# Leuze

# **Technical data sheet Light curtain receiver** Part no.: 50119762 CML720i-R10-1760.A/L-M12



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 changes

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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	
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	1,760 mm
lumber of beams	176 Piece(s)
Beam spacing	10 mm
leasurement data	
/linimum object diameter	20 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	<ol> <li>350 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.</li> </ol>
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 selectab	6,000 Ω <b>ble</b> 4 Piece(s)
Output current, max. Input resistance Number of inputs/outputs selectab Type	6,000 Ω ole 4 Piece(s) Inputs/outputs selectable
Output current, max. Input resistance Number of inputs/outputs selectab Type Voltage type, outputs	6,000 Ω ole 4 Piece(s) Inputs/outputs selectable DC
Output current, max. Input resistance Number of inputs/outputs selectab Type Voltage type, outputs Switching voltage, outputs	6,000 Ω ble 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V
Output current, max. Input resistance Number of inputs/outputs selectab Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs	6,000 Ω le 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC
Output current, max. Input resistance Number of inputs/outputs selectab Type Voltage type, outputs Switching voltage, outputs	6,000 Ω 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: $\geq$ 6V
Output current, max. Input resistance Number of inputs/outputs selectab Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs	6,000 Ω le 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC
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Output current, max. Input resistance Number of inputs/outputs selectab Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	6,000 Ω le 4 Piece(s) Inputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V Iow: ≤ 4 V
Output current, max. Input resistance Number of inputs/outputs selectab Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	6,000 Ω lnputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: $\ge$ 6V low: $\le$ 4 V 0 1 ms
Output current, max. Input resistance Number of inputs/outputs selectab Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	6,000 Ω hputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: $\geq$ 6V low: $\leq$ 4 V 0 1 ms 400 ms
Output current, max. Input resistance Number of inputs/outputs selectab Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Cime behavior Readiness delay Cycle time	6,000 Ω lnputs/outputs selectable DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V low: ≤ 4 V 0 1 ms 400 ms 5.68 ms

IO-Link		
COM mode	COM2	
Min. cycle time	COM2 = 2.3 ms	
Specification	V1.0.1	
	V1.1	
Service interface		
Гуре	IO-Link	
IO-Link		
Function	Configuration via software	
	Service	
Connection		
Number of connections	2 Piece(s)	
Plug outlet	Axial	
Connection 1 Function	Configuration interface	
runction	Configuration interface Signal IN	
	Signal OUT	
	Voltage supply	
Type of connection	Connector	
Thread size	M12	
	Male	
Type Material	Male	
No. of pins		
Encoding	8 -pin A-coded	
Encounig	A-coueu	
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 1,835 mm	
Housing material	Metal	
Metal housing	Aluminum	
ens cover material	Plastic	
Net weight	1,900 g	
Housing color	Silver	
Гуре of fastening	Groove mounting	
	Via optional mounting device	
Dperation and display		
Гуре of display	LED	
	OLED display	
Number of LEDs	2 Piece(s)	
Type of configuration	Software	
	Teach-in	
Operational controls	Membrane keyboard	
Environmental data		
	-30 60 °C	
Ambient temperature, operation	-30 00 0	

## **Technical data**

#### Certifications

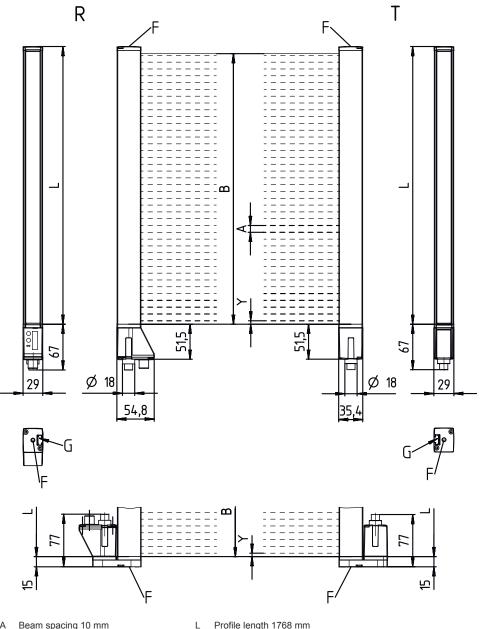
#### Classification

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



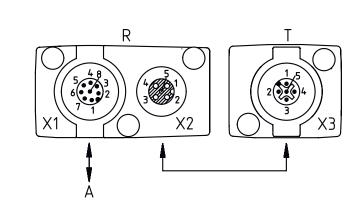
- Beam spacing 10 mm А
- В Measurement field length 1760 mm
- F M6 thread G Fastening groove
- Profile length 1768 mm
- Transmitter
- R Receiver

Т

5 mm Υ

### **Dimensioned drawings**





A PWR / SW IN / OUT

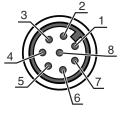
## **Electrical connection**

**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	IO1
3	GND
4	IO-Link
5	102
6	IO3
7	104
8	GND

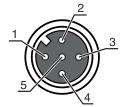


#### **Connection 2**

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-



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### **Operation and display**

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ED	Display	Meaning			
	Green, continuous light	Operational readiness			
	Green, flashing	Teach / error			
	Yellow, continuous light	Light path free, with function reserve			
	Yellow, flashing	No function reserve			
	Off	Object detected			

#### Suitable transmitters

 Part no.	Designation	Article	Description
50119415	CML720i-T10- 1760.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

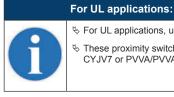
CML	Operating principle Measuring light curtain				
7XXi	Series           720i: 720i series           730i: 730i series				
Y	Device type T: transmitter R: receiver				
ZZ	Beam spacing 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm				
AAAA	Measurement field length [mm], dependent on beam spacing				
В	Equipment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



\$ For UL applications	, use is only permitted in	Class 2 circuits in accordance w	ith the NEC (National Electric Coc	le).

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
Ŭ				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
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

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