

## Data sheet | Item number: 713-1105/037-047

1-conductor female connector, 2-row; 100% protected against mismating; Levers; direct marking; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 10-pole; 1,50 mm<sup>2</sup>; black

[www.wago.com/713-1105\\_037-047](http://www.wago.com/713-1105_037-047)



 Picture differs from the item.

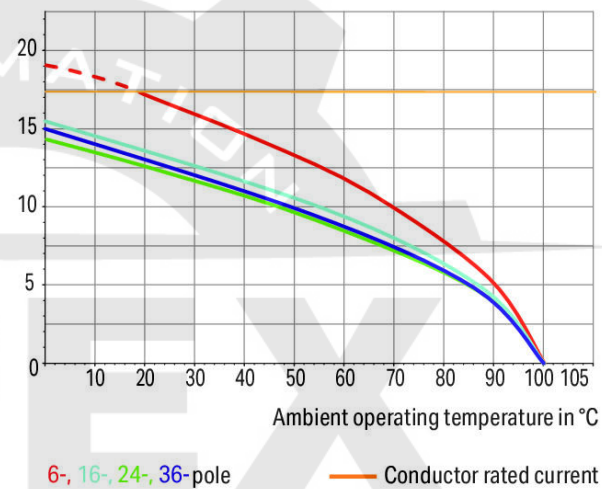
Color: 

### Derating Curve

1-conductor female connector (713-1103) with  
THT male header (713-1403)

Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 0.8

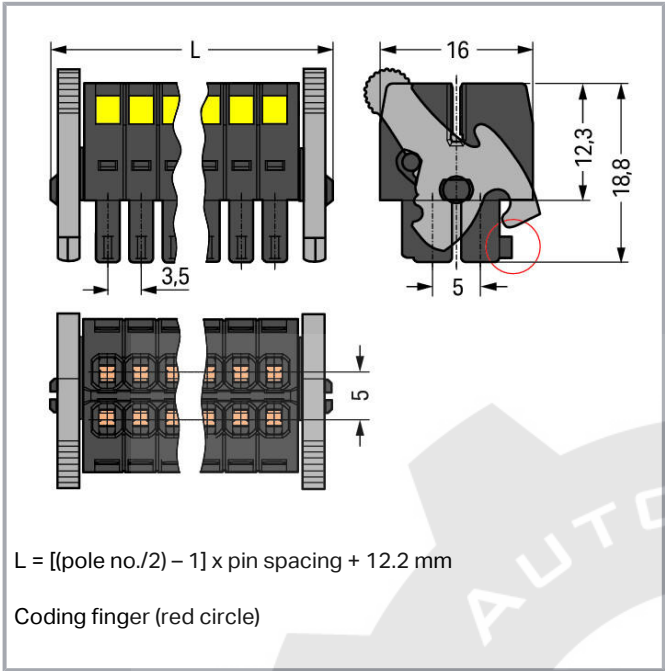
Current in A



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

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Germantown, WI 53022  
Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222  
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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

### Safety information 1:

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. The circuit design should ensure header pins, which can be touched, are not live when unmated.

### Data

#### Electrical data

### IEC Approvals

|                             |                |
|-----------------------------|----------------|
| Ratings per                 | IEC/EN 60664-1 |
| Rated voltage (III / 3)     | 80 V           |
| Rated surge voltage (III/3) | 2.5 kV         |

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|                             |  |
|-----------------------------|--|
| Rated voltage (III/2)       | 160 V  |
| Rated surge 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) $\triangleq$ Overvoltage category III / Pollution degree 2 |

## UL Approvals

|                                |         |
|--------------------------------|---------|
| 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    |

## CSA Approvals

|                                 |       |
|---------------------------------|-------|
| 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 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 inch              |
| Pole No.  | 10   |
| Total number of connection points                 | 10   |
| Total number of potentials                        | 10   |
| Number of connection types                        | 1  |
| Number of levels                                  | 2  |
| Conductor entry direction to mating direction     | 0°   |

## Physical data

|             |                     |
|-------------|---------------------|
| Pin spacing | 3.5 mm / 0.138 inch |
|-------------|---------------------|

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|        |                     |
|--------|---------------------|
| Width  | 26 mm / 1.024 inch  |
| Height | 18.8 mm / 0.74 inch |
| Depth  | 16 mm / 0.63 inch   |

## Plug-in connection

|                                    |                         |
|------------------------------------|-------------------------|
| Contact type (pluggable connector) | Female connector/socket |
| Connector (connection type)        | for conductor           |
| Mismating protection               | Yes                     |
| Locking of plug-in connection      | Locking lever           |

## Material data

|                             |  |
|-----------------------------|--|
| 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                               |
| Contact plating             | tin-plated                                 |
| Fire load                   | 0.085 MJ                                   |
| Weight                      | 6.3 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                  | 4050821177050          |
| Customs tariff number | 8536694040             |

## Approvals / Certificates

### Country specific Approvals

| Logo | Approval                        | Additional Approval Text | Certificate name |
|------|---------------------------------|--------------------------|------------------|
|      | CCA<br>DEKRA Certification B.V. | EN 61984                 | 2169947.01       |

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CCA  
DEKRA Certification B.V.

IEC 61984

NL-30980

## UL-Approvals

| Logo   | Approval                             | Additional Approval Text | Certificate name    |
|--|--------------------------------------|--------------------------|---------------------|
|  | UR<br>Underwriters Laboratories Inc. | UL 1059                  | E45172-<br>19950922 |

## Counterpart



Item no. 713-1425/037-000

THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Levers; Pin spacing 3.5 mm; 10-pole; black

[www.wago.com/713-1425/037-000](http://www.wago.com/713-1425/037-000)


Item no. 713-1405/037-000

THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Levers; Pin spacing 3.5 mm; 10-pole; black

[www.wago.com/713-1405/037-000](http://www.wago.com/713-1405/037-000)

## Optional accessories

## Strain relief



Item no.: 713-130  
Strain relief plate; black

[www.wago.com/713-130](http://www.wago.com/713-130)

## Tools



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)

## Ferrules



Item no.: 216-101  
Ferrule; Sleeve for 0.5 mm<sup>2</sup> / AWG 22; uninsulated; electro-tin plated; silver-colored

[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; silver-colored

[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)

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|  |  |  |
|--|--|--|
|    | <b>Item no.: 216-121</b><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> |
|    | <b>Item no.: 216-122</b><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> |
|    | <b>Item no.: 216-123</b><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> |
|    | <b>Item no.: 216-131</b><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> |
|    | <b>Item no.: 216-132</b><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> |
|    | <b>Item no.: 216-141</b><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> |
|    | <b>Item no.: 216-142</b><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> |
|    | <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  | <a href="http://www.wago.com/216-242">www.wago.com/216-242</a> |

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



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

**Item no.: 216-243**Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; [www.wago.com/216-243](http://www.wago.com/216-243)  
acc. to DIN 46228, Part 4/09.90; red**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.: 216-263**Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; [www.wago.com/216-263](http://www.wago.com/216-263)  
acc. to DIN 46228, Part 4/09.90; red**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.: 216-302**Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; green [www.wago.com/216-302](http://www.wago.com/216-302)**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; green [www.wago.com/216-322](http://www.wago.com/216-322)**Downloads****Documentation****Additional Information**

Technical explanations

Apr 3, 2019

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Environmental Product Compliance 713-1105/037-047

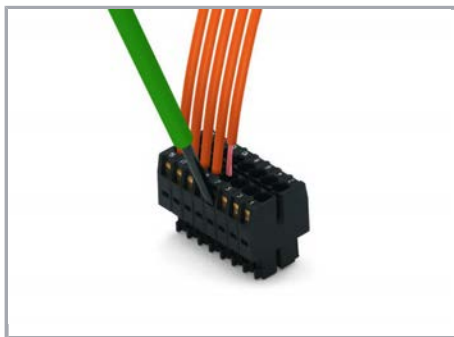
[URL](#)[Download](#)1-conductor female connector, 2-row; 100% protected against mismatching; Levers;  
direct marking; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 10-pole; 1,50 mm<sup>2</sup>; black**Installation Notes****Conductor termination**

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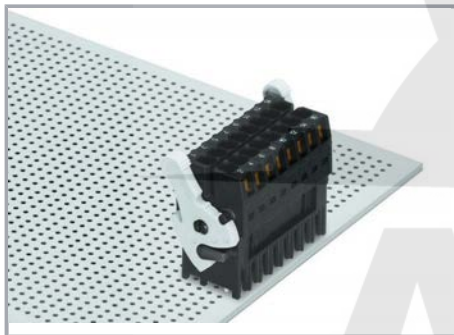
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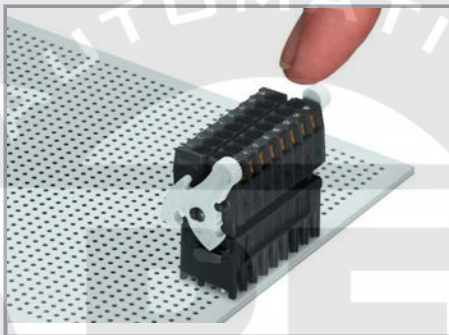


Inserting a conductor via (2.5 x 0.4) mm screwdriver.

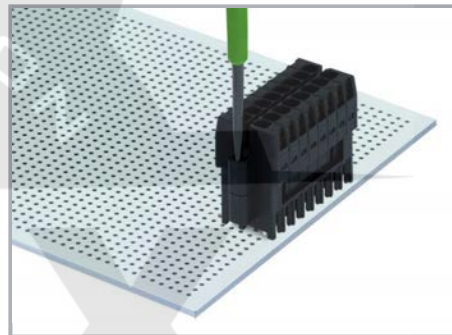
#### Locking lever



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

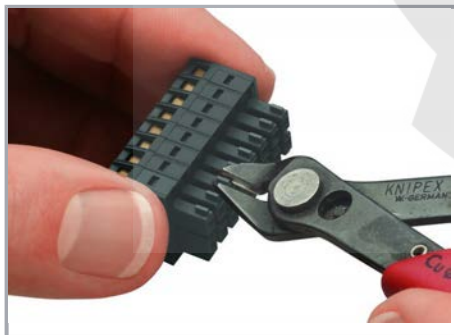


Lever as a disconnection aid – when opened, female connector is disconnected. Rotating the lever lifts the female connector out of the male header.



Screw interlock can only be disconnected using a tool.

#### Coding

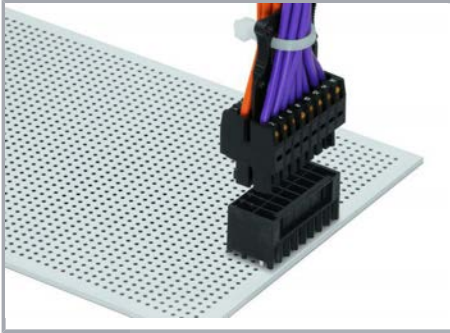


Coding a female connector by removing coding finger(s).

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](#)

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