Technical data sheet
Light curtain receiver
Part no.: 50145110
CML730i-R20-450.A/CV-M12-67



For Illustration purposes only

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- Dimensioned drawings
- Electrical connection
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- Suitable transmitters
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Technical data

Leuze

Basic data

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

Optical data

Measurement field length	450 mm
Number of beams	23 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_B	18 ... 30 V, DC
Residual ripple	0 ... 15 %, From U_B
Open-circuit current	0 ... 165 mA, The specified values refer to the entire package consisting of transmitter and receiver.

Outputs

Number of analog outputs	2 Piece(s)

Analog outputs

Type	Analog output
Current	0 ... 24 mA
Voltage	0 ... 11 V

Analog output 1

Type	Voltage

Analog output 2

Type	Current

Inputs/outputs selectable

Output current, max.	100 mA
Input resistance	6,000 Ω
Number of inputs/outputs selectable	2 Piece(s)
Type	Inputs/outputs selectable
Voltage type, outputs	DC
Switching voltage, outputs	Typ. U_B / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	high: ≥6V
	low: ≤ 4 V

Input/output 1

Activation/disable delay	1 ms

Time behavior

Readiness delay	450 ms
Cycle time	1 ms
Response time per beam	10 µs

Service interface

Type	IO-Link

IO-Link

Function	Configuration via software
	Service

Connection

Number of connections	2 Piece(s)
Plug outlet	Axial

Connection 1

Function	Configuration interface
	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

Connection 2

Function	Connection to transmitter
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Mechanical data

Design	Cubic
Dimension (W x H x L)	30.7 mm x 54.8 mm x 555 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	700 g
Housing color	Silver
Type of fastening	Groove mounting
	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

Ambient temperature, operation	-30 ... 60 °C
Ambient temperature, storage	-40 ... 70 °C

Technical data

Certifications

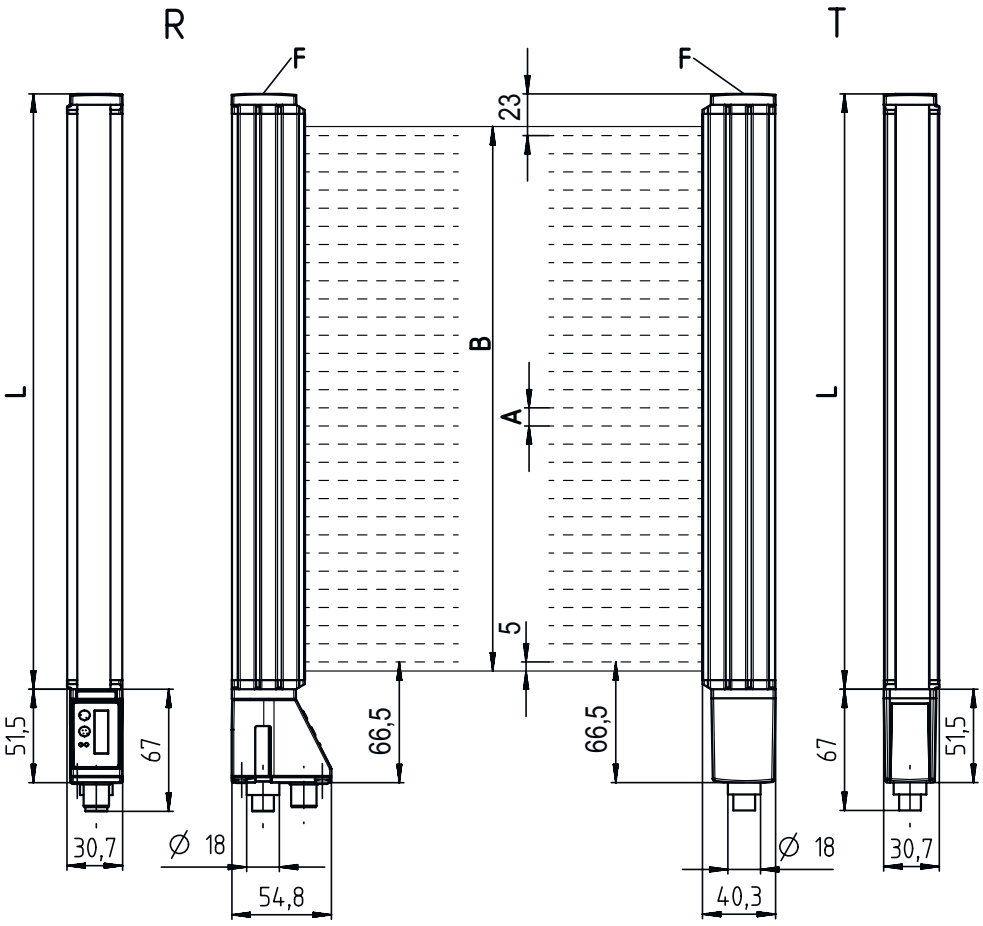
Degree of protection	IP 67
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

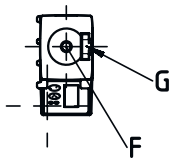
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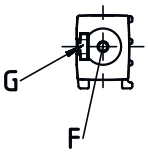
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ECLASS 12.0	27270910
ECLASS 13.0	27270910
ECLASS 14.0	27270910
ECLASS 15.0	27270910
ECLASS 16.0	27270910
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549
ETIM 10.0	EC002549
UNSPSC 26.08	39121528

Dimensioned drawings

All dimensions in millimeters

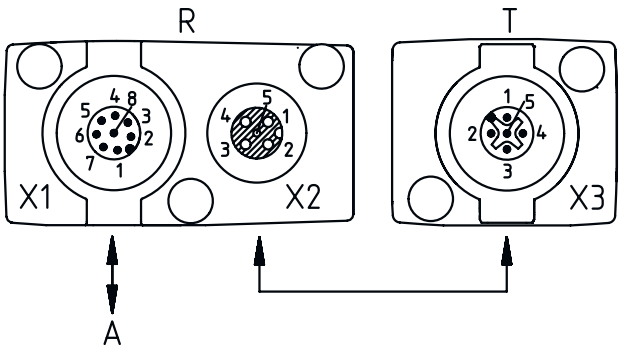






A	Beam spacing 20 mm	L	Profile length 488 mm
B	Measurement field length 450 mm	T	Transmitter
F	M6 thread	R	Receiver
G	Fastening groove	Y	5 mm

Dimensioned drawings



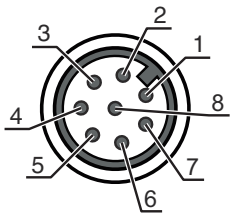
A PWR / SW IN / OUT

Electrical connection

Connection 1

Function	Configuration interface
	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

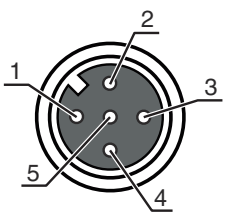
Pin	Pin assignment
1	V+
2	I/O 1
3	GND
4	IO-Link
5	I/O 2
6	OUT V
7	OUT mA
8	AGND



Connection 2

Function	Connection to transmitter
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Pin	Pin assignment
1	FE/SHIELD
2	V+
3	GND
4	RS 485 Tx+
5	RS 485 Tx-



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	Operating range Operating range limit	Description
	50145111	CML730i-T20-450.A-M12-67	0.3 ... 7 m 0.2 ... 9 m	Operating range: 0.3 ... 7 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
B	**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
DDD	**Special equipment** -PS: Power Setting
EEE	**Electrical connection** M12: M12 connector
FFF	**-EX: Explosion protection**

Note

↳ 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:

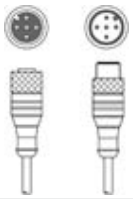
- For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
- These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/CYJV7 or PVVA/PVVA7)

Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50135128	KD S-M12-8A-P1-050	Connection cable	Application: Oil and lubricant resistant Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50129781	KDS DN-M12-5A-M12-5A-P3-050	Interconnection cable	Application: Oil and lubricant resistant 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

Mounting technology - Mounting brackets

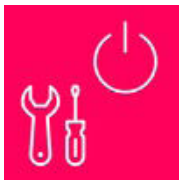
	Part no.	Designation	Article	Description
	50142900	BT 700M.5-2SET	Mounting device set	Contains: 2x mounting brackets, 1 teach template, 4 M6 x 10 screws Design of mounting device: Bracket mounting Fastening, at system: Through-hole mounting, T slotted hole Mounting bracket, at device: Screw type, Sliding block Type of mounting device: Rigid Material: Steel

Accessories

Configuration devices

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

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

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