

**Data sheet | Item number: 713-1112**

1-conductor female plug; 100% protected against mismatching; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 24-pole; 1,50 mm<sup>2</sup>; black

[www.wago.com/713-1112](http://www.wago.com/713-1112)



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
- Optional dual-purpose lever doubles as a lock and disconnection aid, while preventing accidental disconnection in closed position
- Coding fingers provide 100 % protection against mismatching

### Safety information 1:

The *MULTI CONNECTION SYSTEM (MCS)* is designed without breaking capacity for compliance with DIN EN 61984. When used as intended, MCS Connectors shall 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.

### Data

#### Electrical data

#### Ratings per IEC/EN 60664-1

Ratings per

IEC/EN 60664-1

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



|                                 |  |
|---------------------------------|--|
| Rated 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   |
| Rated voltage (II / 2)          | 250 V  |
| Rated impulse voltage (II / 2)  | 2.5 kV   |
| Rated current                   | 10 A   |
| Legend (ratings)                | (III / 2) $\triangleq$ Overvoltage category III / Pollution degree 2 |

### 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    |
| Approvals per                  | UL 1059 |

### Approvals per CSA

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

### Connection data

|   |  |
|---|--|
| Connection technology                                       | CAGE CLAMP®                                  |
| Actuation type  | Operating tool                               |
| 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 ferrule with plastic collar    | 0.25 ... 1 mm <sup>2</sup>                   |
| Fine-stranded conductor with ferrule without plastic collar | 0.25 ... 1 mm <sup>2</sup>                   |
| Strip length  | 6 ... 7 mm / 0.24 ... 0.28 inch              |
| No. of poles  | 24   |
| Total number of connection points                           | 24   |
| Total number of potentials                                  | 24   |
| Number of connection types                                  | 1  |
| Number of levels  | 2  |
| Conductor entry direction to mating direction               | 0°   |

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



## Geometrical Data

|             |                      |
|-------------|----------------------|
| Pin spacing | 3.5 mm / 0.138 inch  |
| Width       | 43.5 mm / 1.713 inch |
| Height      | 18.8 mm / 0.74 inch  |
| Depth       | 16 mm / 0.63 inch    |

## Plug connection

|                                    |                         |
|------------------------------------|-------------------------|
| Contact type (pluggable connector) | Female connector/socket |
| Connector connection type          | for conductors          |
| Mismating protection               | Yes                     |

## Material Data

|                             |   |
|-----------------------------|---|
| Color                       | black                                       |
| Material group              | II  |
| Insulating material         | Glass fiber-reinforced polyamide (PA 66 GF) |
| Flammability class per UL94 | V0  |
| Clamping spring material    | Chrome nickel spring steel (CrNi)           |
| Contact material            | Copper alloy                                |
| Contact plating             | tin-plated                                  |
| Fire load                   | 0.179 MJ                                    |
| Weight                      | 12.2 g                                      |

## Environmental Requirements

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

## Commercial data

|                    |                        |
|--------------------|------------------------|
| Product Group      | 3 (Multi Conn. System) |
| Packaging type     | BOX                    |
| Country of origin  | PL                     |
| GTIN               | 4045454667382          |
| Customs Tariff No. | 85366990990            |

## Approvals / Certificates



### Country specific Approvals

Certificate


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

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| Logo   | Approval                        | Additional Approval Text | 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 No. 158            | 2315087    |

## UL-Approvals

| Logo   | Approval                             | Additional Approval Text | Certificate name |
|--|--------------------------------------|--------------------------|------------------|
|  | UR<br>Underwriters Laboratories Inc. | UL 1059                  | 20190122-E45172  |

## Counterpart

|  |  |  |
|--|--|--|
|  | <b>Item no.713-1412/105-000</b><br>THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 2 x 12-pole; black                                     | <a href="http://www.wago.com/713-1412/105-000">www.wago.com/713-1412/105-000</a>                 |
|  | <b>Item no.713-1412</b><br>THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 2 x 12-pole; black   | <a href="http://www.wago.com/713-1412">www.wago.com/713-1412</a>                                 |
|  | <b>Item no.713-1412/105-000/997-408</b><br>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; 2 x 12-pole; black | <a href="http://www.wago.com/713-1412/105-000/997-408">www.wago.com/713-1412/105-000/997-408</a> |
|  | <b>Item no.713-1432</b><br>THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 2 x 12-pole; black   | <a href="http://www.wago.com/713-1432">www.wago.com/713-1432</a>                                 |
|  | <b>Item no.713-1432/105-000</b><br>THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 2 x 12-pole; black                                       | <a href="http://www.wago.com/713-1432/105-000">www.wago.com/713-1432/105-000</a>                 |
|  | <b>Item no.713-1472</b><br>THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 2 x 12-pole; black   | <a href="http://www.wago.com/713-1472">www.wago.com/713-1472</a>                                 |

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



Item no. 713-1432/105-000/997-408

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; 2 x 12-pole; black

[www.wago.com/713-1432/105-000/997-408](http://www.wago.com/713-1432/105-000/997-408)

## Compatible products

### tools



Item no.: 210-647

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

[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)

### Strain relief plate

Item no.: 713-128

Strain relief plate; black

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

### ferrule



Item no.: 216-101

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated

[www.wago.com/216-101](http://www.wago.com/216-101)



Item no.: 216-102

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated

[www.wago.com/216-102](http://www.wago.com/216-102)



Item no.: 216-103

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated

[www.wago.com/216-103](http://www.wago.com/216-103)

Item no.: 216-121

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated

[www.wago.com/216-121](http://www.wago.com/216-121)



Item no.: 216-122

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / AWG 20; uninsulated; electro-tin plated

[www.wago.com/216-122](http://www.wago.com/216-122)



Item no.: 216-123

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated

[www.wago.com/216-123](http://www.wago.com/216-123)



Item no.: 216-131

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

[www.wago.com/216-131](http://www.wago.com/216-131)



Item no.: 216-132

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / AWG 24; uninsulated; electro-tin plated

[www.wago.com/216-132](http://www.wago.com/216-132)



Item no.: 216-141

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

[www.wago.com/216-141](http://www.wago.com/216-141)

Item no.: 216-142

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight

[www.wago.com/216-142](http://www.wago.com/216-142)

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

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crimped; acc. to DIN 46228, Part 1/08.92

|   |  |  |
|---|--|--|
|    | <b>Item no.: 216-143</b><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> |
|    | <b>Item no.: 216-151</b><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> |
|   | <b>Item no.: 216-152</b><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> |
|   | <b>Item no.: 216-201</b><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> |
|   | <b>Item no.: 216-202</b><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> |
|   | <b>Item no.: 216-203</b><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> |
|    | <b>Item no.: 216-221</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white   | <a href="http://www.wago.com/216-221">www.wago.com/216-221</a> |
|    | <b>Item no.: 216-222</b><br>Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray   | <a href="http://www.wago.com/216-222">www.wago.com/216-222</a> |
|  | <b>Item no.: 216-223</b><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> |
|  | <b>Item no.: 216-241</b><br>Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white | <a href="http://www.wago.com/216-241">www.wago.com/216-241</a> |
|  | <b>Item no.: 216-242</b><br>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 | <a href="http://www.wago.com/216-242">www.wago.com/216-242</a> |
|  | <b>Item no.: 216-243</b><br>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     | <a href="http://www.wago.com/216-243">www.wago.com/216-243</a> |
|  | <b>Item no.: 216-262</b><br>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 | <a href="http://www.wago.com/216-262">www.wago.com/216-262</a> |
|  | <b>Item no.: 216-263</b><br>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     | <a href="http://www.wago.com/216-263">www.wago.com/216-263</a> |
|   | <b>Item no.: 216-301</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow   | <a href="http://www.wago.com/216-301">www.wago.com/216-301</a> |
|  | <b>Item no.: 216-302</b><br>Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green  | <a href="http://www.wago.com/216-302">www.wago.com/216-302</a> |
|   | <b>Item no.: 216-321</b>   |  |

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

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; green

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

## Downloads

### Documentation

#### Additional Information

Technical explanations

Apr 3, 2019

pdf  
3.6 MB

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## CAD/CAE-Data

### CAD data

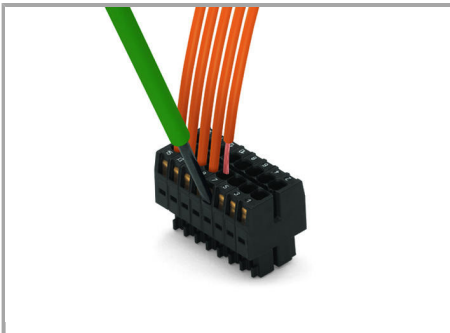
2D/3D Models 713-1112

URL

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## Installation Notes

### Inserting a conductor

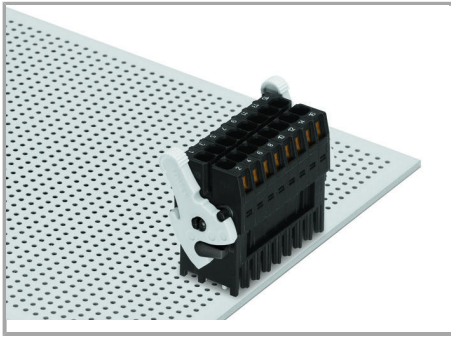


Inserting a conductor via (2.5 x 0.4) mm screwdriver.

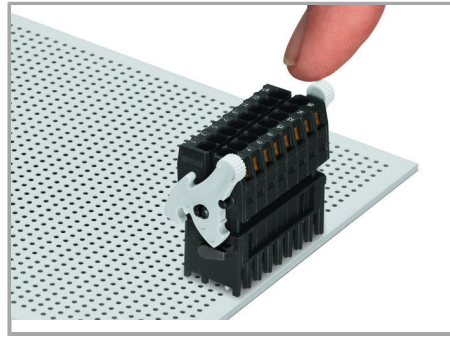
### Locking

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

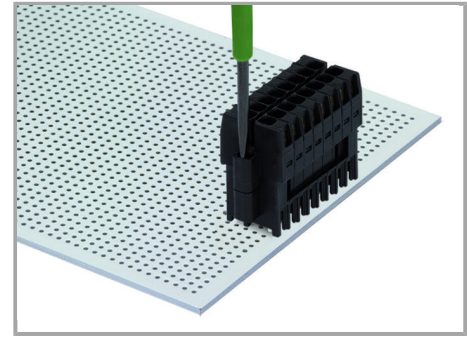




Lever as a lock – when closed, female connector is locked.



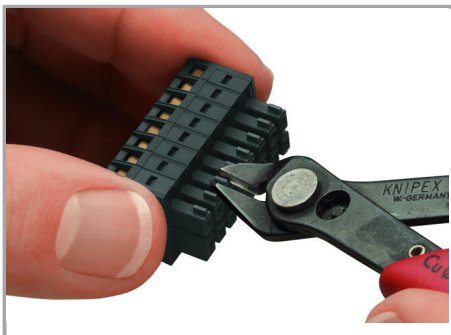
Lever as a disconnection aid – when opened, female connector is disconnected.



Screw interlock can only be disconnected using a tool.

Rotating the lever lifts the female connector out of the male header.

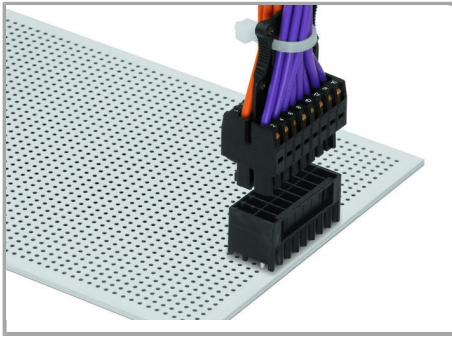
#### Coding



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

#### Assembly

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



Centered strain relief plate anchors  
conductors for easy disconnection.

## Product family

*MCS* MINI HD

[Learn more about the product family.](#)

[Show all products from the family](#)

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