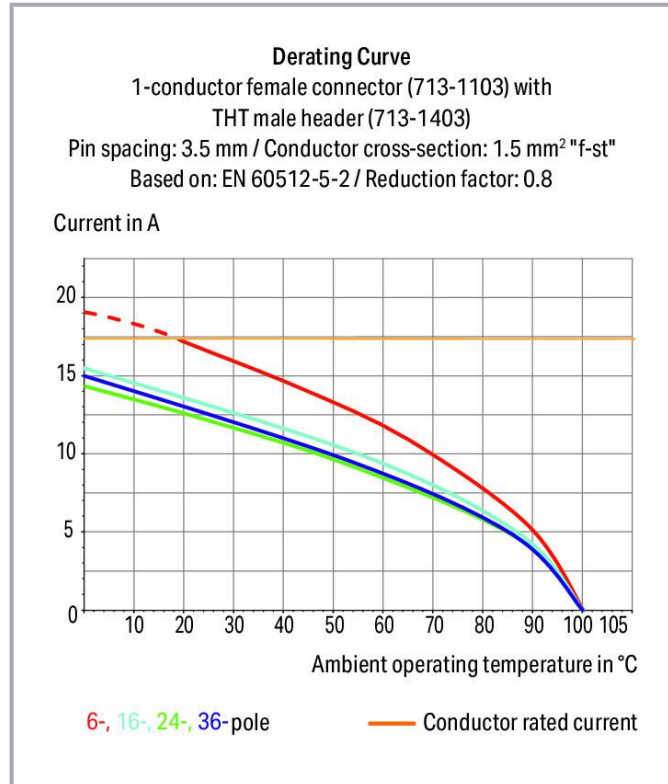


**Data sheet | Item number: 713-1111/107-000**

1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 22-pole; 100% protected against mismatching; Screw flange; 1,50 mm<sup>2</sup>; black



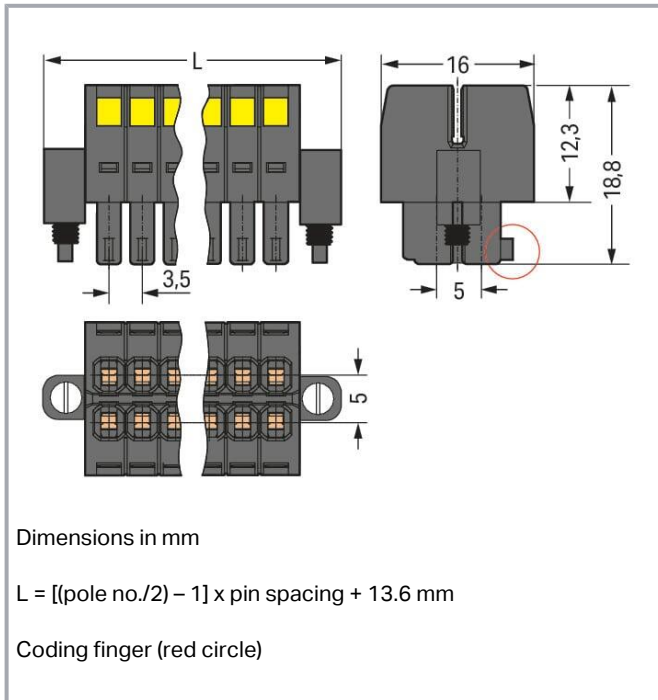
[www.wago.com/713-1111/107-000](http://www.wago.com/713-1111/107-000)



Subject to changes. Please also observe the further product documentation!

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## Item description

- Universal connection for all conductor types
- Unique, compact, double-row connector system for conductor cross-sections up to 1.5 mm<sup>2</sup>
- High-density, wire-to-board connections in very confined spaces
- Centered strain relief plate anchors conductors, while acting as convenient connection and disconnection handle. It also provides easy access to operating slots – even when wired.
- Coding fingers provide 100% protection against mismatching

## Data

### Notes

#### Safety information

The *MCS – MULTI CONNECTION SYSTEM* includes connectors without breaking capacity in accordance with DIN EN 61984. When used as intended, these connectors must not be connected /disconnected when live or under load. When used as intended, these connectors must not be connected/disconnected when live or under load. The circuit design should ensure header pins, which can be touched, are not live when unmated.

#### Variants:

Other pole numbers  
Gold-plated or partially gold-plated contact surfaces

Subject to changes. Please also observe the further product documentation!



Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

## Electrical data

### Ratings per IEC/EN

| Ratings per                   | IEC/EN 60664-1  |
|-------------------------------|---|
| Nominal voltage (III/3)       | 80 V  |
| Rated impulse voltage (III/3) | 2.5 kV  |
| Rated voltage (III/2)         | 160 V   |
| Rated impulse voltage (III/2) | 2.5 kV  |
| Nominal voltage (II/2)        | 250 V   |
| Rated surge voltage (II/2)    | 2.5 kV  |
| Rated current                 | 10 A  |
| Legend (ratings)              | (III / 2) $\hat{=}$ Overvoltage category III / Pollution degree 2 |

### Ratings per UL 1059

| Approvals per                  | UL 1059 |
|--------------------------------|---------|
| Rated voltage UL (Use Group B) | 300 V   |
| Rated current UL (Use Group B) | 10 A    |
| Rated voltage UL (Use Group C) | 50 V    |
| Rated current UL (Use Group C) | 10 A    |

### Ratings per CSA

| Approvals per                   | CSA   |
|---------------------------------|-------|
| Rated voltage CSA (Use Group B) | 300 V |
| Rated current CSA (Use Group B) | 10 A  |

## Connection data

|                            |    |
|----------------------------|----|
| Connection points          | 22 |
| Total number of potentials | 22 |
| Number of connection types | 1  |
| Number of levels           | 2  |

## Connection 1

|                       |             |
|-----------------------|-------------|
| Connection technology | CAGE CLAMP® |
|-----------------------|-------------|

Subject to changes. Please also observe the further product documentation!



|   |  |
|---|--|
| Actuation type                                    | Operating tool                               |
| Actuation direction 1                             | Operation perpendicular to conductor entry   |
| Solid conductor                                   | 0.08 ... 1.5 mm <sup>2</sup> / 28 ... 16 AWG |
| Fine-stranded conductor                           | 0.08 ... 1.5 mm <sup>2</sup> / 28 ... 16 AWG |
| Fine-stranded conductor; with insulated ferrule   | 0.25 ... 1 mm <sup>2</sup>                   |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 1 mm <sup>2</sup>                   |
| Strip length                                      | 6 ... 7 mm / 0.24 ... 0.28 inches            |
| Pole number                                       | 22   |
| Conductor entry direction to mating direction     | 0°   |

### Physical data

|             |                        |
|-------------|------------------------|
| Pin spacing | 3.5 mm / 0.138 inches  |
| Width       | 48.6 mm / 1.913 inches |
| Height      | 18.8 mm / 0.74 inches  |
| Depth       | 16 mm / 0.63 inches    |

### Mechanical Data

|                          |     |
|--------------------------|-----|
| Variable coding          | Yes |
| Anti-rotation protection | Yes |

### Plug-in connection

|                                      |                         |
|--------------------------------------|-------------------------|
| Contact type (pluggable connector)   | Female connector/socket |
| Connector (connection type)          | for conductor           |
| Mismating protection                 | Yes                     |
| Plugging without loss of pin spacing | No                      |
| Locking of plug-in connection        | Screw flange            |

### Material Data

|                             |  |
|-----------------------------|--|
| Note (material data)        | Information on material specifications can be found here |
| Color                       | black  |
| Material group              | II   |
| Insulation material         | Glass fiber-reinforced polyamide (PA66 GF)               |
| Flammability class per UL94 | V0   |
| Clamping spring material    | Chrome-nickel spring steel (CrNi)                        |
| Contact material            | Copper alloy   |

Subject to changes. Please also observe the further product documentation!

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|                 |         |
|-----------------|---------|
| Contact plating | Tin     |
| Fire load       | 0.17 MJ |
| Weight          | 11.9 g  |

### Environmental requirements

|                         |                 |
|-------------------------|-----------------|
| Limit temperature range | -60 ... +100 °C |
| Processing temperature  | -35 ... +60 °C  |

### Commercial data



|                       |                        |
|-----------------------|------------------------|
| Product Group         | 3 (Multi Conn. System) |
| eCl@ss 10.0           | 27-14-11-06            |
| eCl@ss 9.0            | 27-14-11-06            |
| ETIM 8.0              | EC001284               |
| ETIM 7.0              | EC001284               |
| PU (SPU)              | 20 pcs                 |
| Packaging type        | box                    |
| Country of origin     | PL                     |
| GTIN                  | 4045454806835          |
| Customs tariff number | 85366990990            |

### Environmental Product Compliance

|                        |                         |
|------------------------|-------------------------|
| RoHS Compliance Status | Compliant, No Exemption |
|------------------------|-------------------------|

### Approvals / Certificates

#### General approvals

| Logo   | Approval                        | Additional Approval Text | Certificate name |
|--|---------------------------------|--------------------------|------------------|
|  | CCA<br>DEKRA Certification B.V. | EN 61984                 | 2169947.01       |
|  | CCA<br>DEKRA Certification B.V. | IEC 61984                | NL-30980         |
|  | CSA<br>DEKRA Certification B.V. | C22.2                    | 2315087          |
|  | UR                              | UL 1059                  | E45172           |

Subject to changes. Please also observe the further product documentation!



Underwriters Laboratories Inc.

## Counterpart



**Item no.713-1411/107-000**

THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Threaded flange; Pin spacing 3.5 mm; 22-pole; black

[www.wago.com/713-1411/107-000](http://www.wago.com/713-1411/107-000)



**Item no.713-1411/117-000**

THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Threaded flange; Pin spacing 3.5 mm; 22-pole; black

[www.wago.com/713-1411/117-000](http://www.wago.com/713-1411/117-000)



**Item no.713-1411/117-000/997-408**

THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 22-pole; black

[www.wago.com/713-1411/117-000/997-408](http://www.wago.com/713-1411/117-000/997-408)



**Item no.713-1431/107-000**

THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Threaded flange; Pin spacing 3.5 mm; 22-pole; black

[www.wago.com/713-1431/107-000](http://www.wago.com/713-1431/107-000)



**Item no.713-1431/117-000**

THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Threaded flange; Pin spacing 3.5 mm; 22-pole; black

[www.wago.com/713-1431/117-000](http://www.wago.com/713-1431/117-000)



**Item no.713-1471/107-000**

THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; with orientation nose; Threaded flange; Pin spacing 3.5 mm; 22-pole; black

[www.wago.com/713-1471/107-000](http://www.wago.com/713-1471/107-000)



**Item no.713-1431/117-000/997-408**

THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; in tape-and-reel packaging; Pin spacing 3.5 mm; 22-pole; black

[www.wago.com/713-1431/117-000/997-408](http://www.wago.com/713-1431/117-000/997-408)

## Optional accessories

### Tool

Operating tool



**Item no.: 210-647**

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured

[www.wago.com/210-647](http://www.wago.com/210-647)



**Item no.: 210-719**

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

[www.wago.com/210-719](http://www.wago.com/210-719)

### Ferrule

Ferrule

Subject to changes. Please also observe the further product documentation!

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|   |  |
|---|--|
| Item no.: 216-101<br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored  | <a href="http://www.wago.com/216-101">www.wago.com/216-101</a> |
| Item no.: 216-102<br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored   | <a href="http://www.wago.com/216-102">www.wago.com/216-102</a> |
| Item no.: 216-103<br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated  | <a href="http://www.wago.com/216-103">www.wago.com/216-103</a> |
| Item no.: 216-123<br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; silver-colored  | <a href="http://www.wago.com/216-123">www.wago.com/216-123</a> |
| Item no.: 216-122<br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / AWG 20; uninsulated; electro-tin plated; silver-colored   | <a href="http://www.wago.com/216-122">www.wago.com/216-122</a> |
| Item no.: 216-142<br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 | <a href="http://www.wago.com/216-142">www.wago.com/216-142</a> |
| Item no.: 216-132<br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated   | <a href="http://www.wago.com/216-132">www.wago.com/216-132</a> |
| Item no.: 216-121<br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored  | <a href="http://www.wago.com/216-121">www.wago.com/216-121</a> |
| Item no.: 216-143<br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92    | <a href="http://www.wago.com/216-143">www.wago.com/216-143</a> |
| Item no.: 216-131<br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated; silver-colored   | <a href="http://www.wago.com/216-131">www.wago.com/216-131</a> |
| Item no.: 216-141<br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92  | <a href="http://www.wago.com/216-141">www.wago.com/216-141</a> |
| Item no.: 216-152<br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated   | <a href="http://www.wago.com/216-152">www.wago.com/216-152</a> |
| Item no.: 216-203<br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red   | <a href="http://www.wago.com/216-203">www.wago.com/216-203</a> |
| Item no.: 216-202<br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray   | <a href="http://www.wago.com/216-202">www.wago.com/216-202</a> |
| Item no.: 216-151<br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated   | <a href="http://www.wago.com/216-151">www.wago.com/216-151</a> |
| Item no.: 216-201<br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white   | <a href="http://www.wago.com/216-201">www.wago.com/216-201</a> |
| Item no.: 216-223<br>Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red   | <a href="http://www.wago.com/216-223">www.wago.com/216-223</a> |
| Item no.: 216-241<br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight   | <a href="http://www.wago.com/216-241">www.wago.com/216-241</a> |

Subject to changes. Please also observe the further product documentation!

crimped; acc. to DIN 46228, Part 4/09.90; white

**Item no.: 216-242**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray

[www.wago.com/216-242](http://www.wago.com/216-242)

**Item no.: 216-222**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray

[www.wago.com/216-222](http://www.wago.com/216-222)

**Item no.: 216-221**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; insulated; electro-tin plated; white

[www.wago.com/216-221](http://www.wago.com/216-221)

**Item no.: 216-243**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

[www.wago.com/216-243](http://www.wago.com/216-243)

**Item no.: 216-263**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

[www.wago.com/216-263](http://www.wago.com/216-263)

**Item no.: 216-262**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray

[www.wago.com/216-262](http://www.wago.com/216-262)

**Item no.: 216-301**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow

[www.wago.com/216-301](http://www.wago.com/216-301)

**Item no.: 216-321**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow

[www.wago.com/216-321](http://www.wago.com/216-321)

**Item no.: 216-322**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise

[www.wago.com/216-322](http://www.wago.com/216-322)

**Item no.: 216-302**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; light turquoise

[www.wago.com/216-302](http://www.wago.com/216-302)

**Stickers with operating instructions**

Stickers with operating instructions

**Item no.: 210-493**

Stickers for operating instructions

[www.wago.com/210-493](http://www.wago.com/210-493)

**Strain relief**

Strain relief plate

**Item no.: 713-128**

Strain relief plate; for female connectors; 39 mm wide; 1 part; Pin spacing 3.5 mm; black

[www.wago.com/713-128](http://www.wago.com/713-128)

**Downloads****Documentation****Additional Information**

Technical Section

2019 Apr 3

pdf  
2.0 MB

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Technical explanations

---

## CAD/CAE-Data

### CAD data

|                               |                     |                          |
|-------------------------------|---------------------|--------------------------|
| 2D/3D Models 713-1111/107-000 | <a href="#">URL</a> | <a href="#">Download</a> |
|-------------------------------|---------------------|--------------------------|

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### CAE data

|                               |                     |                          |
|-------------------------------|---------------------|--------------------------|
| ZUKEN Portal 713-1111/107-000 | <a href="#">URL</a> | <a href="#">Download</a> |
|-------------------------------|---------------------|--------------------------|

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## Environmental Product Compliance

### Compliance Search

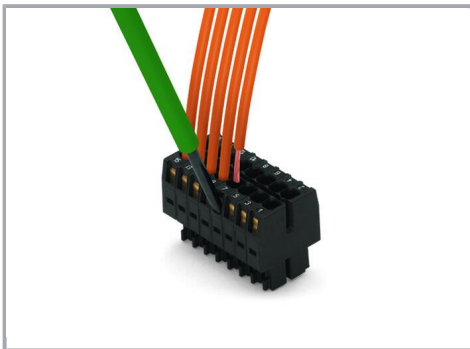
|   |                     |                          |
|---|---------------------|--------------------------|
| Environmental Product Compliance 713-1111/107-000 | <a href="#">URL</a> | <a href="#">Download</a> |
|---|---------------------|--------------------------|

1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm;  
22-pole; 100% protected against mismatching; Screw flange; 1,50 mm<sup>2</sup>; black

---

## Installation Notes

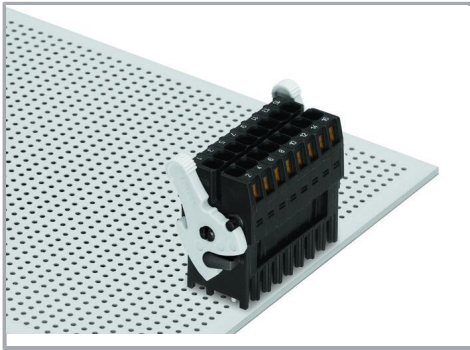
### Conductor termination



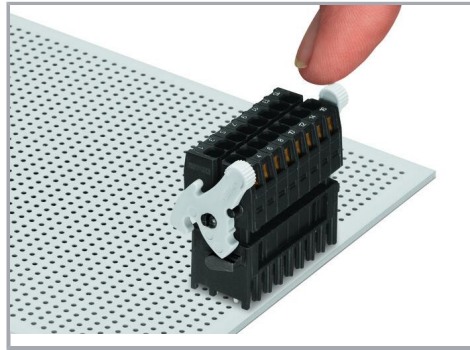
Inserting a conductor via (2.5 x 0.4) mm  
screwdriver.

### Locking system

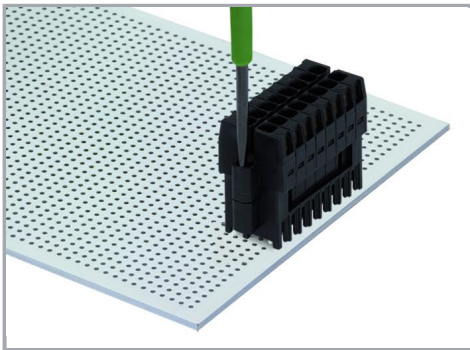
Subject to changes. Please also observe the further product documentation!



Lever as a lock – when closed, female connector is locked.

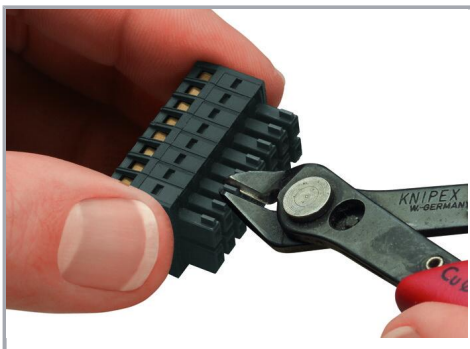


Lever as a disconnection aid – when opened, female connector is disconnected. Rotating the lever lifts the female connector out of the male header.



Screw interlock can only be disconnected using a tool.

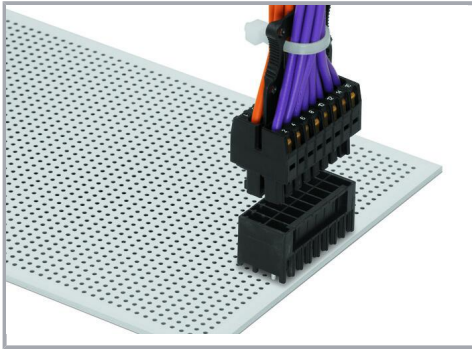
### Coding



Coding a female connector by removing coding finger(s).

Subject to changes. Please also observe the further product documentation!

## Installation



Centered strain relief plate anchors conductors for easy disconnection.

## Product family

**MCS MINI HD**

[Show all products from the family](#)

Subject to changes. Please also observe the further product documentation!