## Leuze

## Technical data sheet Light curtain receiver Part no.: 50118816 CML730i-R40-2210.A/L-M12



 Leuze electronic GmbH + Co. KG
 info@leuze.com • www.leuze.com
 changes

 The Sensor People
 In der Braike 1, D-73277 Owen/Germany
 Phone: +49 7021 573-0 • Fax: +49 7021 573-199
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## **Technical data**

Operating principle	730
	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	
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	2.210 mm
Number of beams	55 Piece(s)
	40 mm
Beam spacing	40 11111
Measurement data	
Minimum object diameter	50 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.
Inputs/outputs selectable	
Output current, max.	100 mA
Input resistance	6,000 Ω
	4 Piece(s)
Number of inputs/outputs selectable	Inputs/outputs selectable
Number of inputs/outputs selectable Type	
	DC
Туре	
Type Voltage type, outputs	DC
Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs	DC Typ. U <sub>B</sub> / 0 V
Type Voltage type, outputs Switching voltage, outputs	DC Typ. U <sub>B</sub> / 0 V DC
Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs	DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V
Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs	DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V
Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs	DC Typ. $U_B / 0 V$ DC high: $\geq 6V$ low: $\leq 4 V$
Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay	DC Typ. $U_B / 0 V$ DC high: $\geq 6V$ low: $\leq 4 V$
Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior	DC Typ. $U_B / 0 V$ DC high: $\ge 6V$ low: $\le 4 V$ 0 1 ms
Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Readiness delay	DC Typ. U <sub>B</sub> / 0 V DC high: ≥6V low: ≤ 4 V 0 1 ms
Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 Activation/disable delay Time behavior Readiness delay Cycle time	DC Typ. $U_B / 0 V$ DC high: $\geq 6V$ low: $\leq 4 V$ 0 1 ms 450 ms 1 ms

IO-Link	
COM mode	COM2
Min. cycle time	COM2 = 2.3 ms
Specification	V1.0.1
	V1.1
ervice interface	
vpe	IO-Link
IO-Link	
Function	Configuration via software
	Service
connection	
umber of connections	2 Piece(s)
lug outlet	Axial
5	
Connection 1	Openfinuenting interferes
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
Composition 0	
Connection 2 Function	Connection to transmitter
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded
lechanical data	
esign	Cubic
imension (W x H x L)	29 mm x 35.4 mm x 2,315 mm
lousing material	Metal
letal housing	Aluminum
ens cover material	Plastic
let weight	2,300 g
lousing color	Silver
ype of fastening	Groove mounting
	Via optional mounting device
Operation and display	
ype of display	LED
	OLED display
lumber of LEDs	2 Piece(s)
ype of configuration	Software
Inerational controls	Teach-in Membrane keyboard
perational controls	Membrane keyboard
nvironmental data	
mbient temperature, operation	-30 60 °C

## **Technical data**

#### Certifications

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

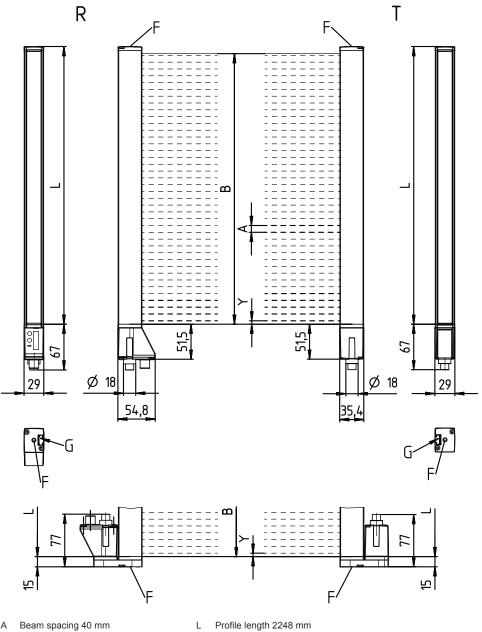
#### Classification

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
ETIM 5.0	EC002549
ETIM 6.0	EC002549
ETIM 7.0	EC002549
ETIM 8.0	EC002549
ETIM 9.0	EC002549



### **Dimensioned drawings**

All dimensions in millimeters



Beam spacing 40 mm А

Fastening groove

- В Measurement field length 2210 mm
- F M6 thread

G

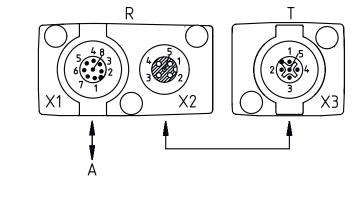
- Т R Receiver
  - 5 mm Υ

Transmitter

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### **Dimensioned drawings**





A PWR / SW IN / OUT

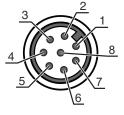
### **Electrical connection**

**Connection 1** 

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

#### Pin Pin assignment

1	V+		
2	IO1		
3	GND		
4	IO-Link		
5	102		
6	IO3		
7	IO4		
8	GND		



#### **Connection 2**

Function	Connection to transmitter
Type of connection	Connector
Thread size	M12
Туре	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	Article	Description
50118653	CML730i-T40- 2210.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
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 wi	th 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.

b The product may only be put into operation by competent persons.

 $\ensuremath{^{\ensuremath{\Downarrow}}}$  Only use the product in accordance with its intended use.



∜ For UL ap	oplications,	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 unit

	Part no.	Designation	Article	Description
C. C	50144900	MD 798i-11-82/L5- 2222	IO-Link master	Type: IO-Link master Current consumption, max.: 11,000 mA Switching outputs for each sensor connection: 1 Piece(s) Switching output: Transistor, PNP Interface: IO-Link, Automatic protocol detection, EtherNet IP, Modbus TCP, PROFINET Connections: 12 Piece(s) Sensor connections: 8 Piece(s) Connections for voltage supply: 2 Piece(s) Interface connections: 2 Piece(s) Degree of protection: IP 67, IP 65, IP 69K

#### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50135128	KD S-M12-8A-P1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connector, LED: No Connection 2: Open end
U				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	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

## Leuze

## 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

**Accessories** 

 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

#### 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.