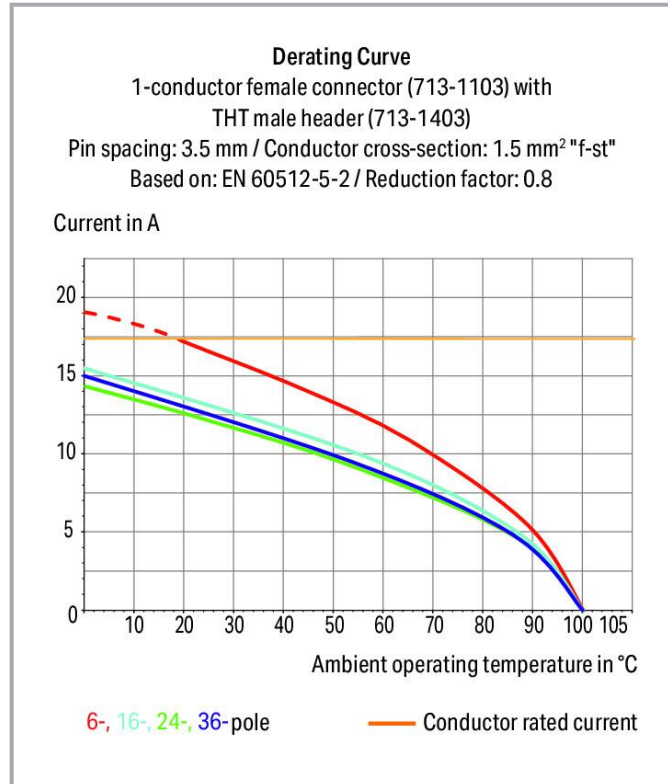
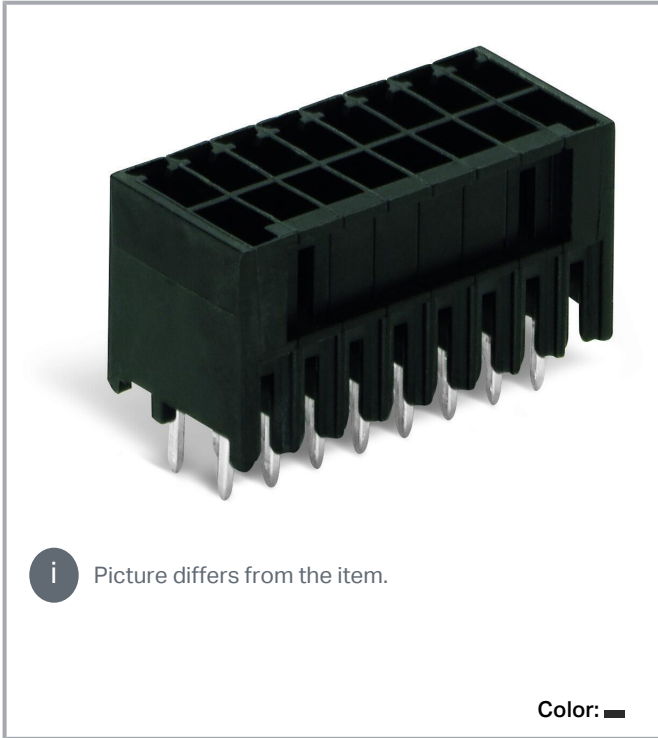


**Data sheet | Item number: 713-1416**

THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 32-pole; black



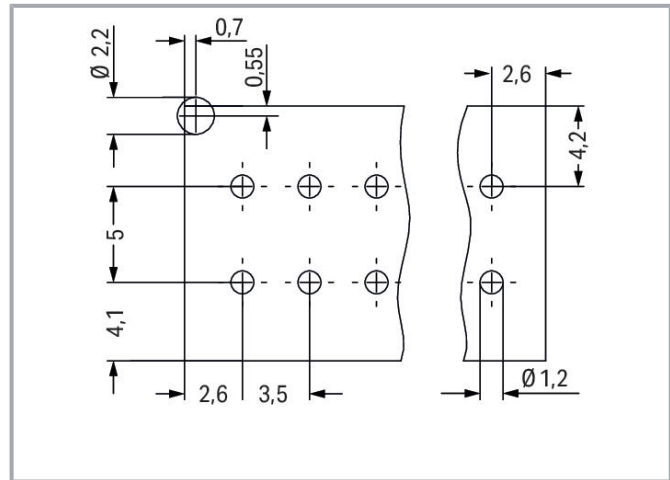
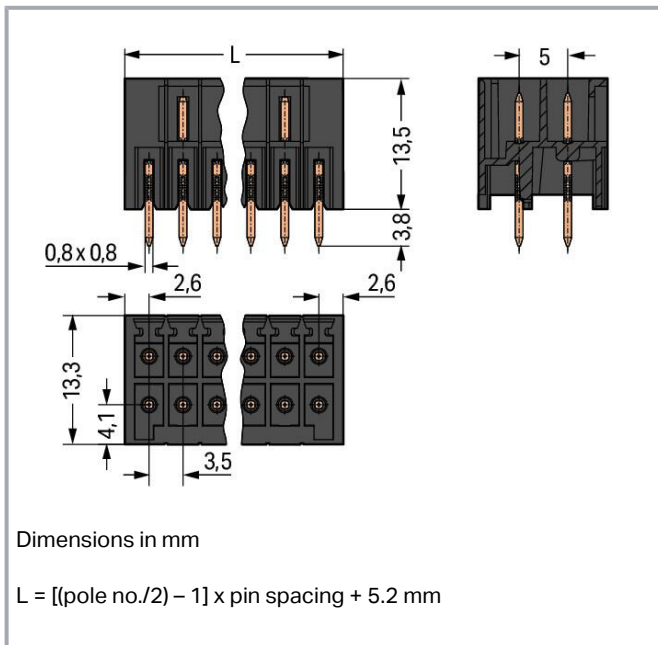
[www.wago.com/713-1416](http://www.wago.com/713-1416)



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

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## Item description

- Male headers may be mounted horizontally or vertically via straight or angled solder pins
- Header housing is molded of THT-compatible insulation material for lead-free reflow soldering
- Separated pin slots prevent damage and make the headers touch-proof when unplugged
- 100% protected against mismatching
- Coding option available

## 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  
 Other solder pin lengths  
 Gold-plated or partially gold-plated contact surfaces  
 Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

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

## 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) | 150 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) | 150 V |
| Rated current CSA (Use Group B) | 12 A  |

## Connection data

|                            |    |
|----------------------------|----|
| Total number of potentials | 32 |
| Number of connection types | 1  |
| Number of levels           | 2  |

### Connection 1

|             |    |
|-------------|----|
| Pole number | 32 |
|-------------|----|

## Physical data

|             |                        |
|-------------|------------------------|
| Pin spacing | 3.5 mm / 0.138 inches  |
| Width       | 57.5 mm / 2.264 inches |

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



|                                      |                          |
|--------------------------------------|--------------------------|
| Height                               | 17.3 mm / 0.681 inches   |
| Height from the surface              | 13.5 mm / 0.531 inches   |
| Depth                                | 13.3 mm / 0.524 inches   |
| Solder pin length                    | 3.8 mm                   |
| Solder pin dimensions                | 0.8 x 0.8 mm             |
| Drilled hole diameter with tolerance | 1.2 <sup>(+0.1)</sup> mm |

### Mechanical Data

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

### Plug-in connection

|                                      |                     |
|--------------------------------------|---------------------|
| Contact type (pluggable connector)   | Male connector/plug |
| Connector (connection type)          | for PCB             |
| Mismating protection                 | Yes                 |
| Plugging without loss of pin spacing | No                  |
| Mating direction to the PCB          | 90 °                |
| Locking of plug-in connection        | none                |

### PCB contact

|                                     |  |
|-------------------------------------|--|
| PCB contact                         | THT                                      |
| Solder pin arrangement              | over the entire male connector (in-line) |
| Number of solder pins per potential | 1  |

### Material Data

|                             |  |
|-----------------------------|--|
| Note (material data)        | Information on material specifications can be found here |
| Color                       | black  |
| Material group              | I  |
| Insulation material         | Polyphthalamide (PPA GF)                                 |
| Flammability class per UL94 | V0   |
| Contact material            | Electrolytic copper (E <sub>Cu</sub> )                   |
| Contact plating             | Tin  |
| Fire load                   | 0.166 MJ   |
| Weight                      | 8.1 g  |

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

## 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           | 27-44-04-02            |
| eCl@ss 9.0            | 27-44-04-02            |
| ETIM 8.0              | EC002637               |
| ETIM 7.0              | EC002637               |
| PU (SPU)              | 20 pcs                 |
| Packaging type        | box                    |
| Country of origin     | PL                     |
| GTIN                  | 4045454700119          |
| 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<br>Underwriters Laboratories Inc. | UL 1059                  | E45172           |

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

## Counterpart

|  |  |  |
|--|--|--|
|  | <b>Item no.713-1116</b><br>1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 32-pole; 100% protected against mismatching; 1,50 mm <sup>2</sup> ; black   | <a href="http://www.wago.com/713-1116">www.wago.com/713-1116</a>                   |
|  | <b>Item no.713-1116/000-047</b><br>1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 32-pole; 100% protected against mismatching; direct marking; 1,50 mm <sup>2</sup> ; black                       | <a href="http://www.wago.com/713-1116/000-047">www.wago.com/713-1116/000-047</a>   |
|  | <b>Item no.713-1116/000-9037</b><br>1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 32-pole; 100% protected against mismatching; direct marking; 1,50 mm <sup>2</sup> ; black                      | <a href="http://www.wago.com/713-1116/000-9037">www.wago.com/713-1116/000-9037</a> |
|  | <b>Item no.713-1116/035-047</b><br>1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 32-pole; 100% protected against mismatching; Strain relief plate; direct marking; 1,50 mm <sup>2</sup> ; black  | <a href="http://www.wago.com/713-1116/035-047">www.wago.com/713-1116/035-047</a>   |
|  | <b>Item no.713-1116/035-9037</b><br>1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm <sup>2</sup> ; Pin spacing 3.5 mm; 32-pole; 100% protected against mismatching; Strain relief plate; direct marking; 1,50 mm <sup>2</sup> ; black | <a href="http://www.wago.com/713-1116/035-9037">www.wago.com/713-1116/035-9037</a> |

## Optional accessories

### Coding

#### Coding



**Item no.: 714-101**  
Coding key; orange

[www.wago.com/714-101](http://www.wago.com/714-101)

## Downloads

### Documentation

#### Additional Information

|                        |            |               |          |
|------------------------|------------|---------------|----------|
| Technical Section      | 2019 Apr 3 | pdf<br>2.0 MB | Download |
| Technical explanations |            |               |          |

## CAD/CAE-Data

### CAD data

|                       |     |          |
|-----------------------|-----|----------|
| 2D/3D Models 713-1416 | URL | Download |
|-----------------------|-----|----------|

## PCB Design

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[URL](#)

[Download](#)

### Symbol and Footprint 713-1416

CAX data for your PCB design, consisting of "schematic symbols and PCB footprints", allow easy integration of the WAGO component into your development environment.

### Supported formats:

- Accel EDA 14 & 15
- Altium 6 to current version
- Cadence Allegro
- DesignSpark
- Eagle Libraries
- KiCad
- Mentor Graphics BoardStation
- Mentor Graphics Design Architect
- Mentor Graphics Design Expedition 99 and 2000
- OrCAD 9.X PCB and Capture
- PADS PowerPCB 3, 3.5, 4.X, and 5.X
- PADS PowerPCB and PowerLogic 3.0
- PCAD 2000, 2001, 2002, 2004, and 2006
- Pulsonix 8.5 or newer
- STL
- 3D STEP
- TARGET 3001!
- View Logic ViewDraw
- Quadcept
- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000

PCB Component Libraries (EDA), PCB CAD Library Ultra Librarian

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### CAE data

|                       |                     |                          |
|-----------------------|---------------------|--------------------------|
| ZUKEN Portal 713-1416 | <a href="#">URL</a> | <a href="#">Download</a> |
|-----------------------|---------------------|--------------------------|

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## Environmental Product Compliance

### Compliance Search

|   |                     |                          |
|---|---------------------|--------------------------|
| Environmental Product Compliance 713-1416 | <a href="#">URL</a> | <a href="#">Download</a> |
|---|---------------------|--------------------------|

THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismatching; Pin spacing 3.5 mm; 32-pole; black

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

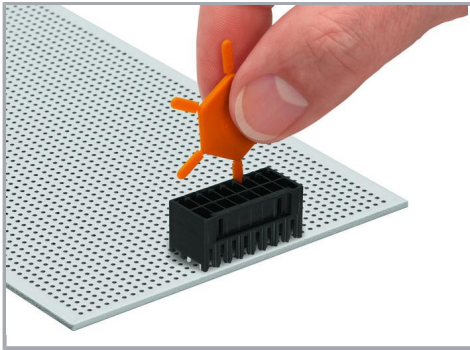
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## Installation Notes

### Coding



Coding a male header by inserting a coding pin.

## Product family

**MCS MINI HD**

[Show all products from the family](#)

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