SMART SENSOR BUSINESS

Leuze electronic

the sensor people



Part no.: 50123309 CML730i-R10-320.A/D3-M12 Light curtain receiver



Figure can vary

Contents

- Technical data
- · Dimensioned drawings
- Electrical connection
- · Operation and display
- Suitable transmitters
- · Part number code
- Notes
- Accessories

Part no.: 50123309 – CML730i-R10-320.A/D3-M12 – Light curtain receiver

Technical data

Basic data	
Series	730
Operating principle	Throughbeam principle
Device type	Receiver
Contains	2x BT-NC sliding block
Application	Detection of transparent objects Object measurement
Special design	
Special design	Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning
Optical data	
Operating range	Guaranteed operating range
Operating range	0.3 9.5 m
Operating range, transparent media	0.3 3.5 m
Operating range, transparent media	Typical operating range
Operating range limit	0.2 12 m
Measurement field length	320 mm
Number of beams	32 Piece(s)
Beam spacing	10 mm
Beam spacing	10 1111
Measurement data	
Minimum object diameter	20 mm
Electrical data	
Protective circuit	Polarity reversal protection Short circuit protected
	Transient protection
Performance data	
Performance data Supply voltage UB	Transient protection
Supply voltage UB	Transient protection 18 30 V , DC
	Transient protection
Supply voltage U _B Residual ripple	Transient protection 18 30 V , DC 0 15 % , From U _B 0 165 mA , The specified values refer to the entire package con-
Supply voltage UB Residual ripple Open-circuit current	Transient protection 18 30 V , DC 0 15 % , From U _B 0 165 mA , The specified values refer to the entire package con-
Supply voltage U _B Residual ripple Open-circuit current Inputs/outputs selectable	Transient protection 18 30 V , DC 0 15 % , From UB 0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver.
Supply voltage UB Residual ripple Open-circuit current <i>Inputs/outputs selectable</i> Number of inputs/outputs selectable	Transient protection 18 30 V , DC 0 15 % , From UB 0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver. 2 Piece(s)
Supply voltage UB Residual ripple Open-circuit current <i>Inputs/outputs selectable</i> Number of inputs/outputs selectable Type	Transient protection 18 30 V , DC 0 15 % , From UB 0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver. 2 Piece(s) Inputs/outputs selectable
Supply voltage UB Residual ripple Open-circuit current <i>Inputs/outputs selectable</i> Number of inputs/outputs selectable Type Voltage type, outputs	Transient protection 18 30 V , DC 0 15 % , From UB 0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver. 2 Piece(s) Inputs/outputs selectable DC
Supply voltage UB Residual ripple Open-circuit current Inputs/outputs selectable Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs	Transient protection 18 30 V , DC 0 15 % , From UB 0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver. 2 Piece(s) Inputs/outputs selectable DC Typ. UB / 0 V high: ≥6V
Supply voltage UB Residual ripple Open-circuit current Inputs/outputs selectable Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1	Transient protection 18 30 V , DC 0 15 % , From UB 0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver. 2 Piece(s) Inputs/outputs selectable DC Typ. UB / 0 V high: ≥6V
Supply voltage UB Residual ripple Open-circuit current <i>Inputs/outputs selectable</i> Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs <i>Input/output 1</i> <i>Timing</i>	Transient protection 18 30 V , DC 0 15 % , From UB 0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver. 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V high: ≥6V low: ≤4V
Supply voltage UB Residual ripple Open-circuit current Inputs/outputs selectable Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1	Transient protection 18 30 V , DC 0 15 % , From UB 0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver. 2 Piece(s) Inputs/outputs selectable DC Typ. UB / 0 V high: ≥6V
Supply voltage UB Residual ripple Open-circuit current Inputs/outputs selectable Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1 Timing Cycle time	Transient protection 18 30 V , DC 0 15 % , From UB 0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver. 2 Piece(s) Inputs/outputs selectable DC Typ. UB / 0 V high: ≥6V Iow: ≤4V
Supply voltage UB Residual ripple Open-circuit current Inputs/outputs selectable Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Switching voltage, inputs Input/output 1 Timing Cycle time	Transient protection 18 30 V , DC 0 15 % , From UB 0 165 mA , The specified values refer to the entire package consisting of transmitter and receiver. 2 Piece(s) Inputs/outputs selectable DC Typ. UB / 0 V high: ≥6V Iow: ≤4V

Leuze electronic GmbH + Co. KG, In der Braike 1, 73277 Owen Phone: +49 7021 573-0, Fax: +49 7021 573-199

Part no.: 50123309 – CML730i-R10-320.A/D3-M12 – Light curtain receiver

RS 485	Droope			
Function	Process			
Service interface				
уре	IO-Link			
IO-Link				
Function	Service	Configuration via software 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 BUS OUT			
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 395 mm			
Housing material	Metal , Aluminum			
ens cover material	Plastic			
Net weight	550 g			
Housing color	Silver			
Гуре 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			
	Membrane keyboard			

Environmental data

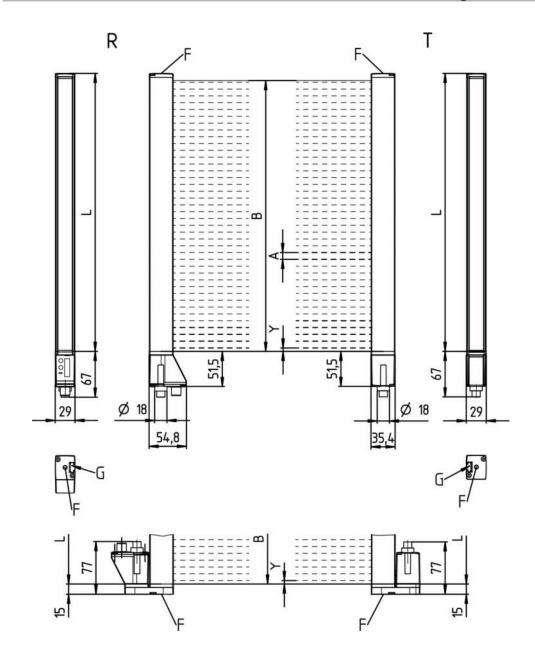
Part no.: 50123309 – CML730i-R10-320.A/D3-M12 – Light curtain receiver

Ambient temperature, operation	-30 60 °C	
Ambient temperature, storage	-40 70 °C	
Certifications		
Degree of protection	IP 65	
Protection class	III	
Certifications	c CSA US	
Standards applied	IEC 60947-5-2	
Classification		
Customs tariff number	90314990	
eCl@ss 8.0	27270910	
eCl@ss 9.0	27270910	
ETIM 5.0	EC002549	
ETIM 6.0	EC002549	

Dimensioned drawings

All dimensions in millimeters

Part no.: 50123309 - CML730i-R10-320.A/D3-M12 - Light curtain receiver

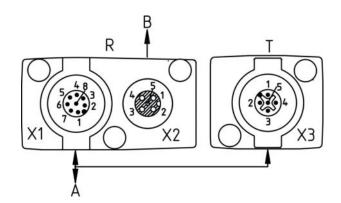


A Beam spacing 10 mm B Measurement field length 320 mm

F M6 thread

- G Fastening groove
- L Profile length 328 mm
- T Transmitter
- R Receiver
- Y 5 mm

Part no.: 50123309 – CML730i-R10-320.A/D3-M12 – Light curtain receiver



A PWR / SW IN/OUT B 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	

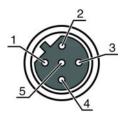
Pin	Pin assignment
1	V+
2	I/O 1
3	GND
4	IO-Link
5	I/O 2
6	RS 485 Tx+
7	RS 485 Tx+
8	FE/SHIELD



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	

Part no.: 50123309 – CML730i-R10-320.A/D3-M12 – Light curtain receiver

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



Operation and display

LEDs

LED	Display	Meaning
1	Green, continuous light	Operational readiness
	Green, flashing	Teach / error
		Measurement frequency display
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
50118614	CML730i- T10-320.A-M12	Light curtain transmitter	Operating range: 0.3 9.5 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		
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: connector outlet, axial R: rear connector outlet		

Part no.: 50123309 – CML730i-R10-320.A/D3-M12 – Light curtain receiver

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

A list with all available device types can be found on the Leuze electronic 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 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 Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

Part no.: 50123309 – CML730i-R10-320.A/D3-M12 – Light curtain receiver

Connection technology - Y distribution cables

	Part no.	Designation	Article	Description
		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
	50123265	K-YPB M12A-5m- M12A-S-PUR	Interconnection cable	Suitable for interface: PROFIBUS DP Connection 1: Connector, M12, Axial, Male, B-coded, 5 -pin Connection 2: Connector, M12, Axial, Female, B-coded, 5 -pin Connection 3: Connector, M12, Axial, Male, B-coded, 5 -pin Shielded: Yes Cable length fork 1: 5,000 mm Cable length fork 2: 250 mm Sheathing material: PUR

Mounting technology - Mounting brackets

Part no.	Designation	Article	Description
50142900	BT 700M.5-2SET	Mounting device set	Contains: 2x mounting brackets, 1 teach template, 4 M6 x 10 screws 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

Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
RR.	429046	BT-2R1	set	Contains: 2x BT-R swivel mount, 1 cylinder for mounting on the light curtain Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic

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. Restrictions: No mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment.
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. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure.

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