

## **Technical data sheet** Light curtain receiver Part no.: 50123475 CML720i-R05-2880.A/D3-M12



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#### **Technical data**

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Series	720
Operating principle	Throughbeam principle
	Receiver
	2x BT-NC sliding block
Application	Object measurement
Special version	
Special version	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning
Optical data	
Operating range	0.1 3.5 m
	Guaranteed operating range
	0.1 4.5 m
	Typical operating range
	2,880 mm
Number of beams	576 Piece(s)
Beam spacing	5 mm
Measurement data	
Minimum object diameter	10 mm
Electrical data	
	Polarity reversal protection
	Short circuit protected
	Transient protection
Performance data	
	18 30 V, DC
	0 15 %, From U <sub>B</sub>
	0 600 mA, The specified values refer to the entire package consisting of trans mitter and receiver.
Inputs/outputs selectable	
····	100 mA
	6,000 Ω
Number of inputs/outputs selectable	
	Inputs/outputs selectable
0 31 7 1	
Switching voltage systemate	
	Typ. U <sub>B</sub> / 0 V
Switching voltage, inputs	high: ≥6V
Switching voltage, inputs	-
Switching voltage, inputs	high: ≥6V
Switching voltage, inputs Input/output 1	high: ≥6V
Switching voltage, inputs Input/output 1 Activation/disable delay	high: ≥6V Iow: ≤ 4 V
Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior	high: ≥6V Iow: ≤ 4 V 1 ms
Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time	high: ≥6V Iow: ≤ 4 V 1 ms 17.68 ms
Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time Response time per beam	high: ≥6V Iow: ≤ 4 V 1 ms
Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time Response time per beam Interface	high: ≥6V low: ≤ 4 V 1 ms 17.68 ms 30 μs
Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time Response time per beam Interface	high: ≥6V Iow: ≤ 4 V 1 ms 17.68 ms
Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Cycle time Response time per beam Interface	high: ≥6V Iow: ≤ 4 V 1 ms 17.68 ms 30 μs

Service interface			
Туре	IO-Link		
IO-Link			
Function	Configuration via software		
T unction	Service		
	Service		
Connection			
Number of connections	2 Piece(s)		
Plug outlet	Axial		
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		
Connection 2			
Function	BUS IN		
	BUSOUT		
Type of connection	Connector		
Thread size	M12		
Туре	Female		
Material	Metal		
No. of pins	5 -pin		
Encoding	B-coded		
Mechanical data			
Design	Cubic		
Dimension (W x H x L)	29 mm x 35.4 mm x 2,955 mm		
Housing material	Metal		
Metal housing	Aluminum		
Lens cover material	Plastic		
Net weight	2,900 g		
Housing color	Silver		
Type of fastening	Groove mounting		
	Via optional mounting device		
Operation and display			
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		
Ambient temperature, storage	-40 70 °C		

## **Technical data**

#### Certifications

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

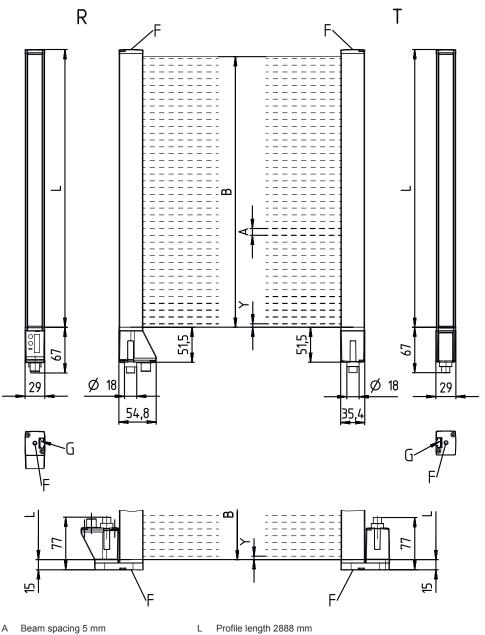
#### Classification

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 5 mm А

Fastening groove

- В Measurement field length 2880 mm
- F M6 thread

G

R Receiver

Т

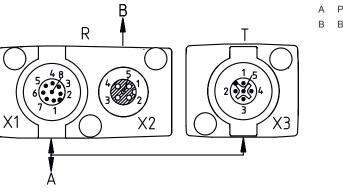
2.5 mm Υ

Transmitter

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#### **Dimensioned drawings**





PWR / SW IN / OUT BUS IN / OUT

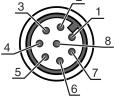
## **Electrical connection**

**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	B-coded

## **Electrical connection**

Pin	Pin assignment	2
1	V+	1
2	Tx-	
3	PB GND	
4	Tx+	
5	FE/SHIELD	

### **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
50119403	CML720i-T05- 2880.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



#### Part number code



DDD	Special equipment -PS: Power Setting
EEE	Electrical connection M12: M12 connector
FFF	-EX: Explosion protection
	Note
A	∜ 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.         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 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 - 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

#### Accessories

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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

#### Services

	Part no.	Designation	Article	Description
ц. С	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.
الم م	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
6	∜ A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.