Leuze

Technical data sheet Light curtain receiver Part no.: 50119739 CML720i-R05-2000.A/L-M12



Technical data

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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	0.1 3.5 m
Dperating range	Guaranteed operating range
Dperating range limit	0.1 4.5 m
Dperating range limit	Typical operating range
Measurement field length	2,000 mm
Number of beams	400 Piece(s)
Beam spacing	5 mm
Measurement data	
Ainimum object diameter	10 mm
-	
Electrical data	
Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection
Performance data	
Supply voltage U _B	18 30 V, DC
Residual ripple	0 15 %, From U _R
Open-circuit current	0 435 mA, The specified values refer to the entire package consisting of trans- mitter and receiver.
Inputs/outputs selectable	100 ~ 1
Output current, max. Input resistance	100 mA
	6,000 Ω
Number of inputs/outputs selectab	Inputs/outputs selectable
Туре	DC
Type Voltage type, outputs	50
Voltage type, outputs	Typ II_ / 0 V
Voltage type, outputs Switching voltage, outputs	Typ. U _B / 0 V
Voltage type, outputs Switching voltage, outputs Voltage type, inputs	DC
Voltage type, outputs Switching voltage, outputs	DC high: ≥6V
Voltage type, outputs Switching voltage, outputs Voltage type, inputs	DC
Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs	DC high: ≥6V
Voltage type, outputs Switching voltage, outputs Voltage type, inputs	DC high: ≥6V
Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	DC high: ≥6V Iow: ≤ 4 V
Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	DC high: ≥6V Iow: ≤ 4 V 0 1 ms
Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	DC high: ≥6V Iow: ≤ 4 V
Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Fime behavior Readiness delay	DC high: ≥6∨ low: ≤ 4 ∨ 0 1 ms 400 ms
Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Fime behavior Readiness delay Cycle time	DC high: ≥6V Iow: ≤ 4 V 0 1 ms 400 ms 12.4 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
Function	Configuration interface
	Signal IN
	Signal OUT
Time of each of the	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded
Connection 2	0
Function	Connection to transmitter
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	5 -pin A-coded
Encoding	A-coded
Mechanical data	
Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 2,075 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	2,100 g
Housing color	Silver
Type of fastening	Groove mounting
	Via optional mounting device
Operation and display	
Type of display	LED
	OLED display
Number of LEDs	2 Piece(s)
Type of configuration	Software
-	Teach-in
Operational controls	Membrane keyboard
Environmental data	
Ambient 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
Standards applied	IEC 60947-5-2

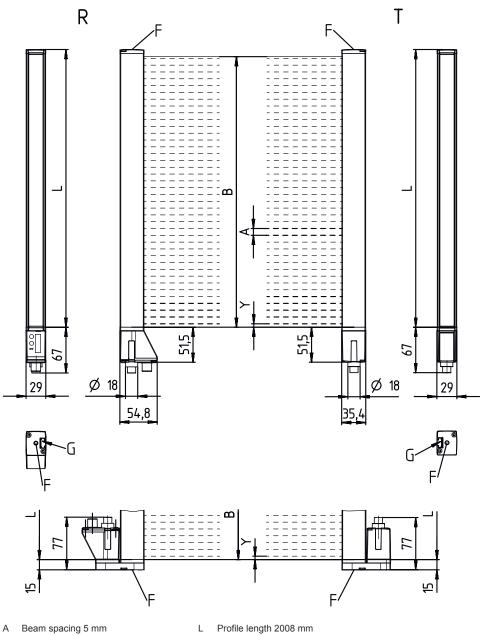
Classification

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

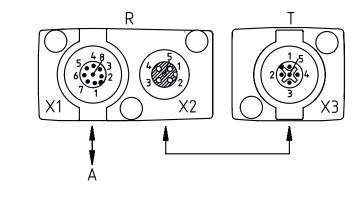


- Beam spacing 5 mm А
- В Measurement field length 2000 mm
- F M6 thread G Fastening groove
- Transmitter Т
- R Receiver
- 2.5 mm Υ

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Dimensioned drawings





A PWR / SW IN / OUT

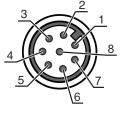
Electrical connection

Connection 1

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 1

2

ain receiver • Part no.: 50119739 • CML720i-R05-2000.A/L-M12			
atio	on and display	Leuze	,
	Display	Meaning	
	Green, continuous light	Operational readiness	1
	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
50119392	CML720i-T05- 2000.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
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
DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection
Note	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
1	∜ 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. HILL	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

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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

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