

# **Technical data sheet Light curtain receiver** Part no.: 50119812 CML720i-R05-1360.A/CV-M12



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 changes

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 eng • 2025-04-04

## **Technical data**

#### Basic data

720
Throughbeam principle
Receiver
2x BT-NC sliding block
Object measurement
Crossed-beam scanning
Diagonal-beam scanning
Parallel-beam scanning
· aranoi boarn coarning
0.1 3.5 m
Guaranteed operating range
0.1 4.5 m
Typical operating range
1,360 mm
272 Piece(s)
5 mm
40
10 mm
Polarity reversal protection
Short circuit protected
Transient protection
18 30 V, DC
0 15 %, From U <sub>B</sub>
0 270 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.
2 Piece(s)
2 Piece(s)
2 Piece(s)
2 Piece(s) Analog output
Analog output
Analog output 0 24 mA
Analog output 0 24 mA 0 11 V
Analog output 0 24 mA
Analog output 0 24 mA 0 11 V
Analog output 0 24 mA 0 11 V Voltage
Analog output 0 24 mA 0 11 V
Analog output 0 24 mA 0 11 V Voltage
Analog output 0 24 mA 0 11 V Voltage Current
Analog output 0 24 mA 0 11 V Voltage Current 100 mA
Analog output 0 24 mA 0 11 V Voltage Current 100 mA 6,000 Ω
Analog output 0 24 mA 0 11 V Voltage Current 100 mA 6,000 Ω le 2 Piece(s)
Analog output 0 24 mA 0 11 V Voltage Current 100 mA 6,000 Ω le 2 Piece(s) Inputs/outputs selectable
Analog output         0 24 mA         0 11 V         Voltage         Current         100 mA         6,000 Ω         le 2 Piece(s)         Inputs/outputs selectable         DC
Analog output         0 24 mA         0 11 V         Voltage         Current         100 mA         6,000 Ω         Inputs/outputs selectable         DC         Typ. U <sub>B</sub> / 0 V
Analog output         0 24 mA         0 11 V         Voltage         Current         100 mA         6,000 Ω         μ         2 Piece(s)         Inputs/outputs selectable         DC         Typ. U <sub>B</sub> / 0 V         DC         Typ. U <sub>B</sub> / 0 V         DC         Typ. U <sub>B</sub> / 0 V         DC
Analog output         0 24 mA         0 11 V         Voltage         Current         100 mA         6,000 Ω         Inputs/outputs selectable         DC         Typ. U <sub>B</sub> / 0 V

	nput/output 1	
1	Activation/disable delay	1 ms
Time	behavior	
Readi	ness delay	450 ms
Cycle	time	8.56 ms
Respo	onse time per beam	30 µs
Servi	ice interface	
Туре		IO-Link
10	Link	
	nction	Configuration via software
		Service
Conn	ection	
Numb	er of connections	2 Piece(s)
Plug o	outlet	Axial
	nnection 1	
Fur	nction	Configuration interface
		Signal IN
		Signal OUT
-		Voltage supply
	be of connection	Connector
	ead size	M12
Тур		Male
	terial	Metal
	of pins	8 -pin
End	coding	A-coded
Co	nnection 2	
	nction	Connection to transmitter
	be of connection	Connector
	read size	M12
Тур	00	Female
	terial	Metal
	. of pins	5 -pin
	coding	A-coded
Mook	anical data	
		Quebia.
Desig Dimor		Cubic
	nsion (W x H x L)	29 mm x 35.4 mm x 1,435 mm Metal
	ing material housing	Aluminum
	nousing cover material	Plastic
		Plastic 1,500 g
Net w	•	1,500 g Silver
	ing color of fastening	
iype (	or rastering	Groove mounting Via optional mounting device
Oper	ation and display	
туре	of display	
		OLED display
	er of LEDs	2 Piece(s)
туре	of configuration	Software
•		Teach-in
Doro	tional controls	Membrane keyboard

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# **Technical data**

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#### **Environmental data**

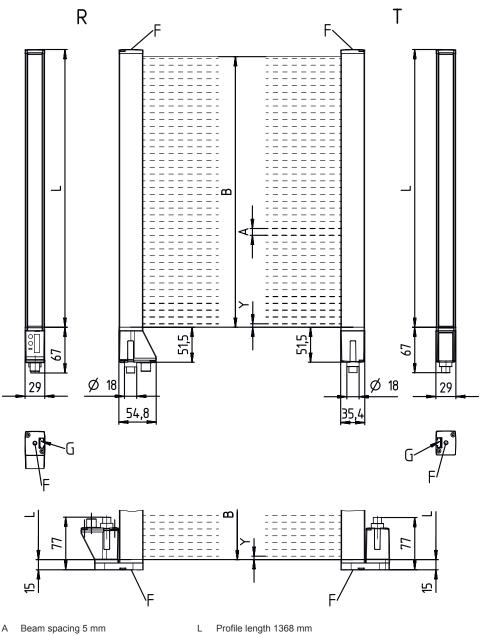
Ambient temperature, operation	-30 60 °C
Ambient temperature, storage	-40 70 °C
Certifications	

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

Customs tariff number         90314990           ECLASS 5.1.4         27270910           ECLASS 8.0         27270910           ECLASS 9.0         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	
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ECLASS 15.0 27270910	
ETIM 5.0 EC002549	)
ETIM 6.0 EC002549	9
ETIM 7.0 EC002549	9
ETIM 8.0 EC002549	9
ETIM 9.0 EC002549	9
ETIM 10.0 EC002549	)

## **Dimensioned drawings**

All dimensions in millimeters



- Beam spacing 5 mm А
- В Measurement field length 1360 mm
- F M6 thread G Fastening groove
- R Receiver

Т

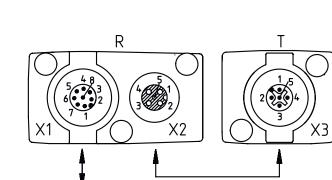
2.5 mm Υ

Transmitter

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## **Dimensioned drawings**





A PWR / SW IN / OUT

## **Electrical connection**

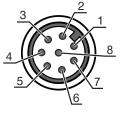
**Connection 1** 

À

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		I/O 1			
3		GND			
4		IO-Link			
5		I/O 2			
6	i	OUT V			
7		OUT mA			
8		AGND			

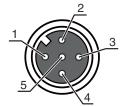


#### **Connection 2**

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**

# Meaning Operational readiness

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
50119384	CML720i-T05- 1360.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

Operating principle Measuring light curtain
Series           720i: 720i series           730i: 730i series
Device type T: transmitter R: receiver
Beam spacing           05: 5 mm           10: 10 mm           20: 20 mm           40: 40 mm
Measurement field length [mm], dependent on beam spacing
Equipment A: Axial connector outlet R: Rear connector outlet
Interface L: IO-Link /CN: CANopen /PB: PROFIBUS /PN: PROFINET /CV: Analog current and voltage output /D3: RS 485 Modbus
Special equipment -PS: Power Setting
Electrical connection M12: M12 connector
-EX: Explosion protection
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.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$  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 UL applications:
A	<ul> <li>For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).</li> <li>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)</li> </ul>

#### Accessories

#### 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

#### Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
1	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

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#### Accessories

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