

Technical data sheet Light curtain receiver

Part no.: 50123388

CML730i-R05-2880.R/D3-M12



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Technical data



Basic data

| Series | 730 |
|---------------------|---------------------------------------|
| Operating principle | Throughbeam principle |
| Device type | Receiver |
| Contains | Accessories for the use of the BT-2R1 |
| 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 | 2,880 mm |
| Number of beams | 576 Piece(s) |
| Beam spacing | 5 mm |
| | |

Measurement data

| Minimum c | object | diameter | 10 | mr |
|-----------|--------|----------|----|----|
| | | | | |

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 | 600 mA, The specified values refer to the entire package consisting of trans- mitter and receiver. |

Inputs/outputs selectable

| Number of inputs/outputs selectable 2 Piece(s) | | |
|--|---------------------------|--|
| Type | Inputs/outputs selectable | |
| Voltage type, outputs | DC | |
| Switching voltage, outputs | Typ. U _B / 0 V | |
| Switching voltage, inputs | high: ≥6V | |
| | low: ≤ 4 V | |

Input/output 1

Time behavior

| Cycle time | 5.91 ms |
|------------------------|---------|
| Response time per beam | 10 μs |

Interface

| | iterrace | |
|----|----------|---------------|
| Ty | уре | RS 485 Modbus |
| | RS 485 | |
| | Function | Process |
| | | |

Service interface

| Type | IO-Link |
|------|---------|
| | |

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

Connection

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

Connection 1

| Function | Configuration interface |
|--------------------|---------------------------|
| | Connection to transmitter |
| | 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 | BUS IN | |
| | BUS OUT | |
| Type of connection | Connector | |
| Thread size | M12 | |
| Type | Female | |
| Material | Metal | |
| No. of pins | 5 -pin | |
| Encoding | B-coded | |

Mechanical data

| Design | Cubic |
|-----------------------|------------------------------|
| Dimension (W x H x L) | 29 mm x 35.4 mm x 2,903 mm |
| Housing material | Metal |
| Metal housing | Aluminum |
| Lens cover material | Plastic |
| Net weight | 2,950 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 |

Certifications

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

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Technical data

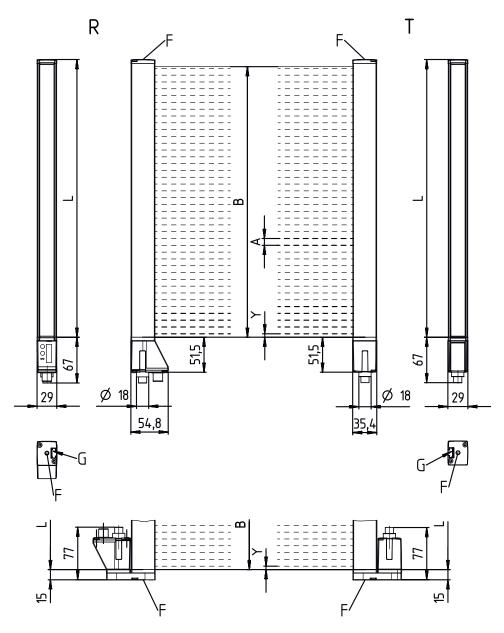


| Customs tariff number | 90314990 |
|-----------------------|----------|
| ECLASS 5.1.4 | 27270910 |
| ECLASS 8.0 | 27270910 |
| ECLASS 9.0 | 27270910 |
| ECLASS 10.0 | 27270910 |
| ECLASS 11.0 | 27270910 |
| ECLASS 12.0 | 27270910 |
| ECLASS 13.0 | 27270910 |
| ECLASS 14.0 | 27270910 |
| ETIM 5.0 | 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 2880 mm
- M6 thread
- Fastening groove
- Profile length 2888 mm
- Transmitter
- Receiver
- 2.5 mm

Dimensioned drawings





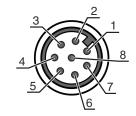
- PWR / SW IN / OUT
- BUS IN / OUT

Electrical connection

Connection 1

| Function | Configuration interface |
|--------------------|---------------------------|
| | Connection to transmitter |
| | 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 Control of the Contro |
|-----|--|
| 1 | V+ |
| 2 | 1/0 1 |
| 3 | GND |
| 4 | IO-Link |
| 5 | I/O 2 |
| 6 | RS 485 Tx+ |
| 7 | RS 485 Tx+ |
| 8 | FE/SHIELD |
| | |



Connection 2

| Function | BUS IN |
|--------------------|-----------|
| | BUS OUT |
| Type of connection | Connector |
| Thread size | M12 |
| Туре | Female |
| Material | Metal |
| No. of pins | 5 -pin |
| Encoding | B-coded |
| | |

Electrical connection



| Pin | Pin assignment |
|-----|----------------|
| 1 | V+ |
| 2 | Tx- |
| 3 | PB GND |
| 4 | Tx+ |
| 5 | FE/SHIELD |



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 |
|----------|----------------------------|------------------------------|---|
| 50118947 | CML730i-T05- 2880.R-M12 | Light curtain transmitter | Operating range: 0.1 4 m Connection: Connector, M12, Rear side, 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 | | | |
| ccc | Interface L: IO-Link /CN: CANopen /PB: PROFIBUS /PN: PROFINET /CV: Analog current and voltage output /D3: RS 485 Modbus | | | |

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Part number code



| 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.
- by 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 |
|----------|------------------------|------------------|---|
| 50132079 | KD U-M12-5A-V1- 050 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC |

Connection technology - Y distribution cables

| | Part no. | Designation | Article | Description |
|--|----------|-----------------------------|-----------------------|--|
| | 50118183 | K-Y1 M12A-5m- M12A-S-PUR | Interconnection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 3: Connector, M12, Axial, Female, A-coded, 8 -pin Shielded: Yes Cable length fork 1: 5,000 mm Cable length fork 2: 150 mm Sheathing material: PUR |

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 |

Mounting technology - Swivel mounts

| Part no. | Designation | Article | Description |
|--------------|-------------|----------------------|---|
| 429029 | BT-2RG | Mounting bracket set | Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Turning, 360° Material: Metal, Plastic |

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. |



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