

Technical data sheet Light curtain receiver Part no.: 50123410 CML730i-R20-470.R/D3-M12



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Technical data

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Racio data

Basic data	
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	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	470 mm
Number of beams	24 Piece(s)
Beam spacing	20 mm
Measurement data	
Minimum object diameter	30 mm
Electrical data	
Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection
Performance data	18 30 V, DC
Supply voltage U _B Residual ripple	0 15 %, From U _B
Open-circuit current	$0 \dots 165 \text{ mA}$, The specified values refer
	to the entire package consisting of trans- mitter and receiver.
Inputs/outputs selectable	
Number of inputs/outputs selectable	
Type	Inputs/outputs selectable
Voltage type, outputs	
Switching voltage, outputs	Typ. U _B / 0 V
Switching voltage inpute	high: >6\/
Switching voltage, inputs	high: ≥6V Iow: <4V
Switching voltage, inputs	high: ≥6V Iow: ≤4V
Switching voltage, inputs Input/output 1	0
	0
Input/output 1	0
Input/output 1 Timing	low: ≤4V
Input/output 1 Timing Cycle time	low: ≤4V 1 ms
Input/output 1 Timing Cycle time Response time per beam	low: ≤4V 1 ms
Input/output 1 Timing Cycle time Response time per beam Interface	low: ≤4V 1 ms 10 μs
Input/output 1 Timing Cycle time Response time per beam Interface Type	low: ≤4V 1 ms 10 μs
Input/output 1 Timing Cycle time Response time per beam Interface Type RS 485	low: ≤4V 1 ms 10 μs RS 485 Modbus

	IO-Link	
	Function	Configuration via software
		Service
С	onnection	
N	umber of connections	2 Diago(a)
	under of connections	2 Piece(s) 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
	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
М	echanical data	
-		
	esign	Cubic 29 mm x 35.4 mm x 503 mm
	imension (W x H x L) ousing material	Metal
	etal housing	Aluminum
	ens cover material	Plastic
	et weight	750 g
	ousing color	Silver
	/pe of fastening	Groove mounting
		Via optional mounting device
_		
0	peration and display	
Ту	vpe of display	LED
		OLED display
N	umber of LEDs	2 Piece(s)
T .		
1)	pe of configuration	Software
	· ·	Teach-in
	perational controls	
0	· ·	Teach-in
O	perational controls	Teach-in Membrane keyboard
O E A	perational controls	Teach-in
O E Au	perational controls nvironmental data mbient temperature, operation mbient temperature, storage	Teach-in Membrane keyboard -30 60 °C
O E Ai	perational controls nvironmental data mbient temperature, operation	Teach-in Membrane keyboard -30 60 °C
O E Au Au	perational controls nvironmental data mbient temperature, operation mbient temperature, storage	Teach-in Membrane keyboard -30 60 °C
O E Au C D C	perational controls nvironmental data mbient temperature, operation mbient temperature, storage ertifications egree of protection rotection class	Teach-in Membrane keyboard -30 60 °C -40 70 °C IIP 65 III
O E A A C D C P I C	perational controls nvironmental data mbient temperature, operation mbient temperature, storage ertifications egree of protection rotection class ertifications	Teach-in Membrane keyboard -30 60 °C -40 70 °C IP 65 III c CSA US
O E A A C D C P I C	perational controls nvironmental data mbient temperature, operation mbient temperature, storage ertifications egree of protection rotection class	Teach-in Membrane keyboard -30 60 °C -40 70 °C IIP 65 III

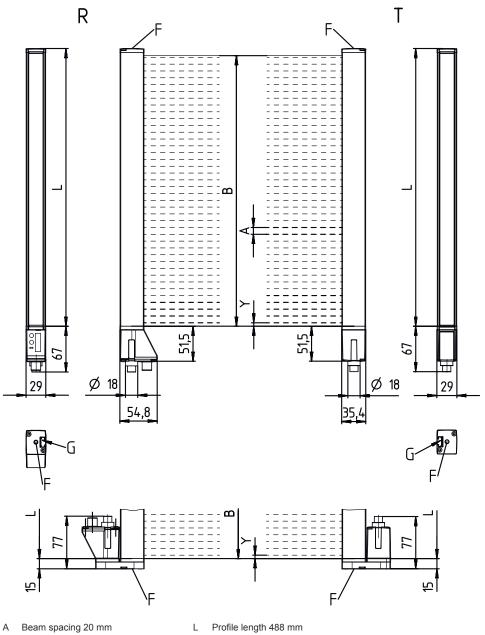
Technical data

Customs tariff number	90314990
eCl@ss 5.1.4	27270910
eCl@ss 8.0	27270910
eCl@ss 9.0	27270910
eCl@ss 10.0	27270910
eCl@ss 11.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549

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Dimensioned drawings

All dimensions in millimeters



B Measurement field length 470 mm

M6 thread

Fastening groove

F

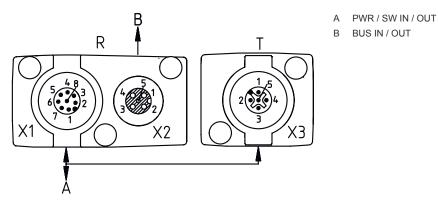
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- h 470 mm T Tra
- T Transmitter R Receiver
- - Y 5mm



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 Pin assignment 1 V+ 2 Tx 3 PB GND 4 Tx+ 5 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

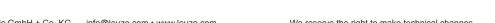
Suitable transmitters

 Part no.	Designation	Article	Description
50118968	CML730i-T20-470.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

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: 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





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

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	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	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, U	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

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