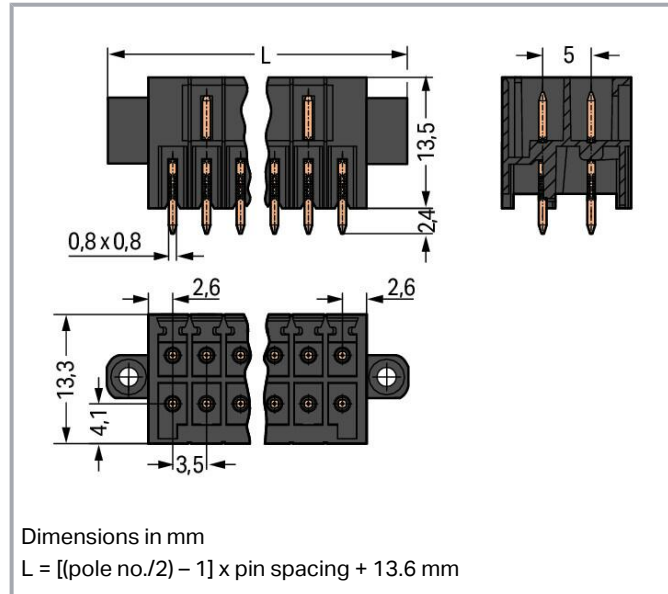
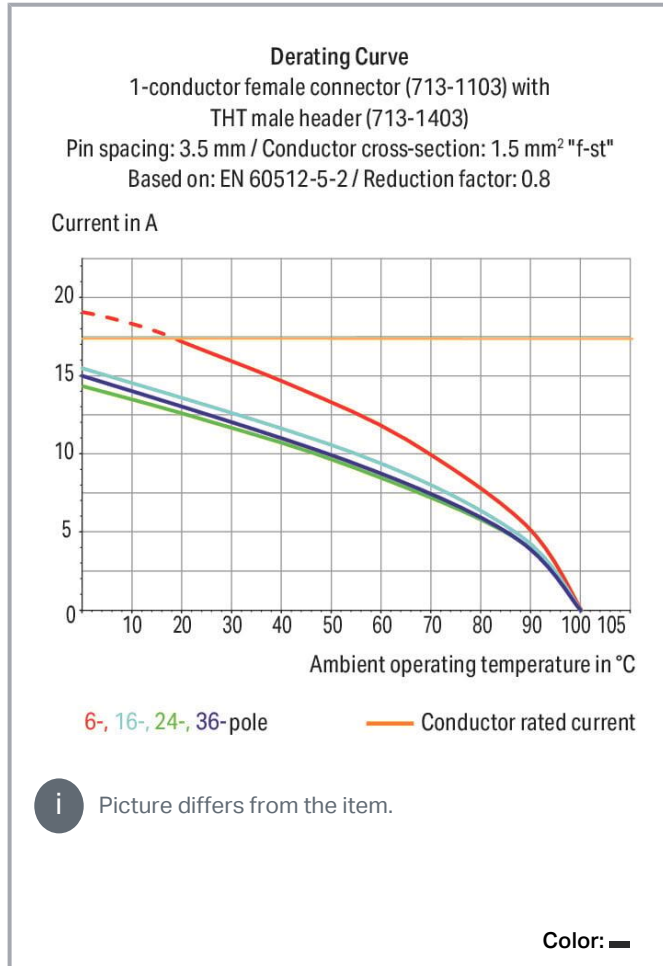


**Data sheet | Item number: 713-1415/117-000/997-409**



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; 30-pole; black

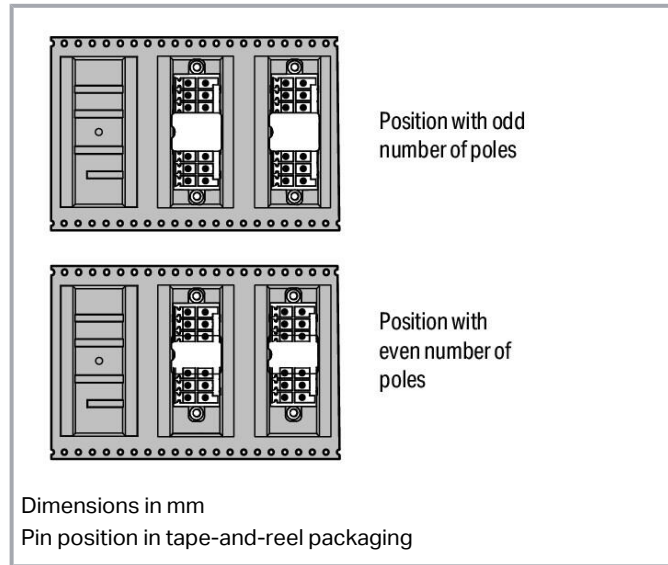
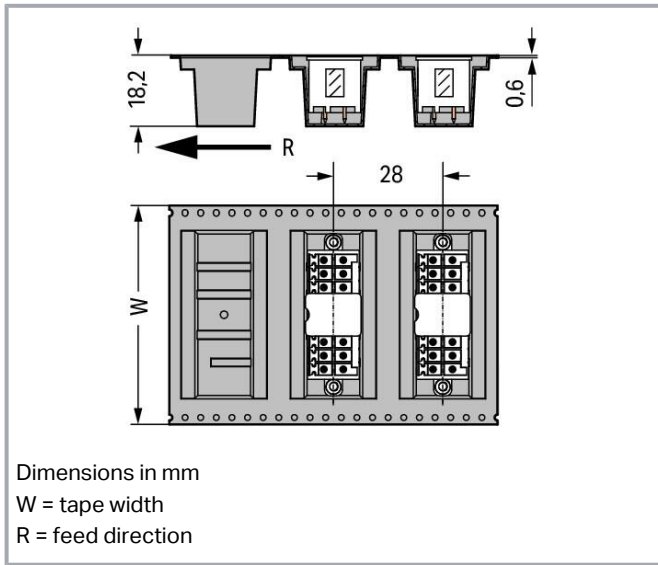
[www.wago.com/713-1415/117-000/997-409](http://www.wago.com/713-1415/117-000/997-409)



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

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## Item description

- THR male headers for reflow soldering in SMT applications
- Available in tape-and-reel packaging for automated pick-and-place PCB assembly
- 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/>.

## Electrical data

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



### 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

|                                |         |
|--------------------------------|---------|
| 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 | 30 |
| Number of connection types | 1  |
| Number of levels           | 2  |

### Connection 1

|             |    |
|-------------|----|
| Pole number | 30 |
|-------------|----|

### Physical data

|                         |                        |
|-------------------------|------------------------|
| Pin spacing             | 3.5 mm / 0.138 inches  |
| Width                   | 62.6 mm / 2.465 inches |
| Height                  | 15.9 mm / 0.626 inches |
| Height from the surface | 13.5 mm / 0.531 inches |

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



|  |                          |
|--|--------------------------|
| Depth                                    | 13.3 mm / 0.524 inches   |
| Solder pin length                        | 2.4 mm                   |
| Solder pin dimensions                    | 0.8 x 0.8 mm             |
| Plated through-hole diameter (THR)       | 1.3 <sup>(+0.1)</sup> mm |
| Reel diameter of tape-and-reel packaging | 330 mm                   |
| Tape width                               | 88 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        | Threaded flange     |

### PCB contact

|                                     |  |
|-------------------------------------|--|
| PCB contact                         | THR                                      |
| 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  |
| Weight                      | 8.1 g  |
| MSL per J-STD 020D          | 1  |

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

|                       |               |
|-----------------------|---------------|
| eCl@ss 10.0           | 27-44-04-02   |
| eCl@ss 9.0            | 27-44-04-02   |
| ETIM 8.0              | EC002637      |
| ETIM 7.0              | EC002637      |
| ECCN                  | NO DATA       |
| PU (SPU)              | 120 pcs       |
| Packaging type        | bag           |
| Country of origin     | DE            |
| GTIN                  | 4050821308935 |
| Customs tariff number | 85366930000   |

## Environmental Product Compliance

|   |                                      |
|---|--------------------------------------|
| CAS-No.                                   | 7439-92-1                            |
| REACH Candidate List Substance            | Lead                                 |
| RoHS Compliance Status                    | Compliant,With Exemption             |
| RoHS Exemption                            | 6(c)                                 |
| SCIP notification number (Austria)        | 1b6e920c-00b4-48d6-a20a-f82a76a805d8 |
| SCIP notification number (Belgium)        | bbae1a5b-1de2-4918-ae52-0e51c0390d0e |
| SCIP notification number (Bulgaria)       | 0563fb83-26d1-4547-b996-669af98ca1c6 |
| SCIP notification number (Czech Republic) | dbd18eac-2454-4dac-a99c-2288d0dbabc5 |
| SCIP notification number (Denmark)        | 7dad3867-58cf-403c-a655-90b98eb059d8 |
| SCIP notification number (Finland)        | b7639f97-532f-47e5-a49b-19a319ae3008 |
| SCIP notification number (France)         | 9facc453-f8a9-478f-a738-fcf1b122b8bd |
| SCIP notification number (Germany)        | 968768f9-0671-49a7-8077-cb65bb389c34 |
| SCIP notification number (Hungary)        | 1637d858-201d-4fe6-9300-7f4d5c0f3f2c |
| SCIP notification number (Italy)          | a243aeb7-e0f5-4793-9907-92fa1935fbc6 |
| SCIP notification number (Netherlands)    | 0fb72d69-5884-4dcf-93e3-ed8dd2a538c5 |
| SCIP notification number (Poland)         | e5772fac-ff62-4abc-b51a-1fc75904498e |
| SCIP notification number (Romania)        | d6c3d716-db79-4e13-b383-faa9bf1828c4 |
| SCIP notification number (Sweden)         | 6976cae3-97c2-4092-acc7-4e6e9631e050 |




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## Approvals / Certificates

### General approvals

| Logo   | Approval                              | Additional Approval Text | Certificate name |
|--|---------------------------------------|--------------------------|------------------|
|  | CSA<br>CSA Group                      | C22.2                    | 2315087          |
|  | KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984                 | 71-<br>126089    |
|  | UR<br>Underwriters Laboratories Inc.  | UL 1059                  | E45172           |

### Counterpart



Item no. 713-1115/107-000

1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 30-pole; 100% protected against mismatching; Screw flange; 1,50 mm<sup>2</sup>; black[www.wago.com/713-1115/107-000](http://www.wago.com/713-1115/107-000)

### 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      | Download |
| Technical explanations |            | 2.1 MB   |          |
| THR Soldering Process  |            | pdf      | Download |
|                        |            | 548.2 kB |          |

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



## CAD/CAE-Data

### CAD data

|                                       |     |          |
|---------------------------------------|-----|----------|
| 2D/3D Models 713-1415/117-000/997-409 | URL | Download |
|---------------------------------------|-----|----------|

### Asset Administration Shell

|   |     |          |
|---|-----|----------|
| Asset Administration Shell 713-1415/117-000/997-409 | URL | Download |
|---|-----|----------|

### PCB Design

|   |     |          |
|---|-----|----------|
| Symbol and Footprint via Ultra Librarian 713-1415/117-000/997-409 | URL | Download |
|---|-----|----------|

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
- Altair
- Altium 6 to current version
- Autodesk Fusion 360
- 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

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



- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000
- Zuken eCADSTAR 2020 and 2021 Zuken CR-5000 and CR-8000

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

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Symbol and Footprint via SamacSys 713-1415/117-000/997-409

URL

Download

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:

- 3D (stp)
- Altium
- CADSTAR
- Capture
- CircuitStudio
- CR-5000
- CR-8000
- DEHDL
- DesignSpark PCB
- DesignSpark PCB PRO
- DipTrace
- EAGLE
- Easy-PC
- EasyEDA
- eCADSTAR
- KiCad
- OrCAD\_Allegro16
- PADS
- Proteus
- Pulsonix
- Quadcept
- SOLIDWORKS PCB
- TARGET 3001!
- xDX Designer
- Xpedition

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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 713-1415/117-000/997-409

[URL](#)

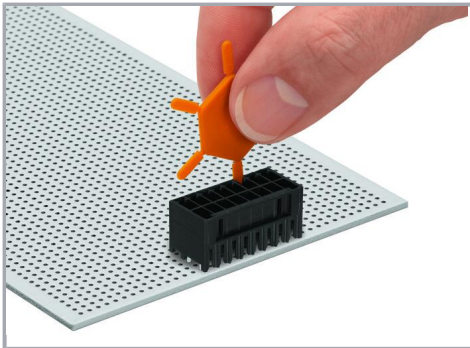
[Download](#)

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; 30-pole; black

---

## Installation Notes

### Coding



Coding a male header by inserting a coding pin.

## Product family

**MCS MINI HD**

[Show all products from the family](#)

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