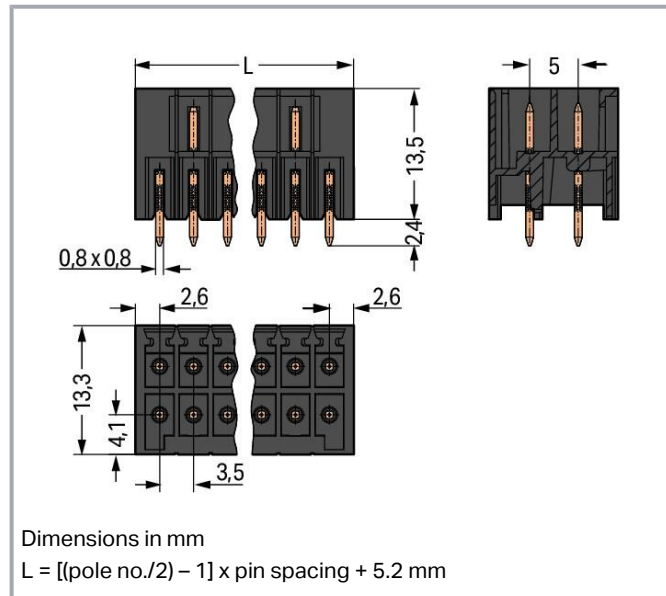
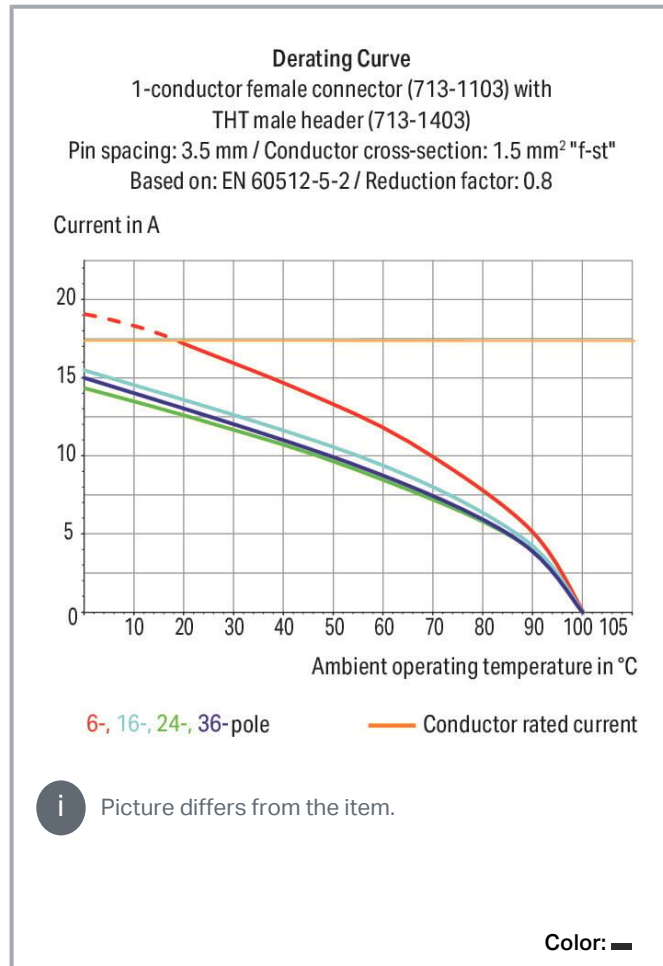


Data sheet | Item number: 713-1409/105-000/997-407



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; 18-pole; black

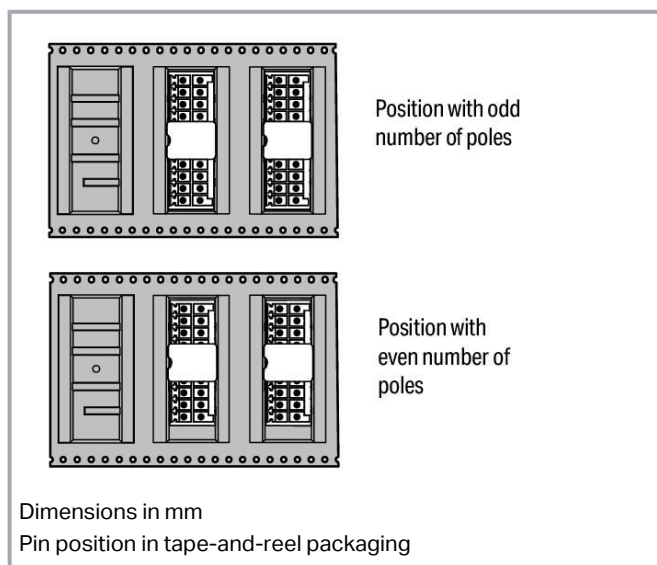
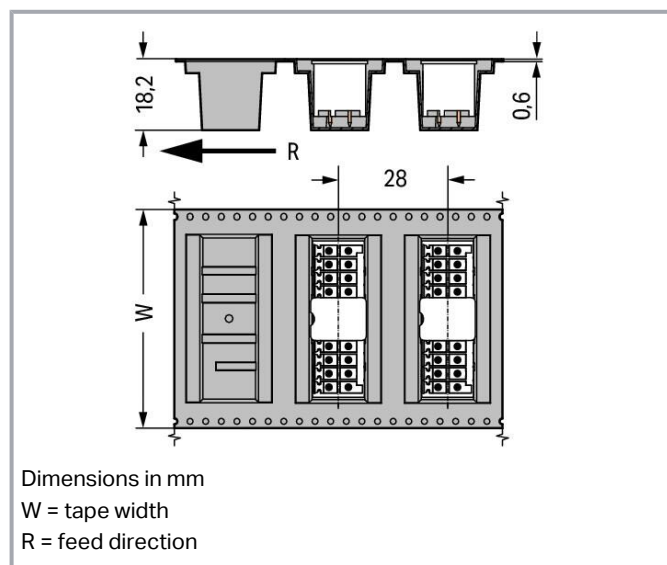
www.wago.com/713-1409/105-000/997-407



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) ≙ 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 | 18 |
| Number of connection types | 1 |
| Number of levels | 2 |

Connection 1

| | |
|-------------|----|
| Pole number | 18 |
|-------------|----|

Physical data

| | |
|-------------------------|------------------------|
| Pin spacing | 3.5 mm / 0.138 inches |
| Width | 33 mm / 1.299 inches |
| Height | 15.9 mm / 0.626 inches |
| Height from the surface | 13.5 mm / 0.531 inches |

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| | |
|--|--------------------------|
| 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 ^(+0.1) mm |
| Reel diameter of tape-and-reel packaging | 330 mm |
| Tape width | 56 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 | 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 _{Cu}) |
| Contact plating | Tin |
| Weight | 4.6 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 |
| PU (SPU) | 120 pcs |
| Packaging type | bag |
| Country of origin | DE |
| GTIN | 4050821308607 |
| Customs tariff number | 85366930000 |

Environmental Product Compliance

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

Approvals / Certificates

General approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|--|------------------|--------------------------|------------------|
|  | CSA CSA Group | C22.2 | 2315087 |

Counterpart



Item no. 713-1109

1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 18-pole; 100% protected against mismatching; 1,50 mm²; black

www.wago.com/713-1109

Optional accessories

Coding

| |
|--------|
| Coding |
|--------|

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Item no.: 714-101
Coding key; orange

Downloads
Documentation

Additional Information

| | | | |
|-----------------------|------------|-----------------|----------|
| | 2019 Apr 3 | pdf 2.1 MB | Download |
| THR Soldering Process | | pdf 548.2 kB | Download |

CAD/CAE-Data

CAD data

| | | |
|---------------------------------------|-----|----------|
| 2D/3D Models 713-1409/105-000/997-407 | URL | Download |
|---------------------------------------|-----|----------|

Asset Administration Shell

| | | |
|---|-----|----------|
| Asset Administration Shell 713-1409/105-000/997-407 | URL | Download |
|---|-----|----------|

PCB Design

| | | |
|--|-----|----------|
| Symbol and Footprint via SamacSys 713-1409/105-000/997-407 | 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

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



- EAGLE
- Easy-PC
- EasyEDA
- eCADSTAR
- KiCad
- OrCAD_Allegro16
- PADS
- Proteus
- Pulsonix
- Quadcept
- SOLIDWORKS PCB
- TARGET 3001!
- xDX Designer
- Xpedition

PCB Component Libraries (EDA), PCB CAD Library SamacSys Electronic Component Search Engine

Symbol and Footprint via Ultra Librarian 713-1409/105-000/997-407

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

—
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- 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
- Zuken eCADSTAR 2020 and 2021Zuken CR-5000 and CR-8000

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

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 713-1409/105-000/997-407

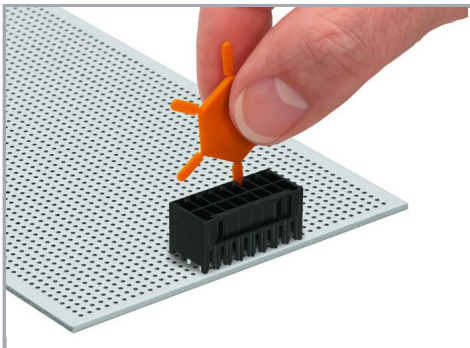
[URL](#)

[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; 18-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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