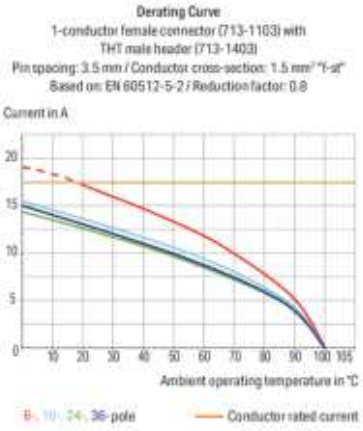
# Data Sheet | Item Number: 713-1109

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

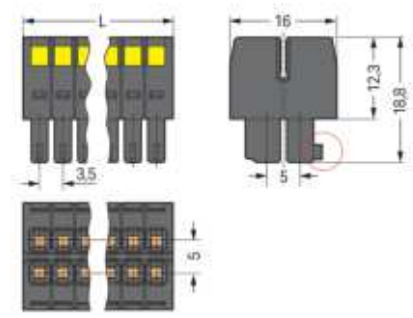
https://www.wago.com/713-1109






Color: ■ black

Similar to illustration




Dimensions in mm
L = [(pole no./2) – 1] x pin spacing + 5.2 mmCoding finger (red circle)

Female connector, 713 Series, with 3.5 mm pin spacing

Our female connector (item number 713-1109) is designed for seamless electrical installations. Strip lengths must be between 6 and 7 mm when connecting conductors to this female connector. This product features one conductor terminal and utilizes CAGE CLAMP®. Our tried-and-tested universal connection known as CAGE CLAMP® is the industry standard for connection technology and electrical interconnections. Dimensions: (33.2 x 16 x 18.8) mm (width x height x depth). This female connector is suitable for conductor cross sections ranging from 0.08 mm² to 1.5 mm².

The contact surface is coated with tin.

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

## Electrical data

| Ratings per | IEC/EN 60664-1 | | |
|---|---|---|---|
| Overvoltage category | III | III | II |
| Pollution degree | 3 | 2 | 2 |
| Nominal voltage | 80 V | 160 V | 250 V |
| Rated impulse withstand voltage | 2.5 kV | 2.5 kV | 2.5 kV |
| Rated current | 10 A | 10 A | 10 A |

| Approvals per | UL 1059 | | |
|---|---|---|---|
| Use group | B | C | D |
| Rated voltage | 300 V | 50 V | - |
| Rated current | 10 A | 10 A | - |

| Approvals per | CSA | | |
|---|---|---|---|
| Use group | B | C | D |
| Rated voltage | 300 V | - | - |
| Rated current | 10 A | - | - |

## Connection Data

| | |
|---|---|
| Clamping units | 18 |
| Total number of potentials | 18 |
| Number of connection types | 1 |
| Number of levels | 2 |

### Connection 1

| | |
|---|---|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| Actuation direction 1 | Operation perpendicular to conductor entry |
| Solid conductor | 0.08 … 1.5 mm² / 28 … 16 AWG |
| Fine-stranded conductor | 0.08 … 1.5 mm² / 28 … 16 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.25 … 1 mm² |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 … 1 mm² |
| Strip length | 6 … 7 mm / 0.24 … 0.28 inches |
| Pole number | 18 |
| Conductor entry direction to mating direction | 0 ° |

## Physical data

| | |
|---|---|
| Pin spacing | 3.5 mm / 0.138 inches |
| Width | 33.2 mm / 1.307 inches |
| Height | 16 mm / 0.63 inches |
| Depth | 18.8 mm / 0.74 inches |


Continued on next page

## Mechanical data

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

## Plug-in connection

| | |
|---|---|
| Contact type (pluggable connector) | Female connector/socket |
| Connector (connection type) | for conductor |
| Mismating protection | Yes |

## Material data

| | |
|---|---|
| Note (material data) | Information on material specifications can be found here |
| Color | black |
| Material group | II |
| Insulation material (main housing) | Glass fiber-reinforced polyamide (PA66 GF) |
| Flammability class per UL94 | V0 |
| Clamping spring material | Chrome-nickel spring steel (CrNi) |
| Contact material | Copper alloy |
| Contact Plating | Tin |
| Fire load | 0.082 MJ |
| Weight | 9.2 g |

## Environmental requirements

| | |
|---|---|
| Limit temperature range | -60 … +100 °C |
| Processing temperature | -35 … +60 °C |

## Commercial data

| | |
|---|---|
| Product Group | 3 (Multi Conn. System) |
| PU (SPU) | 25 pcs |
| Packaging type | Box |
| Country of origin | PL |
| GTIN | 4045454667368 |
| Customs tariff number | 85366990990 |

## Product Classification

| | |
|---|---|
| UNSPSC | 39121409 |
| eCl@ss 10.0 | 27-14-11-06 |
| eCl@ss 9.0 | 27-14-11-06 |
| ETIM 9.0 | EC001284 |
| ETIM 10.0 | EC001284 |
| ECCN | NO US CLASSIFICATION |


Continued on next page

## Environmental Product Compliance

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

## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| CB<br>DEKRA Certification B.V. | IEC 61984 | NL-102427 |
| CSA<br>CSA Group | C22.2 | 2315087 |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984 | 71-133740 |

### Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|---|---|---|
| Railway<br>WAGO GmbH & Co. KG | - | Z00004422.000 |

## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance 713-1109

### Documentation

**Additional Information**

| | | |
|---|---|---|
| Technical Section | 03.04.2019 | pdf<br>2027.26 KB |

### CAD/CAE-Data

**CAD data**

2D/3D Models 713-1109

**CAE data**

ZUKEN Portal 713-1109

## 1 Compatible Products

### 1.1 System counterpart

#### 1.1.1 Male connector/plug



Item No.: 713-1429/105-000/997-407
THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismating; in tape-and-reel packaging; Pin spacing 3.5 mm; 18-pole; black



Item No.: 713-1429/105-000
THR male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismating; Pin spacing 3.5 mm; 18-pole; black



Item No.: 713-1409/105-000/997-407
THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismating; in tape-and-reel packaging; Pin spacing 3.5 mm; 18-pole; black



Item No.: 713-1409/105-000
THR male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismating; Pin spacing 3.5 mm; 18-pole; black


Continued on next page

### 1.1.1 Male connector/plug



Item No.: 713-1429
THT male header, 2-row; 0.8 x 0.8 mm solder pin; angled; 100% protected against mismating; Pin spacing 3.5 mm; 18-pole; black



Item No.: 713-1409
THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismating; Pin spacing 3.5 mm; 18-pole; black



Item No.: 713-1469
THT male header, 2-row; 0.8 x 0.8 mm solder pin; straight; 100% protected against mismating; with orientation nose; Pin spacing 3.5 mm; 18-pole; black

## 1.2 Optional Accessories

### 1.2.1 Ferrule

#### 1.2.1.1 Ferrule



Item No.: 216-321
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



Item No.: 216-131
Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored



Item No.: 216-322
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



Item No.: 216-132
Ferrule; Sleeve for 0.34 mm² / 22 AWG; uninsulated; electro-tin plated



Item No.: 216-221
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white



Item No.: 216-121
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored



Item No.: 216-222
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



Item No.: 216-122
Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; silver-colored



Item No.: 216-223
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



Item No.: 216-123
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored

### 1.2.2 Stickers with operating instructions

#### 1.2.2.1 Stickers with operating instructions



Item No.: 210-493
Stickers for operating instructions

### 1.2.3 Strain relief

#### 1.2.3.1 Strain relief plate



Item No.: 713-127
Strain relief plate; for female connectors; 25 mm wide; 1 part; Pin spacing 3.5 mm; black


Continued on next page

### 1.2.4 Tool

#### 1.2.4.1 Operating tool



Item No.: 210-719
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft



Item No.: 210-647
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured

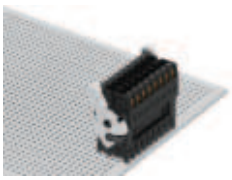
## Installation Notes

### Conductor termination

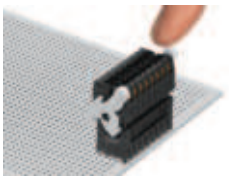


Inserting a conductor via (2.5 x 0.4) mm screwdriver.

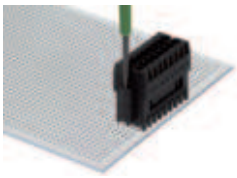
### Locking system



Lever as a lock – when closed, female connector is locked.



Lever as a disconnection aid – when opened, female connector is disconnected. Rotating the lever lifts the female connector out of the male header.



Screw interlock can only be disconnected using a tool.

### Coding



Coding a female connector by removing coding finger(s).

### Strain relief



Strain relief plate for field assembly



Centered strain relief plate anchors conductors for easy disconnection.