

# **Technical data sheet** Light curtain receiver

Part no.: 50118771

CML730i-R05-2800.A/L-M12



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### **Technical data**



### 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**

Operating range	0.1 4.5 m
Operating range	Guaranteed operating range
Operating range, transparent media	0.1 1.75 m
Operating range limit	0.1 6 m
Operating range limit	Typical operating range
Measurement field length	2,800 mm
Number of beams	560 Piece(s)
Beam spacing	5 mm

#### Measurement data

Minimum ob	ject diameter	10 mm
WIIIIIIIIIIIIII OD	ject diameter	10 11111

### **Electrical data**

Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection

#### Performance data Supply voltage U.

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

Input resistance       6,000 Ω         Number of inputs/outputs selectable       4 Piece(s)         Type       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         Iow: < 4 V	Output current, max.	100 mA
Type     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	Input resistance	6,000 Ω
Voltage type, outputs     DC       Switching voltage, outputs     Typ. U <sub>B</sub> / 0 V       Voltage type, inputs     DC       Switching voltage, inputs     high: ≥6V	Number of inputs/outputs selectable	4 Piece(s)
Switching voltage, outputs       Typ. U <sub>B</sub> / 0 V         Voltage type, inputs       DC         Switching voltage, inputs       high: ≥6V	Туре	Inputs/outputs selectable
Voltage type, inputs DC Switching voltage, inputs high: ≥6V	Voltage type, outputs	DC
Switching voltage, inputs high: ≥6V	Switching voltage, outputs	Typ. U <sub>B</sub> / 0 V
	Voltage type, inputs	DC
low: < 4 V	Switching voltage, inputs	high: ≥6V
10W. 2 4 V		low: ≤ 4 V

### Input/output 1

Activation/disable delay	0 1 ms
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#### Time behavior

Readiness delay	450 ms
Cycle time	5.75 ms
Response time per beam	10 μs

### Interface

Type	IO-I ink

IO-Link	
COM mode	COM2
Min. cycle time	COM2 = 2.3 ms
Specification	V1.0.1
	V/1 1

### Service interface

Ţ	уре	IO-Link
	IO-Link	
	Function	Configuration via software
		Service

### Connection

Number of connections	2 Piece(s)
Plug outlet	Axial

#### Connection 1

Configuration interface
Signal IN
Signal OUT
Voltage supply
Connector
M12
Male
Metal
8 -pin
A-coded

#### **Connection 2**

John Ection 2	
Function	Connection to transmitter
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

### **Mechanical data**

Design	Cubic
Dimension (W x H x L)	29 mm x 35.4 mm x 2,875 mm
Housing material	Metal
Metal housing	Aluminum
Lens cover material	Plastic
Net weight	2,850 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 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**



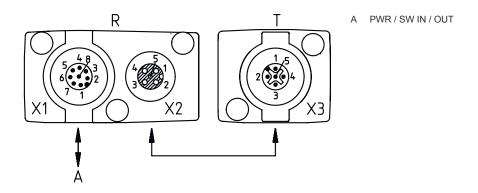
All dimensions in millimeters



- Beam spacing 5 mm
- В Measurement field length 2800 mm
- M6 thread
- Fastening groove
- Profile length 2808 mm
- Transmitter
- Receiver
- 2.5 mm

## **Dimensioned drawings**



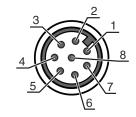


## **Electrical connection**

### **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
-	

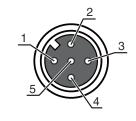
Pin	Pin assignment
1	V+
2	IO1
3	GND
4	IO-Link
5	102
6	103
7	104
8	GND
8	GND



#### **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
50118610	CML730i-T05- 2800.A-M12	Light curtain transmitter	Operating range: 0.1 4 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
Υ	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
В	Equipment A: Axial connector outlet R: Rear connector outlet
ссс	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



🖔 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 unit

	Part no.	Designation	Article	Description
CARLELLE STATES	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 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	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

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### **Accessories**



## 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
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.