



Part no.: 50128785
DCR 202i FIX-N1-102-R3-G
Stationary 2D-code reader



RS232

RS422

Ethernet

Figure can vary

Contents

- . Technical data
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Technical data

| Basic data | |
|------------------------------------|--|
| Series | DCR 200i |
| Chip | CMOS |
| Functions | |
| Software functions | Reading of 1D codes Reading of 2D codes |
| Read data | |
| Code types, readable | 2/5 Interleaved Aztec Codabar Code 128 Code 32 Code 39 Code 93 Data Matrix Code EAN 128 EAN 8/13 GS1 Databar GS1 Databar Omnidirectional GS1 Databar QR code GS1 Databar Stacked PDF417 Pharma Code QR code UPC |
| Optical data | |
| Reading distance | 40 ... 120 mm |
| Light source | LED, Red |
| Transmitted-signal shape | Pulsed |
| Camera resolution, horizontal | 1,280 px |
| Camera resolution, vertical | 960 px |
| Module size | 0.127 ... 0.5 mm |
| Electronic shutter speed | 0.068 ... 5 ms |
| Camera type | Monochrome |
| Electrical data | |
| Protective circuit | Polarity reversal protection Short circuit protected |
| Performance data | |
| Supply voltage U_B | 18 ... 30 V, DC |
| Average power consumption | 8 W |
| Inputs | |
| Number of digital switching inputs | 1 Piece(s) |
| Switching inputs | |
| Voltage type | DC |

| Outputs | |
|-------------------------------------|-----------------------|
| Number of digital switching outputs | 1 Piece(s) |
| Switching outputs | |
| Voltage type | DC |
| Switching current, max. | 100 mA |
| Switching output 1 | |
| Switching element | MOSFET semiconductor, |
| Switching principle | +24 V switching |
| Inputs/outputs selectable | |
| Number of inputs/outputs selectable | 2 Piece(s) |
| Voltage type, outputs | DC |
| Voltage type, inputs | DC |

| Interface | |
|-----------------------|-----------------------------------|
| Type | RS 232, RS 422, Ethernet |
| RS 232 | |
| Function | Process |
| Transmission speed | 4,800 ... 115,200 Bd |
| Data format | Adjustable |
| Start bit | 1 |
| Data bit | 8 data bits |
| Stop bit | 1 stop bit |
| Parity | None |
| Transmission protocol | <STX><data><CR><LF> |
| Data encoding | ASCII Binary |
| RS 422 | |
| Function | Process |
| Transmission speed | 4,800 ... 115,200 Bd |
| Data format | Adjustable |
| Start bit | 1 |
| Data bit | 7, 8 data bits |
| Stop bit | 1, 2 stop bits |
| Data encoding | ASCII Binary |
| Ethernet | |
| Architecture | Client Server |
| Address assignment | DHCP Manual address assignment |
| Transmission speed | 10 Mbit/s 100 Mbit/s |
| Function | Process |
| Switch functionality | None |
| Transmission protocol | TCP/IP , UDP |

| Service interface | |
|--------------------------|----------|
| Type | Ethernet |
| Ethernet | |
| Function | Service |

Connection

Number of connections 2 Piece(s)

Connection 1

| | |
|--------------------|---|
| Type of connection | Connector |
| Function | Data interface Signal IN Signal OUT Voltage supply |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 12 -pin |
| Encoding | A-coded |

Connection 2

| | |
|--------------------|---|
| Type of connection | Connector |
| Function | Configuration interface Data interface |
| Thread size | M12 |
| Type | Female |
| Material | Metal |
| No. of pins | 4 -pin |
| Encoding | D-coded |

Mechanical data

| | |
|-----------------------|---|
| Design | Cubic |
| Dimension (W x H x L) | 43 mm x 61 mm x 44 mm |
| Housing material | Metal Plastic, Diecast aluminum, PC |
| Lens cover material | Glass |
| Net weight | 120 g |
| Housing color | Silver |
| Type of fastening | Mounting thread Via optional mounting device |

Operation and display

| | |
|-------------------------------------|--|
| Type of display | LED |
| Number of LEDs | 10 Piece(s) |
| Type of configuration | Configuration codes Teach-in Via web browser |
| Operational controls | Button(s) |
| Function of the operational control | Adjustment mode Auto-setup Trigger |

Environmental data

| | |
|------------------------------------|---------------|
| Ambient temperature, operation | 0 ... 50 °C |
| Ambient temperature, storage | -20 ... 70 °C |
| Relative humidity (non-condensing) | 90 % |

Certifications

| | |
|----------------------|-------|
| Degree of protection | IP 65 |
| Protection class | III |

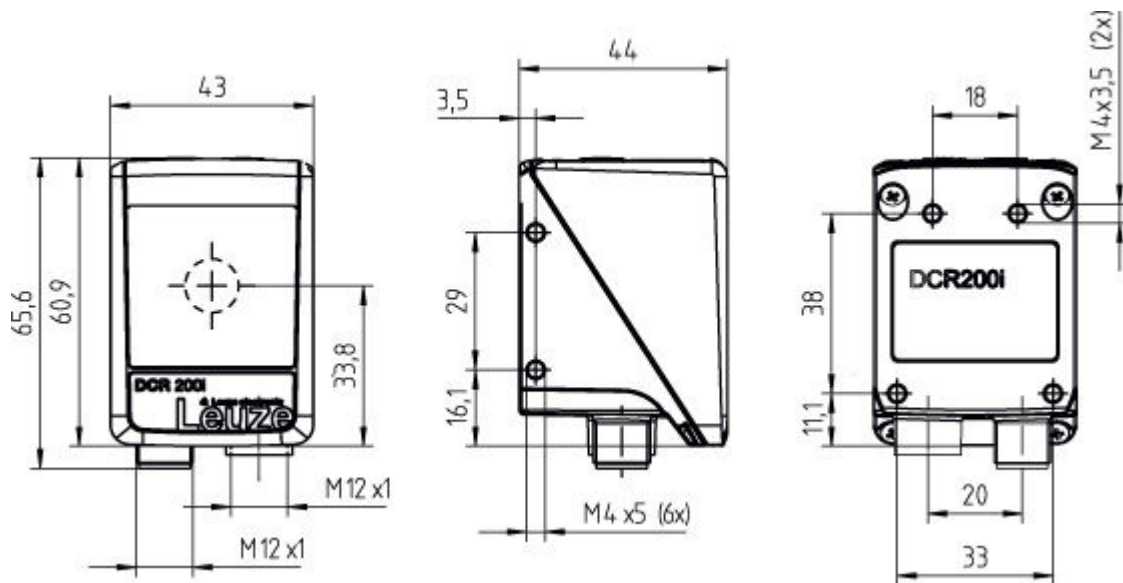
| | |
|---|------------------------------|
| Certifications | c UL US |
| Test procedure for EMC in accordance with standard | EN 61000-6-2 EN 61000-6-4 |
| Test procedure for continuous shock in accordance with standard | IEC 60068-2-29, test Eb |
| Test procedure for vibration in accordance with standard | IEC 60068-2-6, test Fc |

Classification

| | |
|-----------------------|----------|
| Customs tariff number | 84719000 |
| eCl@ss 8.0 | 27280103 |
| eCl@ss 9.0 | 27280103 |
| ETIM 5.0 | EC002999 |
| ETIM 6.0 | EC002999 |

Dimensioned drawings

All dimensions in millimeters

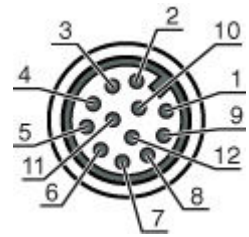


Electrical connection

| Connection 1 | PWR / SWIO |
|--------------------|---|
| Type of connection | Connector |
| Function | Data interface Signal IN Signal OUT Voltage supply |
| Thread size | M12 |
| Type | Male |
| Material | Metal |
| No. of pins | 12 -pin |
| Encoding | A-coded |

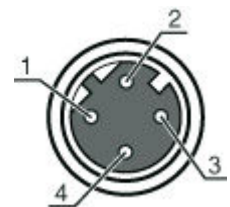
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| Pin | Pin assignment |
|-----|-------------------------|
| 1 | VIN |
| 2 | GNDIN |
| 3 | SWIN 1 |
| 4 | SWOUT 2 |
| 5 | FE |
| 6 | GND RS 232 / GND RS 422 |
| 7 | Rx- |
| 8 | Tx- |
| 9 | RxD/Rx+ |
| 10 | TxD/Tx+ |
| 11 | SWIO 3 |
| 12 | SWIO 4 |



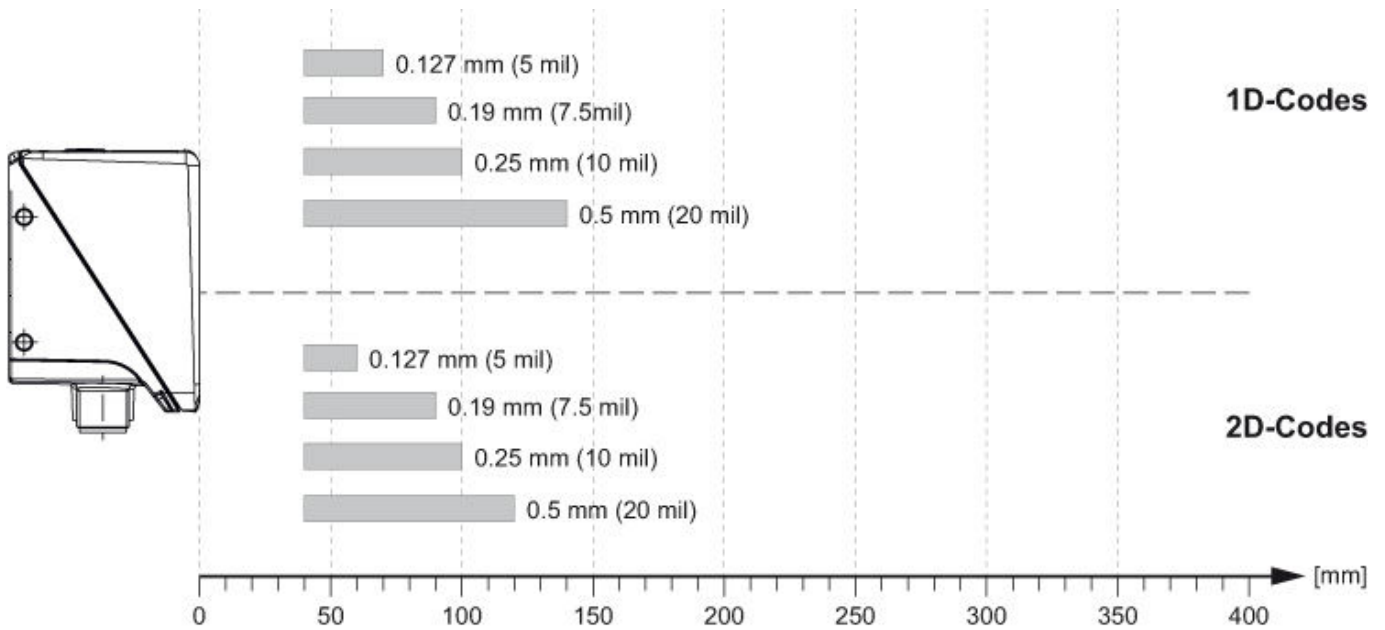
| Connection 2 | HOST |
|--------------------|---|
| Type of connection | Connector |
| Function | Configuration interface Data interface |
| Thread size | M12 |
| Type | Female |
| Material | Metal |
| No. of pins | 4 -pin |
| Encoding | D-coded |

| Pin | Pin assignment |
|-----|----------------|
| 1 | TD+ |
| 2 | RD+ |
| 3 | TD- |
| 4 | RD- |

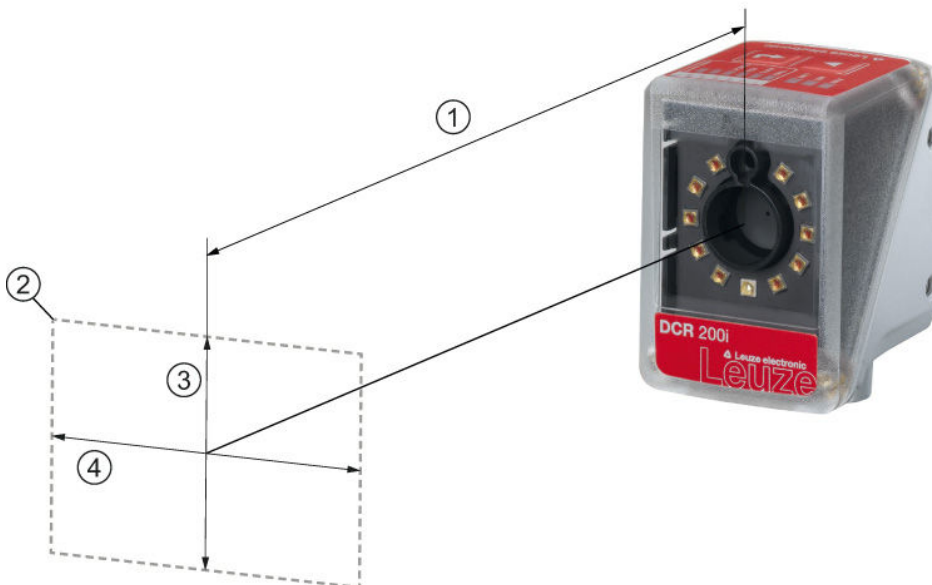


Diagrams

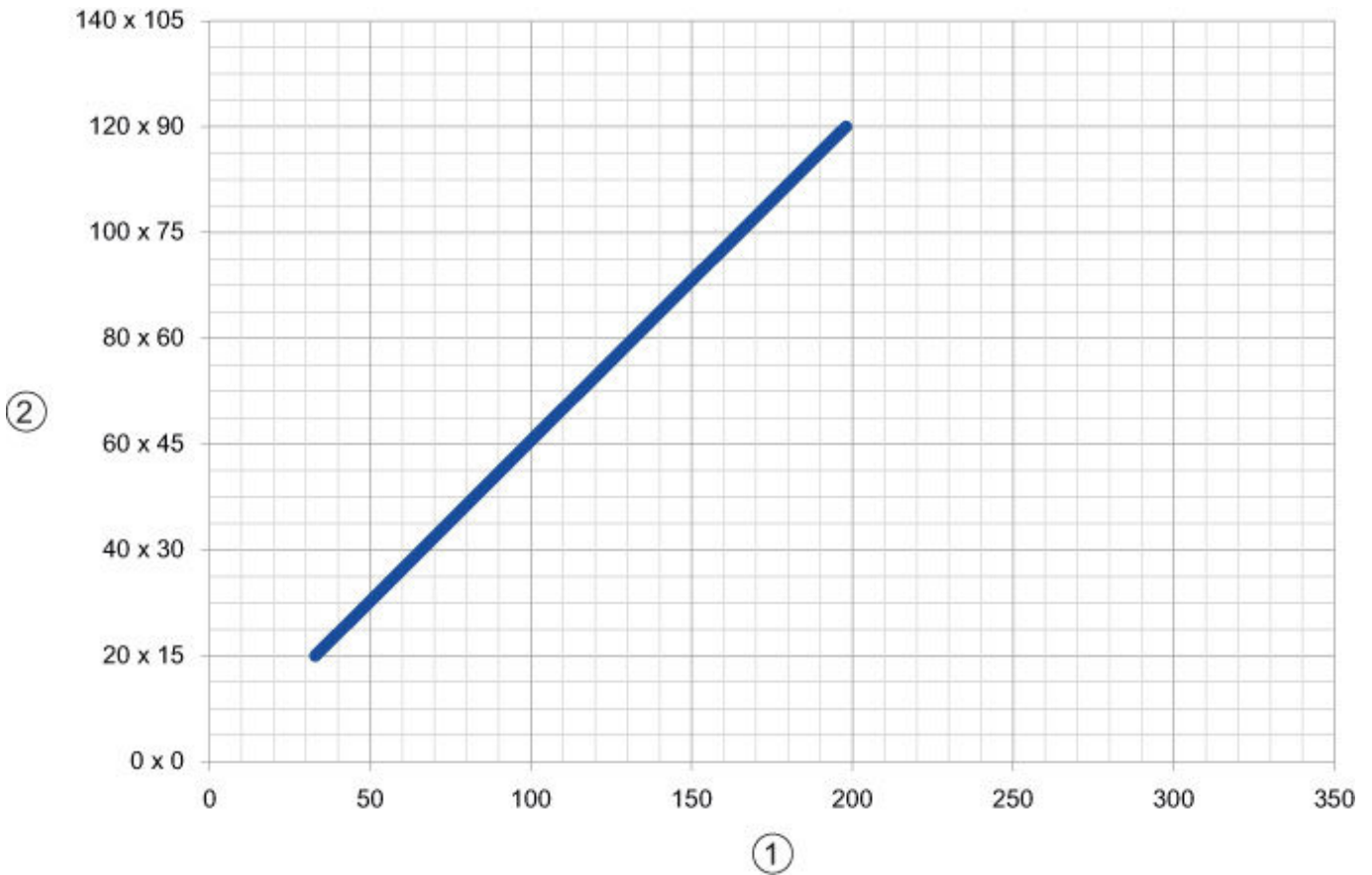
Reading distances



Relationship between camera distance and reading field size



- 1 Camera distance
- 2 Reading field
- 3 Reading field height [mm]
- 4 Reading field width [mm]



- 1 Camera distance [mm]
- 2 Reading field: width x height [mm]

Operation and display

LEDs

| LED | Display | Meaning | |
|-----|---------|--------------------------|--|
| 1 | PWR | Off | No supply voltage |
| | | Green, flashing | Initialization |
| | | Green, continuous light | Operational readiness |
| | | Orange, continuous light | Service operation |
| | | Red, flashing | Device OK, warning set |
| | | Red, continuous light | Device error |
| 2 | NET | Off | No supply voltage |
| | | Green, flashing | Initialization |
| | | Green, continuous light | Operational readiness |
| | | Red, flashing | Communication error |
| | | Red, continuous light | Network error |
| 3 | LINK | Green, continuous light | Ethernet connection is established |
| | | Yellow, flashing | Data exchange active |
| 4 | TRIG | Green, flashing | Trigger and display of the read quality |
| 5 | AUTO | Green, flashing | Auto-setup and display of the read quality |
| 6 | ADJ | Green, flashing | Alignment mode and display of the read quality |
| 7 | TEACH | Green, flashing | Teach-in and display of the read quality |

Part number code

Part designation: DCR XXX YYY-Z-AAA-BC-D-EEEE

| | |
|------|---|
| DCR | Operating principle: DCR: Dual Code Reader |
| XXXX | Series/interface (integrated fieldbus technology): 202i: Ethernet TCP/IP, UDP, RS 232/RS 422 248i: PROFINET-IO, Ethernet TCP/IP, UDP, RS 232/RS 422 |
| YYY | Equipment: FIX: Fixed focal length |
| Z | Optics: U: Ultra high density (very close) N: High Density (close) M: Medium Density (medium distance) F: Low Density (remote) L: Ultra low density (very large distance) |
| AAA | Beam exit: 102: front |
| B | Illumination: R: Red light |
| C | Resolution range: 3: 1280 x 960 pixels |
| D | Protective screen: n/a: Plastic G: Glass P: Polarization filter |
| EEEE | Special equipment: V: Stainless steel housing F001: NPN inputs/outputs H: with heating |

Note

A list with all available device types can be found on the Leuze electronic 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.

Accessories

Connection technology - Connection unit

| | Part no. | Designation | Article | Description |
|---|----------|--------------------------|-------------------------|--|
|  | 50130109 | MA 150 | Modular connection unit | Supply voltage: 18 ... 30 V Current consumption, max.: 150 mA Connections: 5 Piece(s) Degree of protection: IP 67 |
|  | 50112893 | MA 204i Profibus Gateway | Modular connection unit | Supply voltage: 18 ... 30 V Current consumption, max.: 300 mA Interface: PROFIBUS DP, RS 232 Connections: 6 Piece(s) Degree of protection: IP 65 |







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| | Part no. | Designation | Article | Description |
|--|----------|---------------------------------|----------------------------|--|
|  | 50114154 | MA 235i CANopen Gateway | Modular connection unit | Supply voltage: 18 ... 30 V Current consumption, max.: 300 mA Interface: CANopen, RS 232 Connections: 6 Piece(s) Degree of protection: IP 65 |
|  | 50114155 | MA 238i EtherCAT Gateway | Modular connection unit | Supply voltage: 18 ... 30 V Current consumption, max.: 300 mA Interface: EtherCAT, RS 232 Connections: 6 Piece(s) Degree of protection: IP 65 |
|  | 50112891 | MA 248i Profinet Gateway | Modular connection unit | Supply voltage: 18 ... 30 V Current consumption, max.: 300 mA Interface: PROFINET, RS 232 Connections: 6 Piece(s) Degree of protection: IP 65 |
|  | 50114156 | MA 255i DeviceNet Gateway | Modular connection unit | Supply voltage: 18 ... 30 V Current consumption, max.: 300 mA Interface: RS 232, DeviceNet Connections: 6 Piece(s) Degree of protection: IP 67 |
|  | 50114157 | MA 258i EtherNet/ IP Gateway | Modular connection unit | Supply voltage: 18 ... 30 V Current consumption, max.: 300 mA Interface: EtherNet IP, RS 232 Connections: 6 Piece(s) Degree of protection: IP 65 |

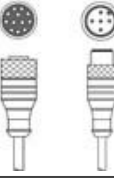
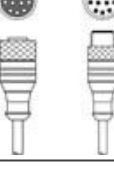
Connection technology - Connection cables

| | Part no. | Designation | Article | Description |
|---|----------|------------------------|------------------|--|
|  | 50130281 | KD S-M12-CA- P1-020 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connection 2: Open end Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR |
|  | 50130282 | KD S-M12-CA- P1-050 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR |
|  | 50130283 | KD S-M12-CA- P1-100 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connection 2: Open end Shielded: Yes Cable length: 10,000 mm Sheathing material: PUR |
|  | 50134943 | KD S-M12-CW- P1-050 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 12 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR |



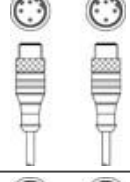
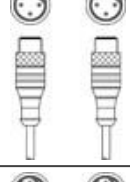
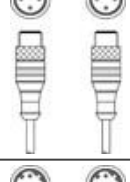
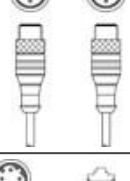
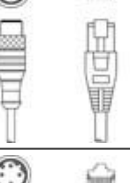
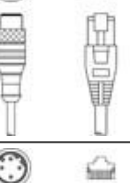
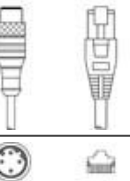
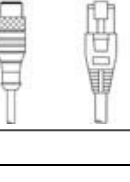
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| | Part no. | Designation | Article | Description |
|---|----------|---------------------|------------------|---|
|  | 50135073 | KS ET-M12-4A-P7-020 | Connection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR |
|  | 50135074 | KS ET-M12-4A-P7-050 | Connection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR |
|  | 50135075 | KS ET-M12-4A-P7-100 | Connection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 10,000 mm Sheathing material: PUR |
|  | 50135076 | KS ET-M12-4A-P7-150 | Connection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 15,000 mm Sheathing material: PUR |
|  | 50135077 | KS ET-M12-4A-P7-300 | Connection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 30,000 mm Sheathing material: PUR |
|  | 50134942 | KS ET-M12-4W-P7-050 | Connection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Angled, Male, D-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR |

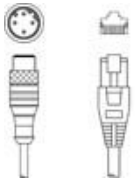
Connection technology - Interconnection cables

| | Part no. | Designation | Article | Description |
|---|----------|--------------------------------|-----------------------|--|
| | 50132488 | KB JST-M12A-12P-50 | Interconnection cable | |
|  | 50137694 | KDS S-M12-CA-M12-5A-P1-004-23X | Interconnection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: Yes Cable, crossed: Connection 1, pin 2 <-> connection 2, pin 3 Cable length: 400 mm Sheathing material: PUR |
|  | 50130284 | KDS S-M12-CA-M12-CA-P1-020 | Interconnection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 12 -pin Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR |



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| | Part no. | Designation | Article | Description |
|---|----------|-----------------------------|-----------------------|---|
|  | 50130285 | KDS S-M12-CA-M12-CA-P1-050 | Interconnection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 12 -pin Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR |
|  | 50130286 | KDS S-M12-CA-M12-CA-P1-100 | Interconnection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 12 -pin Shielded: Yes Cable length: 10,000 mm Sheathing material: PUR |
|  | 50137077 | KSS ET-M12-4A-M12-4A-P7-020 | Interconnection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Connector, M12, Axial, Male, D-coded, 4 -pin Shielded: Yes Cable length: 1,000 mm Sheathing material: PUR |
|  | 50137078 | KSS ET-M12-4A-M12-4A-P7-050 | Interconnection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Connector, M12, Axial, Male, D-coded, 4 -pin Shielded: Yes Cable length: 1,000 mm Sheathing material: PUR |
|  | 50137079 | KSS ET-M12-4A-M12-4A-P7-100 | Interconnection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Connector, M12, Axial, Male, D-coded, 4 -pin Shielded: Yes Cable length: 10,000 mm Sheathing material: PUR |
|  | 50137080 | KSS ET-M12-4A-M12-4A-P7-150 | Interconnection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Connector, M12, Axial, Male, D-coded, 4 -pin Shielded: Yes Cable length: 15,000 mm Sheathing material: PUR |
|  | 50135080 | KSS ET-M12-4A-RJ45-A-P7-020 | Interconnection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR |
|  | 50135081 | KSS ET-M12-4A-RJ45-A-P7-050 | Interconnection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR |
|  | 50135082 | KSS ET-M12-4A-RJ45-A-P7-100 | Interconnection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 10,000 mm Sheathing material: PUR |
|  | 50135083 | KSS ET-M12-4A-RJ45-A-P7-150 | Interconnection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 15,000 mm Sheathing material: PUR |


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| | Part no. | Designation | Article | Description |
|---|----------|-----------------------------|-----------------------|---|
|  | 50135084 | KSS ET-M12-4A-RJ45-A-P7-300 | Interconnection cable | Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 30,000 mm Sheathing material: PUR |


Connection technology - Connectors

| | Part no. | Designation | Article | Description |
|---|----------|-------------|-----------|--|
|  | 50132254 | D M12A-12P | Connector | Connection: Connector with solder connection, M12, Axial, Female, A-coded, 12 -pin |
|  | 50112155 | S-M12A-ET | Connector | Suitable for interface: Ethernet Connection: Connector, M12, Axial, Male, D-coded, 4 -pin |



Connection technology - Adapters

| | Part no. | Designation | Article | Description |
|---|----------|----------------|---------|---|
|  | 50132255 | D M12A-12P-PWR | Adapter | Number of connections: 2 Piece(s) Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connection 2: Jack socket |





Mounting technology - Mounting brackets

| | Part no. | Designation | Article | Description |
|---|----------|-------------|------------------|--|
|  | 50132151 | BT 320M | Mounting bracket | Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal |



Mounting technology - Rod mounts

| | Part no. | Designation | Article | Description |
|---|----------|-------------------|-----------------|--|
|  | 50132150 | BTU 320M-D12 | Mounting system | Contains: 4x M4 x 6 screws Design of mounting device: Mounting system Fastening, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal |
|  | 50132453 | BTU 320M-D12-RL70 | Mounting system | Contains: 4x M4 x 6 screws Design of mounting device: Mounting system Fastening, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Turning, 360°, Adjustable, Clampable Material: Metal |

General

| | Part no. | Designation | Article | Description |
|--|----------|-----------------------|------------------|---|
| | 50132562 | AC-RL-70/40-Diff | Vision component | |
|  | 50131462 | Cover DCR 200i | Cover hood | Housing material: Plastic Optics cover: Plastic |
|  | 50131461 | Cover DCR 200i-G | Cover hood | Housing material: Plastic Optics cover: Glass |
|  | 50131460 | Cover DCR 200i-P | Cover hood | Housing material: Plastic Optics cover: Glass with polarization filter |
| | 50131459 | Diffusor DCR 200i | Film | |
|  | 50132511 | RL-70/ 40r-003-M12 | Illumination | |

Services

| | Part no. | Designation | Article | Description |
|---|----------|-------------|------------------|---|
|  | S981014 | CS30-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. Restrictions: No mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment. |
|  | S981019 | CS30-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. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure. |