

# **Technical data sheet Light curtain receiver** Part no.: 50131808 CML730i-R20-2550.A/PN-M12



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 changes

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We reserve the right to make technical changes

# **Technical data**

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Series	730
Operating principle	Throughbeam principle
Device type	Receiver
Contains	2x BT-NC sliding block
Application	Detection of transparent objects
	Object measurement
Special version	
Special version	Crossed-beam scanning
	Diagonal-beam scanning
	Parallel-beam scanning
	· a.a.o. boaooag
Optical data	
Operating range	0.3 9.5 m
Operating range	Guaranteed operating range
Operating range, transparent media	0.3 3.5 m
Operating range limit	0.2 12 m
Operating range limit	Typical operating range
Measurement field length	2,550 mm
Number of beams	128 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	
Supply voltage U <sub>B</sub>	18 30 V, DC
Residual ripple	0 15 %, From U <sub>B</sub>
Open-circuit current	0 435 mA, The specified values refer to the entire package consisting of trans mitter and receiver.
Innuts/outputs salactable	
Inputs/outputs selectable Output current, max.	100 mA
Input resistance	6,000 Ω
Number of inputs/outputs selectable	
Туре	Inputs/outputs selectable
Voltage type, outputs	DC
Switching voltage, outputs	Typ. U <sub>B</sub> / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥6V
	low: $\leq 4 \text{ V}$
Input/output 1	1
Activation/disable delay	1 ms
Time behavior	
Readiness delay	1,500 ms
Cycle time	1.43 ms
Response time per beam	10 µs
Interface	
Туре	PROFINET

Туре

PROFINI		
Function	E I	Process
	ince class	В
Protocol		PROFINET RT
	nctionality	Integrated
	sion speed	10 Mbit/s
		100 Mbit/s
Service int	erface	
Туре		IO-Link
IO-Link		
Function		Configuration via software
		Service
Connectio	n	
Number of c	onnections	3 Piece(s)
Plug outlet	onneedons	Axial
Connect	ion 1	
Function		Configuration interface
		Connection to transmitter
		Signal IN
		Signal OUT
		Voltage supply
	onnection	Connector
Thread size	ze	M12
Туре		Male
Material		Metal
No. of pin		8 -pin
Encoding		A-coded
Connect	ion 2	
Function		BUS IN
Type of co	onnection	Connector
Thread size		M12
Туре		Female
Material		Metal
No. of pin	s	4 -pin
Encoding		D-coded
Connect	ion 3	
Function		BUS OUT
Thread size	onnection	Connector M12
Type	Ze	Female
Material		Metal
No. of pin	c	4 -pin
Encoding		D-coded
		2 00000
Mechanica	l data	
Design		Cubic
Dimension (	W x H x L)	29 mm x 35.4 mm x 2,635 mm
Housing ma	terial	Metal
-		Aluminum
Lens cover i	material	Plastic
Net weight		2,600 g
Housing col		Silver
Type of faste	ening	Groove mounting
		Via optional mounting device

# **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	-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

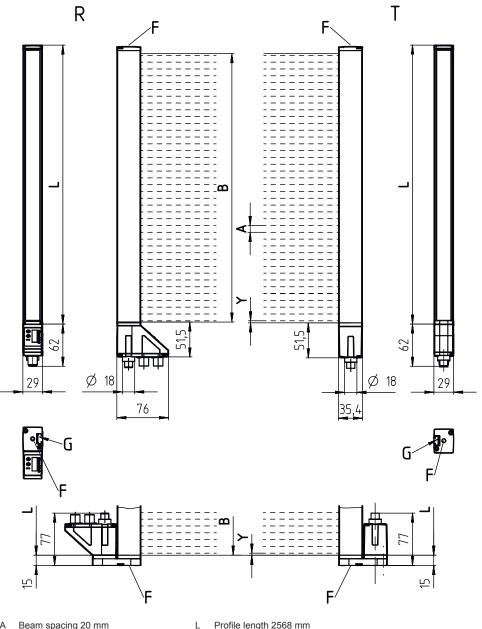
Classification	
Customs tariff number	90314990
ECLASS 5.1.4	27270910
ECLASS 8.0	27270910
ECLASS 9.0	27270910
ECLASS 10.0	27270910
ECLASS 11.0	27270910
ECLASS 12.0	27270910
ECLASS 13.0	27270910
ECLASS 14.0	27270910
ECLASS 15.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549

EC002549

ETIM 10.0

# **Dimensioned drawings**

All dimensions in millimeters



- Beam spacing 20 mm А
- В Measurement field length 2550 mm
- F M6 thread G
  - Fastening groove
- Profile length 2568 mm Т
  - Transmitter
- R Receiver
- 5 mm Υ

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# **Dimensioned drawings**

R

A

### В С А В BUS IN С $\cap$

- PWR / SW IN / OUT
- BUS 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

**X1** 

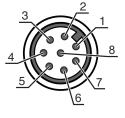
### Pin Pin assignment

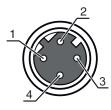
2       I/O 1         3       GND         4       IO-Link
4 IO-Link
5 I/O 2
6 RS 485 Tx+
7 RS 485 Tx+
8 FE/SHIELD

### **Connection 2** X2A Function BUS IN Type of connection Connector Thread size M12 Female Туре 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** 

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**

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
3	Green, continuous light (at the X2A / X2B connector)	Link
4	Yellow, continuous light (at the X2A / X2B connector)	Activity

# Suitable transmitters

 Part no.	Designation	Article	Description
50118644	CML730i-T20- 2550.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
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



# 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!				
<ul> <li>This product is not a safety sensor and is not intended as personnel protection.</li> <li>The product may only be put into operation by competent persons.</li> <li>Only use the product in accordance with its intended use.</li> </ul>				

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

# Configuration devices

	Part no.	Designation	Article	Description
165	50121098	SET MD12-US2-IL1.1 + Zub.	Diagnostics set	Interface: USB Connections: 2 Piece(s) Degree of protection: IP 20

## Services

	Part no.	Designation	Article	Description
с. С	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.

# Accessories





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