## SMART SENSOR BUSINESS

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Part no.: 50123342 CML730i-R20-2710.A/D3-M12 Light curtain receiver



Figure can vary

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### Part no.: 50123342 – CML730i-R20-2710.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 limit	Typical operating range
Operating range limit	0.2 12 m
Measurement field length	2,710 mm
Number of beams	136 Piece(s)
Beam spacing	20 mm
	20 1111
Measurement data	
Minimum object diameter	30 mm
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Electrical data	
<i>Electrical data</i> Protective circuit	Polarity reversal protection Short circuit protected Transient protection
Protective circuit	
Protective circuit Performance data	Short circuit protected Transient protection
Protective circuit Performance data Supply voltage UB	Short circuit protected Transient protection 18 30 V , DC
Protective circuit Performance data	Short circuit protected Transient protection
Protective circuit Performance data Supply voltage UB Residual ripple	Short circuit protected Transient protection          18 30 V , DC         0 15 % , From UB         0 435 mA , The specified values refer to the entire package con-
Protective circuit          Performance data         Supply voltage UB         Residual ripple         Open-circuit current	Short circuit protected Transient protection          18 30 V , DC         0 15 % , From UB         0 435 mA , The specified values refer to the entire package con-
Protective circuit          Performance data         Supply voltage UB         Residual ripple         Open-circuit current         Inputs/outputs selectable	Short circuit protected Transient protection          18 30 V , DC         0 15 % , From UB         0 435 mA , The specified values refer to the entire package consisting of transmitter and receiver.
Protective circuit          Performance data         Supply voltage UB         Residual ripple         Open-circuit current         Inputs/outputs selectable         Number of inputs/outputs selectable	Short circuit protected Transient protection          18 30 V , DC         0 15 % , From UB         0 435 mA , The specified values refer to the entire package consisting of transmitter and receiver.         2 Piece(s)
Protective circuit          Performance data         Supply voltage UB         Residual ripple         Open-circuit current         Inputs/outputs selectable         Number of inputs/outputs selectable         Type	Short circuit protected Transient protection          18 30 V , DC         0 15 % , From UB         0 435 mA , The specified values refer to the entire package consisting of transmitter and receiver.         2 Piece(s)         Inputs/outputs selectable
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Protective circuit          Performance data         Supply voltage UB         Residual ripple         Open-circuit current         Inputs/outputs selectable         Number of inputs/outputs selectable         Type         Voltage type, outputs         Switching voltage, outputs	Short circuit protected Transient protection  18 30 V , DC  0 15 % , From UB  0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver.  2 Piece(s)  Inputs/outputs selectable  DC  Typ. U <sub>B</sub> / 0 V  high: ≥6V
Protective circuit          Performance data         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	Short circuit protected Transient protection  18 30 V , DC  0 15 % , From UB  0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver.  2 Piece(s)  Inputs/outputs selectable  DC  Typ. U <sub>B</sub> / 0 V  high: ≥6V
Protective circuit          Performance data         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	Short circuit protected Transient protection  18 30 V , DC  0 15 % , From UB  0 435 mA , The specified values refer to the entire package con- sisting of transmitter and receiver.  2 Piece(s)  Inputs/outputs selectable  DC  Typ. U <sub>B</sub> / 0 V  high: ≥6V
Protective circuit          Performance data         Supply voltage UB         Residual ripple         Open-circuit current         Inputs/outputs selectable         Number of inputs/outputs selectable         Type         Voltage type, outputs         Switching voltage, inputs         Switching voltage, inputs	Short circuit protected         Transient protection         18 30 V , DC         0 15 % , From UB         0 435 mA , The specified values refer to the entire package consisting of transmitter and receiver.         2 Piece(s)         Inputs/outputs selectable         DC         Typ. U <sub>B</sub> / 0 V         high: ≥6V         Iow: ≤4V
Protective circuit          Performance data         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	Short circuit protected         Transient protection         18 30 V , DC         0 15 % , From UB         0 435 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

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### Part no.: 50123342 – CML730i-R20-2710.A/D3-M12 – Light curtain receiver

Function	Dragon		
Function	Process		
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		
	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 2,795 mm		
lousing material	Metal , Aluminum		
ens cover material	Plastic		
Net weight	2,750 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

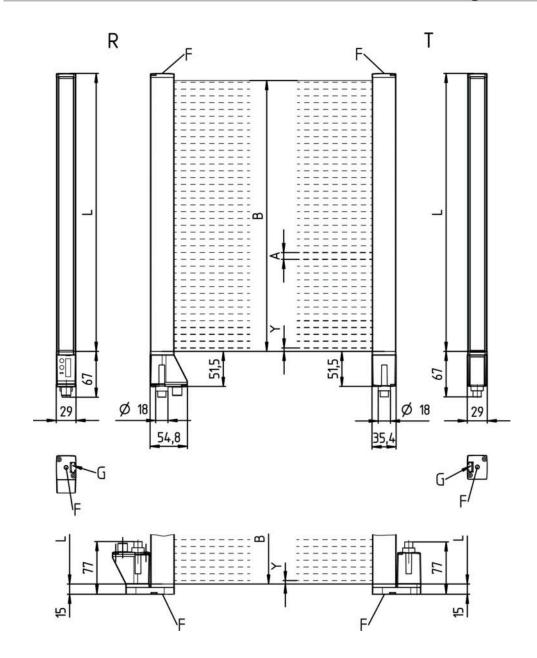
### Part no.: 50123342 – CML730i-R20-2710.A/D3-M12 – Light curtain receiver

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.: 50123342 – CML730i-R20-2710.A/D3-M12 – Light curtain receiver

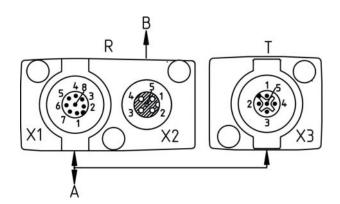


A Beam spacing 20 mm B Measurement field length 2710 mm

F M6 thread

- G Fastening groove
- L Profile length 2728 mm
- T Transmitter
- R Receiver
- Y 5 mm

Part no.: 50123342 - CML730i-R20-2710.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	

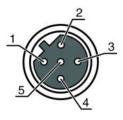
Pin	Pin assignment
1	V+
2	I/O 1
3	GND
4	IO-Link
5	I/O 2
6	RS 485 Tx+
7	RS 485 Tx+
8	FE/SHIELD



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.: 50123342 – CML730i-R20-2710.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		Light path free, with function reserve
	Yellow, flashing	No function reserve
	Off	Object detected

#### Suitable transmitters

Part no.	Designation	Article	Description
50118645	CML730i- T20-2710.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.: 50123342 – CML730i-R20-2710.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

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#### 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
ęł.	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