

Technical data sheet Light curtain receiver

Part no.: 50118807

CML730i-R20-2550.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 | 0.3 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 m | Minimum | object | diameter | 30 mi |
|------------------------------|---------|--------|----------|-------|
|------------------------------|---------|--------|----------|-------|

Electrical data

| Protective circuit | Polarity reversal protection |
|--------------------|------------------------------|
| | Short circuit protected |
| | Transient protection |

Performance data Supply voltage U.

| Supply voltage U _B | 18 30 V, DC |
|-------------------------------|-----------------------------|
| Residual ripple | 0 15 %, From U _B |
| Open-circuit current | 0 435 mA, The specified |

d values refer to the entire package consisting of transmitter and receiver.

Inputs/outputs selectable

| Output current, max. | 100 mA |
|-------------------------------------|---------------------------|
| Input resistance | 6,000 Ω |
| Number of inputs/outputs selectable | 4 Piece(s) |
| Туре | 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 | 0 1 ms |
|--------------------------|--------|
|--------------------------|--------|

Time behavior

| Readiness delay | 450 ms |
|------------------------|---------|
| Cycle time | 1.43 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 |
| | V1 1 |

Service interface

| Ty | уре | IO-Link |
|----|----------|----------------------------|
| | IO-Link | |
| | Function | Configuration via software |
| | | Service |

Connection

| Number of connections | 2 Piece(s) |
|-----------------------|------------|
| Plug outlet | Axial |

Connection 1

| 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 |

Mechanical data

| Design | Cubic |
|-----------------------|------------------------------|
| Dimension (W x H x L) | 29 mm x 35.4 mm x 2,635 mm |
| Housing material | Metal |
| Metal housing | Aluminum |
| Lens cover material | Plastic |
| Net weight | 2,600 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

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| 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 |

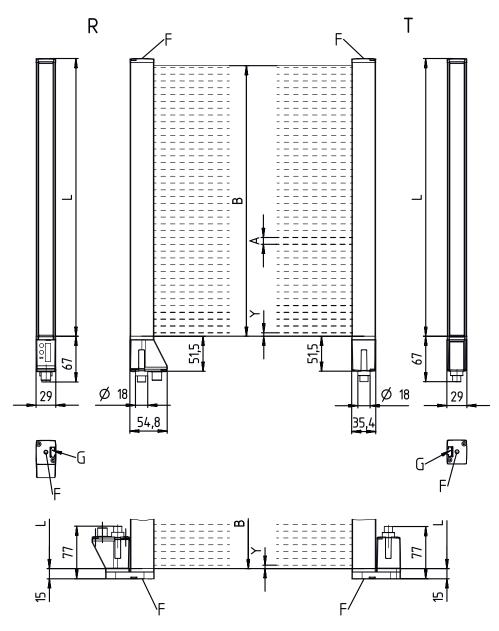
Classification

| 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



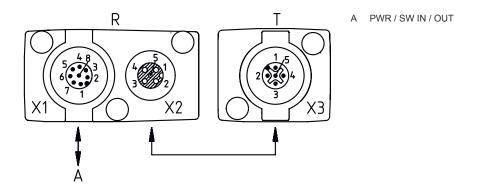
All dimensions in millimeters



- Beam spacing 20 mm
- В Measurement field length 2550 mm
- M6 thread
- Fastening groove
- Profile length 2568 mm
- Transmitter
- Receiver
- 5 mm

Dimensioned drawings



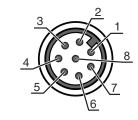


Electrical connection

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 | 101 |
| 3 | GND |
| 4 | IO-Link |
| 5 | 102 |
| 6 | 103 |
| 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



| 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 |
|----------|----------------------------|------------------------------|-------------------------------------------------------------------------|
| 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 |
| 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 |
|----------------|----------|---------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CARLELL 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 |
|------------|----------|---------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (1) | 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 |
|------|----------|-------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| YI (| 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.