Leuze

Technical data sheet Light curtain receiver Part no.: 50118786 CML730i-R10-2080.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
 eng • 2025-04-03

Technical data

Leuze

| 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 |
| | Guaranteed operating range |
| | 0.3 3.5 m |
| | 0.2 12 m |
| | Typical operating range |
| | 2,080 mm |
| Ū | 208 Piece(s) |
| | 10 mm |
| Measurement data | |
| | 20 mm |
| Minimum object diameter | 20 mm |
| 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 |
| | 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 | |
| Number of inputs/outputs selectable | Inputs/outputs selectable |
| Number of inputs/outputs selectable Type | Inputs/outputs selectable DC |
| Number of inputs/outputs selectable Type Voltage type, outputs | |
| Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs | DC |
| Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs | DC Typ. U _B / 0 V |
| Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs | DC Typ. U _B / 0 V DC |
| Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs | DC Typ. U _B / 0 V DC high: ≥6V |
| Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs Input/output 1 | DC Typ. U _B / 0 V DC high: ≥6V |
| Number of inputs/outputs selectable Type Voltage type, outputs Switching voltage, outputs Voltage type, inputs Switching voltage, inputs | DC Typ. U _B / 0 V DC high: ≥6V Iow: ≤ 4 V |
| Number of inputs/outputs selectable 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: ≥6V Iow: ≤ 4 V 0 1 ms |
| Number of inputs/outputs selectable 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 _B / 0 V DC high: ≥6V Iow: ≤ 4 V |
| Number of inputs/outputs selectable 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: ≥6V Iow: ≤ 4 V 0 1 ms |
| Number of inputs/outputs selectable 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: ≥6V Iow: ≤ 4 V 0 1 ms 450 ms 2.23 ms |

| IO-Link | |
|---|---|
| COM mode | COM2 |
| Min. cycle time | COM2 = 2.3 ms |
| Specification | V1.0.1 |
| | V1.1 |
| Service interface | |
| Гуре | 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 |
| Туре | Male |
| Material | Metal |
| No. of pins | 8 -pin |
| Encoding | A-coded |
| 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 |
| Vechanical data | |
| | |
| Design | Cubic |
| Design Dimension (W x H x L) | 29 mm x 35.4 mm x 2,155 mm |
| Design Dimension (W x H x L) Housing material | 29 mm x 35.4 mm x 2,155 mm Metal |
| Design Dimension (W x H x L) Housing material Metal housing | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Fype of fastening | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Decration and display | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deration and display Type of display | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deration and display Type of display | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deration and display Type of display Number of LEDs Type of configuration | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in |
| Design Dimension (W x H x L) Housing material Metal housing Lens cover material Net weight Housing color Type of fastening Deration and display Type of display Number of LEDs Type of configuration | 29 mm x 35.4 mm x 2,155 mm Metal Aluminum Plastic 2,200 g Silver Groove mounting Via optional mounting device LED OLED display 2 Piece(s) Software Teach-in |

Technical data

Certifications

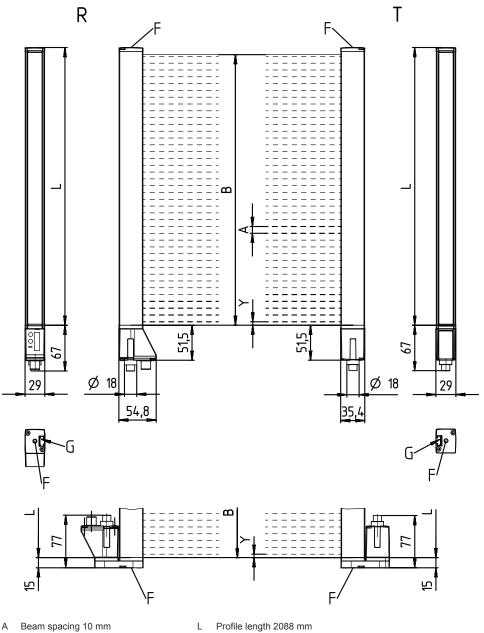
Classification

| 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 |
| ETIM 10.0 | EC002549 |
| | |

Leuze

Dimensioned drawings

All dimensions in millimeters



Beam spacing 10 mm А

Fastening groove

- В Measurement field length 2080 mm
- F M6 thread

G

- Т R Receiver
 - 5 mm Υ

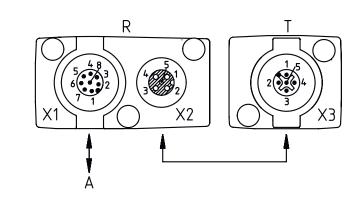
Transmitter

We reserve the right to make technical 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
 eng • 2025-04-03



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+ |
|--------------|
| I V+ |
| 2 IO1 |
| 3 GND |
| 4 IO-Link |
| 5 IO2 |
| 6 IO3 |
| 7 104 |
| 8 GND |

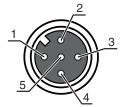


Connection 2

| 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

Meaning

| 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 |
|--------------|----------------------------|------------------------------|---|
| 50118623 | CML730i-T10- 2080.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

| Operating principle Measuring light curtain |
|---|
| Series 720i: 720i series 730i: 730i series |
| Device type T: transmitter R: receiver |
| Beam spacing 05: 5 mm 10: 10 mm 20: 20 mm 40: 40 mm |
| Measurement field length [mm], dependent on beam spacing |
| Equipment A: Axial connector outlet R: Rear connector outlet |
| Interface L: IO-Link /CN: CANopen /PB: PROFIBUS /PN: PROFINET /CV: Analog current and voltage output /D3: RS 485 Modbus |
| Special equipment -PS: Power Setting |
| Electrical connection M12: M12 connector |
| -EX: Explosion protection |
| |
| 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 |
|---|-----------------|
| 1 | ∜ F ∜ T C |

| UL | _ appl | ications: | |
|----|--------|-----------|--|
|----|--------|-----------|--|

b 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 |
|-------------|----------|---------------------------|----------------|--|
| C. L. LILLE | 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 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

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 |
| R. Ca | 429393 | BT-2HF | Mounting bracket set | Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic |

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 |
|----|----------|-------------|------------------|--|
| ц. | 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. |

