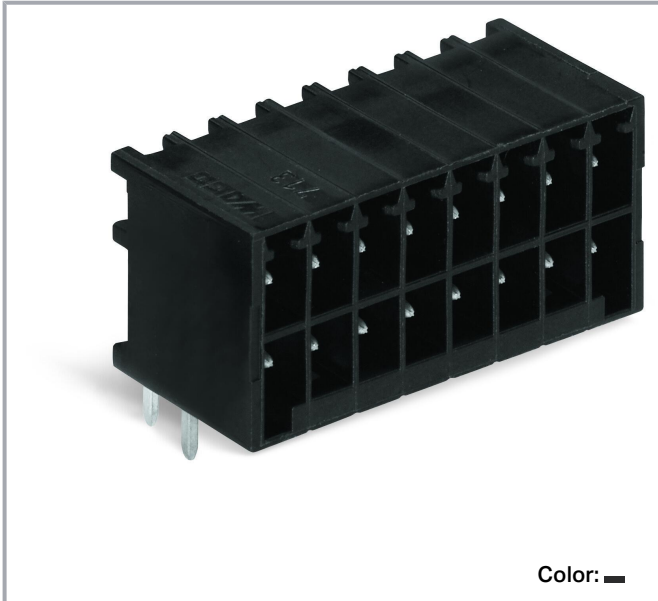


Data sheet | Item number: 713-1428

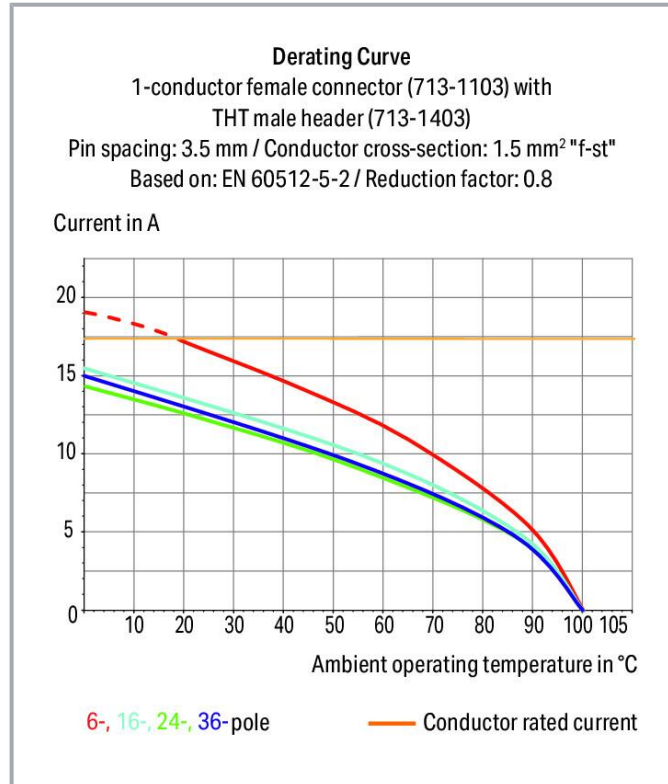
THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 16-pole; black



www.wago.com/713-1428



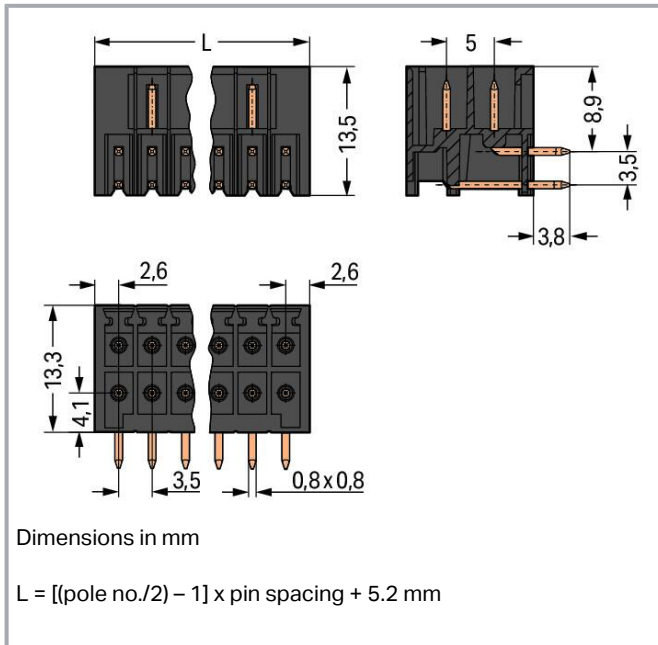
Color:



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

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Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



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 | 16 |
| Number of connection types | 1 |
| Number of levels | 2 |

Connection 1

| | |
|-------------|----|
| Pole number | 16 |
|-------------|----|

Physical data

| | |
|-------------|------------------------|
| Pin spacing | 3.5 mm / 0.138 inches |
| Width | 29.5 mm / 1.161 inches |

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



| | |
|--------------------------------------|--------------------------|
| Height | 17.1 mm / 0.673 inches |
| Height from the surface | 13.3 mm / 0.524 inches |
| Depth | 13.5 mm / 0.531 inches |
| Solder pin length | 3.8 mm |
| Solder pin dimensions | 0.8 x 0.8 mm |
| Drilled hole diameter with tolerance | 1.2 ^(+0.1) 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 | 0° |
| 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 _{Cu}) |
| Contact plating | Tin |
| Fire load | 0.088 MJ |
| Weight | 4.5 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) | 25 pcs |
| Packaging type | box |
| Country of origin | PL |
| GTIN | 4045454700195 |
| 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 DEKRA Certification B.V. | EN 61984 | 2169947.01 |
| | CCA DEKRA Certification B.V. | IEC 61984 | NL-30980 |
|  | CSA DEKRA Certification B.V. | C22.2 | 2315087 |
|  | UR Underwriters Laboratories Inc. | UL 1059 | E45172 |

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

Counterpart

| | | |
|--|--|--|
|  | Item no.713-1108 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm ² ; Pin spacing 3.5 mm; 16-pole; 100% protected against mismatching; 1,50 mm ² ; black | www.wago.com/713-1108 |
|  | Item no.713-1108/000-047 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm ² ; Pin spacing 3.5 mm; 16-pole; 100% protected against mismatching; direct marking; 1,50 mm ² ; black | www.wago.com/713-1108/000-047 |
|  | Item no.713-1108/033-047 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm ² ; Pin spacing 3.5 mm; 16-pole; 100% protected against mismatching; Strain relief plate; direct marking; 1,50 mm ² ; black | www.wago.com/713-1108/033-047 |
|  | Item no.713-1108/033-9037 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm ² ; Pin spacing 3.5 mm; 16-pole; 100% protected against mismatching; Strain relief plate; direct marking; 1,50 mm ² ; black | www.wago.com/713-1108/033-9037 |
|  | Item no.713-1108/000-9037 1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm ² ; Pin spacing 3.5 mm; 16-pole; 100% protected against mismatching; direct marking; 1,50 mm ² ; black | www.wago.com/713-1108/000-9037 |

Optional accessories

Coding

Coding



Item no.: 714-101
Coding key; orange

www.wago.com/714-101

Downloads

Documentation

Additional Information

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

CAD/CAE-Data

PCB Design

Symbol and Footprint 713-1428 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.

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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

CAE data

| | | |
|-----------------------|---------------------|--------------------------|
| ZUKEN Portal 713-1428 | URL | Download |
|-----------------------|---------------------|--------------------------|

CAD data

| | | |
|-----------------------|---------------------|--------------------------|
| 2D/3D Models 713-1428 | URL | Download |
|-----------------------|---------------------|--------------------------|

Environmental Product Compliance

Compliance Search

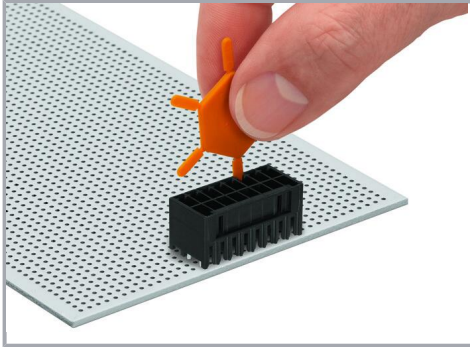
| | | |
|---|---------------------|--------------------------|
| Environmental Product Compliance 713-1428 | URL | Download |
|---|---------------------|--------------------------|

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

THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Pin spacing 3.5 mm; 16-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](#)

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