

Technical data sheet Light curtain receiver Part no.: 50126369 CML720i-R10-2060.A/CN-M12-EX



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 eng • 2025-04-04

Technical data

Leuze

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
	Ex-protected
	Parallel-beam scanning
Optical data	
Operating range	0.3 7 m
Operating range	Guaranteed operating range
Operating range limit	0.2 9 m
Operating range limit	Typical operating range
Measurement field length	2,060 mm
Number of beams	206 Piece(s)
Beam spacing	10 mm
Measurement data	
Vinimum object diameter	20 mm
-	20 11111
Electrical data	
Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection
Performance data	10 001/ 00
Supply voltage U _B	18 30 V, DC
Residual ripple	0 15 %, From U _B
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	
Туре	Inputs/outputs selectable
Voltage type, outputs	
Switching voltage, outputs	Typ. U _B / 0 V
Switching voltage, outputs Voltage type, inputs	Typ. U _B / 0 V DC
Switching voltage, outputs	Typ. U _B / 0 V DC high: ≥6V
Switching voltage, outputs Voltage type, inputs	Typ. U _B / 0 V DC
Switching voltage, outputs Voltage type, inputs Switching voltage, inputs	Typ. U _B / 0 V DC high: ≥6V
Switching voltage, outputs Voltage type, inputs	Typ. U _B / 0 V DC high: ≥6V
Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V
Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Fime behavior	Typ. $U_B / 0 V$ DC high: $\geq 6V$ low: $\leq 4 V$ 1 ms
Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Fime behavior Readiness delay	Typ. U _B / 0 ∨ DC high: ≥6∨ low: ≤ 4 ∨ 1 ms 450 ms
Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Fime behavior Readiness delay Cycle time	Typ. $U_B / 0 V$ DC high: $\geq 6V$ low: $\leq 4 V$ 1 ms 450 ms 6.64 ms
Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Fime behavior Readiness delay	Typ. U _B / 0 ∨ DC high: ≥6∨ low: ≤ 4 ∨ 1 ms 450 ms
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IO-Link COM mode Specification V1.0.1 V1.1 V1.1 Specification V1.0.1 V1.1 CANopen Function Process Function Process Connection Axial Number of connections 2 Piece(s) Plug outiet Axial Connection 1 Configuration interface Function Configuration interface Signal IN Signal OUT Voltage supply Voltage supply Type of connection Connector Thread size M12 Type Male Material Metal No. of pins 8 -pin Encoding A-coded Connection 2 Function Function BUS IN BUS OUT Type of connection Thread size M12 Type Female Material Metal No. of pins 5 -pin Encoding A-coded Design Cubic Dimension (W x H x L) 30.7 mm x 54.8 mm x 2,103 mm Housing color Silver <t< th=""><th>COM mode Specification CANopen Function Connection Number of connections</th><th>V1.0.1 V1.1</th></t<>	COM mode Specification CANopen Function Connection Number of connections	V1.0.1 V1.1
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Ex specification Ex-zone 2	Ambient temperature, operation	-30 60 °C
Ex-zone 2	Ambient temperature, storage	-40 70 °C
Ex-zone 2	Ex specification	
	·	2
Ex device group II	Ex device group	
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Technical data

Leuze

Certifications

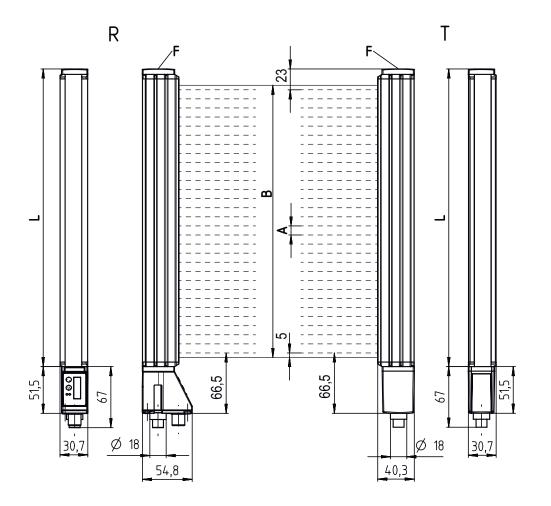
Degree of protection	IP 65
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

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





- A Beam spacing 10 mm
- B Measurement field length 2060 mm
- F M6 thread
- G Fastening groove
- L Profile length 2088 mm
- T Transmitter
- R Receiver

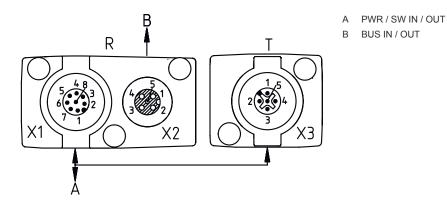


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Leuze

Dimensioned drawings





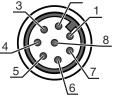
Electrical connection

Connection 1

Function	Configuration interface
	Connection to transmitter
	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	RS 485 Tx-		
7	RS 485 Tx+		
8	FE/SHIELD		



Connection 2

Function	BUS IN
	BUS OUT
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Electrical connection

Pin

••••		
	Pin assignment	$\frac{2}{\sqrt{2}}$
	FE/SHIELD	$\frac{1}{2}$
	n.c.	
	CAN GND	
	CAN H	
	CAN L	3

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
50126400	CML720i-T10- 2060.A-M12-EX	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
22	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



Part number code



DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection
	Note
A	N 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. The product may only be put into operation by competent persons. Only use the product in accordance with its intended use. 					



For UL applications:

 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
CALL PRINT	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

Accessories

Leuze

Connection technology - Connection cables

 Part no.	Designation	Article	Description
50132079	KD U-M12-5A-V1- 050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC

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

Connection technology - Y distribution cables

	Part no.	Designation	Article	Description
	50118183	K-Y1 M12A-5m- M12A-S-PUR	Interconnection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Female, A-coded, 8 -pin Shielded: Yes Cable length fork 1: 5,000 mm Cable length fork 2: 150 mm Sheathing material: PUR
	50118185	K-YCN M12A-M12A- S-PUR	Interconnection cable	Suitable for interface: CANopen Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable length fork 1: 250 mm Cable length fork 2: 350 mm Sheathing material: PUR

Connection technology - Terminating resistors

 Part no.	Designation	Article	Description
50040099	TS 01-5-SA	Terminator plug	Suitable for: DeviceNet, CANopen Function: Bus termination Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin

Accessories

Leuze

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

General

 Part no.	Designation	Article	Description
50109217	K-V M12-Ex	Safety locking device	Housing material: Plastic, PA

Services

	Part no.	Designation	Article	Description
J.	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.