

## **Technical data sheet Light curtain receiver** Part no.: 50119787 CML720i-R20-2870.A/L-M12



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 changes

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 eng • 2025-04-04

### **Technical data**

Series	720
Operating principle	Throughbeam principle
Device type	Receiver
Contains	2x BT-NC sliding block
pplication	Object measurement
pecial version	
Special version	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning
Optical data	
Dperating range	0.3 7 m
Dperating range	Guaranteed operating range
Dperating range limit	0.2 9 m
Dperating range limit	Typical operating range
leasurement field length	2,870 mm
lumber of beams	144 Piece(s)
Beam spacing	20 mm
leasurement data	
linimum object diameter	30 mm
Electrical data	
Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection
Performance data	
Supply voltage U <sub>B</sub>	18 30 V, DC
Residual ripple	0 15 %, From U <sub>B</sub>
Open-circuit current	0 435 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	
Switching voltage, outputs	Typ. U <sub>B</sub> / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥6V low: ≤ 4 V
	$10W. \ge 4 V$
Innut/output 1	0 1 ms
Input/output 1 Activation/disable delay	
Activation/disable delay	01113
Activation/disable delay	
Activation/disable delay	400 ms
Activation/disable delay	
Activation/disable delay Time behavior Readiness delay Cycle time	400 ms 4.72 ms
Activation/disable delay Time behavior Readiness delay Cycle time Response time per beam	400 ms 4.72 ms

	OM mode	COM2
	lin. cycle time	COM2 = 2.3  ms
	pecification	V1.0.1
		V1.1
er	vice interface	
yp	e	IO-Link
10	O-Link	
	unction	Configuration via software
		Service
oı	nnection	
lun	nber of connections	2 Piece(s)
	g outlet	Axial
	Connection 1	Configuration interface
ſ	unction	Configuration interface Signal IN
		ů.
		Signal OUT
-		Voltage supply
	ype of connection	Connector M12
	hread size	=
	ype	Male
	laterial	Metal
	o. of pins	8 -pin
E	ncoding	A-coded
C	connection 2	
F	unction	Connection to transmitter
Ţ	ype of connection	Connector
Т	hread size	M12
Ţ	уре	Female
N	laterial	Metal
Ν	o. of pins	5 -pin
E	ncoding	A-coded
le	chanical data	
)es	ign	Cubic
)im	ension (W x H x L)	29 mm x 35.4 mm x 2,955 mm
	sing material	Metal
let	al housing	Aluminum
.en	s cover material	Plastic
let	weight	2,900 g
lou	ising color	Silver
	e of fastening	Groove mounting
	-	Via optional mounting device
)pe	eration and display	
-	e of display	LED
٦P	o or alopiay	OLED display
lun	nber of LEDs	2 Piece(s)
	e of configuration	Software
36	e e. sonngaradon	Teach-in
Эре	rational controls	Membrane keyboard
-	/ironmental data	
_	bient 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

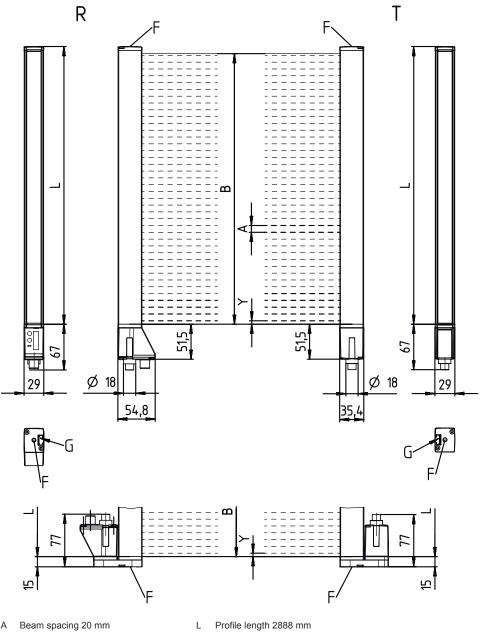
#### Classification

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



Beam spacing 20 mm А

Fastening groove

- В Measurement field length 2870 mm
- F M6 thread

G

R Receiver

Т

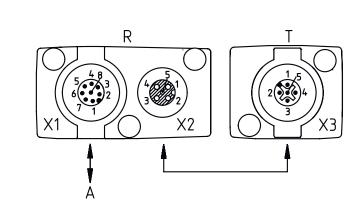
5 mm Υ

Transmitter

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### **Dimensioned drawings**





A PWR / SW IN / OUT

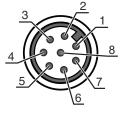
### **Electrical connection**

**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	IO4
8	GND

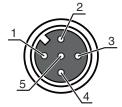


#### **Connection 2**

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

 Part no.	Designation	Article	Description
50119440	CML720i-T20- 2870.A-M12	Light curtain transmitter	Operating range: 0.3 7 m Connection: Connector, M12, Axial, 5 -pin

#### Part number code

Part designation: CML7XXi-YZZ-AAAA.BCCCDDD-EEEFFF

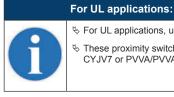
CML	Operating principle Measuring light curtain
7XXi	Series           720i: 720i series           730i: 730i series
Y	Device type T: transmitter R: receiver
ZZ	Beam spacing 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm
AAAA	Measurement field length [mm], dependent on beam spacing
В	Equipment A: Axial connector 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.

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



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. 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

## 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

**Accessories** 

	Part no.	Designation	Article	Description
165	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.