

## Data sheet | Item number: 713-1430/037-000

THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Levers; Pin spacing 3.5 mm; 20-pole; black

[www.wago.com/713-1430/037-000](http://www.wago.com/713-1430/037-000)



 Picture differs from the item.

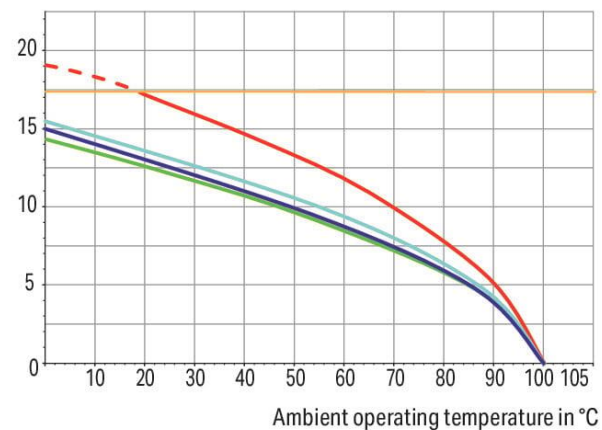
Color: 

### Derating Curve

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

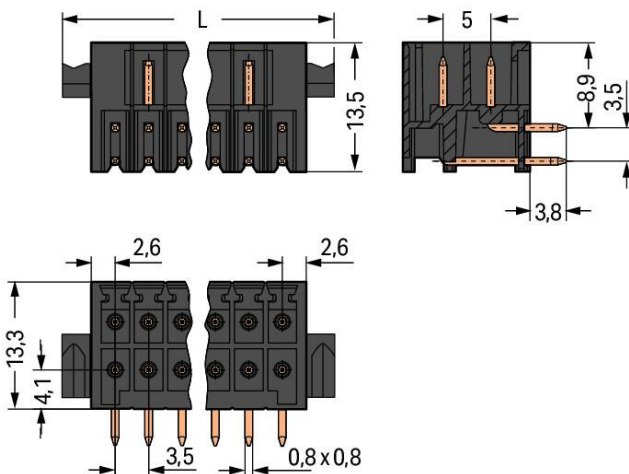
Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 0.8

Current in A



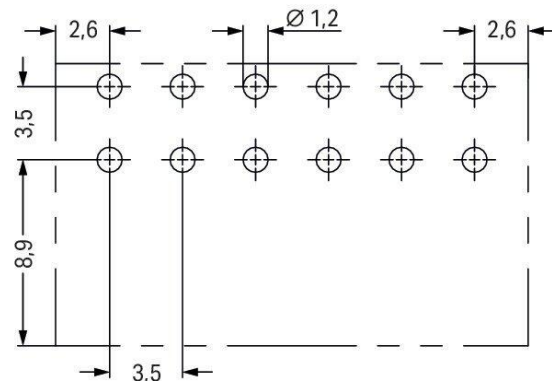
6-, 16-, 24-, 36-pole

Conductor rated current



Dimensions in mm

$L = [(pole\ no./2) - 1] \times pin\ spacing + 11.6\ mm$



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

WAGO GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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/>.

## 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) ≙ Overvoltage category III / Pollution degree 2 |

### Ratings per UL

|               |         |
|---------------|---------|
| Approvals per | UL 1059 |
|---------------|---------|

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



|                                |       |
|--------------------------------|-------|
| 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 | 20 |
| Number of connection types | 1  |
| Number of levels           | 2  |

### Connection 1

|             |    |
|-------------|----|
| Pole number | 20 |
|-------------|----|

### Physical data

|                                      |                          |
|--------------------------------------|--------------------------|
| Pin spacing                          | 3.5 mm / 0.138 inches    |
| Width                                | 43.1 mm / 1.697 inches   |
| 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 <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             |

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



|                                      |               |
|--------------------------------------|---------------|
| Mismating protection                 | Yes           |
| Plugging without loss of pin spacing | No            |
| Mating direction to the PCB          | 0 °           |
| Locking of plug-in connection        | Locking lever |

## 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                   | 0.112 MJ                               |
| Weight                      | 5.7 g                                  |

## 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               |
| ECCN              | NO DATA                |
| PU (SPU)          | 25 pcs                 |
| Packaging type    | box                    |
| Country of origin | PL                     |

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

WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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

|                       |               |
|-----------------------|---------------|
| GTIN                  | 4045454808822 |
| Customs tariff number | 85366930000   |

## Environmental Product Compliance

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

## Approvals / Certificates

### General approvals

| Logo                                                                               | Approval                                     | Additional Approval Text | Certificate name |
|------------------------------------------------------------------------------------|----------------------------------------------|--------------------------|------------------|
|                                                                                    | <b>CB</b><br>DEKRA Certification B.V.        | IEC 61984                | NL-102427        |
|    | <b>CSA</b><br>CSA Group                      | C22.2                    | 2315087          |
|    | <b>KEMA/KEUR</b><br>DEKRA Certification B.V. | EN 61984                 | 71-126089        |
|  | <b>UR</b><br>Underwriters Laboratories Inc.  | UL 1059                  | E45172           |

## Counterpart



### Item no. 713-1110/037-000

1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 20-pole; 100% protected against mismatching; Levers; 1,50 mm<sup>2</sup>; black

[www.wago.com/713-1110/037-000](http://www.wago.com/713-1110/037-000)



### Item no. 713-1110/037-047

1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 20-pole; 100% protected against mismatching; Levers; direct marking; 1,50 mm<sup>2</sup>; black

[www.wago.com/713-1110/037-047](http://www.wago.com/713-1110/037-047)



### Item no. 713-1110/037-047/033-000

1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 20-pole; 100% protected against mismatching; Levers; Strain relief plate; direct marking; 1,50 mm<sup>2</sup>; black

[www.wago.com/713-1110/037-047/033-000](http://www.wago.com/713-1110/037-047/033-000)

### Item no. 713-1110/037-9037

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

WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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



1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 20-pole; 100% protected against mismatching; Levers; direct marking; 1,50 mm<sup>2</sup>; black

[www.wago.com/713-1110/037-9037](http://www.wago.com/713-1110/037-9037)



#### Item no. 713-1110/037-9037/033-000

1-conductor female connector, 2-row; CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 20-pole; 100% protected against mismatching; Levers; Strain relief plate; direct marking; 1,50 mm<sup>2</sup>; black

[www.wago.com/713-1110/037-9037/033-000](http://www.wago.com/713-1110/037-9037/033-000)

## 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 年4月3日 | pdf    | Download |
| Technical explanations |            | 2.1 MB |          |

## CAD/CAE-Data

### CAD data

|                               |     |          |
|-------------------------------|-----|----------|
| 2D/3D Models 713-1430/037-000 | URL | Download |
|-------------------------------|-----|----------|

### PCB Design

|                                                           |     |          |
|-----------------------------------------------------------|-----|----------|
| Symbol and Footprint via Ultra Librarian 713-1430/037-000 | 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

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

WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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



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

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

---

Symbol and Footprint via SamacSys 713-1430/037-000

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

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

---

WAGO GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.



- DipTrace
- 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

CAE data

|                               |     |          |
|-------------------------------|-----|----------|
| ZUKEN Portal 713-1430/037-000 | URL | Download |
|-------------------------------|-----|----------|

Asset Administration Shell

|                                             |     |          |
|---------------------------------------------|-----|----------|
| Asset Administration Shell 713-1430/037-000 | URL | Download |
|---------------------------------------------|-----|----------|

Environmental Product Compliance

Compliance Search

|                                                                                                                                         |     |          |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----|----------|
| Environmental Product Compliance 713-1430/037-000                                                                                       | URL | Download |
| THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismatching; Levers; Pin spacing 3.5 mm; 20-pole; black |     |          |

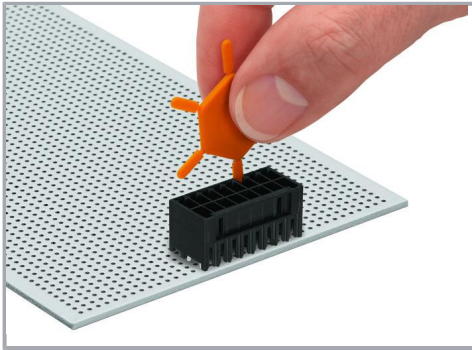
Installation Notes

Coding

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

WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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



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!

WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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