

Technical data sheet Light curtain receiver Part no.: 50123300 CML730i-R05-2480.A/D3-M12



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Technical data

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Rasic data

Operating principle Throughbeam principle Device type Receiver Contains 2x BT-NC sliding block Application Detection of transparent objects Object measurement Object measurement Special version Crossed-beam scanning Diagonal-beam scanning Diagonal-beam scanning Operating range Guaranteed operating range Operating range 0.1 4.5 m Operating range, transparent media 0.1 1.75 m Operating range limit Typical operating range Operating range limit 0.1 6 m Measurement field length 2.480 mm Number of beams 496 Piece(s) Beam spacing 5 mm Measurement data Minimum object diameter Minimum object diameter 10 mm Electrical data Polarity reversal protection Performance data Supply voltage U _B Supply voltage U _B 18 30 V, DC Residual ripple 0 45 %, From U _B Open-circuit current 0 45 %, Trom U _B Open-circuit current 0	Basic data	
Device type Receiver Contains 2x BT-NC silding block Application Detection of transparent objects Object measurement Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Operating range Cuaranteed operating range Operating range Imit 0, 1, 4, 5 m Operating range Imit 0, 1, 4, 5 m Operating range Imit 0, 1, 4, 5 m Operating range Imit 0, 1, 6 m Measurement field length 2,480 mm Number of beams 496 Piece(s) Beam spacing 5 mm Measurement data Minimum object diameter 10 mm Electrical data Protective circuit Polarity reversal protection Short circuit protected Transient protection Short circuit current 0, 45 %, From U _b Open-circuit current 10 µs Interface Type RS 485 Modbus RS 485 Function Process	Series	730
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Application Detection of transparent objects Object measurement Special version Special version Crossed-beam scanning Diagonal-beam scanning Operating range Guaranteed operating range Operating range (mit) 0.1 4.5 m Operating range limit 0.1 4.5 m Operating range limit 0.1 4.5 m Operating range limit 0.1 6 m Measurement field length 2.480 mm Number of beams 496 Piece(s) Beam spacing 5 mm Minimum object diameter 10 mm Electrical data Polarity reversal protection Protective circuit Polarity reversal protected Tansient protection Short circuit protected Tansient protection Short circuit protected Performance data Supply voltage U _b 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 Voltage type, outputs selectable 2 Piece(s) T	Device type	Receiver
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Number of beams 496 Piece(s) Beam spacing 5 mm Measurement data 10 mm Electrical data Polarity reversal protection Short circuit protected Transient protection Short circuit protected Transient protection Performance data Short circuit protected 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 Voltage type, outputs selectable 2 Piece(s) Type Inputs/outputs selectable Number of inputs/outputs selectable DC Switching voltage, outputs DC Switching voltage, inputs high: 26V low: ≤4V Input/output 1 Timing Uv ≤4V Cycle time 5.11 ms Response time per beam 10 μs Interface Type RS 485 Function Function Process		2,480 mm
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Short circuit protected Transient protection Performance data 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 transmitter and receiver. Inputs/outputs selectable Number of inputs/outputs selectable 2 Piece(s) Type Inputs/outputs selectable Voltage type, outputs DC Switching voltage, outputs Typ. U _B / 0 V Switching voltage, inputs high: ≥6V Iow: ≤4V Iow: ≤4V Input/output 1 Timing Cycle time 5.11 ms Response time per beam 10 µs Interface Type Type RS 485 Modbus RS 485 Function Function Process	Electrical data	
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Number of inputs/outputs selectable 2 Piece(s) Type Inputs/outputs selectable Voltage type, outputs DC Switching voltage, outputs Typ. U _B / 0 V Switching voltage, inputs high: ≥6V low: ≤4V low: ≤4V Input/output 1 Timing Cycle time Response time per beam 10 µs Interface Type Type RS 485 Modbus Function Process		
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Switching voltage, inputs high: ≥6∨ low: ≤4∨ Input/output 1 Timing Cycle time 5.11 ms Response time per beam 10 µs Interface Interface Type RS 485 Modbus Function Process Service interface Interface	Voltage type, outputs	
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Input/output 1 Timing Cycle time 5.11 ms Response time per beam 10 μs Interface Type RS 485 RS 485 Modbus Function Process Service interface Process	Switching voltage, inputs	
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Cycle time 5.11 ms Response time per beam 10 µs Interface Type RS 485 RS 485 Modbus Function Process Service interface	Input/output 1	
Response time per beam 10 μs Interface Interface Type RS 485 Modbus RS 485 Function Function Process	Timing	
Response time per beam 10 µs Interface Interface Type RS 485 Modbus RS 485 Function Function Process	Cycle time	5.11 ms
Type RS 485 Modbus RS 485 Function Process Service interface	Response time per beam	
RS 485 Function Process Service interface	Interface	
Function Process Service interface	Туре	RS 485 Modbus
Service interface	RS 485	
	Function	Process
Type IO-Link	Service interface	
	Turno	

IO-Link	
Function	Configuration via software
	Service
Connection	
Number of connections	2 Piaco(s)
Plug outlet	2 Piece(s) Axial
	/ 0101
Connection 1	
Function	Configuration interface
	Connection to transmitter
	Signal IN
	Signal OUT
Type of connection	Voltage supply Connector
Thread size	M12
Туре	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded
Connection 2	
Function	BUS IN
Time of connection	BUS OUT
Type of connection Thread size	Connector M12
Type	Female
Material	Metal
No. of pins	5 -pin
Encoding	B-coded
Liboanig	5 00000
Mechanical data	
Mechanical data Design	Cubic
	29 mm x 35.4 mm x 2,555 mm
Design Dimension (W x H x L) Housing material	29 mm x 35.4 mm x 2,555 mm Metal
Design Dimension (W x H x L) Housing material Metal housing	29 mm x 35.4 mm x 2,555 mm Metal Aluminum
Design Dimension (W x H x L) Housing material Metal housing Lens cover material	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s)
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Operational controls Environmental data	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Operational controls Environmental data Ambient temperature, operation	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Operational controls Environmental data	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Operational controls Environmental data Ambient temperature, operation	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Operational controls Environmental data Ambient temperature, operation Ambient temperature, storage	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Operational controls Environmental data Ambient temperature, operation Ambient temperature, storage	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C -40 70 °C
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Type of display Number of LEDs Type of configuration Operational controls Environmental data Ambient temperature, operation Ambient temperature, storage Certifications Degree of protection	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C -40 70 °C
Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Operation and display Operation and display Type of display Number of LEDs Type of configuration Operational controls Environmental data Ambient temperature, operation Ambient temperature, storage Certifications Degree of protection Protection class	29 mm x 35.4 mm x 2,555 mm Metal Aluminum Plastic 2,550 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in Membrane keyboard -30 60 °C -40 70 °C IIP 65 III

Technical data

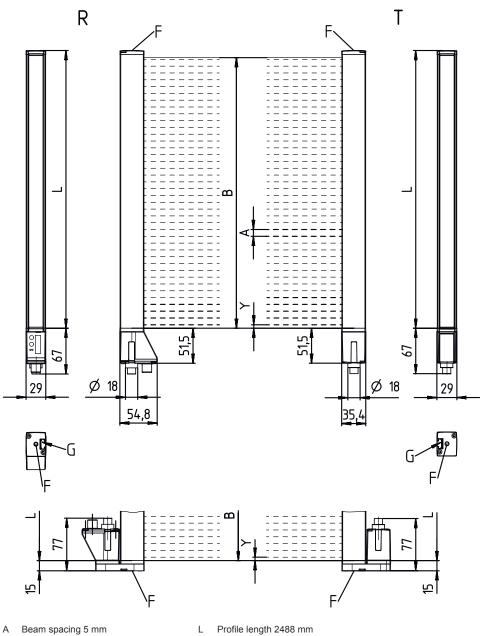
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eCl@ss 11.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549

3/8

Leuze

Dimensioned drawings

All dimensions in millimeters



Beam spacing 5 mm А

Fastening groove

- В Measurement field length 2480 mm
- F M6 thread

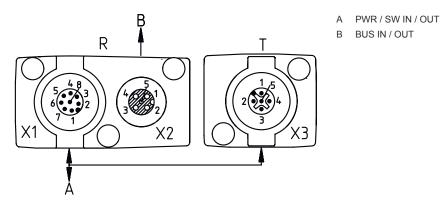
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- Transmitter Т R Receiver
- 2.5 mm Υ



Dimensioned drawings





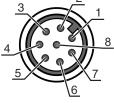
Electrical connection

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	B-coded

5/8

Electrical connection

Pin

1 2

3

4

5

Pin assignment V+ Tx PB GND Tx+ FE/SHIELD



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
50118606	CML730i-T05- 2480.A-M12	Light curtain transmitter	Operating range: 0.1 4 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
ccc	Interface L: IO-Link /CN: CANopen /PB: PROFIBUS /PN: PROFINET /CV: Analog current and voltage output /D3: RS 485 Modbus

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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. 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

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

Leuze

	Part no.	Designation	Article	Description
	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: Cable with connector, M12, Axial, Female, B-coded, 5 -pin Connection 3: Cable with connector, M12, Axial, Male, B-coded, 5 -pin Shielded: Yes Sheathing material: PUR

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
1 + 1 + 1 + 1 + 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

Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
ęę.	429046	BT-2R1	Mounting bracket set	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
y;	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 website in the Download tab of the article detailed page.