

Technical data sheet Light curtain receiver Part no.: 50131765 CML730i-R10-1920.R/PN-M12



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Technical data

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Device type Receiver Contains Accessories for the use of the BT-2R1 Application Detection of transparent objects Object measurement Object measurement Special version Crossed-beam scanning Detection of transparent objects Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Operating range 0.39.5 m Operating range, transparent media 0.33.5 m Operating range limit 0.2	Series	730
Contains Accessories for the use of the BT-2R1 Application Detection of transparent objects Object measurement Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Optical data Operating range 0.3 9.5 m Operating 0.0 15 m Operating 0.0	Operating principle	Throughbeam principle
Application Detection of transparent objects Object measurement Special version Crossed-beam scanning Diagonal-beam scanning Special version Crossed-beam scanning Operating range 0.3 9.5 m Operating range 0.3 9.5 m Operating range 0.3 9.5 m Operating range 0.3 3.5 m Operating range limit 0.2 12 m Operating range limit 1.920 mm Number of beams 192 Piece(s) Beam spacing 10 mm Measurement data Number of beams Winimum object diameter 20 mm Electrical data 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 trans mitter and receiver. Voltage V _b 100 mA Input resistance 6,000 Ω Number of inputs/outputs selectable 2 Piece(s) Voltage type, outputs DC Switching voltage, inputs DC Switching voltage, o	Device type	Receiver
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Special version Special version Crossed-beam scanning Diagonal-beam scanning Parallel-beam scanning Parallel-beam scanning Optical data Operating range 0.3 9.5 m Operating range 0.2 12 m Operating range 0.2 12 m Operating range 1.920 mm Number of beams 192 Piece(s) Beam spacing 0 m Performance data Supply voltage U _B 18 30 V, DC Residual ripple 0 435 mA, The specified values refer to the entire package consisting of trans mitter and receiver. Input/soutputs selectable 0 c Output current, max. 100 mA Input resistance 6,000 Ω Number of inputs/outputs selectable 2 Piece(s) Typ Input/output 1 Activation/disable delay 1 ms Time behavior	Application	Detection of transparent objects
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Response time per beam 10 µs	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	mitter and receiver. 100 mA $6,000 \Omega$ 2 Piece(s) Inputs/outputs selectable DC Typ. U _B / 0 V DC high: $\geq 6V$ Iow: $\leq 4 V$ 1 ms
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Туре

PROFINET

PROFINET	
Function	Process
Conformance class	В
Protocol	PROFINET RT
Switch functionality	Integrated
Transmission speed	10 Mbit/s
	100 Mbit/s
Service interface	
уре	IO-Link
IO-Link	
Function	Configuration via software
	Service
Connection	
lumber of connections	3 Piece(s)
Plug outlet	Rear side
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
O anno atlan O	
Connection 2 Function	BUS IN
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded
Connection 3	
Function	BUS OUT
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded
Nechanical data	
Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 1,943 mm
lousing material	Metal
letal housing	Aluminum
ens cover material	Plastic
let weight	2,100 g
lousing color	Silver
ype of fastening	Groove mounting

Technical data

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Operation and display

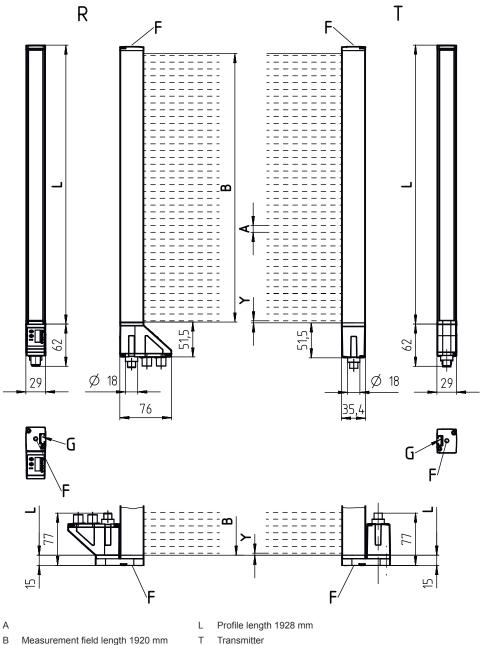
Type of display	LED
	OLED display
Number of LEDs	4 Piece(s)
Type of configuration	Software
	Teach-in
Operational controls	Membrane keyboard
Environmental data	
Ambient temperature, operation	-30 60 °C
Ambient temperature, operation Ambient temperature, storage	-30 60 °C -40 70 °C
Ambient temperature, storage	
Ambient temperature, storage	
Ambient temperature, storage	-40 70 °C
Ambient temperature, storage Certifications Degree of protection	-40 70 °C
Ambient temperature, storage Certifications Degree of protection Protection class	-40 70 °C IP 65 III

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

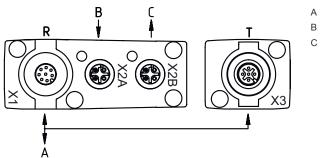


- Measurement field length 1920 mm
- F M6 thread
- G Fastening groove
- Transmitter
- R Receiver
- 5 mm Υ

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Dimensioned drawings

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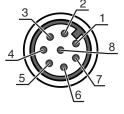
- A PWR / SW IN / OUT B BUS IN
- C BUS OUT

Electrical connection

Connection 1	X1
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

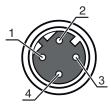
1	V+		
2	I/O 1		
3	GND		
4	IO-Link		
5	I/O 2		
6	RS 485 Tx+		
7	RS 485 Tx+		
8	FE/SHIELD		



Connection 2	X2A
Function	BUS IN
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

Pin Pin assignment

1	TD0+
2	RD0+
3	TD0-
4	RD0-



Electrical connection

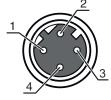
Connection 3

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Function	BUS OUT
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

X2B

Pin	Pin assignment
1	TD0+
2	RD0+
3	TD0-
4	RD0-



Operation and display

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 3 Green, continuous light (at the X2A / X2B connector) Link	LED	Display	Meaning
Yellow, continuous light Light path free, with function reserve Yellow, flashing No function reserve Off Object detected	1	Green, continuous light	Operational readiness
Yellow, flashing No function reserve Off Object detected		Green, flashing	Teach / error
Off Object detected	2	Yellow, continuous light	Light path free, with function reserve
		Yellow, flashing	No function reserve
3 Green, continuous light (at the X2A / X2B connector) Link		Off	Object detected
	3	Green, continuous light (at the X2A / X2B connector)	Link
4 Yellow, continuous light (at the X2A / X2B connector) Activity	4	Yellow, continuous light (at the X2A / X2B connector)	Activity

Suitable transmitters

 Part no.	Designation	Article	Description
50117911	CML730i-T10- 1920.R-M12	Light curtain transmitter	Operating range: 0.3 9.5 m Connection: Connector, M12, Rear side, 5 -pin

Part number code

Part designation: CML7XXi-YZZ-AAAA.BCCCDDD-EEEFFF

Operating principle Measuring light curtain
Series 720i: 720i series 730i: 730i series
Device type T: transmitter R: receiver
Beam spacing 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm
Measurement field length [mm], dependent on beam spacing
Equipment A: Axial connector outlet R: Rear connector outlet

Part number code



CCC	Interface L: IO-Link //N: 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
1	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

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🗞 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
50135074	KS ET-M12-4A-P7- 050	Connection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5.000 mm Sheathing material: PUR

Accessories

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Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50135081	KSS ET-M12-4A- RJ45-A-P7-050	Interconnection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

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

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

Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
RR.	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

Configuration devices

 Part no.	Designation	Article	Description
50121098	SET MD12-US2-IL1.1 + Zub.	Diagnostics set	Interface: USB Connections: 2 Piece(s) Degree of protection: IP 20

Accessories

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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.
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.