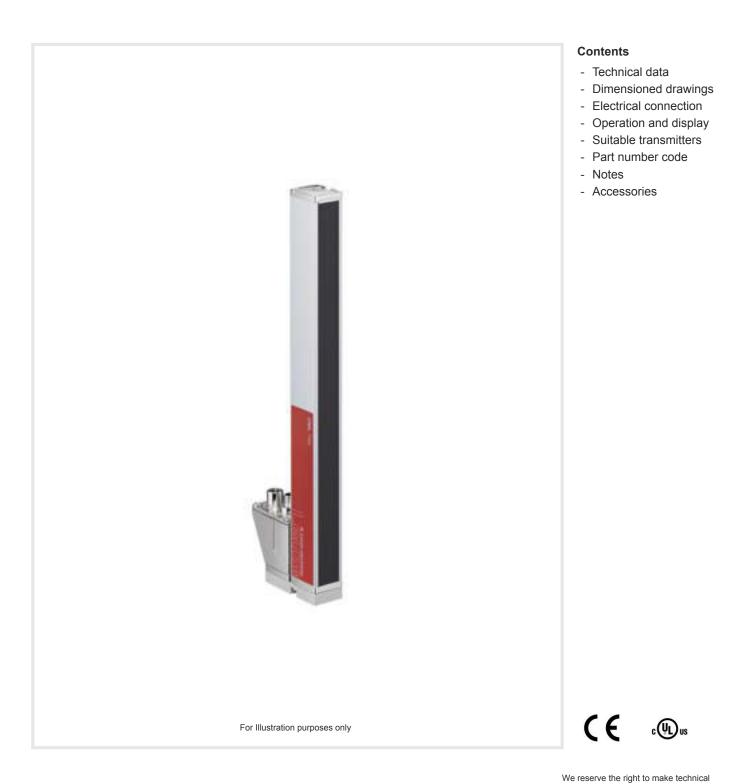


Technical data sheet Light curtain receiver Part no.: 50119001 CML730i-R05-720.R/CN-M12



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 changes

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Technical data

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Series	730		
Operating principle	Throughbeam principle		
Device type	Receiver		
Contains	Accessories for the use of the BT-2R1		
Application	Detection of transparent objects		
	Object measurement		
Special version			
Special version	Crossed-beam scanning		
	Diagonal-beam scanning		
	Parallel-beam scanning		
Optical data			
Operating range	0.1 4.5 m		
Operating range	Guaranteed operating range		
Operating range, transparent media	0.1 1.75 m		
Operating range limit	0.1 6 m		
Operating range limit	Typical operating range		
Measurement field length	720 mm		
Number of beams	144 Piece(s)		
Beam spacing	5 mm		
Measurement data			
Minimum object diameter	10 mm		
Electric el dete			
Electrical data			
	Polarity reversal protection		
	Polarity reversal protection Short circuit protected		
Protective circuit	Short circuit protected		
Protective circuit Performance data	Short circuit protected Transient protection		
Protective circuit Performance data Supply voltage U _B	Short circuit protected Transient protection 18 30 V, DC		
	Short circuit protected Transient protection		
Protective circuit Performance data Supply voltage U _B Residual ripple	Short circuit protected Transient protection 18 30 V, DC 0 15 %, From U _B 0 215 mA, The specified values refer		
Protective circuit Performance data Supply voltage U _B Residual ripple Open-circuit current	Short circuit protected Transient protection 18 30 V, DC 0 15 %, From U _B 0 215 mA, The specified values refer to the entire package consisting of trans		
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Protective circuit Performance data Supply voltage U _B Residual ripple Open-circuit current Inputs/outputs selectable	Short circuit protected Transient protection 18 30 V, DC 0 15 %, From U _B 0 215 mA, The specified values refer to the entire package consisting of trans mitter and receiver.		
Protective circuit Performance data Supply voltage U _B Residual ripple Open-circuit current Inputs/outputs selectable Output current, max.	Short circuit protected Transient protection 18 30 V, DC 0 15 %, From U _B 0 215 mA, The specified values refer to the entire package consisting of trans mitter and receiver. 100 mA 6,000 Ω		
Protective circuit Performance data Supply voltage U _B Residual ripple Open-circuit current Inputs/outputs selectable Output current, max. Input resistance	Short circuit protected Transient protection 18 30 V, DC 0 15 %, From U _B 0 215 mA, The specified values refer to the entire package consisting of trans mitter and receiver. 100 mA 6,000 Ω		
Protective circuit Performance data Supply voltage U _B Residual ripple Open-circuit current Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs	Short circuit protected Transient protection 18 30 V, DC 0 15 %, From U _B 0 215 mA, The specified values refer to the entire package consisting of trans mitter and receiver. 100 mA 6,000 Ω 2 Piece(s) Inputs/outputs selectable DC		
Protective circuit Performance data Supply voltage U _B Residual ripple Open-circuit current Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs	Short circuit protected Transient protection 18 30 V, DC 0 15 %, From U _B 0 215 mA, The specified values refer to the entire package consisting of trans mitter and receiver. 100 mA 6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V		
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Protective circuit Performance data Supply voltage U _B Residual ripple Open-circuit current Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs	Short circuit protected Transient protection 18 30 V, DC 0 15 %, From U _B 0 215 mA, The specified values refer to the entire package consisting of trans mitter and receiver. 100 mA 6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC		
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Protective circuit Performance data Supply voltage U _B Residual ripple Open-circuit current Inputs/outputs selectable Output current, max. Input resistance 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 U _B 0 215 mA, The specified values refer to the entire package consisting of trans- mitter and receiver. 100 mA 6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: \geq 6V Iow: \leq 4 V		
Protective circuit Performance data Supply voltage U _B Residual ripple Open-circuit current Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	Short circuit protected Transient protection 18 30 V, DC 0 15 %, From U _B 0 215 mA, The specified values refer to the entire package consisting of trans- mitter and receiver. 100 mA 6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: \geq 6V Iow: \leq 4 V		
Protective circuit Performance data Supply voltage U _B Residual ripple Open-circuit current Inputs/outputs selectable Output current, max. Input resistance Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior	Short circuit protected Transient protection 18 30 V, DC 0 15 %, From U _B 0 215 mA, The specified values refer to the entire package consisting of trans- mitter and receiver. 100 mA 6,000 Ω 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V 1 ms		

CANopen

CANopen Function	Process		
Service interface			
Туре	IO-Link		
IO-Link Function	Configuration via software		
	Service		
Connection			
Number of connections	2 Piece(s)		
Plug outlet	Rear side		
Connection 1 Function	Configuration interface		
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 Encoding	5 -pin A-coded		
	A-coded		
Mechanical data			
Design	Cubic		
Dimension (W x H x L)	29 mm x 35.4 mm x 743 mm		
Housing material	Metal Aluminum		
Metal housing Lens cover material	Plastic		
Net weight	1,000 g		
Housing color	Silver		
Type of fastening	Groove mounting		
rype of lastening	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			
Environmental data Ambient temperature, operation	-30 60 °C		

Туре

Technical data

Certifications

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

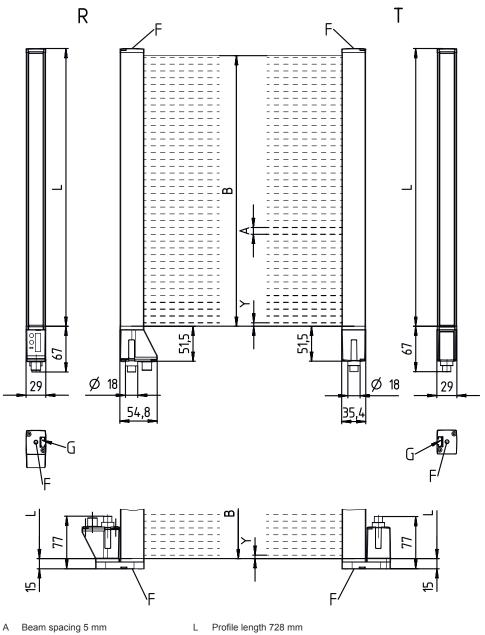
Classification

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



B Measurement field length 720 mm

Fastening groove

M6 thread

F

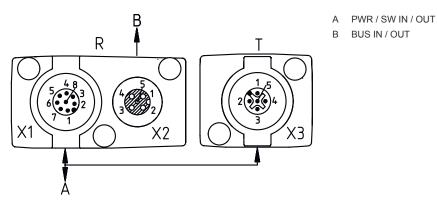
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- T Transmitter
 - Receiver
- R Receive
 - Y 2.5 mm

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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	A-coded

Electrical connection

n	Pin assignment
	FE/SHIELD
	n.c.
	CAN GND
	CAN H
	CAN L

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
50118920	CML730i-T05-720.R- M12	Light curtain transmitter	Operating range: 0.1 4 m Connection: Connector, M12, Rear side, 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	S 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 Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC

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

Accessories

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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
	50118185	K-YCN M12A-M12A- S-PUR	Interconnection cable	Suitable for interface: CANopen Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable length fork 1: 250 mm Cable length fork 2: 350 mm Sheathing material: PUR

Connection technology - Terminating resistors

 Part no.	Designation	Article	Description
50040099	TS 01-5-SA	Terminator plug	Suitable for: DeviceNet, CANopen Function: Bus termination Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
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
æ.	429029	BT-2RG	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
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.

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Accessories

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