>	
0 600 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.	
100 mA	
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 <sub>B</sub> / 0 V	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. $U_B / 0 \vee$ DC high: ≥6 $\vee$ Iow: ≤ 4 $\vee$	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. $U_B / 0 \vee$ DC high: ≥6 $\vee$ Iow: ≤ 4 $\vee$	
6,000 $\Omega$ 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: $\geq$ 6V Iow: $\leq$ 4 V 0 1 ms	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 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 <sub>B</sub> / 0 V DC high: ≥6V Iow: ≤ 4 V 0 1 ms 400 ms 17.68 ms	
6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V Iow: ≤ 4 V 0 1 ms 400 ms 17.68 ms	

COM2
COM2 = 2.3 ms
V1.0.1
V1.1
IO-Link
Configuration via software
Service
2 Piece(s)
Axial
Configuration interface
Signal IN
Signal OUT
Voltage supply
Connector
M12
M12 Male
Metal
8 -pin
A-coded
0
Connection to transmitter
Connector
M12
Female
Metal
5 -pin
A-coded
Cubic
29 mm x 35.4 mm x 2,955 mm
Metal
Aluminum
Plastic
2,900 g
Silver
Groove mounting Via optional mounting device
LED
LED OLED display
OLED display
OLED display 2 Piece(s)
OLED display 2 Piece(s) Software
OLED display 2 Piece(s)
OLED display 2 Piece(s) Software Teach-in
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

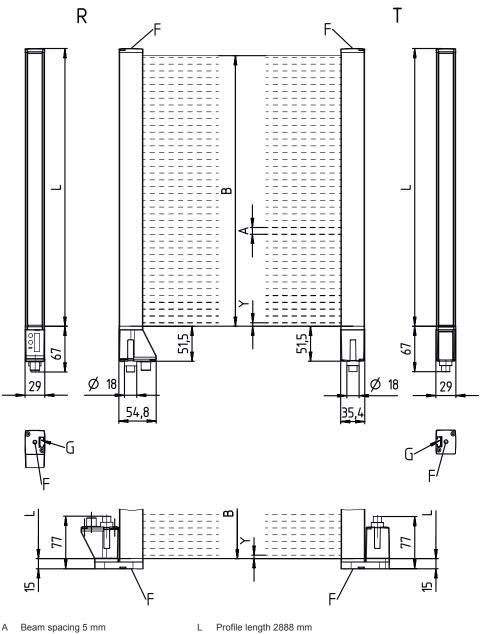
#### Classification

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

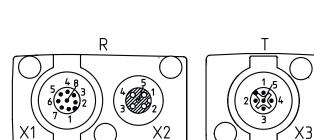


- Beam spacing 5 mm А
- В Measurement field length 2880 mm
- F M6 thread G Fastening groove
- Transmitter Т
- R Receiver
- 2.5 mm Υ

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### **Dimensioned drawings**





A PWR / SW IN / OUT

## **Electrical connection**

**Connection 1** 

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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

3     GND       4     IO-Link       5     IO2       6     IO3       7     IO4		
3         GND           4         IO-Link           5         IO2           6         IO3           7         IO4	1	V+
4         IO-Link           5         IO2           6         IO3           7         IO4	2	IO1
5         IO2           6         IO3           7         IO4	3	GND
6 IO3 7 IO4	4	IO-Link
7 104	5	IO2
	6	IO3
8 GND	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**

0	n receiver • Part no.: 50119750 • CML720i-R05-2880.A/L-M12	Leuze
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
50119403	CML720i-T05- 2880.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	
6 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.

	For
0	∜ F ∜ T C

U	L appl	icat	ions:	
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b 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

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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

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